

Validation of Long-Term and Post-Acute Care Quality Indicators

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Executive Summary

Assessments of health care quality and the dissemination of resulting information about quality is becoming more widespread in the U.S. These assessments are most frequently in the form of “quality indicators” that are intended to reflect the quality of the care delivered or the patient care outcomes that can be attributed to the care delivered by various health care providers. In this report, we summarize the results of our efforts to validate a series of quality indicators for use with chronic and post-acute care nursing home residents. Some of the other sources of quality indicators that are in current use include the Agency for Health Care Quality’s Inpatient and Prevention Quality Indicators, the CAHPS (Consumer Assessment of Health Plans), the National Committee for Quality Assurance’s HEDIS measures, Outcome-based Quality Indicators (OBQIs) for home health, dialysis care quality measures, and nursing facility quality indicators. The development of the latter three types of measures have been funded by the Centers for Medicare and Medicaid Services (CMS) in whole or in part, and federal initiatives are underway to utilize the home health and nursing facility measures for regulatory as well as public reporting purposes. Dialysis care measures are currently publicly reported on the CMS website.

The types of measurement information commonly utilized in making judgments about the value of a particular quality indicator include whether the measure has face (or clinical) validity and construct validity, and whether it reliably captures and measures what it purports to measure (validity). Earlier work under this contract (the CMS-sponsored “Development and Validation of Long-term and Post-acute Care Quality Indicators” project) established a set of 45 Minimum Data Set-based (MDS) quality indicators for use in nursing facilities that fulfilled select measurement criteria such as those cited above. These indicators were provisionally recommended for use by CMS, pending an assessment of their reliability and validity (Abt Associates Inc., Oct-2001).

This report summarizes work performed to date to validate these 45 existing and newly developed quality indicators for the long-term and post-acute care populations residing in nursing facilities. Thirty indicators applicable to the chronic (or long-term) care population that were originally developed by others were evaluated, as were 15 newly developed measures for the chronic and post-acute care populations¹. To our knowledge, the only previous work done to validate any nursing home quality indicators of this type was performed by the Centers for Health Systems Research and Analysis at the University of Wisconsin (CHSRA)² (see Zimmerman et al., 1995; Zimmerman et al., 1999; and Zimmerman and Karon, 1997). The list of measures examined in this study may be found in Tables 1 and 2.

Many of the indicators studied here are already in use by CMS in the quality monitoring system utilized in the long-term care survey process. Many facilities actively use these measures for enhancing internal quality performance. In addition, nine of the measures reported upon here are

¹ Original developers of existing quality indicators examined in this report include the Centers for Health Systems Research and Analysis, University of Wisconsin, LTCQ Inc., and J.D. Ramsey.

² “Validate” in this context means to clinically review the indicator against medical record and other primary data. Other developers may have performed other types of validation, for example, through secondary data analysis or the convening of industry experts, but this is not the type of validation done in this study nor in the CHSRA validation studies.

being publicly reported for the states of Colorado, Florida, Maryland, Ohio, Rhode Island, and Washington as part of the CMS “nursing home quality initiative” (NHQI).³

Defining Nursing Home Quality

Nursing facility quality is multidimensional, encompassing clinical, functional, psychosocial and other aspects of resident health and well being. In this examination of nursing facility quality indicators, all listed aspects of resident functioning are addressed in varying degrees, and the needs of chronic residents and post-acute patients are separately examined. In most cases, multiple quality indicators (QIs) are recommended within a given domain of quality (e.g., clinical quality), and we propose that CMS utilize several QIs from each domain for purposes of public reporting, quality monitoring, and performance improvement. As stated previously, quality of care is necessarily multidimensional. No single QI is likely to capture overall facility quality. Facilities may perform extremely well on one type of QI, but may not perform nearly as well on another. Indeed, two papers recently confirmed this hypothesis, one using New York state data and the other data from Massachusetts (Mukamel and Brower, 1998; Porell and Caro, 1998). It is therefore important to present different indicators across multiple domains for a full view of facility quality performance.

Measurement of Quality

The research design utilized in this quality indicator validation study follows that of other researchers who have concluded that quality must be measured by examining the interaction of structural, process and outcome measures (Donabedian, 1980; Sainfort et al, 1995; Zimmerman et al, 1995; Ramsey, et al, 1995). Each of these quality dimensions was incorporated into our hypotheses concerning the factors that enable a facility to prevent clinical and other problems from occurring, our subsequent collection of data from nursing facilities, and the analyses of these data.

Validation Study Parameters

The final analytic sample for this study was comprised of 209 freestanding and hospital-based facilities located in six states: California, Illinois, Missouri, Ohio, Pennsylvania and Tennessee. Facilities were selected for participation in the study based upon their quality indicator scores (observed over the prior year) on twenty QIs, their geographic location and their willingness to participate in the data collection protocols. The total patient sample included in our on-site field review comprised some 5,758 chronic and post-acute patients, although these facilities serve over 20,000 residents at any one point in time. Compared to all facilities in the states from which they were selected, participating facilities tended to be somewhat larger, were more likely to be non-profit and were less likely to be located in rural settings.

Both resident-level and facility-level data were collected in each sampled facility from November 2001 through June 2002. At the resident level, medical records were reviewed to determine care processes provided to a representative resident sample during the time period of interest in twenty-one quality dimensions, such as physical restraint use, pressure sores and pain. The types of care processes reviewed included whether comprehensive assessments other than the MDS were performed, whether physicians were notified in a timely manner following resident change in status, and whether care planning was documented in the record for identified problems. In addition, a subset

³ These are designated as “pilot” quality indicators and are listed in Tables 1 and 2.

of MDS items was independently assessed by research nurses for later comparison to facility MDS assessments. Facility-level data collected included an administrative survey in which questions were asked of the administrator and director of nursing, and an observation of the general facility environment.

Methods

Description of the Quality Indicators

In constructing the set of quality measures evaluated here, there has been a concern for possible inter-facility variation in the types of residents admitted and served by nursing facilities; difference in the mix of residents served across facilities raises the possibility that inter-facility comparisons may be biased. To control for this possibility, where deemed necessary, three adjustment strategies have been applied.

- 1) For all of the indicators a denominator exclusion rule was applied (e.g., residents near death). These residents were not considered in the calculation of the quality indicator.
- 2) For four of the CHSRA indicators, two sub-versions of the same overall indicator were created for each facility, one applying to high-risk residents, the other to low risk residents. In addition, an overall high/low risk indicator was calculated.
- 3) For many of the other indicators, including those created by the project team and LTCQ Inc., some type of statistical regression-based covariate adjustment strategy was employed. For many indicators, this involved traditional resident-level covariates, supplemented in many instances by a new type of facility-based adjustment based upon resident characteristics upon admission. This is referred to as the “facility admission profile”. QIs constructed using a facility admission profile are designated as such in Tables 1 and 2.

Testing the Reliability of the Quality Indicators

In each participating facility research nurses sampled up to 30 residents records, observing and speaking with (if possible) the resident to complete a reduced form version of the MDS in order to allow for a comparison of the MDS based upon facility assessors and that completed by the research nurse assessor. The rationale for examining the reliability of the QI information across all our participating facilities was to allow for the possibility that poor data quality might compromise our ability to adequately test the validity of the QIs. Having information on the average reliability of the MDS data on which the QIs are based allowed us the possibility of excluding facilities with poor data quality from the analyses.

Over 100 MDS data elements were incorporated in the reliability study. A Kappa statistic was used to calculate the level of agreement between the facility and research nurse assessor. This statistic is more stringent than merely calculating the percentage agreement because it adjusts for the possibility of chance agreement that can occur if the condition in question is relatively rare (something true for many of the QIs).

Validation of the Quality Indicators

During the development of data collection tools for this study, expert clinical panels were convened to develop empirically based hypotheses about what constitutes quality of care in a given dimension

(e.g., pain, activities of daily living (ADL)). This effort met with varied success, as there appear to be relatively few well-studied, research-based “standards of care” in use in the nursing facility environment⁴. In cases in which no empirical evidence could drive theories about what components of care qualify a nursing facility as a “good” performer, the expert panels created their own hypotheses. These hypotheses were then utilized to 1) develop data collection instruments to assess nursing home care processes and structures, and 2) direct analysis of these data.

For the primary validation task, individual validation elements, as well as a series of summary scales, from the three data collection tools (Medical Record Review, Administrative Survey, and Environmental Observation) were categorized by quality of care construct (or hypothesis), and then evaluated to determine the degree of their relationship to each quality indicator. The final categorization of quality of care constructs were defined as “preventive” and “responsive”.

- **Preventive** strategies represent the class of actions that “good” facilities choose to follow in an attempt to minimize the emergence of problems; these strategies are anticipatory in character. Data elements categorized into the preventive construct include staff training, higher staff resource levels, and facility efforts at continuous quality improvement (CQI).
- **Responsive** strategies represent actions that facilities are likely to use as they recognize that residents have ongoing or emerging problems in different quality areas. They represent a service response “audit trail,” and as such confirm that staff have recognized the problem. Externally, these facilities will be observed to have higher QI scores, but the medical record will reflect a recognition that action must be taken in response to identified resident problems. Examples of data elements gathered on-site that are categorized as responsive are the documentation of comprehensive assessments (other than the MDS), documentation of changes in resident status, and referrals to specialists from inside and outside of the facility (e.g., physicians).

In summary, preventive strategies work to reduce the prevalence or incidence of quality problems measured by the QIs. On the other hand, responsive strategies reflect the fact that quality problems may have emerged in the resident population and as such reflect a “failure” of the facility to prevent the problem (or failure to achieve expected improvement outcomes). Consequently, responsive strategies are associated with an increased prevalence of problems (i.e. quality indicators).

While the constructs created from the various sources of data were conceptualized as falling into one class or another, clinically and administratively relevant data elements thought to be related to particular QIs might have been able to be classified as either preventive or responsive. Thus, our final classification of the validation elements was done based both upon how they related to one another as well as how they related to the QIs. While seeming to represent a “circular” logic (i.e. using one construct to validate another and then to apply the same logic in the other direction), this is a process that characterizes most efforts at construct validation. Thus, the validation elements and constructs were examined for directionality relative to selected QIs and then the QIs were each formally tested against the battery of constructs (classified as preventive or responsive) to determine whether facility records, care processes and structures related to the QIs in the expected direction.

⁴ The best examples found of empirically-based nursing facility care practices came from clinical guidelines established by the Agency for Health Research and Quality, such as the Pain Clinical Practice Guidelines.

For each of the constructs or individual data elements categorized as preventive or responsive, the relationship between it and the full array of quality indicators under study was reviewed. To be found acceptable, the construct had to have a consistent relationship across multiple quality indicators. For example, to be classified as preventive, a data element (e.g., a CQI monitoring protocol) had to be related to several quality indicators. We required that there be a clear directional relationship between the construct and the quality indicators. Specifically, preventive elements had to always show a positive relationship to lower (less problematic) QI rates, while responsive elements had to demonstrate a positive relationship to higher (more problematic) QI rates. In other words, the correlation between preventive elements and quality indicators had to be negative, and the correlation between responsive elements and quality indicator scores had to be positive to be considered clearly directional.

In evaluating the validity of the quality indicators, several summary measures were created and reviewed:

- 1) a count of the number of significant preventive or responsive validation elements for the quality indicator, with the greater the count, the greater the confidence in the relationship;
- 2) a measure of the pooled association of the list of significant validation elements with the quality indicator. The latter is derived from a regression equation, and in this case represented by the multiple correlation coefficient. This is a multivariate-derived value that resembles a standard bivariate correlation.⁵ In reviewing these values, we settled on a combination of two factors in assigning each of the candidate quality indicators to one of three “valid” categories: Top, Mid, and Not Validated; and
- 3) the underlying reliability of the MDS item and resulting QI.

To understand how these preventive and responsive factors were applied in establishing the validity of a QI, we provide examples of how these elements individually relate to two of the chronic quality indicators, “Percent of residents with pressure sores ” (high & low risk) and “Percent of residents with worsening function in some basic daily activities”. Both indicators are assigned to the Level I, Top Validity category, and both achieved this status on the basis of the preventive elements alone. For the Pressure sore indicator, there was also a substantial array of individual responsive relationships, while for the other, Worsening function in some basic daily activities, there was only one item of this type.

The ***Pressure sore*** indicator quantifies the proportion of at-risk residents in a facility that have a pressure sore (i.e., bed sore, decubitus ulcer, pressure sore) of severity ranging from one persistent area of redness that does not disappear when pressure is relieved to one or more open wounds where the full thickness of skin and subcutaneous tissue is lost and underlying bone or muscle is exposed.

There are a large number of clinical and functional risk factors for pressure sores (e.g., poor nutrition, incontinence, diabetes, immobility); thus, a number of preventive activities and responsive factors were evaluated. Preventive activities, in general, relate to the handling of at-risk residents and treatment of conditions that contribute to or mitigate pressure sore risk. Responsive activities, in general, define actions that a facility’s caregivers take to document, communicate and attempt to ameliorate pressure sores once present.

⁵ Note: this value can be squared to get the classic R2 estimate of explained variance.

Preventive activities for pressure sore prevalence included the screening, assessment, and treatment for conditions placing residents at risk for pressure sores. Thus, the following individual data elements or constructs were found to be associated with lower pressure sore prevalence:

- More frequent scheduling of assessments for suspicious skin areas.
- Weekly routine assessment using a standard protocol for delirium, that would - if present - keep residents bed-bound.
- Observations on the environmental assessment of residents walking or otherwise out of bed.
- Observations on the environmental assessment of caregivers providing assistance to residents with nutritional needs.
- A constructed scale expressing the extent to which a facility manages clinical, psychosocial, and nutritional complications across domains in a manner consistent with high quality care (expressed as a single factor score).

Staffing factors provide additional (albeit indirect) evidence of preventive activities. For example, staffing items related to pressure sore prevalence were 1) the absence of facility management change; and 2) the extent that a facility did *not* rely upon floats or contract staff.

Responsive activities for pressure sore prevalence include policies, procedures or actions taken by caregivers in response to existing or newly detected pressure sores. Identified activities include:

- Comprehensive assessment (other than the MDS) of pressure sores documented in the medical record.
- Assessment of pressure sores by a physician.
- Clear documentation in the medical record that the resident has a problem in this area or that the resident's condition has changed relative to pressure sores.
- Where change was noted in the medical record, there is documentation that this change 1) was evaluated within 72 hours, 2) resulted in a notification to physician or therapist, 3) resulted in a referral to a consultant, and/or 4) resulted in a change in the care plan.

An additional theme related to pressure sores was a constructed measure of the extent to which the medical record and care plan agree that pressure sores are a problem. This level of agreement signals facilities with a well-integrated system for problem recognition and treatment implementation.

For ***Worsening function in some basic daily activities***, there were 17 significant preventive elements and one significant responsive element. From this set of preventive elements, three primary themes emerge: attention to the resident as an individual, an engaging and safe environment, and good continence care. Further explanation of these themes and related data elements follows.

- Maintaining ADL gains is related to a concern with what the resident is thinking and who he or she may be as a person, as seen in areas related to cognition, behavior, and pain. Better outcomes (i.e. facilities have lower rates of worsening function in basic daily activities) are observed when there are: 1) CQI monitoring protocols in place for behavioral function and communication; 2) weekly routine screening of communication and pain, using standard protocols; and 3) rooms that are personalized with furniture, photos, and other things from the resident's past.

- Maintenance of ADLs is also related to an environment in which the resident is up and out of bed and engaged in activities. Better outcomes are related to a series of things that were observed by the research nurse about the facility, including: 1) residents being up and about; 2) residents seen to be walking or independently moving about the facility with or without assistive devices; and 3) indications that a variety of activities are available for residents with different capabilities. Related data elements observed during inspection of the facility environment were that public and common areas were well lighted and resident safety had been considered.
- Finally, there was a link to facility efforts aimed at good continence care. Preventive elements relating to this theme include: 1) a scale that counted up to 15 “good” incontinence management items; 2) a scale that focused on care practices relevant to promoting improved levels of continence; 3) a scale that looked specifically at ADL training approaches that were targeted to helping residents maintain continence patterns; and 4) a CQI monitoring protocol in place for bladder incontinence.

Examination of the Performance of the Facility Admission Profile

In addition to evaluating the validity of each of the 45 QIs, two sets of analyses were conducted to examine the performance of the proposed risk adjustment approach earlier recommended by this project team. Each studied different aspects of the facility-level adjustment mechanism (referred to as the facility admission profile, or FAP).

- First, we compared the validity of raw, or non FAP-adjusted, quality indicators to the validity of FAP-adjusted indicators.
- Second, we tested the impact of systematic measurement bias on quality indicators, as described below.

Findings

Reliability was evaluated in several ways. Research nurse MDS assessments were compared to facility-generated MDS assessments to generate the following statistics: 1) percent agreement between “gold” standard nurses and facility nurses; 2) MDS item-level Kappas; and 3) Kappas for a subset of the QI where these could be established (i.e., for prevalence QIs only).

Table 1 displays reliability and distributional statistics for each of the quality indicators for the 209 facilities in the national study sample. Reliability was assessed using the weighted Kappa statistic, with a value of .40 or higher being considered indicative of inter-assessor agreement, while a value of .75 or higher is indicative of superior inter-assessor reliability. In this case the weighted Kappas reflect the cross-sectional reliability of the MDS items that comprise the numerator of the quality indicator (e.g., the numerator for the “Residents who have fallen” QI is MDS item J4a). Using this standard, only one of the MDS items for a QI numerator falls below the .40 threshold (MDS item N2, which makes up the “Residents engaging in little to no activity” QI). Thirty-one of the quality indicators are based on MDS items with an average weighted Kappa of .70 or higher.

Table 1 also displays the mean rates of the quality indicators across the 209 sampled facilities. As seen here, only two quality indicators have very low prevalence (i.e. < five percent). The rate of the chronic care “New indwelling catheter” indicator is two percent, and the rate of the post-acute care

“Residents with delirium” indicator is three percent across the sampled facilities. Five of these QIs have very high prevalence (i.e., > 60 percent). The rate of “Residents who are bladder or bowel incontinent – high and low risk” is 62 percent, the rate of “Residents who are bladder or bowel continent – high risk” is 93 percent. Similarly, the chronic care “Residents who walk as well or better than the previous assessment” indicator is 82 percent. Two post-acute care indicators, “Residents who have not improved since admission” and “Residents who have developed a respiratory infection or have not gotten better ” have rates of 63 and 92 percent, respectively. The rate of occurrence of various QIs is another criterion that should be taken into consideration when evaluating the utility of various QIs, as extreme skews in the rates of occurrence may indicate QI instability, as well as poor utility in detecting inter-facility variation.

The validity of the FAP-adjusted quality indicators was examined. Non FAP-adjusted and FAP-adjusted quality indicators were equally valid in all but eight instances. In three, two of which (“Residents who walk as well or better on day 14 as of day 5 of their stay – PAC” and “Residents with pain – PAC”) are currently in the CMS Nursing Home Quality Initiative pilot project, validity was higher for the FAP-adjusted measures. For the other four, validity for the FAP-adjusted measures was lower. The FAP models did not out-perform the non-FAP models; they did not provide scores that were systematically superior.

Finally, an exploration of the presence of “measurement bias” was also completed, in order to understand whether particular QIs are more subject to over- or under-reporting by facilities than others. If this were the case, we would be able to evaluate the ability of the facility admission profile to capture this measurement bias. By and large, while there was inter-state variation in the extent of over or under-reporting, relatively few QIs were observed to have large levels of under or over-reporting in general and relatively few facilities were systematically over or under-reporting the prevalence of quality problems as measured by a multiplicity of QIs. Thus, there is no evidence of systematic bias in facility reporting of the set of prevalence-based QIs evaluated here. The FAP method of risk adjustment therefore cannot be considered an adequate and robust measure of ascertainment bias.

Table 2 displays the summary measures of quality indicator validity. Of the master list of 45 quality indicators, two could not be evaluated due to missing quality indicator data.⁶ Fourteen of the chronic care indicators and four of the post-acute care indicators were judged to be in the Level I (Top) validation category. An additional group of seventeen chronic and two post-acute indicators were also accepted as valid, and placed into Level II, the Mid-Valid Category. A total of seven chronic care indicators and one post-acute care indicator were judged not to be valid.

Conclusions and Recommendations

In this national validation study, there is strong evidence that many of the set of 45 reviewed quality indicators capture meaningful aspects of nursing facility performance. We highly recommend for use by CMS and nursing facilities any of the QIs that fall into the Level I validation category, as these QIs have the strongest degree of evidence that they represent real care processes in nursing facilities. The chronic care quality indicators with the highest level of validity include:

⁶ High and low risk pressure sores will be evaluated separately and findings submitted upon delivery of the final validation report.

- Residents with indwelling catheters;
- Residents who are bladder or bowel incontinent (high and low risk, high risk, low risk);
- Residents with a urinary tract infection;
- Residents with infections;
- Residents with pain;
- Residents with pressure sores (high and low risk);
- Residents with pressure sores (high risk);
- Residents who had an unexpected loss of function in some basic daily activities;
- Residents with worsening function in some basic daily activities;
- Residents who have declined in their ability to locomote;
- Residents who walk as well or better than the previous assessment; and
- Residents with worsening bladder continence.

Four post-acute care quality indicators are highly valid, including:

- Short-stay residents with delirium⁷;
- Short-stay residents with pain;
- Short-stay residents who have not improved since admission; and
- Short-stay residents who walk well or better on day 14 as on day 5 of their stay.

The chronic quality indicators that we recommend rejecting for further use at this time are:

- Residents with inappropriate behavior (high risk and low risk);
- Residents who have unexplained weight loss;
- Residents on antipsychotics without a diagnosis of psychosis (high risk and low risk);
- Residents whose behavior has worsened; and
- Residents with worsening pressure sores.

The post-acute care indicator that proved not to be valid is “Short-stay residents whose pressure sores have not gotten better” and therefore should be rejected for use by CMS.

Those QIs that fall into the Level II – Mid Valid category are deemed appropriate for use in measuring nursing facility quality, as they do offer evidence of validity; they are simply not as highly recommended to CMS as those QIs falling into the “Top” (Level I) validation category. In making final determinations about the utility of these QIs for performance improvement, public reporting or other purposes, CMS may want to review both the prevalence and the reliability of these indicators.

A special note is warranted on the “Residents engaging in little or no activity” quality indicator. While based on the validation effort it was judged to fall into the Mid-Valid (Level II) category, the MDS item on which the indicator is based was found to have poor reliability. Should CMS choose to utilize this indicator for public reporting, facilities will need instruction on proper coding of this assessment item.

⁷ Again, this QI has a very low rate of occurrence (three percent) in our study sample. The national distribution of this and other indicators should be examined as CMS makes a final determination as to each QI’s overall utility.

In addition to determining which of these sets of nursing facility quality indicators are “valid”, or reflecting the care outcomes and issues they are purported to reflect, these results provide evidence that quality indicators measure aspects of care quality that may be amenable to modification through facility practice. For example, facility staffing and policies, practices or procedures are found to be related to resident quality outcomes and therefore may be modified by facilities to enhance quality of care delivery.

With regard to the facility admission profile, we find no reason to continue to support the universal application of the FAP as currently operationalized. Nonetheless, our analyses also suggest that there are very real inter-facility differences in the mix of residents admitted and who remain to be served by the facility and that these differences are related to the distribution of facilities as measured by the non FAP-adjusted QIs as well as those relying only upon resident-level adjustment. Thus, additional research focusing on the testing of alternate resident and facility level adjustment variables is needed.

Table 1**QI Rates and Weighted Kappas**

Quality Indicator	QI Proportional Rate – The Average Across Facilities	Standard Deviation of the QI Rate	The Rate in the Facility with the Lowest Proportional Problem	The Rate in the Facility with the Highest Proportional Problem	Average Weighted Kappa for MDS Items Composing the QI ¹
Chronic Prevalence					
++Percent of residents with inappropriate behavior (high & low risk) BEH1	.20	.10	.00	.68	.71
++Percent of residents with inappropriate behavior (high risk) BEH2	.23	.11	.00	.69	.71
++ Percent of residents with inappropriate behavior (low risk) BEH3	.07	.05	.00	.23	.71
Percent of residents engaging in little or no activity SOC2	.12	.12	.00	.77	.28
Percent of residents with indwelling catheters CAT2	.07	.05	.00	.32	.71
++Percent of residents who are bladder or bowel incontinent (high & low risk) CNT1	.62	.13	.14	.89	.88
++ Percent of residents who are bladder or bowel incontinent (high risk) CNT5	.93	.05	.76	.99	.88
++ Percent of residents who are bladder or bowel incontinent (low risk) CNT6	.49	.13	.12	.83	.88
Percent of residents with a urinary tract infection CNT4	.08	.05	.00	.31	.53

Table 1

QI Rates and Weighted Kappas

Quality Indicator	QI Proportional Rate – The Average Across Facilities	Standard Deviation of the QI Rate	The Rate in the Facility with the Lowest Proportional Problem	The Rate in the Facility with the Highest Proportional Problem	Average Weighted Kappa for MDS Items Composing the QI ¹
Percent of residents who have fallen FAL1	.08	.04	.00	.24	.52
++Percent of residents with infections (pilot) INFX	.17	.08	.00	.43	.50
++Percent of residents with a feeding tube NUT1	.08	.05	.00	.27	.80
++Percent of residents with a low BMI BMIX	.12	.05	.00	.31	.85
++Percent of residents who have unexplained weight loss (pilot) WGT1	.08	.04	.00	.26	.42
++Percent of residents with pain (pilot) PAIX	.11	.08	.00	.48	.73
++Percent of residents with pressure sores (high&low risk) (pilot) PRU1	.09	.05	.00	.27	.74
++ Percent of residents with pressure sores (high risk) PRU2	.14	.07	.01	.48	.74
++ Percent of residents with pressure sores (low risk) PRU3	.03	.02	.00	.10	.74
++Percent of residents with burns, skin tears or cuts BURX	.05	.04	.00	.19	.46
Percent of residents in physical restraints (pilot) RES1	.07	.09	.00	.49	.56

Table 1**QI Rates and Weighted Kappas**

Quality Indicator	QI Proportional Rate – The Average Across Facilities	Standard Deviation of the QI Rate	The Rate in the Facility with the Lowest Proportional Problem	The Rate in the Facility with the Highest Proportional Problem	Average Weighted Kappa for MDS Items Composing the QI ¹
++Percent of residents on antipsychotics without a diagnosis of psychosis (high&low risk) (pilot) DRG1	.21	.08	.02	.43	.89
++ Percent of residents on antipsychotics without a diagnosis of psychosis (high risk) DRG2	.43	.11	.26	.61	.89
++ Percent of residents on antipsychotics without a diagnosis of psychosis (low risk) DRG3	.17	.07	.02	.40	.89
Chronic Incidence					
Percent of residents who had an unexpected loss of function in some basic daily activities (pilot) ADL1	.16	.09	.00	.44	.84
Percent of residents with worsening function in some basic daily activities ADL2	.08	.07	.00	.33	.83
Percent of residents who have improved in their ability to function ADL3	.25	.09	.08	.48	.83

Table 1**QI Rates and Weighted Kappas**

Quality Indicator	QI Proportional Rate – The Average Across Facilities	Standard Deviation of the QI Rate	The Rate in the Facility with the Lowest Proportional Problem	The Rate in the Facility with the Highest Proportional Problem	Average Weighted Kappa for MDS Items Composing the QI¹
++Percent of residents who have declined in their ability to locomote MOB1	.14	.07	.01	.40	.82
++Percent of residents who walk as well or better than the previous assessment WALX	.82	.08	.61	.99	.84
++Percent of residents whose cognitive ability has worsened COG1	.12	.07	.00	.43	.76
++Percent of residents whose ability to communicate has worsened COM1	.11	.07	.00	.31	.83
++Percent of residents with symptoms of delirium DELX	.09	.06	.00	.29	.61
++Percent of residents whose behavior has worsened BEH4	.07	.05	.00	.24	.72
++Percent of residents who have become more depressed or anxious MOD3	.15	.07	.00	.37	.60
Percent of residents with a new indwelling catheter CAT1	.02	.02	.00	.09	.71
Percent of residents with worsening bowel continence CNT2	.19	.09	.00	.41	.88
++Percent of residents with worsening bladder continence CNT3	.19	.09	.00	.49	.87

Table 1**QI Rates and Weighted Kappas**

Quality Indicator	QI Proportional Rate – The Average Across Facilities	Standard Deviation of the QI Rate	The Rate in the Facility with the Lowest Proportional Problem	The Rate in the Facility with the Highest Proportional Problem	Average Weighted Kappa for MDS Items Composing the QI¹
++Percent of residents with worsening pain PAN1	.10	.05	.00	.26	.73
++Percent of residents with worsening pressure sores PRU4	.07	.04	.00	.27	.74
Post-acute Prevalence					
++Percent of short-stay residents with delirium (pilot) DELX	.03	.03	.00	.16	.65
++ Percent of short-stay residents with pain (pilot) PAIX	.27	.10	.02	.60	.72
Post-acute Incidence					
Percent of short-stay residents who have not improved since admission ADLX	.63	.19	.14	.99	.72
++ Percent of short-stay residents whose ability to control their bowel or bladder has not improved since admission CNTX	.55	.09	.32	.79	.73
++ Percent of short-stay residents whose pressure sores have not gotten better PRUX	.23	.09	.04	.50	.74

Table 1**QI Rates and Weighted Kappas**

Quality Indicator	QI Proportional Rate – The Average Across Facilities	Standard Deviation of the QI Rate	The Rate in the Facility with the Lowest Proportional Problem	The Rate in the Facility with the Highest Proportional Problem	Average Weighted Kappa for MDS Items Composing the QI ¹
++ Percent of short-stay residents who have developed a respiratory infection or have not gotten better RSPX	.92	.05	.77	.99	.53
++Percent of short-stay residents who walk as well or better on day 14 as on day 5 of their stay (pilot) WALX	.28	.14	.03	.71	.77

Notes:

1 Kappas below 0.4 reflect poor inter-rater reliability; a value between .40 and .60 is indicative of acceptable inter-assessor agreement; and a value of .75 or higher is indicative of superior inter-assessor reliability.

++ Quality indicator was risk-adjusted using facility admission profile.

Table 2**Summary Measures of Quality Indicator Validity**

Quality Indicator	Count of Significant Preventive Data Elements ¹	Count of Significant Responsive / Reactive Data Elements	Total Count of Significant Data Elements	Multiple R (Measure of Association) For Preventive Elements	Multiple R For Responsive Elements	Multiple R for All Elements	Degree of Validity ²
							I TOP II MID III NOT Valid
Chronic Prevalence							
++Percent of residents with inappropriate behavior (high & low risk) BEH1	3	4	7	.34	.31	.43	II
++Percent of residents with inappropriate behavior (high risk) BEH2	1	3	4	.25	.30	.39	III
++ Percent of residents with inappropriate behavior (low risk) BEH3	0	0	0	--	--	--	III
Percent of residents engaging in little or no activity SOC2	8	1	9	.39	.13	.44	II
Percent of residents with indwelling catheters CAT2	5	6	11	.45	.71	.78	I
++Percent of residents who are bladder or bowel incontinent (high & low risk) CNT1	7	3	10	.50	.45	.66	I
++ Percent of residents who are bladder or bowel incontinent (high risk) CNT5	8	2	10	.57	.35	.65	I
++ Percent of residents who are bladder or bowel incontinent (low risk) CNT6	5	3	8	.47	.31	.56	I
Percent of residents with a urinary tract infection CNT4	7	8	15	.51	.41	.59	I

Table 2

Summary Measures of Quality Indicator Validity

Quality Indicator	Count of Significant Preventive Data Elements ¹	Count of Significant Responsive / Reactive Data Elements	Total Count of Significant Data Elements	Multiple R (Measure of Association) For Preventive Elements	Multiple R For Responsive Elements	Multiple R for All Elements	Degree of Validity ²
							I TOP II MID III NOT Valid
Percent of residents who have fallen FAL1	4	4	11	.27	.40	.50	II
++Percent of residents with infections (pilot) INFX	6	9	15	.46	.36	.53	I
++Percent of residents with a feeding tube NUT1	7	7	15	.44	.40	.54	II
++Percent of residents with a low BMI BMIX	6	1	7	.39	.20	.41	II
++Percent of residents who have unexplained weight loss (pilot) WGT1	3	0	3	.27	--	.27	III
++Percent of residents with pain (pilot) PAIX	5	4	9	.32	.67	.74	I
++Percent of residents with pressure sores (high&low risk) (pilot) PRU1	10	12	22	.48	.43	.59	I
++ Percent of residents with pressure sores (high risk) PRU2	10	12	22	.43	.41	.51	I
++ Percent of residents with pressure sores (low risk) PRU3	10	12	22	.36	.35	.50	II
++Percent of residents with burns, skin tears or cuts BURX	4	7	11	.30	.34	.47	II
Percent of residents in physical restraints (pilot) RES1	3	7	10	.33	.48	.52	II

Table 2**Summary Measures of Quality Indicator Validity**

Quality Indicator	Count of Significant Preventive Data Elements ¹	Count of Significant Responsive / Reactive Data Elements	Total Count of Significant Data Elements	Multiple R (Measure of Association) For Preventive Elements	Multiple R For Responsive Elements	Multiple R for All Elements	Degree of Validity ²
							I TOP II MID III NOT Valid
++Percent of residents on antipsychotics without a diagnosis of psychosis (high&low risk) (pilot) DRG1	5	3	8	.32	.31	.47	II
++ Percent of residents on antipsychotics without a diagnosis of psychosis (high risk) DRG2	0	1	1	--	.31	.31	III
++ Percent of residents on antipsychotics without a diagnosis of psychosis (low risk) DRG3	1	3	4	.15	.35	.38	III
Chronic Incidence							
Percent of residents who had an unexpected loss of function in some basic daily activities (pilot) ADL1	13	1	14	.49	.26	.51	I
Percent of residents with worsening function in some basic daily activities ADL2	17	1	18	.57	.07	.57	I
Percent of residents who have improved in their ability to function ADL3	5	0	5	.39	--	.39	II

Table 2**Summary Measures of Quality Indicator Validity**

Quality Indicator	Count of Significant Preventive Data Elements ¹	Count of Significant Responsive / Reactive Data Elements	Total Count of Significant Data Elements	Multiple R (Measure of Association) For Preventive Elements	Multiple R For Responsive Elements	Multiple R for All Elements	Degree of Validity ²
							I TOP II MID III NOT Valid
++Percent of residents who have declined in their ability to locomote MOB1	8	1	9	.62	.09	.62	I
++Percent of residents who walk as well or better than the previous assessment WALX	9	0	9	.64	--	.64	I
++Percent of residents whose cognitive ability has worsened COG1	12	8	20	.40	.34	.52	II
++Percent of residents whose ability to communicate has worsened COM1	3	5	8	.29	.31	.41	II
++Percent of residents with symptoms of delirium DELX	10	0	10	.40	--	.40	II
++Percent of residents whose behavior has worsened BEH4	1	1	2	.15	.17	.24	III
++Percent of residents who have become more depressed or anxious MOD3	7	0	7	.31	--	.31	II
Percent of residents with a new indwelling catheter CAT1	8	6	14	.40	.24	.44	II
Percent of residents with worsening bowel continence CNT2	3	1	4	.25	.30	.45	II

Table 2**Summary Measures of Quality Indicator Validity**

Quality Indicator	Count of Significant Preventive Data Elements ¹	Count of Significant Responsive / Reactive Data Elements	Total Count of Significant Data Elements	Multiple R (Measure of Association) For Preventive Elements	Multiple R For Responsive Elements	Multiple R for All Elements	Degree of Validity ²
							I TOP II MID III NOT Valid
++Percent of residents with worsening bladder continence CNT3	6	5	11	.39	.40	.63	I
++Percent of residents with worsening pain PAN1	9	5	15	.37	.40	.51	II
++Percent of residents with worsening pressure sores PRU4	3	2	5	.27	.23	.35	III
Post-acute Prevalence							
++Percent of short-stay residents with delirium (pilot) DELX	10	2	9	.58	.36	.62	I
++ Percent of short-stay residents with pain (pilot) PAIX	17	6	7	.52	.36	.64	I
Post-acute Incidence							
Percent of short-stay residents who have not improved since admission ADLX	8	0	9	.59	--	.59	I
++ Percent of short-stay residents whose ability to control their bowel or bladder has not improved since admission CNTX	6	0	3	.37	--	.37	II

Table 2

Summary Measures of Quality Indicator Validity

Quality Indicator	Count of Significant Preventive Data Elements ¹	Count of Significant Responsive / Reactive Data Elements	Total Count of Significant Data Elements	Multiple R (Measure of Association) For Preventive Elements	Multiple R For Responsive Elements	Multiple R for All Elements	Degree of Validity ²
							I TOP II MID III NOT Valid
++ Percent of short-stay residents whose pressure sores have not gotten better PRUX	19	0	1	.12	--	.12	III
++ Percent of short-stay residents who have developed a respiratory infection or have not gotten better RSPX	4	0	2	.42	--	.42	II
++Percent of short-stay residents who walk as well or better on day 14 as on day 5 of their stay (pilot) WALX	2	0	4	.48	--	.48	I

Notes:

- ¹ An alpha significance level for the correlation between the validation element and the quality indicator of .09 or lower. Note that these counts refer to the count of elements entered into the multivariate models.
- ² Level I -- Preventive Multiple R Equal to or Greater than .45 – OR -- Total Multiple R equal to or greater than .55
 Level II -- Preventive Multiple R Equal to or Greater than .30 – OR -- Total Multiple R equal to or greater than .40
 Level III -- Preventive Multiple R Less than .30 – OR -- Total Multiple R less than .40
- ³ The sample utilized in evaluation of the post-acute care QIs includes hospital-based transitional care units (TCUs) only [maximum N = 52 facilities]. At the same time, we note that this was one of two analytic samples that could have been used to evaluate the post-acute indicators. Under a second sampling strategy, the TCU sample could be supplemented through the addition of 104 chronic nursing facilities. In each of these facilities there were sufficient numbers of Medicare residents on which to calculate the post-acute quality indicators. Had this second sample approach been the primary strategy to be followed, rather than the TCU approach on which this task rests, the Failure to Prevent or Improve Pressure Sore quality indicator would not have been rejected. In fact it would have been placed in Level I, the highest validation category. At the other extreme, had this alternative approach been used, the Improvement in Walking quality indicator would have been placed in Level III, Not Validated. See Appendix M for more detail.

++ Quality indicator was risk-adjusted using facility admission profile.

--- Indicates that statistics could not be generated due to lack of significant data elements.

1.0 Background and Overview

1.1 Summary of Project Accomplishments To Date

The “Development and Validation of Long-term and Post-acute Care Quality Indicators” project was intended to assist the Centers for Medicare and Medicaid Services (CMS) in advancing its vision of stimulating quality of care in nursing facilities by developing indicators that reflect clinical and other important care outcomes. This report describes the results of a large-scale validation study designed to reveal whether a select number of quality indicators indeed measure what they are intended to measure. Prior to this validation study, a number of accomplishments took place and are described here, including:

- evaluation of the literature regarding existing quality of care indicators (QIs);
- development of additional QIs (referred to throughout as “MegaQIs”) based on areas where there were “gaps” in measurement for long-term (or chronic) and post-acute (or short-term) populations;
- development of a facility-level risk adjustment methodology referred to as the “facility admission profile” (FAP); and
- a pilot study to test data collection strategies.

These project activities are briefly described below, with further information about how the pilot validation study influenced the current study found in Sections 2, 3 and 4.

Review of the literature. The project team conducted an extensive review of published and unpublished literature on all QIs appropriate for use in determining outcomes for long-term and post-acute facility residents/patients. From this review, 143 indicators were identified and evaluated against select criteria. Minimum criteria for selection of QIs for empirical testing was defined as the presence of a clearly specified numerator and denominator, both of which could be operationally defined using Minimum Data Set (MDS) assessment items (See Abt Associates, Oct-2001). Preference was given to QIs that had some form of risk adjustment in order to permit a fairer comparison between facilities with different patient populations (or casemix). Of the 143 indicators identified, 44 indicators were empirically evaluated. After this evaluation, 26 were deemed to have met the Project Team’s selection criteria. Alternative forms of the QIs – specifically forms that utilized a facility-level risk adjustor - were then modeled and reevaluated. This process resulted in a final recommendation of 22 QIs for use by CMS.

Development of Additional Quality Indicators. Once the review of existing QIs had been completed, the project team identified gaps in existing QIs where aspects of care were not being sufficiently addressed. Fifty-four additional quality measures were subsequently developed and tested using secondary data. CMS conducted an internal review process of the 54 newly developed QIs (21 chronic, 21 post-acute, and 12 drug therapy indicators) and then stakeholders were given the opportunity to comment on a website where the underlying conceptual framework of the QIs were posted. Comments from stakeholders and industry representatives were useful in informing the modification of the QI definitions. Decisions on the drug QIs were postponed since CMS decided not to go forward with requiring Section U data on the MDS. Organizational QIs were removed from

further consideration. From this review process, 15 newly developed “MegaQIs” were considered for further validation.

Development of a facility admission profile. A main concern in the implementation of an indicator-based quality reporting system is that judgments based on those QIs might be influenced by facility characteristics other than quality of care. The project team investigated the impact of casemix differences resulting from differential admission or discharge practices and of differential ascertainment as the most likely sources for such biased assessments. The results showed that this concern is warranted and that the specification of appropriate risk adjustment models is a key requirement for the validity of any QI. Other analyses conducted revealed that, particularly in smaller facilities, rankings based on QIs may vary substantially over time and, therefore, that statements about QI performance cannot be made with much statistical confidence.

In attempts to capture these differential effects on quality indicator rankings, a series of analyses were conducted, resulting in the development of a new risk adjustment method that incorporates facility admitting characteristics into the construction of QIs. This adjustment method is referred to as the “facility admission profile” (FAP). As further work on this risk adjustment model has been undertaken, the project team has recommended the use of this facility-level adjuster on some but not all QIs. In general, use of the FAP is recommended for QIs where 1) the adjustment model performs well statistically, and 2) the quality dimension in question is one in which it is expected that facilities cannot affect change upon resident admission. For example, facilities with a “restraint-free” philosophy have the ability to limit physical restraint use at resident admission. Thus, no FAP adjustment is recommended for the “residents in physical restraints” quality indicator.

Validation Pilot Study. Data collection instruments were then developed and field-tested in 45 Massachusetts freestanding facilities. The QIs were grouped by eight quality dimensions for validation: the use of inappropriate drugs, falls, pain, delirium, depression, BMI, failure to improve, and pressure sores. The pilot study provided a first indication as to which of the hypothesized independent causal measures were related to the facility measures of nursing home quality (Abt Associates, Sep-2001). Pilot study findings are described in Section 2.

1.2 Selection of Measures for Full-scale Validation

While in the field conducting the pilot study (Spring/Summer 2001), CMS embarked upon a public reporting initiative. This initiative called for public reporting of quality indicator data for all nursing facilities in six pilot states (Colorado, Florida, Maryland, Ohio, Rhode Island, and Washington). After this pilot test, CMS plans to expand public reporting of nursing facility quality to all states in the nation. Due to the CMS pilot project initiative and impending national quality reporting, the project team redesigned and expanded the validation strategy to examine all dimensions of quality covered by the final set of quality indicators (n = 45). Rather than directly validate each of the 45 quality indicators, each quality *dimension* reflecting particular quality indicators was examined. For example, data were collected for “under-nutrition” as a quality dimension, with the idea that care processes and facility policies collected in this dimension would address the validity of individual measures such as low BMI and unexplained weight loss. Table 1.1 presents the set of quality indicators examined and reported on in this Validation Report; in all, 21 dimensions of quality were examined for chronic and post-acute nursing facility patients.

Table 1.1
Set of Quality Indicators Validated

Indicator	Developer
CHRONIC CARE QUALITY INDICATORS	
Percent of residents with inappropriate behavior (high/low risk, high risk, low risk)	CHSRA
Percent of residents engaging in little or no activity	CHSRA
Percent of residents with indwelling catheters	CHSRA
Percent of residents who are bladder or bowel incontinent (high/low risk, high risk, low risk)	CHSRA
Percent of residents with a urinary tract infection	CHSRA
Percent of residents who have fallen	LTCQ
Percent of residents with infections	MEGAQI
Percent of residents with a feeding tube	Ramsey
Percent of residents with a low BMI	MEGAQI
Percent of residents who have unexplained weight loss	LTCQ
Percent of residents with pain	MEGAQI
Percent of residents with pressure sores (high/low risk, high risk, low risk)	CHSRA
Percent of residents with burns, skin tears or cuts	MEGAQI
Percent of residents in physical restraints	CHSRA
Percent of residents on antipsychotics without a diagnosis of psychosis (high/low risk, high risk, low risk)	CHSRA
Percent of residents who had an unexpected loss of function in some basic daily activities	CHSRA
Percent of residents with worsening function in some basic daily activities	MEGAQI
Percent of residents who have improved in their ability to function	MEGAQI
Percent of residents who have declined in their ability to locomote	LTCQ
Percent of residents who walk as well or better than the previous assessment	MEGAQI
Percent of residents whose cognitive ability has worsened	LTCQ
Percent of residents whose ability to communicate has worsened	LTCQ
Percent of residents with symptoms of delirium	MEGAQI
Percent of residents whose behavior has worsened	LTCQ
Percent of residents who have become more depressed or anxious	LTCQ
Percent of residents with a new indwelling catheter	LTCQ
Percent of residents with worsening bowel continence	LTCQ
Percent of residents with worsening bladder continence	LTCQ
Percent of residents with worsening pain	LTCQ
Percent of residents with worsening pressure sores	LTCQ
POST ACUTE QUALITY INDICATORS	
Percent of short-stay residents with delirium	MEGAQI
Percent of short-stay residents who have not improved since admission	MEGAQI
Percent of short-stay residents whose ability to control their bowels or bladder has not improved since admission	MEGAQI
Percent of short-stay residents with pain	MEGAQI
Percent of short-stay residents whose pressure sores have not gotten better	MEGAQI
Percent of short-stay residents who have developed a respiratory infection or have not gotten better	MEGAQI
Percent of short-stay residents who walk as well or better	MEGAQI

1.3 Overview of this Report

This Validation Report is structured as follows: Section 2 outlines the preliminary pilot study results that influenced the final full-scale validation design. Section 3 explains the data collection process, such as sampling strategy, description of recruitment, and development of data collection tools. In Sections 4 and 5, we describe the methods for the validation of quality indicators. Section 6 contains results from our primary validation findings and reliability and ascertainment bias findings. Section 7 describes preliminary analyses conducted to examine the performance of the facility admission profile. Section 8 contains a discussion of these results, along with conclusions, recommendations, and a description of next steps.

2.0 Summary of Preliminary Pilot Study Results

In February 2001, a pilot study was conducted to test the team's data collection instruments and to provide a provisional analysis of the hypothesized relationship between quality indicator measures and pertinent service input and process measures.

Two samples of data and related data sources were used to test the QIs. Each data sample included MDS-based QIs derived from computerized MDS data and an array of validation elements collected by research staff from participating facilities. The first sample was from an existing data set of 45 facilities owned or managed by the National Health Corporation (NHC). The second data source was obtained under the current CMS "Development and Validation of Long-term and Post-acute Care Indicators" contract from a sample of 45 nursing facilities in Massachusetts (MA).

Data collection protocols were similar for both the existing (NHC) and new primary data collection samples (MA). Staff at each facility, including the Director of Nursing and a representative from Administration, completed self-administered surveys on facility characteristics, care practices, policies, and procedures. In both samples trained research nurses reviewed up to one hundred resident charts per facility. Reviewed records were selected based on computerized algorithms using MDS data, with protocols keyed to specific QI areas — three in NHC and eight in MA. In addition, facility staff were asked to complete a survey on factual and attitudinal items, and research staff completed a systematic walk-through to characterize the ambience of the nursing home and to observe facility care plan meetings.

During the development of data collection protocols, expert panels had defined hypotheses that linked field data elements to specific QIs. Using these hypotheses as a guide, exploratory data analysis techniques were then used to combine data from staff surveys, medical record reviews, facility "walk-through" surveys, care plan observations and other forms. Pilot results suggested that 29 of the 31 QIs examined pass a minimal threshold of provisional validity. Some QIs appeared to have stronger validity evidence than others. For the seven post-acute care (PAC) QIs, the analyses were suggestive of the indicators being valid. Single data elements from the chronic care sample validated some of the PAC QIs, but many PAC QIs demonstrated validity with multiple scales.

In this preliminary and exploratory study, the team found that aspects of nursing home quality of care could be measured with field survey research instruments. Validation "constructs" or scales derived from these instruments appeared to explain a significant proportion of the variability in nursing home MDS-based quality indicator rates. These results provide preliminary evidence that support the position that MDS-based QIs are valid measures of aspects of care quality provided by nursing facilities. The next step of the team was to test these relationships in a larger, more nationally representative sample of nursing homes. This full-scale validation study is described in the remaining sections of this report.

3.0 Data Collection Process

3.1 Sampling Strategy

3.1.1 Facility Sampling

The original facility sampling strategy was to emphasize facilities at both extremes (“good” performers and “poor” performers) of the observed quality of care continuum in a state. Probable poor facilities were defined as those with a preponderance of “bad” QIs; i.e., they were one standard deviation or more above the state mean for the selected QIs. At the other extreme, probable good facilities were defined as those with a preponderance of “good” QIs; i.e., they were one standard deviation or more below the state mean. Twenty-two QIs (those with the most promising results from the pilot study) were used to categorize facilities into good and poor performers. The QIs included:

- Percent of residents who had an unexpected loss of function in some daily activities (CHSRA)
- Percent of residents who have declined in their ability to locomote (LTCQ)
- Percent of residents who walk as well or better than the previous assessment (MegaQI)
- Percent of residents who have fallen (LTCQ)
- Percent of residents whose cognitive ability has worsened (LTCQ)
- Percent of residents whose ability to communicate has worsened (LTCQ)
- Percent of residents with symptoms of delirium (MegaQI)
- Percent of residents with inappropriate behavior high and low risk (CHSRA)
- Percent of residents whose behavior has worsened (LTCQ)
- Percent of residents who have become depressed or anxious (LTCQ)
- Percent of residents with a new indwelling catheter (LTCQ)
- Percent of residents with indwelling catheters (CHSRA)
- Percent of residents who are bladder or bowel incontinent high and low risk (CHSRA)
- Percent of residents with infections (MegaQI)
- Percent of residents with a feeding tube (RAMSEY)
- Percent of residents with a low BMI (MegaQI)
- Percent of residents with pain (MegaQI)
- Percent of residents with pressure sores high and low risk (CHSRA)
- Percent of residents with pressure sores (high risk) (CHSRA)
- Percent of residents with pressure sores (low risk) (CHSRA)
- Percent of residents with worsening pressure sores (LTCQ)
- Percent of residents on antipsychotics without a diagnosis of psychosis high and low risk (CHSRA)

We then oversampled from the good and bad facilities. As facility recruitment progressed and targeted facilities refused to participate, the “good” vs. “bad” facility dichotomy gave way to some convenience sampling, as it was vital to reach the target sample of 210 facilities. Therefore, facilities in the extreme tails of quality performance are not as concentrated as originally hoped.

In order to optimize recruitment of hospital-based facilities and to obtain a nationally representative sample, six states with large numbers of hospital-based facilities or transitional care units (TCUs) were selected: California, Illinois, Missouri, Ohio, Pennsylvania, and Tennessee. Within each state,

the sample of chronic care facilities and TCUs was drawn from contiguous counties with the greatest concentration of TCUs. Long-term care facilities with fewer than 50 beds or with residents with a mean age of less than 50 years were excluded from the sample.

Hospital-based facilities in each state were randomized. As alluded to earlier, some geographic “convenience” sampling was also done due to resource constraints. Table 3.1 illustrates the percentage of facilities from the recruited sample of 219 facilities within each of the four sampling strata.

Table 3.1
Distribution of Facility Sampling Strata by State for 219 Recruited Facilities

State	Neutral		Bad		Good		Bad & Good		Total	
	N	%	N	%	N	%	N	%	N	%
CA	8	8.4	6	15.0	21	27.6	2	25.0	37	16.9
IL	12	12.6	6	15.0	20	26.3	3	37.5	41	18.7
MO	16	16.8	3	7.5	8	10.5	1	12.5	28	12.8
OH	22	23.2	10	7.5	10	13.2	0	0	35	16.0
PA	13	13.7	20	50.0	11	14.5	1	12.5	45	20.5
TN	24	25.3	2	5.0	6	7.9	1	12.5	33	15.1
Total	95	43.4	40	18.3	76	34.7	8	3.7	219	100

The six-state sample is distributed as follows: 37 from California, 41 from Illinois, 28 from Missouri, 35 from Ohio, 45 from Pennsylvania, and 33 from Tennessee. For this sample, not every facility had complete data (e.g., for two facilities, the Administrative Survey was not turned in). The resulting available sample size of 209 will therefore serve as the upper limit for the analytical sample. For most comparisons of chronic quality indicators, the available sample was 151 facilities. For PAC QIs, the available sample numbered 166 facilities, 52 of which were TCUs. Compared to all facilities in the states from which they were selected, participating facilities tended to be somewhat larger, were more likely to be non-profit and were less likely to be located in rural settings. Descriptive statistics comparing the study sample to all nursing facilities in the U.S. may be found in Appendix A.

3.1.2 Patient Sampling

A target of 30 chronic residents or post-acute patients was established per facility. In chronic care nursing facilities, the sample was comprised of 10 residents with a recently completed admission MDS assessment; 10 residents with a recently completed quarterly MDS assessment; and 10 residents with a recently completed annual MDS assessment. “Recently completed” assessments were defined as those that were completed no later than one-month prior to the nurse researcher arriving at the site. If a sample could not be captured with recently completed assessments, the nurse assessors looked back as far as 90 days to fulfill the sample. In hospital-based facilities, the sample was the 30 most recently assessed patients.

Table 3.2 presents the distribution of chronic residents and hospital-based patients from the 209 facilities included in the analytical sample. These distributions are further categorized into neutral, bad, good, and bad and good performers. As displayed in the table, a total of 5,758 long-term and post-acute subjects were included in the analytical sample.

Table 3.2
Distribution of Patients by Facility Sampling Strata by State

State	Neutral		Bad		Good		Bad & Good		Total	
	N	%	N	%	N	%	N	%	N	%
CA	190	7.5	155	14.9	428	21.8	41	19.2	814	14.1
IL	350	13.8	173	16.6	566	28.9	86	40.2	1175	20.4
MO	434	17.1	59	5.7	222	11.3	29	13.6	744	12.9
OH	545	21.4	50	4.8	268	13.7	0	0	863	15.0
PA	361	14.2	548	52.6	306	15.6	29	13.6	1244	21.6
TN	662	26.0	57	5.5	170	8.7	29	13.6	918	15.9
Total	2542	44.1	1042	18.1	1960	34.0	214	3.7	5758	100

3.2 Description of Recruitment

A recruitment package was mailed to each potential study site. This package included a letter introducing the project team and outlining study procedures, a project overview and fact sheet, and letters of project endorsement from CMS, the American Association of Homes and Services for the Aging, and the American Health Care Association. The package is included here as Appendix B.

HRCA nurse recruiters called each facility within two weeks of the mailing to verify contact information, answer questions, and - when possible - arrange for a site visit by the assessor team. When the first call did not elicit a positive response, nurses continued calling until the contact person agreed to schedule a visit or firmly refused to participate. Recruitment calls averaged six per site. Acceptance and refusal rates are presented in Table 3.3. Refusal rates were higher for chronic care facilities (54.4 percent) than for hospital-based facilities (47.6 percent). Facilities that refused tended to be larger, and a higher proportion were for profit, chain-owned facilities. Reasons cited for refusal to participate are described in Table 3.4.

Table 3.3
Acceptance and Refusal Rates for Chronic Care and Hospital-based facilities

State	Chronic care				Hospital-based			
	Accepted		Refused		Accepted		Refused	
	N	%	N	%	N	%	N	%
California	19	5.6	24	7.1	18	14.5	16	12.9
Illinois	26	7.7	41	12.1	15	12.1	14	11.3
Missouri	26	7.7	30	8.9	2	1.6	5	4.0
Ohio	23	6.8	21	6.2	12	3.5	6	4.9
Pennsylvania	34	10.1	28	8.3	11	8.9	14	11.3
Tennessee	26	7.7	40	11.8	7	5.6	4	3.2
Total	154	45.6	184	54.4	65	52.4	59	47.6

Table 3.4
Reasons for Refusal by Facility Type

Reason	Chronic care (%) (N=184)	Hospital-based (%) (N=59)	Total (%)
Too busy	40.2	42.1	40.2
Staffing	12.5	11.9	12.3
Not interested/no reason	30.0	30.5	30.3
Corporation refused	10.8	3.4	9.0
Other	6.5	13.6	8.2

3.3 Development of Data Collection Tools

As the first step in the development of data collection tools for the Pilot Study, the project team convened panels of experts for the eight targeted dimensions of care (pain, pressure sore, high risk drugs, body mass index, falls, depression, failure to improve, and delirium) in the spring of 2000. Criteria used in selecting these areas of care included:

- Prevalence of the problem;
- Face validity;
- Availability of treatments for the problem;
- Tendency for facilities to document the problem (so that evidence may be found in the medical record);
- Susceptibility to being able to be verified via other data collection methods (observation, interview); and
- Sufficient variation in the care area.

Expert panel members were comprised of geriatric nurses, physicians and researchers, both from the participating organizations (Abt Associates, Hebrew Rehabilitation Center for the Aged (HRCA), Brown University and the University of Michigan) and from the long-term care industry.

The charge of the panel members was to review the quality dimensions that were to be validated directly and to propose criteria for how to validate them. These dimensions reflected a mix of facility structures (e.g., staffing) and processes (e.g., drug treatment) as well as an array of resident clinical, functional, and psychosocial outcome areas: psychotropic drugs; falls; delirium; depression; undernutrition (body mass index); failure to improve in activities of daily living (ADLs); pain; and pressure sores. Each expert panel was asked to develop a data collection protocol intended to distinguish “good” performing nursing facilities from poorer performers in the panel’s designated quality dimension (e.g., pain). These data collection protocols would then be used to “validate” the quality measures. Panels were given a template to use as an example, and asked to 1) review all proposed quality measures (chronic or post-acute) relevant to the quality dimension, 2) conduct a brief literature review to ensure panel members were abreast of the latest clinical practice guidelines, standards of care and research in their quality dimension and include the references in their draft protocol, 3) establish a series of hypotheses about what distinguishes a “good” facility from a poor facility in that dimension (e.g., the Pain subcommittee believed that facilities that have a policy in place to guide pain assessment, treatment and evaluation will be more effective in managing and relieving pain), 4) prioritize hypotheses by giving high priority to those that are empirically-based as well as those which the panel believes contribute most to facility quality, and 5) operationalize

hypotheses by developing a series of questions or data items to be gathered to measure facility practices, processes, structures and/or outcomes using sources including medical records, resident observation and interview, staff interview, administrative surveys, environmental observation and family interview. The expert panels were also asked to provide recommendations regarding measurement of global facility practices that might impact upon a facility's provision of quality care in their designated quality dimension (e.g., the Pain subcommittee believed that an interdisciplinary, inclusive care planning process would contribute to adequate pain management).

The effort to have clinical experts specify hypotheses about the essential care processes or structural elements that must be in place in order to label a facility "good" in a particular care domain met with varied success, as there appear to be relatively few well-studied, research-based "standards of care" in use in the nursing facility environment⁸. In cases in which no empirical evidence could drive theories about what components of care qualify a nursing facility as a "good" performer, the expert panels created their own hypotheses.

Review of the material from the dimension-specific panels revealed extensive hypotheses about care processes and structures that comprise "good" facilities in multiple quality domains, but very little in the way of operationalized data collection measures or items. Therefore, the project team further operationalized the recommended concepts and measures into 1) a series of data collection tools that could be completed by trained nurse assessors during medical record review (MRR) and environmental observation and 2) survey instruments designed for completion by facility staff, resident assessment coordinators, Directors of Nursing (DON) and administrators. In many cases these instruments attempt to tap into the congruence of information from different sources. Taking pressure sores for example, measures were developed for the DON survey to determine if the facility had written policies and procedures related to risk assessment, prevention and management and follow-up evaluation of pressure sores, and if the licensed and non-licensed staff were offered educational programs about pressure sores and about facility policies in this area. The MRR sought to determine if there was documentation of risk assessment, preventive measures, and types of interventions and follow-up for residents with pressure sores.

An initial version of the data collection instruments was tested in the winter of 2001 for feasibility in two nursing facilities in Rhode Island and Massachusetts. Information gathered during this feasibility study helped the project team to discover potential problems with the data collection tools, such as ambiguous questions, questions that alienate staff or residents and data items that are not recorded as expected. The gained knowledge lead to substantial modifications of the survey tools.

After incorporating changes from the feasibility study, the revised data collection protocols were tested in a pilot study of 45 Massachusetts nursing homes (see Section 2 for a detailed discussion of the pilot study). Nurse researchers found the data collection instruments to be lengthy, and had two major difficulties in completing them fully at each pilot facility: 1) medical records had often been "thinned" for the period of interest, making it time consuming to gather the required medical record data to complete the medical record review tool; and 2) the "QI-specific" resident sampling framework was cumbersome and at times required the nurse researcher to revisit a particular patient's medical record several times in order to complete the MRR. In addition, nurse researchers found it

⁸ The best examples found of empirically-based nursing facility care practices came from clinical guidelines established by the Agency for Health Research and Quality, such as the Pain Clinical Practice Guidelines.

difficult to complete the required staff and resident observations *and* the observations of care planning meetings *and* individual staff interviews, while also completing the required medical record reviews.

These nurse researcher experiences, as well as findings from the analysis of the pilot study validation data, led the project team to extensively revise the resident sampling framework, the MRR, the environmental walk-through, and the administrative survey in preparation for the full-scale validation study. The care plan observations were dropped from the data collection protocol, as were the staff interviews and MDS Coordinator questionnaire. Care was taken in these protocol revisions to maintain data elements that reflected the quality dimensions of interest in the pilot (and additional dimensions, cited below). Appendix C contains the final data collection instruments utilized in this study.

A final feasibility test of the new data collection protocols was conducted in a Massachusetts hospital-based facility in late October 2001. This exercise allowed the team to identify time management issues for the nurse assessors and eradicate duplicate lines of questioning. The facility's Director of Nursing was particularly helpful with her questions and concerns regarding the Administrative Survey. These comments, along with other observed difficulties, were used to rework the final set of data collection tools used in the full-scale validation effort.

Full-scale implementation of data collection began in mid-November 2001 and was completed in mid-June 2002. The following is the list of instruments used in this full-scale validation effort:

- Medical Record Review;
- MDS Supplement;
- Administrative Questionnaire; and
- Environmental Walk Through/Resident Observation.

Resident-level Data Collection Tools

Medical Record Review Tool. The purpose of the medical record review (MRR) was to obtain information regarding the care processes and types of patient/resident assessments performed by sampled facilities on select areas. The intent of this tool was to assist the research team in understanding the relationship between a facility's quality indicator rates and its resident-specific care processes. The following 21 care areas (or quality dimensions) were reviewed during the MRR:

- Cognitive Impairment;
- Communication;
- Delirium;
- Depression/Mood;
- Behavior Problems;
- ADL Improvement;
- ADL Decline;
- Mobility/Walking;
- Falls;
- Anti-psychotic Drugs;
- Pain;

- Physical Restraints;
- Feeding Tubes;
- Undernutrition / Low BMI / Weight Loss;
- Indwelling Urinary Catheter;
- Bladder Incontinence;
- Bowel Incontinence;
- Infections;
- Pressure sores / Potential for Skin Breakdown;
- Burns, Abrasions, Skin Tears; and
- Little or No Involvement in Activities.

For each of these domains, nurse assessors reviewed the medical record (including nursing progress notes, physician orders and progress notes, care plans, therapy consults and notes, medication administration records, flow sheets and other interdisciplinary notes and consults) for resident care and status documentation. Specifically, assessors looked for documentation on comprehensive assessments, problems/issues, change in status (within certain time frames), referrals, treatments and nursing care plans. All MRR information was entered into the “MedQuest” computer software program, backed up onto diskette and archived by the nurse assessors.

Supplement MDS Assessments. The “MDS Version 2.0 for Nursing Home Resident Assessment and Care Screening Supplement” was used to conduct assessments on all patients in the sample (see Section 3.1.2 for a description of the resident sample). This assessment contained questions regarding:

- cognitive patterns;
- communication/hearing patterns;
- mood and behavior patterns;
- physical functioning and structural problems;
- continence in last 14 days;
- disease diagnoses;
- health conditions;
- oral/nutritional status;
- skin conditions;
- activity pursuit patterns;
- medications;
- special treatment procedures; and
- discharge potential and overall status.

The nurse assessors used the resident’s record, communication with and observation of the resident (when the resident was deemed capable by facility staff of providing an informed consent), communication with direct-care staff (e.g., nursing assistants, activity aides) and communication with licensed professionals (when available) to complete the evaluation. To ensure impartiality, nurse assessors were instructed to complete the supplemental MDS assessment before reviewing the facility’s MDS assessment.

Facility-level Data Collection Tools

Administrative Questionnaire. The Administrator questionnaire included questions regarding:

- staff responsibilities;
- staff/resident/family involvement in care;
- resident status;
- access to specialists/consultants;
- clinical communication channels;
- staff turnover;
- staffing ratios;
- planning processes;
- information on the organization; and
- training and orientation of staff.

These areas were selected for two reasons: 1) the expert panels had developed hypotheses regarding the impact of issues such as staff training and communication on quality; and 2) the Project Team agreed that certain facility-level processes and systems (e.g., communication, care planning) are vitally linked to quality outcomes. While there are many communication patterns represented in a nursing facility, the ones that seem to be most critical are those that involve communication of resident status among facility staff and cognizant physicians. Care planning processes are also considered vital to the successful care of residents. These questions were designed to understand the facility processes that facilitate or impede care delivery, and the relationship of these processes to nursing facility quality of care.

Environmental Walk Through/ Resident Observation. The aim of the Environmental Walk Through/ Resident Observation was to gain an overall understanding regarding whether the facility is “resident-centered”, what the “feel” of the facility is, and what the nature of staff interactions with residents are. A series of general environmental measures were employed to describe the responsiveness of the milieu to resident strengths, needs, and problems that include general care environment measures (e.g., nature of physical environment, communication strategies, environmental manipulation and resident interactions with staff). These measures were collected through assessment, surveillance, and observation of staff technique. The data collectors on site recorded their observations three times per day at approximately 10:00 a.m., lunchtime and 2:00 p.m. to obtain a comprehensive picture of the facility care environment.

3.4 Description of Nurse Researcher Training Program

3.4.1 Qualifications of Nurse Researchers

The Peer Review Organizations (PROs) in participating states were responsible for hiring field data collectors. Preference in hiring was given to registered nurses with chart review experience who also had experience in a long-term care setting and/or in completing the MDS Version 2.0. Among the final group of hires all but one was an RN, several had both long-term care and MDS experience, and all had PRO experience abstracting data from medical records.

3.4.2 Summary of Training and Certification Program

Prior to initiating the field study in November 2001, we conducted a five-day training and certification program in Cambridge, Massachusetts for the newly hired nurse assessors. The majority of assessors were trained in our data collection procedures during this session. Two additional sessions were held in December and January at HRCA for assessors who were unable to attend the first program. Trainers included the CMS Project Officer, three members of the Project Steering Committee (including two RNs), five experienced RN researchers from HRCA who had participated in data collection efforts for the Massachusetts pilot study, and project staff experienced in data collection and management. Training in computerized data entry and archiving was given by the Qualidigm representative who designed the software for this study.

A comprehensive training manual was developed specifically for this activity; each assessor was provided with a copy to serve as a reference guide throughout the training course and for the duration of data collection (see Appendix C). During each session throughout the program trainers walked the assessors through each element and demonstrated how to use the manual to clarify issues that come up in the field. Each manual included all field instruments and detailed instructions on how to complete each tool, including sources of information, definitions of key terms, and examples of coding options. Sections on project procedures and resources, maintaining confidentiality, obtaining informed consent, and data management and submittal were also included. Assessors were instructed to use their manuals for trouble-shooting, looking up contact information for key Project staff resources, and for reminders about standard procedures and implementation guidelines.

Following introductory sessions on project activities, the nursing home and post-acute care environments, and roles and responsibilities of nurse assessors, training was comprised of didactic and practical experience in use of all data collection instruments including the Administrative survey, the facility environmental walk-through and observational tool, the medical record review (MRR) tool, and a subset of MDS Version 2.0 items. To assure accuracy and consistency in coding, particular attention was given to providing the assessors with practical experience in coding the latter two instruments and certifying that they could complete them adequately. Following didactic training in the MRR, the assessors worked in small groups to complete reviews using the MRR on up to four nursing home residents medical records (identifying information deleted). Each group was led by a project staff trainer. Case discussion including question and answer periods with the entire group following each MRR session. Certification of skills competency was then completed using a fifth case, followed by one on one remediation with a group leader as necessary.

Two and one-half days of the program were devoted to training in how to conduct resident assessments using a subset of items from MDS Version 2.0 as the assessors were being trained to be the project's "gold standard" MDS assessors. The didactic portion of the sessions was provided by a clinical nurse specialist with over 10 years experience in this area. The training manual included all corresponding guidelines for assessment from CMS's RAI User's Manual. Trainees were instructed to follow the standard assessment processes specified in the RAI User's Manual (Morris et al, 1995) using multiple sources of information (e.g., resident observation, interviews with direct care staff, chart review). Scripted videotaped vignettes were presented to demonstrate interviewing techniques and to provide practice in coding. Trainees were paired for role-playing exercises to practice their interviewing skills. Case presentations and follow-up discussion were used to illustrate assessment techniques and correct coding responses. To certify competency in MDS assessment, each trainee completed a case and met individually with the lead trainer for review.

To enhance and maintain consistency in coding, project staff held weekly one-hour conference calls with the assessors during the course of data collection. Minutes of the calls, which always included a question and answer section, were distributed to all assessors within one week of the call.

3.5 Inter-rater Reliability Among Nurse Researchers

As mentioned in Section 3.4, nurse researchers were assessed for their understanding and ability to correctly complete the MRR and MDS forms prior to leaving the training sessions. In addition to this “certification” process, weekly debriefing teleconferences were held with nurse teams to answer any coding questions. Finally, beginning in January 2002, nurse researchers were required to complete two paired assessments and medical reviews with their partner per facility. Nurses were asked to select cases for inter-rater reliability review at random, once the resident sample at each facility had been selected. Nurses were not to share findings until each of their reviews of both MRR and MDS forms was complete and data entered. Inter-rater review cases were submitted to HRCA along with all other MRR and MDS data submitted from the field. Nurse reviewers were also asked to photocopy portions of the relevant records and submit to HRCA for two main purposes: 1) to provide a context for discussion on subsequent debriefing calls; and 2) to allow spot-checking of results by project nurses.

All nurse reviewers performed some number of the requested inter-rater reliability reviews. Some nurses performed and submitted more inter-rater reviews than others. Agreement statistics for the MDS inter-rater reliability of nurse researchers were very good, and are described in Section 5.2.

In order to understand the degree and nature of nurse assessor item-level consistency, Medical Record Review forms were completed for eight records from five nurse assessor teams representing four states. These reviews were completed as a “spot check” of MRR coding, and were selected based upon lower levels of overall MRR inter-rater agreement between these nurse teams. In general, nurse assessors appeared to pay careful attention to detail and a rationale for their responses could be detected. In many cases where there was disagreement between the project nurse and the assessor(s), it seemed very possible that not all parts of the medical record had been submitted to HRCA for review. Other areas of discrepancy found were attributable to 1) contradictory and/or inconsistent facility documentation; and 2) lack of clear coding instructions. With regard to the latter problem, attempts were made to clarify coding instructions on the weekly debriefing calls, particularly in the area of comprehensive assessments and ADL improvement and decline.

3.6 The Data Collection Process

The overall tasks in management of primary data included: 1) creation of a database to manage all site data obtained during the validation study; 2) data entry of all data collection instruments; 3) processing data submitted by sampled facilities and by nurse reviewers; 4) data cleaning; and 5) identification of sites with complete data for inclusion in the analytical file.

Using Qualidigm’s Medquest Clinical Data System Software, field nurses entered MDS supplement and Medical Record Review data onsite, copied the data onto diskettes, and forwarded the diskettes to HRCA, where the data was added to the study database. On numerous occasions, diskettes submitted with MDS supplement and medical record data were found to be empty, corrupt or unreadable and the assessor was asked to submit their backup data. Qualidigm programmers were available by phone to

work with the assessors to resolve problems. When the assessor could not produce a backup copy or Qualidigm was unable to resolve the software problem, assessors were asked to submit paper copies, if available, to HRCA for data processing.

The Administrative Surveys completed by facility staff and copies of the 30 most-recently completed MDS assessments were submitted to HRCA for data entry. HRCA staff also entered the three Environmental/Walk Through Observations and contact sheets for the 30-plus residents from each site.

All site data, including the Administrative Survey, was to be sent by Federal Express to HRCA within the week following the site visit. Although the assessors had been instructed to submit site data in one package, many of them entered their data after the site visit, off-site of the facility; thus, data from a site often arrived in two packages as much as a week apart. The clerk who opened the package checked against the sample roster to verify that each case was complete and the study IDs were correctly recorded on each paper form (contact sheet, consent form when required, facility MDS assessment, and paper or diskette for MDS and medical record review). Diskette data was read and checked for completeness, and errors were corrected prior to being merged into the study database.

Data cleaning programs were written to identify sites with missing data, to ensure that disposition of the case was correctly recorded on the contact sheet, that each MDS assessment was accompanied by the facility MDS completed no more than 90 days earlier. Assessors were contacted by phone or e-mail when IDs could not be matched, or data was incomplete or improperly coded.

HRCA nurses called many facilities repeatedly requesting that Administrative Surveys that had not been completed during the site visit be mailed or faxed directly to HRCA. This process resulted in successfully obtaining all but two of these surveys. Unfortunately, most surveys were returned with at least one missing or questionable response. All problematic items were photocopied and faxed to the facility for correction. When the facility failed to correct one or more items after at least two requests by fax and a follow-up telephone request, these items were coded as refusals.

Ten sites were dropped because of incomplete data:

- Two small hospital-based facilities and one chronic care facility with a small census during the site visit were dropped because the assessors were unable to obtain assessments for a minimum of 20 residents who had been assessed by the facility during the 90-day period prior to the site visit.
- Assessors at one site failed to provide at least 20 complete copies of the most recent MDS assessments by the facility, and attempts to complete the sample were unsuccessful.
- Assessors at one site were denied access to medical records for more than half of the sample; they were told that the records were “locked up.”
- Three sites were lost because data for 15 of the 30 cases could not be recovered from diskette or archive, and paper assessments were not available.
- Two facilities failed to complete the Administrative Survey and were therefore dropped from the analytic sample.

4.0 Methods for Primary Validation of QIs

4.1 Overview

This section of the report presents the methods used in this national study to determine whether a series of MDS-based quality indicators, also referred to as performance measures, are valid measures of the quality of care provided by nursing homes. The analysis is based on a six-state, national sample of nursing facilities (N= 209), and is focused on the relationship between two sets of variables. The first is a series of indicators of nursing home quality based upon aggregated resident data (i.e., the quality indicators). The second are three arrays of measures that relate to service inputs, assessments, and staffing that have been hypothesized as the precursors to good nursing home performance on the quality indicators (i.e., the validation elements). The major premise for these analyses is that if the former quality indicator measures are to be considered meaningful and valid, there should be a significant relationship with the relevant validation measures.

4.2 The Quality Indicators

4.2.1 Description of the QIs Evaluated in this Study

The quality indicators are of two types, “chronic” and “post-acute,” and they were derived from one of two sources: they were either in general use in the industry prior to this study, or they were designed by the study team to fill “gaps” in the coverage of the existing indicator set. All post-acute care indicators were created by the study team, as were eight of the chronic measures. The remaining chronic measures were derived from three sources – Ramsey, the Center for Health Systems Research and Analysis (CHSRA), and LTCQ, Inc. The research conducted to select the existing indicators has previously been reported (Abt Associates, Oct-2001).

The largest set of indicators to be tested applies to long-stay residents of nursing facilities. These residents are often referred to as “chronic,” with many likely to spend the rest of their lives in a nursing home. These measures do not assess quality at the point of admission, rather, most of them require a minimum exposure period of 90 days in the facility before the indicator comes into play. In fact, for the typical chronic resident, he or she will have been in the facility for more than one year, and in all cases we seek to ensure that to the extent possible, the indicator is an honest reflection of the long-term path of decline of the resident and the intervening care practices of the facility.

There are 38 of these “chronic” quality indicators, divided into prevalence and change-based measures. Twenty-three are prevalence measures, 15 are change-based measures. All but two of the change measures reference declines in status, and these declines occur over a 90-day assessment window (i.e., the scheduled interval between MDS assessments for long-stay, chronic residents). These indicators reference the following dimensions: functional performance; cognition and communication status; mood and behavior; social activities; clinical complications (e.g., incontinence, unexplained weight loss, pain, pressure sores, infections); falls; use of appliances (i.e., restraints, tubes, catheters); and antipsychotic drug use.

The second type of quality indicator evaluated applies to the short-stay resident population found in skilled nursing facilities. Medicare largely pays for the care for these residents, and a resident of this

type is typically admitted from a hospital and will have a total length of stay of from a few days to a month's duration. These residents are often called subacute or post-acute care (PAC) patients.

Seven PAC QIs were evaluated, referencing the following dimensions: functional performance (i.e., overall ADLs and mobility); delirium; pain; bladder continence; pressure sores; and respiratory problems. Two are prevalence-based, five are incidence-based, and all seven reference patient status during the initial two plus weeks of the stay.

4.2.2 The Nursing Home Minimum Data Set

The measures underlying the quality indicators are derived from a facility-mandated, facility-generated, resident assessment tool known as the Minimum Data Set (MDS). CMS first mandated national use of the MDS in 1990, and under this mandate, facility staff are responsible for completing the assessments. And, given this facility assignment feature of the national MDS mandate, it was deemed advisable to reassess the accuracy of these assessments. The quality indicator effort rests on this structure, and for these measures to be usable as inputs into a national quality indicator system, we must be able to “trust” these staff assessments.

MDS reliability reports in the literature from the initial roll out of Version 1 of the MDS in 1990 and Version 2 in 1996 were most positive, although there have been more conflicting assessments reported subsequent to 1996. To further test this issue seemed to be a prudent step in this study. And, while the results are described elsewhere in this report, the bottom line is most encouraging. Facility staff reliability levels remain on par with the earlier reports from the rollouts of Versions 1 and 2 of the MDS. There were no significant inter-state differences in the accuracy of the assessments, and only a handful of facilities appeared to perform poorly (around 5 percent of the total). For a nationally mandated system, these are very positive results, indicating that the U.S. nursing home industry has reacted responsively to this aspect of the federal mandate.

4.2.3 Construction of the Quality Indicators

In constructing the set of quality indicators evaluated here, there has been a concern for possible inter-facility variation in the types of residents admitted and served by the facility; difference in the mix of residents served across facilities raises the possibility that inter-facility comparisons may be biased. To control for this possibility, where deemed necessary, three adjustment strategies have been applied.

- 1) For all of the indicators a denominator exclusion rule was applied (e.g., residents near death). These residents were not considered in the calculation of the quality indicator.
- 2) For four of the CHSRA indicators, two sub-versions of the same overall indicator were created for each facility, one applying to high-risk residents, the other to low risk residents. In addition, an overall high/low risk indicator was calculated.
- 3) For many of the other indicators, including those created by the project team and LTCQ Inc., some type of statistical regression-based covariate adjustment strategy was employed. For many indicators, this involved traditional resident-level covariates, supplemented in many instances by a new type of facility-based adjustment based upon resident characteristics upon admission. This is referred to as the “facility admission profile”. QIs constructed using a facility admission profile are designated as such in results table 6.1.

Unadjusted, covariate-adjusted and FAP- and covariate-adjusted quality indicator rates for the set of 45 chronic and PAC QIs were calculated for every facility in the six validation states. Rates were calculated using target quarters corresponding to the time period of primary data collection (i.e., Calendar Quarter 4, 2001 and Calendar Quarter 1, 2002). Adjusted rates were derived from logistic regression models run on a national MDS dataset that consisted of four quarters (excluding the target quarter) of data. Appendix D describes the exact method of QI calculation, and Appendix E contains operational definitions (e.g., numerators, denominators, risk adjustment) of each of the 45 quality indicators.

4.3 Primary Validation of QIs

The primary goal of this full-scale validation study was to determine if the selected set of MDS-based quality indicators reflect the care processes in place in nursing facilities. That is, do the MDS-based QIs measure what they are intended to measure (i.e., validity)? Nursing facility quality indicators may be considered valid when they 1) are accurately measured; and 2) reflect a positive relationship between the care reflected by the QI and the care processes and structures in place to achieve those care processes reflected by data collected at a nationally representative sample of nursing facilities. For example, in a facility with a low rate of pressure sores (i.e., a “good” facility), we would expect to see care processes in place that are designed to prevent the occurrence of pressure sores, or to treat and cure pressure sores expediently. The positive relationship between the QI rate and the care processes in place in the facility would allow a determination that the QI in question (in this case, pressure sore) was valid.

The accuracy of the measure of quality is of vital importance in any assessment of validity; the analysis of this and related issues is discussed in Section 5. The following section describes the various components of the design of the full-scale validation study and the subsequent development of measures by which QI validity was assessed.

4.3.1 Development of Validation Hypotheses

In facilities with good quality outcomes one should be able to identify care processes and structures that relate to, or could potentially influence, resident outcomes. The project team therefore took a multi-step approach to developing a comprehensive array of observational, survey, and record review tools that could efficiently measure such processes and structures. This process was previously described in Section 3.3.

As described, the data collection tools and subsequent validation analyses were based upon a series of hypotheses regarding the relationship of “good” care or best practices in nursing facilities to good quality outcomes in specific care dimensions. One example is provided here to further articulate this process.

The expert clinical panel that dealt with the “Pressure sore” quality dimension developed a series of hypotheses related to the ability of the facility to minimize the incidence of pressure sores among their residents or to manage the patient with a wound admitted from other settings of care. The expert panel reviewed clinical practice guidelines regarding pressure sores from both the Agency for Health Research and Quality (formerly the Agency for Health Care Policy and Research) and the American Medical Directors Association in proposing these hypotheses. The pressure sore hypotheses include (but are not limited to):

Hypothesis 1: Facilities that have the following in place will have fewer new pressure sores arise among their patient population:

- a standardized assessment protocol for identifying the patients at risk,
- policies and procedures to specifically address the individual's risk factors, and
- explicit programs for implementation and monitoring of individualized prevention interventions.

Hypothesis 2: Facilities that have surveillance mechanisms to identify early signs of tissue injury will have fewer new pressure sores arise among their patient population.

Hypothesis 3: For patients with pressure sores, attention to support surfaces, positioning protocols and padding will result in fewer new pressure sores among these patients.

The project team utilized these hypotheses both to create data collection items on the medical record review, environmental observation and administrative questionnaire and to form validation constructs upon data analysis. In implementing data collection for this area of care quality, medical records were reviewed to determine if sampled facilities used screening tools or other assessments (i.e., Norton or Braden scales), research nurses observed during the environmental tour if positioning devices were in use, and Directors of Nursing were asked about facility pressure sore policies, quality improvement activities, and educational efforts regarding the prevention of pressure sores.

4.3.2 Process of Developing Final Validation Scales

In addition to guiding the content of data collection instruments, the hypotheses for quality dimensions were also used to construct validation scales or “constructs” by which to assess facility quality in the analysis of validation data.

In the full-scale validation study, emphasis was placed upon 21 key dimensions of quality: cognitive impairment, communication, delirium, depression/mood, behavior problems, ADL improvement, ADL decline, mobility/walking, falls, antipsychotic drugs, pain, physical restraints, feeding tubes, undernutrition, indwelling urinary catheter, bladder incontinence, bowel incontinence, infections, pressure sores, burns/abrasions/skin tears, and little or no involvement in activities. In addition to these dimensions, data regarding facility paradigms such as a preventative, enhancement-oriented approach, good and comprehensive care planning and assessment processes, and access to consultants in and outside the facility were gathered during the site visits.

During the analysis phase of the validation study, a series of activities occurred:

- Re-examination of validation scales/constructs used in the pilot study;
- Creation of new validation constructs for all 21 quality dimensions; and
- Examination of the relationship of individual data collection instruments to quality dimensions/quality indicators.

Each validation scale used in the pilot analysis was re-examined to determine the expected strength of the relationship with the quality indicator, and with other quality indicators if warranted. In addition, data collection instruments were reviewed in order to identify validation elements for specific quality

indicators beyond the eight primary dimensions targeted by the pilot study, and to construct validation scales that may reflect performance in multiple domains of quality.

Methods

Project members reviewed all available data collection instruments, and examined the frequency distribution of each data element of interest. They suggested individual items, combination of elements or summary scales based on content and the distribution of responses. That is, items with no variation (e.g., all facility responses on a given item were “yes”) were not used because they would not discriminate between good and poor performers.

Each proposed validation scale was discussed by the project team. One hundred seventy- four- validation scales in all were created or re-examined from the pilot study (see Appendix F). The clinical validity of each scale was reviewed, as was the frequency distribution of the scale to ensure that it demonstrated sufficient variation. Based on conference discussion, some scales were modified and others deleted. If similar constructs were addressed by more than one scale, preference was given to scales with better potential for applicability to multiple domains and to those with variation in the distribution of responses. If merited, judgments were made as to whether the hypothesized relationship between the validation construct (or scale) and the QI was expected to be moderate (Level 1) or weak (Level 2).

Finally, relationships between individual data collection instruments (either in entirety or by individual data item) and QIs were examined to determine the strength of these relationships. This evaluation revealed that many of the medical record review items, for example, bore a strong relationship to individual quality indicators, absent any additional data elements or a priori construct. Again, these data items were collected because it was hypothesized that the processes they measured (e.g., care planning, comprehensive assessment) were related to quality, so these positive relationships were not unexpected.

4.3.3 Final Validation Constructs

The final validation elements utilized to determine degree of quality indicator validity were categorized as follows:

- ***Preventive*** strategies represent the class of actions that “good” facilities choose to follow in an attempt to minimize the emergence of problems; these strategies are anticipatory in character. Data elements categorized into the preventive construct include staff training, higher staff resource levels, and facility efforts at continuous quality improvement (CQI).
- ***Responsive*** strategies represent actions that facilities are likely to use as they recognize that residents have ongoing or emerging problems in different quality areas. They represent a service response “audit trail,” and as such confirm that staff have recognized the problem. Externally, these facilities will be observed to have higher QI scores, but the medical record will reflect a recognition that action must be taken in response to identified resident problems. Examples of data elements gathered on-site that are categorized as responsive are the documentation of comprehensive assessments (other than the MDS), documentation of changes in resident status, and referrals to specialists from inside and outside of the facility (e.g., physicians).

In summary, preventive strategies work to reduce the prevalence or incidence of quality problems measured by the QIs. On the other hand, responsive strategies reflect the fact that quality problems may have emerged in the resident population and as such reflect a “failure” of the facility to prevent the problem (or failure to achieve expected improvement outcomes). Consequently, responsive strategies are associated with an increased prevalence of problems (i.e. quality indicators).

While the constructs created from the various sources of data were conceptualized as falling into one class or another, clinically and administratively relevant data elements thought to be related to particular QIs might have been able to be classified as either preventive or responsive. Thus, our final classification of the validation elements was done based both upon how they related to one another as well as how they related to the QIs. While seeming to represent a “circular” logic (i.e. using one construct to validate another and then to apply the same logic in the other direction), this is a process that characterizes most efforts at construct validation. Thus, the validation elements and constructs were examined for directionality relative to selected QIs and then the QIs were each formally tested against the battery of constructs (classified as preventive or responsive) to determine whether facility records, care processes and structures related to the QIs in the expected direction.

For each of the constructs or individual data elements categorized as preventive or responsive, the relationship between it and the full array of quality indicators under study was reviewed. To be found acceptable, the construct had to have a consistent relationship across multiple quality indicators. For example, to be classified as preventive, a data element (e.g., a CQI monitoring protocol) had to be related to several quality indicators. We required that there be a clear directional relationship between the construct and the quality indicators. Specifically, preventive elements had to always show a positive relationship to lower (less problematic) QI rates, while responsive elements had to demonstrate a positive relationship to higher (more problematic) QI rates. In other words, the correlation between preventive elements and quality indicators had to be negative, and the correlation between responsive elements and quality indicator scores had to be positive to be considered clearly directional.

In evaluating the validity of the quality indicators, several summary measures were created and reviewed:

- a count of the number of significant preventive or responsive validation elements for the quality indicator, with the greater the count, the greater the confidence in the relationship;
- a measure of the pooled association of the list of significant validation elements with the quality indicator. The latter is derived from a regression equation, and in this case represented by the multiple correlation coefficient. This is a multivariate-derived value that resembles a standard bivariate correlation⁹. In reviewing these values, we settled on a combination of two factors in assigning each of the candidate quality indicators to one of three “valid” categories: Top, Mid, and Not Validated; and
- the underlying reliability of the MDS item and resulting QI.

To understand how these preventive and responsive factors were applied in establishing the validity of a QI, we provide examples of how these elements individually relate to two of the chronic quality indicators, “Residents with pressure sores” (high & low risk) and “Residents with worsening function in some basic daily activities”. Both indicators are assigned to the Level I, Top Validity category,

⁹ Note: this value can be squared to get the classic R² estimate of explained variance.

and both achieved this status on the basis of the preventive elements alone. For the Pressure sore indicator, there was also a substantial array of individual responsive relationships, while for the other, worsening function in basic daily activities, there was only one item of this type.

The *Pressure sore* indicator quantifies the proportion of at-risk residents in a facility that have a pressure sore (i.e., bed sore, decubitus ulcer, pressure ulcer) of severity ranging from one persistent area of redness that does not disappear when pressure is relieved to one or more open wounds where the full thickness of skin and subcutaneous tissue is lost and underlying bone or muscle is exposed.

There are a large number of clinical and functional risk factors for pressure sores (e.g., poor nutrition, incontinence, diabetes, immobility); thus, a number of preventive activities and responsive factors were evaluated. Preventive activities, in general, relate to the handling of at-risk residents and treatment of conditions that contribute to or mitigate pressure sore risk. Responsive activities, in general, define actions that a facility's caregivers take to document, communicate and attempt to ameliorate pressure sores once present.

Preventive activities for pressure sore prevalence included the screening, assessment, and treatment for conditions placing residents at risk for pressure sores. Thus, the following individual data elements or constructs were found to be associated with lower pressure sore prevalence:

- More frequent scheduling of assessments for suspicious skin areas.
- Weekly routine assessment using a standard protocol for delirium, that would - if present - keep residents bed-bound.
- Observations on the environmental assessment of residents walking or otherwise out of bed.
- Observations on the environmental assessment of caregivers providing assistance to residents with nutritional needs.
- A constructed scale expressing the extent to which a facility manages clinical, psychosocial, and nutritional complications across domains in a manner consistent with high quality care (expressed as a single factor score).

Staffing factors provide additional (albeit indirect) evidence of preventive activities. For example, staffing items related to pressure sore prevalence were 1) the absence of facility management change; and 2) the extent that a facility did *not* rely upon floats or contract staff.

Responsive activities for pressure sore prevalence include policies, procedures or actions taken by caregivers in response to existing or newly detected pressure sores. Identified activities include:

- Comprehensive assessment (other than the MDS) of pressure sores documented in the medical record.
- Assessment of pressure sores by a physician.
- Clear documentation in the medical record that the resident has a problem in this area or that the resident's condition has changed relative to pressure sores.
- Where change was noted in the medical record, there is documentation that this change 1) was evaluated within 72 hours, 2) resulted in a notification to physician or therapist, 3) resulted in a referral to a consultant, and/or 4) resulted in a change in the care plan.

An additional theme related to pressure sores was a constructed measure of the extent to which the medical record and care plan agree that pressure sores are a problem. This level of agreement signals facilities with a well-integrated system for problem recognition and treatment implementation.

For *Worsening function in some basic daily activities*, there were 17 significant preventive elements and one significant responsive element. From this set of preventive elements, three primary themes emerge: attention to the resident as an individual, an engaging and safe environment, and good continence care. Further explanation of these themes and related data elements follows.

- Maintaining ADL gains is related to a concern with what the resident is thinking and who he or she may be as a person, as seen in areas related to cognition, behavior, and pain. Better outcomes (i.e. facilities have lower rates of worsening function in basic daily activities) are observed when there are: 1) CQI monitoring protocols in place for behavioral function and communication; 2) weekly routine screening of communication and pain, using standard protocols; and 3) rooms that are personalized with furniture, photos, and other things from the resident's past.
- Maintenance of ADLs is also related to an environment in which the resident is up and out of bed and engaged in activities. Better outcomes are related to a series of things that were observed by the research nurse about the facility, including: 1) residents being up and about; 2) residents seen to be walking or independently moving about the facility with or without assistive devices; and 3) indications that a variety of activities are available for residents with different capabilities. Related data elements observed during inspection of the facility environment were that public and common areas were well lighted and resident safety had been considered.

Finally, there was a link to facility efforts aimed at good continence care. Preventive elements relating to this theme include: 1) a scale that counted up to 15 "good" incontinence management items; 2) a scale that focused on care practices relevant to promoting improved levels of continence; 3) a scale that looked specifically at ADL training approaches that were targeted to helping residents maintain continence patterns; and 4) a CQI monitoring protocol in place for bladder incontinence.

5.0 Methods for Evaluating Reliability and Measurement Bias

Prior to conducting the analyses to validate the meaningfulness of the quality indicators, it was crucial to first establish whether the data submitted by participating facilities were reliable and without substantial measurement bias. Since the QIs are based upon MDS data submitted on all residents and admissions from all facilities, if a facility's data are consistently unreliable or biased in a particular manner, that facility's data would increase the noise, or error, in the data being used to test the validity of the QIs. To the extent that this occurs, our test of the validity of the QIs will be compromised. Consequently, one of the principle reasons for conducting reliability and measurement bias analyses was to consider dropping facilities from the pool of facilities included in the analyses. The methods used to test the reliability and measurement bias in the data are described in the sections below.

5.1 Testing for Inter-rater Reliability

The data collection effort in each facility had the research nurses gather over 100 different MDS data elements independently about each sampled nursing home patient, both new admissions and long-stay residents. These MDS assessments were done as part of the research nurse's examination of sampled patients' medical records as well as their observation of, or conversation with, the patient. In comparing the MDS assessment elements recorded in the facility MDS with those recorded by the study research nurses, we had to ensure that the research nurses were reliable one with the other. Thus, the first step in the testing for inter-rater reliability was testing the inter-rater reliability among the research nurses. These nurses underwent a central training by HRCA nurses, all of whom have extensive MDS experience, and have worked with CMS in the design and refinement of the MDS since its inception in 1990.

In most participating study facilities, pairs of research nurses worked together to split the work and to ensure efficient conduct of the entire data collection protocol. One feature of that was to have the two research nurses conduct an inter-rater reliability test on several residents in many of the study facilities (see Section 3.5). While there were not enough residents assessed by the same pair of raters to permit inter-rater reliability assessments for each research nurse, it was possible to pool the paired reliability assessments done among the research nurses. In this way, we established the general inter-rater reliability of the research nurses. To the extent that they are found to be reliable, one can assume that comparisons to any one research nurse are generalizable to all others. Furthermore, since the goal was to test not only the degree of inter-rater reliability in the study facilities, but also the extent to which there is measurement bias, it is important to know that the research nurses can be thought of as the "gold standard" against which the measurement performance of the facility nurses can be compared.

The approach used to test inter-rater reliability is the Kappa statistic, or the weighted Kappa for ordinal measures such as ADL performance, etc (Cohen, 1960). This statistic essentially compares the two sets of raters who have each observed and assessed the same patient independently. However, rather than merely calculate the percentage of cases on which they agree, the Kappa statistic corrects for "chance" agreement, where "chance" is a function of the prevalence of the condition being assessed. It is possible that two raters could agree 98 percent of the time that a resident had episodes

of disorganized speech. However, it might be the case that virtually no residents were rated by either rater as having episodes of disorganized speech and that they never agreed when one thought that the condition was present. In this instance, in spite of the fact that the level of agreement would be very high, the Kappa would be very low. Depending upon the importance of the assessment construct, or item, having a low Kappa in the face of very high agreement and high prevalence could be very problematic or a trivial concern. For this reason, we will generally present the percentage agreement as well as the Kappa, or weighted Kappa. The weighted and unweighted Kappas are identical for dichotomous (binary) measures such as all the Quality Indicators (presence or absence); however, the ordinal measures like ADL or cognitive decision-making are more appropriately assessed with the weighted Kappa.

By convention, a Kappa statistic that is .70 or higher is excellent whereas a Kappa statistic that is less than .40 is considered unacceptable. Levels in-between are acceptable. These standards were applied for both the individual MDS data elements as well as the composite, dichotomous quality indicators.

The total number of pairs of observations for the inter-rater reliability analyses is nearly 4,000. Obviously, in view of the numbers of observations, any estimate of the overall degree of inter-rater reliability for the sample of participating facilities in this study will be very stable. For the most part, the number of pairs of observations per facility is between 25 and 30. This number of observations yields a fairly stable estimate of inter-rater reliability to characterize the facility, given that the observations are representative of the residents and nurse raters in the facility and conditional on the relative prevalence and distribution of the condition (e.g., dementia, pain) in the facility. This means that a Kappa statistic characterizing the reliability of all raters in a given facility is likely to reflect the stability and commonality of assessment perspectives among individuals in the home.

In some instances, particularly for calculating the QIs at the level of the individual resident, restrictions on the residents to which a QI applies ends up reducing the number of paired comparisons within a facility as the basis for calculating a facility-specific Kappa. In order to insure that a minimum number of observations are included in the calculation of Kappa, we set the threshold at five. The confidence intervals around an estimate of the Kappa is a function of the absolute percentage agreement, the prevalence, or variance, of the condition as well as the number of pairs being compared. Holding constant the prevalence and agreement rate, the size of the confidence interval is clearly related to the number of observations. For a facility with 30 paired observations, the approximate 95 percent confidence interval is +/- .25; that interval becomes +/- .65 when there are only five observations. While it is obvious that this means that the confidence interval around the Kappa estimate for a given facility may be quite large, we didn't want to lose significant numbers of facilities to the inter-rater reliability analysis by requiring the number of pairs to be much higher.

5.2 The Reliability of “Gold Standard” Research Nurses

In all, a total of 119 pairs of resident assessments were compared across the 26 research nurses included in the validation study. Each research nurse rated from one to 17 of the paired assessments. The results of the analyses are presented below in Table 5.1.

Table 5.1
Summary Inter-Rater Reliability Statistics of MDS items for Research Nurses

	MDS Item	Percent Agreement	Kappa	Weighted Kappa*
A10A	Living Will	87.16	0.61	0.61
A10B	Do Not Resuscitate	91.45	0.83	0.83
A10C	Do Not Hospitalize	97.22	0.39	0.39
A10F	Feeding Restrictions	97.25	0.89	0.89
A10G	Medication Restrictions	97.22	0.83	0.83
A10H	Other Treatment Restrictions	92.59	0.69	0.69
A10I	Advanced Directives: None Above	96.33	0.93	0.93
B2A	Short-term Memory	88.24	0.63	0.63
B4	Cog Skill for Daily Decision Making	97.29	0.85	0.89
B5A	Less Alert, Easily Distracted	97.88	0.85	0.79
B5B	Periods of Altered Perception	97.69	0.80	0.75
B5C	Episodes of Disorganized Speech	97.69	0.79	0.72
B5D	Periods of Motor Restlessness	96.22	0.67	0.66
B5E	Periods of Lethargy	98.11	0.80	0.78
B5F	Mental Function Varies over the Day	96.64	0.78	0.71
C4	Making Self Understood	95.89	0.73	0.82
C6	Ability to Understand Others	96.08	0.76	0.80
E1A	Patient Made Negative Statements	98.32	0.89	0.89
E1C	Repetitive Verbalizations	98.11	0.65	0.71
E1D	Persistent Anger with Self/Others	98.95	0.84	0.86
E1E	Self Deprecation	97.48	0.56	0.56
E1F	Express Unrealistic Fears	96.64	0.76	0.76
E1G	Recurring State - Something Terrible	99.16	0.80	0.80
E1H	Repetitive Health Complaints	94.12	0.73	0.73
E1I	Repetitive Anxious Complaints	97.69	0.74	0.73
E1L	Sad, Pained Facial Expression	95.38	0.68	0.71
E1M	Crying, Tearfulness	98.32	0.74	0.78
E1N	Repetitive Physical Movements	97.27	0.77	0.86
E2	Mood Persistence	94.49	0.73	0.81
E4A.A	Frequent Wandering	98.79	0.85	0.85
E4B.A	Frequent Verbally Abusive	100.00	1.00	1.00
E4C.A	Frequent Physically Abusive	98.69	0.76	0.74
E4D.A	Frequent Socially Inappropriate Behavior	99.35	0.75	0.87
G1AA	Bed Mobility Self-Perform	96.02	0.72	0.86
G1BA	Transfer Self-Perform	97.80	0.71	0.92
G1CA	Walk in Room Self-Perform	97.01	0.72	0.91
G1DA	Walk in Corridor Self-Perform	95.23	0.74	0.86
G1EA	Loco on Unit-Perform	94.81	0.71	0.85
G1FA	Loco off Unit Self-Perform	96.28	0.74	0.89
G1GA	Dressing Self-Perform	96.59	0.69	0.85
G1HA	Eating Self-Perform	96.96	0.84	0.88
G1IA	Toilet Use Self-Perform	97.59	0.76	0.91
G1JA	Personal Hygiene Self-Perform	96.96	0.70	0.89
G8A	Res-increased Independence in some ADLs	93.52	0.74	0.74
G8B	Staff-increased Independence in some ADLs	89.19	0.73	0.73

Table 5.1
Summary Inter-Rater Reliability Statistics of MDS items for Research Nurses

	MDS Item	Percent Agreement	Kappa	Weighted Kappa*
G8C	R Able to Perform Tasks Slowly	90.00	0.47	0.47
G8D	Major Diff ADLs Morning vs. Evening	95.37	0.26	0.26
G8E	ADL Rehab Potent: None Above	86.96	0.72	0.72
H1A	Bowel Continence	94.96	0.77	0.88
H1B	Bladder Continence	95.70	0.78	0.88
H3D	Indwelling Catheter	97.22	0.79	0.79
H3E	Intermittent Catheter	99.08	0.80	0.80
H3F	Didn't Use Toilet Room	91.74	0.53	0.53
H3G	Pads/Briefs Used	89.47	0.78	0.78
H3I	Ostomy	99.08	0.80	0.80
H3J	Appliance and Programs: None	90.99	0.81	0.81
I1FF	Manic Depressive	100.00	1.00	1.00
I1GG	Schizophrenia	99.07	0.90	0.90
I1RR	Diseases: None of the Above	96.64	0.78	0.78
I1X	Paraplegia	97.22	0.39	0.39
I2E	Pneumonia	99.08	0.85	0.85
I2F	Respiratory Infection	98.15	0.89	0.89
I2G	Septicemia	100.00	1.00	1.00
I2J	Urinary Tract Infection	96.36	0.88	0.88
I2L	Wound Infection	99.07	0.80	0.80
I2M	Infection: None of the Above	93.97	0.85	0.85
J1B	Unable to Lie Flat	95.45	0.59	0.59
J1H	Fever	99.07	0.88	0.88
J1I	Hallucinations	100.00	1.00	1.00
J1L	Shortness of Breath	91.82	0.71	0.71
J1P	None of the Above	93.04	0.78	0.78
J2A	Pain Frequency	92.95	0.72	0.78
J2B	Pain Intensity	98.18	0.73	0.82
J4A	Fell Past 30 Days	93.75	0.00	0.00
K3A	Weight Loss	97.46	0.83	0.83
K5B	Feeding Tube	99.08	0.92	0.92
K5C	Mechanically Altered Diet	90.99	0.82	0.82
K5I	Nutritional Approach: None Above	92.11	0.84	0.84
M2A	Pressure sores	98.73	0.73	0.83
M4F	Skin Tears	95.37	0.76	0.76
M4H	Other Skin Problems: None of the Above	94.92	0.72	0.72
N2	Average Time Involved in Activities	95.34	0.57	0.65
O4A	Days Received: Antipsychotics	97.32	0.91	0.92
P1AO	Spec Program: Hospice	99.07	0.66	0.66
P1AS	Spec Program: None of the Above	99.16	0.66	0.66
P4C	Restraints: Trunk Restraint	98.09	0.66	0.72
P4E	Restraints: Chair Prevents Rising	97.01	0.74	0.80
Q1C	Discharge Planned Within 3 Months	95.06	0.76	0.66

Notes:

* weight = $1 - [(i-j)^2 / (g-1)^2]$ where i, j are row and column number, and g the number of groups

weighted Kappa inflated with the function $sbicc = (2 * kw) / (2 * kw + (1 - kw))$ where kw is the weighted Kappa

As can be seen, the percentage agreement and the weighted and unweighted Kappa statistics are high for most MDS items. Only three elements (shaded in gray) have a Kappa that is below .4 (the accepted minimum, particularly for highly skewed variables), and these are highly prevalent and not incorporated into any of the quality measures. The average weighted Kappa for all 87 items is .78, well within the excellent range. Thus, it is clear that these research nurses were well trained and behaved in a similar manner, meaning that all inter-rater reliability performance comparisons between the research and facility nurses can be compared.

5.3 Estimating the Extent of Systematic Measurement Bias

While inter-rater reliability provides evidence of the degree of agreement, correcting for chance, between “gold standard” nurse assessors and facility nurses, even an acceptable Kappa still leaves room for the possibility that all disagreements between raters are in the same direction. For example, the Kappa between the research and facility nurses for one of the measures characterizing the presence of behavioral problems might be .6. The Kappa statistic provides no indication of the “directionality” of the disagreements, but it may well be that facility nurses “normalize” such manifestations of behavioral disturbances and so are less likely to record them as present than are the research nurses. In this way, there is a measurement bias toward under-reporting, or minimizing the presence of selected kinds of clinical problems.

The rationale for exploring the presence of “measurement bias” relates to one of our concerns about comparing nursing facilities across the country using the QIs. Examinations of national data on the prevalence of conditions like pain have found that there is substantially less pain reported among residents in some states than in others, in spite of the fact that the clinical characteristics of nursing home residents in those different facilities is quite similar. Similarly, anecdotal evidence suggested that some facilities focused more aggressively on the identification of some clinical problems such as behavioral problems, distressed mood and pain than did others. The relevance of this suggestion for the development and dissemination of QIs is that facilities that more aggressively identify clinical problems in the MDS assessment will be ranked as performing worse with respect to those QI areas. Since our “gold standard” research nurses were uniformly trained and were found to be reliable, one to the other, they provided an ideal opportunity to see how facility nurses in our participating facilities assessed some of these subjective states relative to a common standard – the research nurses. To address this issue, we created a statistic that estimates the extent to which there is a consistent direction to the disagreement between raters. There might be very limited or considerable disagreement between two raters, but as long as those disagreements are not consistently in one direction or another, there is no bias.

We are interested in comparing the results from our ‘gold raters’ to the facility raters for each of the QIs. Our trained raters are considered the ‘gold standard’ because *a priori* there is no reason to believe that they will over or under report any of the QIs for some facilities (i.e., there should be a consistency across facilities). There are many statistical methods that could be used for comparing the raters. For a review, see Banjeree, et al, 1999. The most common statistic for assessing agreement between two raters for binary random variables is Cohen’s Kappa (Cohen, 1960). A feature of the Kappa statistic is that it adjusts for the probability of agreement by chance.

For the measurement bias analyses we are interested not only in whether the raters agree, but also in whether disagreement is systematic within facilities. That is, our interest is in determining whether or

not facilities tend to over or under report each indicator. We measure the chance-corrected measure of disagreement using the following statistic, which we will refer to as Gamma. We will index facility by i and patient by j . Let G_{ij} be the value of the indicator from the gold rater for facility i and patient j . Similarly, F_{ij} is the indicator from the facility rater. There are two types of errors that can be made (false positive and false negative). In the spirit of Kappa, we penalize each error for the probability of disagreement by chance. This leads to chance-corrected directional Kappa-like statistic, Gamma,

$$\gamma_{ij} = P(F_{ij} = 1 | G_{ij} = 0) / P(F_{ij} = 1) - P(F_{ij} = 0 | G_{ij} = 1) / P(F_{ij} = 0).$$

That is, γ_{ij} is the difference in false positive and false negative rates, except that each rate is ‘adjusted’ for the probability of disagreement be chance, e.g., if the prevalence of the indicator is low, then a false positive is considered a more serious mistake. Positive values of Gamma indicate that the facility tends to over report the indicator; Gamma equal 0 indicates that the facility does not under or over report the indicator, on average; negative values correspond to under reporting.

We conducted a simulation study to determine a ‘rule of thumb’ for classifying facilities based on Gamma. Data were simulated from 10,000 facilities, where each facility’s data were generated under one of the following five scenarios: 1) large negative disagreement (facility raters under report the QI); 2) small negative disagreement; 3) no direction to the disagreement; 4) small positive disagreement; and 5) large positive disagreement. Based on the simulations, we classify Gamma in an analogous way to Landis and Koch’s (1977) classification of Kappa as follows: 1) $\text{Gamma} < -0.6$ is large negative bias; 2) $-0.6 < \text{Gamma} < -0.2$ is moderate negative bias; 3) $-0.2 < \text{Gamma} < 0.2$ is little to no bias; 4) $0.2 < \text{Gamma} < 0.6$ is moderate positive bias; and 5) $\text{Gamma} > 0.6$ is large positive bias.

We generated the Gamma statistic per facility for all facilities with at least five paired inter-rater reliability observations. The basic data per facility generated and included in Appendix G is the prevalence for the “gold standard” and for the facility raters, the false positive and the false negative rate (assuming that the research nurse is the “gold standard”), the facility Kappa and the resulting facility Gamma statistic. Since we anticipated inter-state differences in the directionality of the measurement bias, we also chose to report the distribution of the Gamma statistic separately by state for each QI. At the level of the facility we plotted the distribution of the Gamma statistic on each QI as a histogram to provide an indication of the directionality of the participating facilities’ assessments. Finally, we cross-tabulated the frequency of QIs being in the high negative or in the high positive across all facilities so as to provide an overall assessment of whether, relative to the research nurse assessors, participating facilities were under or over-reporting problems.

5.4 Analyzing the Relationship Between Measurement Bias and the QI

We conducted descriptive graphical analyses as well as multiple regression analyses in order to determine if the Gamma statistic moderates the relationship between the facility Quality Indicator measurement and the facility admission profile (FAP). The QI is a measure indicating the proportion of residents in the facility with a given condition, based upon the most recently available facility-wide MDS data. The QI is based upon the prevalence “snap shot” population of nursing home residents. The FAP reflects the proportion of individuals admitted to the facility in the 12 months prior to the measurement of the QI with the condition that would otherwise trigger them to meet the QI condition.

The graphical analyses were done by creating a scatterplot of the relationship between the QI and the FAP, with different colors indicating those facilities with a substantial negative vs. a substantial positive Gamma statistic vs. those with a Gamma statistic around zero (0). The regression analysis was done regressing the FAP on the QI, controlling for two indicator variables based upon the Gamma – one suggesting a large positive Gamma and the other suggesting a large negative Gamma, with the Gammas around zero serving as the referent group. In conducting these analyses, we focused both on the relative strength of the Gamma associations as well as the extent to which the relationship between the FAP and the QI changes with the introduction of the Gamma in the regression model. These findings are described in Section 7.0.

6.0 Results

As has been stated previously, the reliability and validity of quality indicators is of utmost importance in any deliberations regarding QI utility. This section presents findings on MDS and quality indicator reliability, and on the presence (or absence) of systematic measurement bias (or “ascertainment bias”) in this set of evaluated quality indicators. In addition, we report on the degree of validity of each of the 45 tested QIs.

6.1 Reliability/Ascertainment Bias Findings

We undertook the reliability and ascertainment bias analyses for several different purposes. First, in order to provide the best test of the validity of the quality indicators, we wanted to determine whether poor MDS data quality might adversely affect our ability to detect a relationship between the validation elements and the various quality indicators. If we were to find that the overall reliability of the MDS data was poor, the strength of any validation effort would be seriously questioned. The reason for gathering sufficient information to determine the reliability of the MDS data in each participating facility was to allow us to exclude facilities that revealed systematic data reliability problems across a broad range of MDS data elements used to create QIs.

We also undertook these analyses to test the possible influence of systematic measurement bias on the reliability and validity of the QIs. Based upon comparisons of the prevalence of selected clinical care problems from state to state, we surmised that assessors in some areas of the country were more or less likely to assess residents as having some care problems that are used in the construction of QIs. Thus, treating our research nurse assessor as the “gold standard”, we sought to understand the extent to which systematic bias (facility assessors tending to miss problems when research assessors found them or *vice versa*) existed for each QI in each facility and ultimately how it related to the QI.

6.1.1 MDS Reliability

Reliability was evaluated in several ways. Research nurse MDS assessments were compared to facility-generated MDS assessments to generate the following statistics: 1) percent agreement between “gold” standard nurses and facility nurses; 2) MDS item-level Kappas; and 3) Kappas for a subset of the QI where these could be established (i.e., for prevalence QIs only).

Table 6.1 displays reliability and distributional statistics for each of the quality indicators for the 209 facilities in the national study sample. Reliability was assessed using the weighted Kappa statistic, with a value of .40 or higher being considered indicative of inter-assessor agreement, while a value of .75 or higher is indicative of superior inter-assessor reliability. In this case the weighted Kappas reflect the cross-sectional reliability of the MDS items that comprise the numerator of the quality indicator (e.g., the numerator for the “Residents who have fallen” QI is MDS item J4a). Using this standard, only one of the MDS items for a QI numerator falls below the .40 threshold (MDS item N2, which makes up the “Residents engaging in little or no activity” QI). Thirty-two of the quality indicators are based on MDS items with an average weighted Kappa of .70 or higher.

Table 6.1 also displays the mean rates of the quality indicators across the 209 sampled facilities. As seen here, only three quality indicators have very low prevalence (i.e. < five percent). The rate of the chronic care “Residents with pressure sores (low risk)” is three percent. The rate of the chronic care

“Resident with a new indwelling catheter” indicator is two percent, and the rate of the post-acute care “Residents with delirium” indicator is three percent across the sampled facilities. Five of these QIs have very high prevalence (i.e., > 60 percent). The rate of “Residents who are bladder or bowel incontinent – high and low risk” is 62 percent, the rate of “Residents who are bladder or bowel continent – high risk” is 93 percent. Similarly, the chronic care “Residents who walk as well or better than the previous assessment” indicator is 82 percent. Two post-acute care indicators, “Residents who have not improved since admission” and “Residents who have developed a respiratory infection or have not gotten better” have rates of 63 and 92 percent, respectively. The rate of occurrence of various QIs is another criterion that should be taken into consideration when evaluating the utility of various QIs, as extreme skews in the rates of occurrence may indicate QI instability, as well as poor utility in detecting inter-facility variation.

Table 6.1

QI Rates and Weighted Kappas

Quality Indicator	QI Proportional Rate – The Average Across Facilities	Standard Deviation of the QI Rate	The Rate in the Facility with the Lowest Proportional Problem	The Rate in the Facility with the Highest Proportional Problem	Average Weighted Kappa for MDS Items Composing the QI 1
Chronic Prevalence					
++Percent of residents with inappropriate behavior (high & low risk) BEH1	.20	.10	.00	.68	.71
++Percent of residents with inappropriate behavior (high risk) BEH2	.23	.11	.00	.69	.71
++ Percent of residents with inappropriate behavior (low risk) BEH3	.07	.05	.00	.23	.71
Percent of residents engaging in little or no activity SOC2	.12	.12	.00	.77	.28
Percent of residents with indwelling catheters CAT2	.07	.05	.00	.32	.71
++Percent of residents who are bladder or bowel incontinent (high & low risk) CNT1	.62	.13	.14	.89	.88

Table 6.1

QI Rates and Weighted Kappas

Quality Indicator	QI Proportional Rate – The Average Across Facilities	Standard Deviation of the QI Rate	The Rate in the Facility with the Lowest Proportional Problem	The Rate in the Facility with the Highest Proportional Problem	Average Weighted Kappa for MDS Items Composing the QI 1
++ Percent of residents who are bladder or bowel incontinent (high risk) CNT5	.93	.05	.76	.99	.88
++ Percent of residents who are bladder or bowel incontinent (low risk) CNT6	.49	.13	.12	.83	.88
Percent of residents with a urinary tract infection CNT4	.08	.05	.00	.31	.53
Percent of residents who have fallen FAL1	.08	.04	.00	.24	.52
++Percent of residents with infections (pilot) INFX	.17	.08	.00	.43	.50
++Percent of residents with a feeding tube NUT1	.08	.05	.00	.27	.80
++Percent of residents with a low BMI BMIX	.12	.05	.00	.31	.85
++Percent of residents who have unexplained weight loss (pilot) WGT1	.08	.04	.00	.26	.42
++Percent of residents with pain (pilot) PAIX	.11	.08	.00	.48	.73
++Percent of residents with pressure sores (high&low risk) (pilot) PRU1	.09	.05	.00	.27	.74
++ Percent of residents with pressure sores (high risk) PRU2	.14	.07	.01	.48	.74

Table 6.1

QI Rates and Weighted Kappas

Quality Indicator	QI Proportional Rate – The Average Across Facilities	Standard Deviation of the QI Rate	The Rate in the Facility with the Lowest Proportional Problem	The Rate in the Facility with the Highest Proportional Problem	Average Weighted Kappa for MDS Items Composing the QI 1
++ Percent of residents with pressure sores (low risk) PRU3	.03	.02	.00	.10	.74
++Percent of residents with burns, skin tears or cuts BURX	.05	.04	.00	.19	.46
Percent of residents in physical restraints (pilot) RES1	.07	.09	.00	.49	.56
++Percent of residents on antipsychotics without a diagnosis of psychosis (high&low risk) (pilot) DRG1	.21	.08	.02	.43	.89
++ Percent of residents on antipsychotics without a diagnosis of psychosis (high risk) DRG2	.43	.11	.26	.61	.89
++ Percent of residents on antipsychotics without a diagnosis of psychosis (low risk) DRG3	.17	.07	.02	.40	.89
Chronic Incidence					
Percent of residents who had an unexpected loss of function in some basic daily activities (pilot) ADL1	.16	.09	.00	.44	.84

Table 6.1**QI Rates and Weighted Kappas**

Quality Indicator	QI Proportional Rate – The Average Across Facilities	Standard Deviation of the QI Rate	The Rate in the Facility with the Lowest Proportional Problem	The Rate in the Facility with the Highest Proportional Problem	Average Weighted Kappa for MDS Items Composing the QI 1
Percent of residents with worsening function in some basic daily activities ADL2	.08	.07	.00	.33	.83
Percent of residents who have improved in their ability to function ADL3	.25	.09	.08	.48	.83
++Percent of residents who have declined in their ability to locomote MOB1	.14	.07	.01	.40	.82
++Percent of residents who walk as well or better than the previous assessment WALX	.82	.08	.61	.99	.84
++Percent of residents whose cognitive ability has worsened COG1	.12	.07	.00	.43	.76
++Percent of residents whose ability to communicate has worsened COM1	.11	.07	.00	.31	.83
++Percent of residents with symptoms of delirium DELX	.09	.06	.00	.29	.61
++Percent of residents whose behavior has worsened BEH4	.07	.05	.00	.24	.72
++Percent of residents who have become more depressed or anxious MOD3	.15	.07	.00	.37	.60

Table 6.1**QI Rates and Weighted Kappas**

Quality Indicator	QI Proportional Rate – The Average Across Facilities	Standard Deviation of the QI Rate	The Rate in the Facility with the Lowest Proportional Problem	The Rate in the Facility with the Highest Proportional Problem	Average Weighted Kappa for MDS Items Composing the QI 1
Percent of residents with a new indwelling catheter CAT1	.02	.02	.00	.09	.71
Percent of residents with worsening bowel continence CNT2	.19	.09	.00	.41	.88
++Percent of residents with worsening bladder continence CNT3	.19	.09	.00	.49	.87
++Percent of residents with worsening pain PAN1	.10	.05	.00	.26	.73
++Percent of residents with worsening pressure sores PRU4	.07	.04	.00	.27	.74
Post-acute Prevalence					
++Percent of short-stay residents with delirium (pilot) DELX	.03	.03	.00	.16	.65
++Percent of short-stay residents with pain (pilot) PAIX	.27	.10	.02	.60	.72
Post-acute Incidence					
Percent of short-stay residents who have not improved since admission ADLX	.63	.19	.14	.99	.72
++ Percent of short-stay residents whose ability to control their bowel or bladder has not improved since admission CNTX	.55	.09	.32	.79	.73

Table 6.1**QI Rates and Weighted Kappas**

Quality Indicator	QI Proportional Rate – The Average Across Facilities	Standard Deviation of the QI Rate	The Rate in the Facility with the Lowest Proportional Problem	The Rate in the Facility with the Highest Proportional Problem	Average Weighted Kappa for MDS Items Composing the QI 1
++ Percent of short-stay residents whose pressure sores have not gotten better PRUX	.23	.09	.04	.50	.74
++ Percent of short-stay residents who have developed a respiratory infection or have not gotten better RSPX	.92	.05	.77	.99	.53
++Percent of short-stay residents who walk as well or better on day 14 as on day 5 of their stay (pilot) WALX	.28	.14	.03	.71	.77

Notes:

¹ Kappas below 0.4 reflect poor inter-rater reliability; a value between .40 and .60 is indicative of acceptable inter-assessor agreement; and a value of .75 or higher is indicative of superior inter-assessor reliability.

++ Quality indicator was risk-adjusted using facility admission profile.

6.1.2 The Performance of all Prevalence-based Quality Indicators

Table 6.2 contains results for the average “percent agreement” between facility and research nurse assessors on 21 prevalence-based quality indicators. Overall level of agreement in the population of raters was high, with only the “Residents engaging in little or no activity” QI demonstrating lower than 70 percent agreement. Most QIs were near or above the 90 percent agreement mark. The “population average” Kappas are presented in Table 6.2 along with the “facility-specific average” Kappas for each QI. Again, only the “Residents engaging in little or no activity” QI performed poorly.

6.1.3 Other Analyses

We also examined the following issues in these analyses:

- The effect of elapsed time on reliability;
- Inter- and intra-state variation in reliability;
- A detailed case study of the reliability of the MDS items on pain (items J2a and J2b);
- An analysis of consistently poor-performing facilities (in terms of MDS reliability); and
- An assessment of the direction of measurement bias, using the Gamma statistic.

With the exception of the analysis of measurement bias, which may be found in Section 7.0, a discussion of the above-referenced analyses and findings may be found in Appendix H. In summary, the key findings regarding MDS and QI reliability are as follows:

- Overall level of agreement in the population of raters was high, with only the “Residents engaging in little or no activity” QI demonstrating lower than 70 percent agreement. Most QIs were near or above the 90 percent agreement mark;
- We found no significant differences between facility and research assessor level of agreement attributable to elapsed time between pairs of assessments;
- As seen in our previous research, we did find considerable variability of reliability statistics within and across states;
- Facilities tended to be either “good” raters or “poor” raters, as measured by Kappa scores with exceptional reliability (i.e. greater than .75) plotted against Kappa scores with poor reliability (i.e., Kappas below .40);
- Only a handful of facilities were found to be problematic based on the Kappa and Gamma analyses; and when validation models were tested with and without this small number of facilities there was little or no effect on the results. Thus, the findings that follow included all sampled facilities.

Table 6.2
Performance of 22 Quality Measures

Quality Measure	Percent Agreement	Population Average Kappa	Facility-Specific Average Kappa
Percent of residents with inappropriate behavior – high & low risk (chsra; beh01)	89.88	0.65	0.60
Percent of residents with inappropriate behavior – high risk (chsra; beh02)	86.89	0.65	0.63
Percent of residents with inappropriate behavior – low risk (chsra; beh03)	96.43	0.51	0.75
Percent of residents engaging in little or no activity (chsra; soc02)	65.39	0.21	0.21
Percent of residents with indwelling catheters (chsra; cat02)	92.59	0.67	0.68
Percent of residents who are bladder or bowel incontinent – high & low risk (chsra; cnt01)	91.47	0.83	0.79
Percent of residents who are bladder or bowel incontinent – high risk (chsra; cnt05)	97.59	0.75	0.74
Percent of residents who are bladder or bowel incontinent – low risk (chsra; cnt06)	90.76	0.8	0.76
Percent of residents with a urinary tract infection (chsra; cnt04)	89.16	0.48	0.42
Percent of residents with infections (megaqi; inf0x)	79.67	0.45	0.37
Percent of residents with a feeding tube (ramsey; nut01)	98.19	0.87	0.82
Percent of residents with a low BMI (megaqi; bmi0x)	96.7	0.87	0.83
Percent of residents who have unexplained weight loss (chsra; wgt1)	*	*	*
Percent of residents with pain (megaqi; pai0x)	86.57	0.57	0.50
Percent of residents with pressure sores – high & low risk (chsra; pru01)	88.68	0.6	0.54
Percent of residents with pressure sores – high risk (chsra; pru02)	85.33	0.61	0.58
Percent of residents with pressure sores – low risk (chsra; pru03)	92.29	0.52	0.81
Percent of residents with burns, skin tears or cuts (megaqi; bur0x)	90.28	0.24	0.57
Percent of residents in physical restraints (chsra; res01)	91.39	0.53	0.51
Percent of residents on antipsychotics without a diagnosis of psychosis – high & low risk (chsra; drg01)	94.63	0.82	0.78
Percent of residents on antipsychotics without a diagnosis of psychosis – high risk (chsra; drg02)	89.87	0.8	0.67
Percent of residents on antipsychotics without a diagnosis of psychosis – low risk (chsra; drg03)	95.63	0.81	0.77

Note: *Analyses were not completed for this QI.

6.2 Primary Validation Findings

Appendix I & J display the results of the relationship between the a priori hypotheses and the quality indicators, and the findings are as anticipated. There are more positive, significant findings than one would have expected by chance alone. In fact the rate of observed findings of this type is over twice what one would have expected had the relationships been simply random. But, it is also true that for the typical QI, which had slightly less than 16 *a priori* hypotheses, only 2.4 of these hypotheses are found to be significant, and in the direction hypothesized (note, in the appendix tables, there are also a few shaded values, representing instances where the direction of the observed, significant relationship was counter to that which had been hypothesized). Nevertheless, the fact remains that these relationships do begin to lay the foundation for our validation rationale for a number of the quality indicators.

For the item-specific preventive and responsive analyses, many more positive findings are observed (see Appendices K and L). There is support for both the preventive and responsive hypotheses.

These individual findings are summarized in Table 6.3. The rows of the table reference the individual quality indicators, arranged as follows: chronic prevalence indicators, chronic incidence indicators, post-acute prevalence indicators, and post-acute incidence indicators. There are seven additional columns to the table. The first three present the count of significant, supportive validation elements for each quality indicator, with separate counts for the number that fall under the preventive and responsive domains, and a final count of the total number of supportive validation elements for the indicator. Columns 4 through 6 provide the Multiple R correlation estimate of the relationship between the pool of significant validation elements and the quality indicator. The last column on the table, labeled “Degree of Validity”, provides the final assessment of the confidence one can have in the quality indicator at the end of this validation process. There are three possible classifications: Level I, Top validity, represents those quality indicators with the strongest support. Level II, Mid, represents the remainder of the validated indicators. Level III, Not Validated, represents indicators that failed to be supported in this analysis. In their current form, there is insufficient reason to believe that they provide a reasonable facility estimate for the quality problems they seek to address.

Let us walk through the first row of the table, for the Residents with inappropriate behavior (high and low risk) prevalence indicator. In terms of the count of supportive elements, there are seven in total, three preventive and four responsive. The overall multiple R equals .43, and is .34 for the preventive elements and .31 for the responsive elements. Moving to the last column, the net result of this analysis supports the validity of this quality indicator. This is a Level II, Mid validation finding. As can be seen in the “notes” to Table 6.3, the criteria for a QI to be categorized as Level II requires a preventive Multiple R equal to or greater than .30 OR a total Multiple R equal to or greater than .40. This QI is found to be valid at the Level II category based upon both its total Multiple R and preventive Multiple R scores.

For all quality indicators the findings are as follows:

- Fourteen chronic quality indicators were at Level I, Top. Nine are prevalence indicators, while five are incidence indicators. There are nine clinical complexity indicators (Residents who are bladder or bowel incontinent prevalence in total and for the two risk subgroups, Residents with infections, Residents with urinary tract infection, Residents with pain,

Residents with pressure sores, high and low risk, Residents with pressure sores, high risk, Residents with worsening bladder continence); one service indicator (Residents with indwelling catheters); and four functional indicators (Residents who had an unexpected loss of function in some basic daily activities, Residents with worsening function in some basic daily activities, Residents who have declined in their ability to locomote, Residents who walk as well or better than the previous assessment).

- Seventeen chronic quality indicators are at Level II, Mid. Nine are prevalence indicators, while eight are incidence indicators.
- Seven chronic quality indicators are at Level III, NOT Validated. They include Residents with inappropriate behavior high and low risk (although the overall, or combined indicator was Level I), Residents who have unexplained weight loss, Residents on antipsychotics without a diagnosis of psychosis high and low (although the overall, or combined indicator was Level II), Residents whose behavior has worsened, and Residents with worsening pressure sores.
- Four post-acute care quality indicators were at Level I, Top; two were at Level II, Mid; and one (Short stay residents whose pressure sores have not gotten any better) was at Level III, NOT Validated.

Table 6.3**Summary Measures of Quality Indicator Validity**

Quality Indicator	Count of Significant Preventive Data Elements ¹	Count of Significant Responsive / Reactive Data Elements	Total Count of Significant Data Elements	Multiple R (Measure of Association) For Preventive Elements	Multiple R For Responsive Elements	Multiple R for All Elements	Degree of Validity ²
							I TOP II MID III NOT Valid
Chronic Prevalence							
++Percent of residents with inappropriate behavior (high & low risk) BEH1	3	4	7	.34	.31	.43	II
++Percent of residents with inappropriate behavior (high risk) BEH2	1	3	4	.25	.30	.39	III
++ Percent of residents with inappropriate behavior (low risk) BEH3	0	0	0	--	--	--	III
Percent of residents engaging in little or no activity SOC2	8	1	9	.39	.13	.44	II
Percent of residents with indwelling catheters CAT2	5	6	11	.45	.71	.78	I
++Percent of residents who are bladder or bowel incontinent (high & low risk) CNT1	7	3	10	.50	.45	.66	I
++ Percent of residents who are bladder or bowel incontinent (high risk) CNT5	8	2	10	.57	.35	.65	I
++ Percent of residents who are bladder or bowel incontinent (low risk) CNT6	5	3	8	.47	.31	.56	I
Percent of residents with a urinary tract infection CNT4	7	8	15	.51	.41	.59	I

Table 6.3

Summary Measures of Quality Indicator Validity

Quality Indicator	Count of Significant Preventive Data Elements ¹	Count of Significant Responsive / Reactive Data Elements	Total Count of Significant Data Elements	Multiple R (Measure of Association) For Preventive Elements	Multiple R For Responsive Elements	Multiple R for All Elements	Degree of Validity ²
							I TOP II MID III NOT Valid
Percent of residents who have fallen FAL1	4	4	11	.27	.40	.50	II
++Percent of residents with infections (pilot) INFX	6	9	15	.46	.36	.53	I
++Percent of residents with a feeding tube NUT1	7	7	15	.44	.40	.54	II
++Percent of residents with a low BMI BMIX	6	1	7	.39	.20	.41	II
++Percent of residents who have unexplained weight loss (pilot) WGT1	3	0	3	.27	--	.27	III
++Percent of residents with pain (pilot) PAIX	5	4	9	.32	.67	.74	I
++Percent of residents with pressure sores (high&low risk) (pilot) PRU1	10	12	22	.48	.43	.59	I
++ Percent of residents with pressure sores (high risk) PRU2	10	12	22	.43	.41	.55	I
++ Percent of residents with pressure sores (low risk) PRU3	10	12	22	.36	.35	.50	II
++Percent of residents with burns, skin tears or cuts BURX	4	7	11	.30	.34	.47	II
Percent of residents in physical restraints (pilot) RES1	3	7	10	.33	.48	.52	II

Table 6.3

Summary Measures of Quality Indicator Validity

Quality Indicator	Count of Significant Preventive Data Elements ¹	Count of Significant Responsive / Reactive Data Elements	Total Count of Significant Data Elements	Multiple R (Measure of Association) For Preventive Elements	Multiple R For Responsive Elements	Multiple R for All Elements	Degree of Validity ²
							I TOP II MID III NOT Valid
++Percent of residents on antipsychotics without a diagnosis of psychosis (high&low risk) (pilot) DRG1	5	3	8	.32	.31	.47	II
++ Percent of residents on antipsychotics without a diagnosis of psychosis (high risk) DRG2	0	1	1	--	.31	.31	III
++ Percent of residents on antipsychotics without a diagnosis of psychosis (low risk) DRG3	1	3	4	.15	.35	.38	III
Chronic Incidence							
Percent of residents who had an unexpected loss of function in some basic daily activities (pilot) ADL1	13	1	14	.49	.26	.51	I
Percent of residents with worsening function in some basic daily activities ADL2	17	1	18	.57	.07	.57	I
Percent of residents who have improved in their ability to function ADL3	5	0	5	.39	--	.39	II

Table 6.3**Summary Measures of Quality Indicator Validity**

Quality Indicator	Count of Significant Preventive Data Elements ¹	Count of Significant Responsive / Reactive Data Elements	Total Count of Significant Data Elements	Multiple R (Measure of Association) For Preventive Elements	Multiple R For Responsive Elements	Multiple R for All Elements	Degree of Validity ²
							I TOP II MID III NOT Valid
++Percent of residents who have declined in their ability to locomote MOB1	8	1	9	.62	.09	.62	I
++Percent of residents who walk as well or better than the previous assessment WALX	9	0	9	.64	--	.64	I
++Percent of residents whose cognitive ability has worsened COG1	12	8	20	.40	.34	.52	II
++Percent of residents whose ability to communicate has worsened COM1	3	5	8	.29	.31	.41	II
++Percent of residents with symptoms of delirium DELX	10	0	10	.40	--	.40	II
++Percent of residents whose behavior has worsened BEH4	1	1	2	.15	.17	.24	III
++Percent of residents who have become more depressed or anxious MOD3	7	0	7	.31	--	.31	II
Percent of residents with a new indwelling catheter CAT1	8	6	14	.40	.24	.44	II
Percent of residents with worsening bowel continence CNT2	3	1	4	.25	.30	.45	II

Table 6.3**Summary Measures of Quality Indicator Validity**

Quality Indicator	Count of Significant Preventive Data Elements ¹	Count of Significant Responsive / Reactive Data Elements	Total Count of Significant Data Elements	Multiple R (Measure of Association) For Preventive Elements	Multiple R For Responsive Elements	Multiple R for All Elements	Degree of Validity ²
							I TOP II MID III NOT Valid
++Percent of residents with worsening bladder continence CNT3	6	5	11	.39	.40	.63	I
++Percent of residents with worsening pain PAN1	9	5	15	.37	.40	.51	II
++Percent of residents with worsening pressure sores PRU4	3	2	5	.27	.23	.35	III
Post-acute Prevalence³							
++Percent of short-stay residents with delirium (pilot) DELX	10	2	9	.58	.36	.62	I
++Percent of short-stay residents with pain (pilot) PAIX	17	6	7	.52	.36	.64	I
Post-acute Incidence							
Percent of short-stay residents who have not improved since admission ADLX	8	0	9	.59	--	.59	I
++ Percent of short-stay residents whose ability to control their bowel or bladder has not improved since admission CNTX	6	0	3	.37	--	.37	II

Table 6.3

Summary Measures of Quality Indicator Validity

Quality Indicator	Count of Significant Preventive Data Elements ¹	Count of Significant Responsive / Reactive Data Elements	Total Count of Significant Data Elements	Multiple R (Measure of Association) For Preventive Elements	Multiple R For Responsive Elements	Multiple R for All Elements	Degree of Validity ²
							I TOP II MID III NOT Valid
++ Percent of short-stay residents whose pressure sores have not gotten better PRUX	19	0	1	.12	--	.12	III
++ Percent of short-stay residents who have developed a respiratory infection or have not gotten better RSPX	4	0	2	.42	--	.42	II
++Percent of short-stay residents who walk as well or better on day 14 as on day 5 of their stay (pilot) WALX	2	0	4	.48	--	.48	I

Notes:

¹ An alpha significance level for the correlation between the validation element and the quality indicator of .09 or lower.² Level I -- Preventive Multiple R Equal to or Greater than .45 – OR -- Total Multiple R equal to or greater than .55

Level II -- Preventive Multiple R Equal to or Greater than .30 – OR -- Total Multiple R equal to or greater than .40

Level III -- Preventive Multiple R Less than .30 – OR -- Total Multiple R less than .40

³ The sample utilized in evaluation of the post-acute care QIs includes hospital-based transitional care units (TCUs) only [maximum N = 52 facilities]. At the same time, we note that this was one of two analytic samples that could have been used to evaluate the post-acute indicators. Under a second sampling strategy, the TCU sample could be supplemented through the addition of 104 chronic nursing facilities. In each of these facilities there were sufficient numbers of Medicare residents on which to calculate the post-acute quality indicators. Had this second sample approach been the primary strategy to be followed, rather than the TCU approach on which this task rests, the Failure to Prevent or Improve Pressure Sore quality indicator would not have been rejected. In fact it would have been placed in Level I, the highest validation category. At the other extreme, had this alternative approach been used, the Improvement in Walking quality indicator would have been placed in Level III, Not Validated. See Appendix M for more detail.

++ Quality indicator was risk-adjusted using facility admission profile.

--- Indicates that statistics could not be generated due to lack of significant data elements.

7.0 Analysis of the Facility Admission Profile

7.1 Background

A main concern in the implementation of an indicator-based quality reporting system is that judgments based on those quality indicators (QIs) might be influenced by facility characteristics other than quality of care. In past work, this project team investigated the impact of casemix differences resulting from differential admission or discharge practices and of differential ascertainment as likely sources for such biased assessments. Our investigation, discussed previously in this report, confirms this concern. The specification of appropriate risk adjustment models is a key requirement for the validity of any QI. Prior analyses conducted revealed that, particularly in smaller facilities, rankings based on some QIs may vary substantially over time and, therefore, that statements about QI performance in smaller facilities cannot be made with much statistical confidence.

In attempts to capture these differential effects on quality indicator rankings, a series of analyses were conducted, resulting in the development of a new risk adjustment method that incorporates facility-admitting characteristics into the construction of QIs. We refer to this adjustment method as the “facility admission profile” (FAP). In prior work, the project team recommended the use of this facility-level adjuster on some but not all QIs. In general, use of the FAP was recommended for QIs where

- 1) the adjustment model performs well statistically,
- 2) the measurement of the quality dimension in question is subjective and more prone to the differential effects of assessment acumen or bias, and
- 3) the facility will encounter significant challenges to effecting change within a quality measure domain. For example, a FAP was suggested for the “Residents with pain” QI, where a facility’s ability to impact on the condition is more challenging. On the other hand, facilities with a “restraint-free” philosophy, which would be in keeping with national trends, have the ability to limit, if not totally avoid, physical restraint use subsequent to resident admission. Thus, no FAP adjustment is recommended for the “Residents in physical restraints” quality indicator.

7.1.1 Public Sentiment about the Facility Admission Profile (FAP)

There has been great debate about the issue of risk adjustment when making judgments about quality. Some stakeholders strongly advocate for risk adjustment, others argue strongly against. Arguments vary, but most advocates of risk adjustment believe that some adjustment of quality indicators is necessary to prevent biased rankings of facilities. Bias in quality ranking may be introduced when the quality measure does not sufficiently capture the variance in resident populations at given facilities. Opponents to risk adjustment of quality indicators argue that no adjustment is better than “over” adjustment, and that, in the absence of a perfect risk adjustment measure or method, indicators should remain unadjusted.

This project team believes strongly that risk should be taken into consideration in the measurement of quality, and we have been exploring risk adjustment techniques throughout this research process. As stated above, the FAP emerged as a response to this commitment. On a preliminary basis, we developed the FAP for use with the initially recommended set of existing and newly developed

quality indicators (pending results of this validation study). There has been great debate about this particular form of risk adjustment. Those concerned with this draft recommendation have argued that

- the FAP makes facilities that might be considered to look ‘bad’ or ‘average’ with a non FAP-adjusted QI, inappropriately look ‘average’ or ‘good’ with a FAP-adjusted QI;
- the FAP should not be applied universally to all quality indicators (a position that the research team is in agreement with);
- since the FAP (in the case of chronic care QIs) is based on an admission assessment that might not be conducted for up to 14 days after admission, the FAP can actually reflect the early effects of care (both positive and negative) provided by the facility. During this delay, many of the quality concerns measured by the QIs are likely to occur (that were not present upon arrival). Since these QIs will show up on the ‘assessment’, the FAP will adjust down the facility’s QI rates (thereby making the facility look better than it should).
- there are also arguably incentives for facilities to report greater disability upon admission for both reimbursement and quality assurance purposes, which may skew the admission picture captured by the FAP, and
- the FAP is too complicated and therefore will not be credible to end users of the information (e.g., facility staff, consumers).

In response to these concerns, and in line with the long-standing plan for the national validation of the quality indicators, the project team undertook a series of analyses intended to evaluate the utility of the FAP as a risk adjustor for nursing facility quality indicators. Methods and findings regarding this work are reported here. We want to stress that these findings reflect preliminary work in a very complex area of inquiry. We will have greater confidence in our conclusions after further modeling, replicating at the national level some of the initial analyses that were conducted on a limited number of states.

7.2 Analyses Conducted to Assess Validity and Measurement Error

We report on two separate analyses. Each examined different aspects of the facility-level adjustment mechanism.

- First, we compared the validity of raw, or non FAP-adjusted, quality indicators to the validity of FAP-adjusted indicators.
- Second, we tested the impact of systematic measurement bias on quality indicators, as described below.

While each of these sets of analyses are still underway, the preliminary results obtained to date provide useful information about the performance of the FAP and should be considered as decisions are made regarding risk adjustment of publicly reported quality indicators.

7.2.1 Validation Findings for Non FAP-adjusted vs. FAP-adjusted Quality Indicators

We compared the results of the validation analyses with and without the FAP adjustment. Results of these comparisons are summarized in Table 7.1. Overall, there were relatively small differences in the quantitative results. That is, in most cases, the amount of variability accounted for by the

validation elements was of a comparable magnitude in the FAP and non FAP-adjusted forms of the QI. While in a number of instances the number of validation elements found to be related to the non-FAP form of the QIs was fewer than in the FAP-adjusted version, the statistical measures of model fit tended to be similar. Therefore, in most cases the level of validation for FAP and non FAP-adjusted forms of the QI was comparable, given our array of validation elements.

As can be seen in Table 7.1, FAP-adjusted QIs differed from non-FAP QIs in nine instances. In five of these instances, the FAP-adjusted QI indicated a higher level of validity than the non-FAP QI. In four, FAP adjustment implied a lower level of validity. However, it is worth mentioning that four of the five cases where the validation level was greater with FAP adjustment represent cases where a QI is classified as "Not Valid" without FAP, and "Top" or "Mid" level of validity *with* FAP adjustment. The four QIs where a higher level of validity was achieved with FAP adjustment included "Residents with inappropriate behavior (high and low risk)", "Residents with pressure sores (low risk)", and two post-acute care quality indicators, "Residents who walk as well or better than the previous assessment" and "Residents whose ability to control their bowel or bladder has not improved since admission." Only two of the four cases where a higher level of validity was observed without FAP adjustment represented a shift from a "Not Valid" level to a "Mid" or "Top" level ("Residents with inappropriate behavior (high risk)" and Residents on antipsychotics without a diagnosis of psychosis (low risk)).

Overall, these comparative analyses demonstrate that, under the model used in our national validation of the quality indicators, there is little evidence that the FAP adjustment results in an array of QI scores that perform better than QIs without FAP adjustment in the statistical sense. The FAP models did not, as had been hoped, out perform the non FAP-adjusted models.

Table 7.1

Comparison of Validation Results with and without Adjustment for Facility Admission Profile (FAP)

Quality Indicators with FAP Adjustment	Multiple R (Measure of Association) for Preventive Elements	Multiple R (Measure of Association) for Responsive Elements	Multiple R for All Elements	Degree of Validity ¹
				I TOP II MID III NOT Valid
Chronic Prevalence				
Percent of residents with inappropriate behavior – high & low risk (chsra; beh01)				
FAP	0.34	0.31	0.43	II
without FAP	0.16	0.31	0.33	III
Percent of residents with inappropriate behavior – high risk (chsra; beh02)				
FAP	0.25	0.30	0.39	III
without FAP	---	0.38	0.40	II
Percent of residents with inappropriate behavior – low risk (chsra; beh03)				
FAP	---	---	---	III
without FAP	---	---	---	III
Percent of residents who are bladder and bowel incontinent – high & low risk (chsra; cnt01)				
FAP	0.50	0.45	0.66	I
without FAP	0.52	0.59	0.76	I
Percent of residents who are bladder and bowel incontinent – high risk (chsra; cnt05)				
FAP	0.57	0.35	0.65	I
without FAP	0.58	---	0.58	I
Percent of residents who are bladder and bowel incontinent – low risk (chsra; cnt06)				
FAP	0.47	0.31	0.56	I
without FAP	0.50	0.44	0.65	I
Percent of residents with infections (megaqi; inf0x) (pilot)				
FAP	0.46	0.36	0.53	I
without FAP	0.51	0.41	0.59	I
Percent of residents with a feeding tube (ramsey; nut01)				
FAP	0.44	0.40	0.54	II
without FAP	0.48	0.82	0.88	I
Percent of residents with a low BMI (megaqi;bmi0x)				
FAP	0.39	0.20	0.41	II
without FAP	0.37	0.19	0.39	II

Table 7.1

Comparison of Validation Results with and without Adjustment for Facility Admission Profile (FAP)

Quality Indicators with FAP Adjustment	Multiple R (Measure of Association) for Preventive Elements	Multiple R (Measure of Association) for Responsive Elements	Multiple R for All Elements	Degree of Validity ¹
				I TOP II MID III NOT Valid
Percent of residents who have unexplained weight loss (ltcq; wgt01) (pilot)				
FAP	0.27	---	0.27	III
without FAP	0.26	---	0.26	III
Percent of residents with pain (megaqi; pai0x) (pilot)				
FAP	0.32	0.67	0.74	I
without FAP	0.26	0.78	0.82	I
Percent of residents with pressure sores – high risk & low risk (chsra; pru01) (pilot)				
FAP	0.48	0.43	0.59	I
without FAP	0.47	0.43	0.58	I
Percent of residents with pressure sores – high risk (chsra; pru02)				
FAP	0.43	0.41	0.51	I
without FAP	0.58	0.40	0.72	I
Percent of residents with pressure sores – low risk (chsra; pru03) ¹				
FAP	0.36	0.35	0.50	II
without FAP	---	---	---	III
Percent of residents with burns, skin tears or cuts (megaqi; bur0x)				
FAP	0.30	0.34	0.47	II
without FAP	0.32	0.38	0.52	II
Percent of residents on antipsychotics without a diagnosis of psychosis – high & low risk (chsra; drg01) (pilot)				
FAP	0.32	0.31	0.47	II
without FAP	0.29	0.52	0.62	I
Percent of residents on antipsychotics without a diagnosis of psychosis – high risk (chsra; drg02)				
FAP	---	0.31	0.31	III
without FAP	---	---	---	III
Percent of residents on antipsychotics without a diagnosis of psychosis – low risk (chsra; drg03)				
FAP	0.15	0.35	0.38	III
without FAP	---	0.51	0.51	II

Table 7.1

Comparison of Validation Results with and without Adjustment for Facility Admission Profile (FAP)

Quality Indicators with FAP Adjustment	Multiple R (Measure of Association) for Preventive Elements	Multiple R (Measure of Association) for Responsive Elements	Multiple R for All Elements	Degree of Validity ¹
				I TOP II MID III NOT Valid
Chronic Incidence				
Percent of residents who have declined in their ability to locomote (ltcq; mob01)				
FAP	0.62	0.09	0.62	I
without FAP	0.67	---	0.67	I
Percent of residents who walk as well or better than the previous assessment (megaqi; wal0x)				
FAP	0.64	---	0.64	I
without FAP	0.67	---	0.67	I
Percent of residents whose cognitive ability has worsened (ltcq; cog01)				
FAP	0.40	0.34	0.52	II
without FAP	0.39	0.34	0.52	II
Percent of residents whose ability to communicate has worsened (ltcq; com01)				
FAP	0.29	0.31	0.41	II
without FAP	0.28	0.32	0.42	II
Percent of residents with symptoms of delirium (megaqi; del0x)				
FAP	0.40	---	0.40	II
without FAP	0.39	---	0.39	II
Percent of residents whose behavior has worsened (ltcq; beh04)				
FAP	0.15	0.17	0.24	III
without FAP	0.13	0.21	0.26	III
Percent of residents who have become more depressed or anxious (ltcq; mod03)				
FAP	0.31	---	0.31	II
without FAP	0.31	---	0.31	II
Percent of residents with worsening bladder incontinence (ltcq; cnt03)				
FAP	0.39	0.40	0.63	I
without FAP	0.39	0.42	0.66	I
Percent of residents with worsening pain (ltcq; pan01)				
FAP	0.37	0.40	0.51	II
without FAP	0.39	0.37	0.49	II
Percent of residents with worsening pressure sores (ltcq; pru04)				
FAP	0.27	0.23	0.35	III
without FAP	0.24	0.23	0.33	III

Table 7.1

Comparison of Validation Results with and without Adjustment for Facility Admission Profile (FAP)

Quality Indicators with FAP Adjustment	Multiple R (Measure of Association) for Preventive Elements	Multiple R (Measure of Association) for Responsive Elements	Multiple R for All Elements	Degree of Validity ¹
				I TOP II MID III NOT Valid
Post-acute Prevalence ²				
Percent of short-stay residents with delirium (megaqi; del0x) (pilot)				
FAP	0.58	0.36	0.62	I
without FAP	0.53	0.38	0.59	I
Percent of short-stay residents with pain (megaqi; pai0x) (pilot)				
FAP	0.52	0.36	0.64	I
without FAP	---	---	---	III
Post-acute Incidence ²				
Percent of short-stay residents whose ability to control their bowel or bladder has not improved since admission (megaqi; cnt0x)				
FAP	0.37	---	0.37	II
without FAP	0.29	---	0.29	III
Percent of short-stay residents whose pressure sores have not gotten better (megaqi; pruo0x)				
FAP	0.12	---	0.12	III
without FAP	0.24	---	0.24	III
Percent of short-stay residents who have developed a respiratory infection or have not gotten better (megaqi; rsp0x)				
FAP	0.42	---	0.42	II
without FAP	0.38	---	0.38	II
Percent of short-stay residents who walk as well or better on day 14 as on day 5 of their stay (megaqi; wal0x) (pilot)				
FAP	0.48	---	0.48	I
without FAP	---	---	---	III

Table 7.1**Comparison of Validation Results with and without Adjustment for Facility Admission Profile (FAP)**

Quality Indicators with FAP Adjustment	Multiple R (Measure of Association) for Preventive Elements	Multiple R (Measure of Association) for Responsive Elements	Multiple R for All Elements	Degree of Validity ¹
				I TOP II MID III NOT Valid

Notes:

¹ Level I -- Preventive Multiple R Equal to or Greater than .45 – OR -- Total Multiple R equal to or greater than .55

Level II -- Preventive Multiple R Equal to or Greater than .30 – OR -- Total Multiple R equal to or greater than .40

Level III -- Preventive Multiple R Less than .30 – OR -- Total Multiple R less than .40

² The sample utilized in evaluation of the post-acute care QIs includes hospital-based transitional care units (TCUs) only [maximum N = 52 facilities]. At the same time, we note that this was one of two analytic samples that could have been used to evaluate the post-acute indicators. Under a second sampling strategy, the TCU sample could be supplemented through the addition of 104 chronic nursing facilities. In each of these facilities there were sufficient numbers of Medicare residents on which to calculate the post-acute quality indicators. Had this second sample approach been the primary strategy to be followed, rather than the TCU approach on which this task rests, the Failure to Prevent or Improve Pressure Sore quality indicator would not have been rejected. In fact it would have been placed in Level I, the highest validation category. At the other extreme, had this alternative approach been used, the Improvement in Walking quality indicator would have been placed in Level III, Not Validated.

--- Indicates that statistics could not be generated due to lack of significant data elements.

7.2.2 Analysis of the Effect of Systematic Measurement Bias on the QI

One reason for examining the prevalence of systematic measurement bias in the QIs was because of concerns regarding inter-facility variation in the comprehensiveness of assessments. cursory assessments might yield lower rates of clinical problems. Indeed, this concern was one of the principle motivations for the creation of the FAP that characterizes all residents admitted to a facility over the year prior to the measurement of the QI. Conceptually, the FAP has the potential of capturing the propensity of facility assessors to detect clinical problems that they inherited from the admitting location.

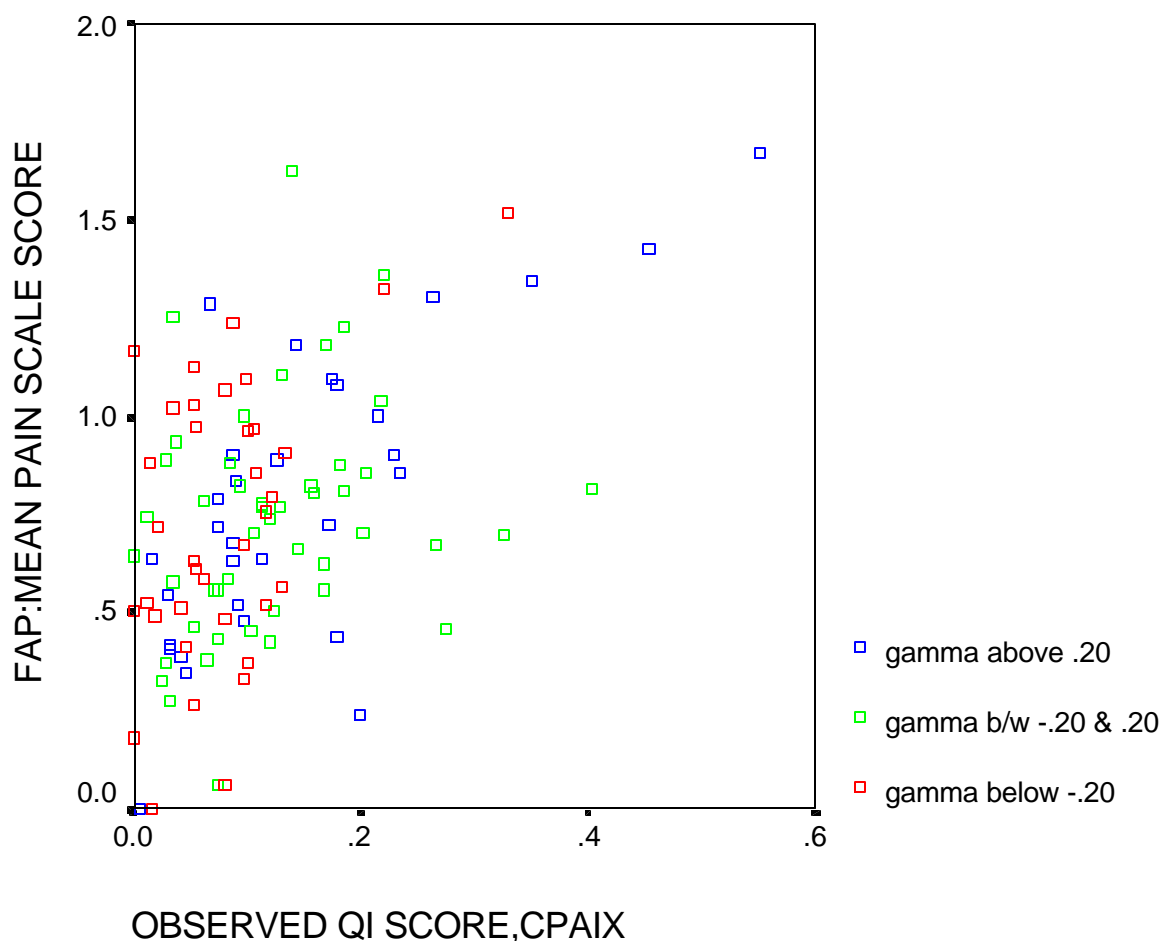
The Gamma statistic, which has been described in Section 5.3, provides a means for assessing the extent to which there is a directional bias in the disagreements between the research nurse assessors and the facility assessors. As noted earlier, facilities with high positive Gamma statistics were those that observed more clinical problems in a given domain than did our research nurses. Facilities with high negative Gamma statistics were less likely to observe clinical problems among residents than were the research nurses. Nonetheless, by and large there were relatively few facilities that consistently manifested high or low Gamma statistics on numerous measures, and the modal facility had Gamma statistics within $+.2$ and $-.2$ of the unbiased zero (0). Consequently, in conducting analyses of the effect of the Gamma on the QI measurement with and without the FAP, we used this cut-off to classify facilities as over or under reporting (or assessing) the clinical condition in question in the QI.

We anticipated that facilities with high negative Gamma statistics (facilities less likely to detect a clinical problem than were the research nurse assessors) would also have a FAP that would be correlated to the related QI. To that end, we examined whether the presence of high positive or high negative Gamma statistics attenuated the observed relationship between the QI and its associated FAP. This was done using both graphical means and multiple linear regression analysis. A complete description of the analyses applied to the “Residents with pain” QI is presented below followed by parallel analyses performed for the “Residents with infections” QI.

Each nursing home’s facility admission profile for “Residents with pain” and its observed QI score for “Residents with pain” are portrayed in the scatter plot below (Figure 1). The plot is further identified using Gamma values classified into 3 groups: Gamma above $.20$, Gamma between $-.20$ and $.20$, and Gamma below $-.20$.

As expected, facilities with the highest observed “Residents with pain” QI scores tended to have the highest Gamma scores. There are only a few “below $-.20$ ” facilities with observed pain QI scores above 20 percent. Conversely, many of the facilities with a Gamma score above $.2$ had the highest pain QI measures. On the other hand, there is little apparent pattern to the relationship between the three Gamma classes and the FAP score. That is, facilities with Gamma statistics in excess of $.2$ or less than $-.2$ were equally likely to have a FAP scale score under $.5$ and over 1.0 . This suggests that the direction of bias in the measurement of the MDS items that make up the “Residents with pain” QI is not particularly related to the prevalence of pain among residents assessed at the time of their admission.

Figure 1. Scatter Plot of Pain QI and Pain FAP, by Gamma Level Classification



To more formally test the effect of this Gamma class construct on the statistical relationship between the QI and the FAP, the observed “Residents with pain” QI score was regressed on the pain FAP to identify the association between the two items. Table 7.2a below shows the strong relationship between admission prevalence and the observed QI score in this sample of facilities participating in the validation study and serving chronic patients. The correlation between the two variables is about .5. Table 7.2b contains the results of the model after introducing two dummy variables to reflect the relative position of each facility’s Gamma value. “Above .20” and “Below -.20” can be interpreted in reference to “between –.20 and .20” (omitted). The results reveal that introducing the two “dummy” Gamma values only modestly attenuates the relationship between the FAP and the observed QI. While, as hypothesized, a negative Gamma is significantly related to a facility’s QI ($t = -2.105$; $p = .038$), the residual relationship between the QI and the FAP is not terribly different. Without the Gamma indicators in the model, the correlation between the FAP and QI is .5; with them included it drops to .45.

Table 7.2a
Observed Pain QI Regressed on Pain FAP

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.502 ^a	.252	.246	.10865

^a. Predictors: (Constant), FAP:MEAN PAIN SCALE SCORE

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.364E-02	.024		-.567	.572
	FAP:MEAN PAIN SCALE SCORE	.182	.029	.502	6.230	.000

^a. Dependent Variable: OBSERVED QI SCORE,CPAIX

Table 7.2b
Observed Pain QI Regressed on FAP with Gamma Dummies

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.553 ^a	.305	.287	.10484

^a. Predictors: (Constant), FAP:MEAN PAIN SCALE SCORE, Above .20, Below -.20

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.487E-03	.026		.057	.954
	FAP:MEAN PAIN SCALE SCORE	.167	.029	.457	5.755	.000
	Gamma above .20	3.637E-02	.024	.132	1.519	.132
	Gamma below -.20	-4.886E-02	.023	-.181	-2.105	.038

^a. Dependent Variable: OBSERVED QI SCORE,CPAIX

A similar analysis was performed for the “Residents with infections” QI. The results are presented in Figure 2. Relatively few facilities have Gamma values exceeding .20 for the infection QI and those facilities with high Gamma values appear clustered along the diagonal of the relationship between the observed QI and the FAP. The “Residents with infections” FAP is clearly associated with the observed “Residents with infection” QI (Table 7.3a), but analysis failed to detect any attenuation of the relationship after introducing the Gamma-dummied values (Table 7.3b).

**Figure 2. Scatter Plot of Infection QI and Infection FAP,
by Gamma Classification**

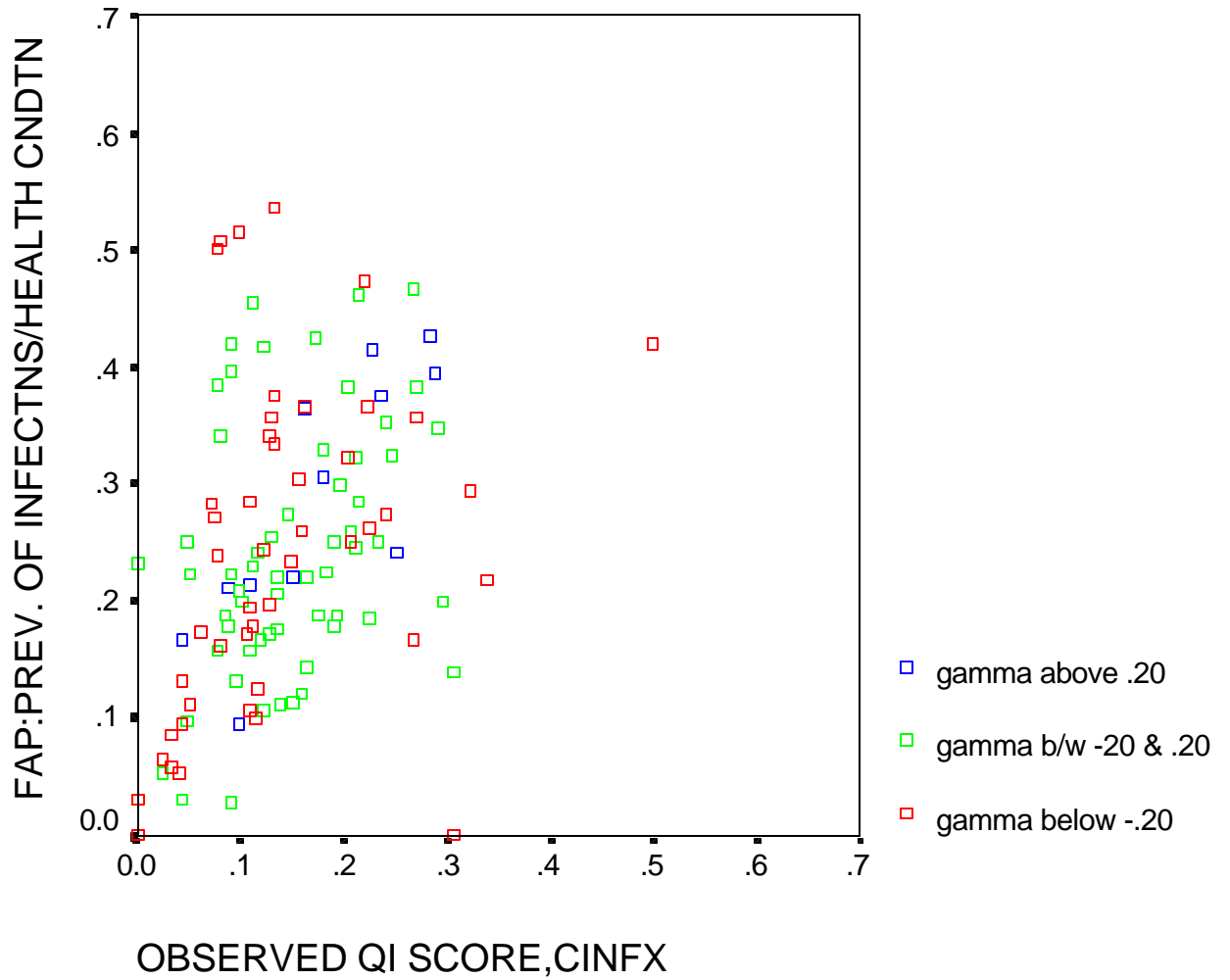


Table 7.3a
Observed Infection QI Regressed on Infection FAP

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.453 ^a	.206	.199	.14063

^a. Predictors: (Constant), FAP:PREVALENCE OF INFECTNS/HEALTH CNDTN

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.889E-02	.028		1.025	.307
	FAP:PREVALENCE OF INFECTNS/HEALTH CNDTN	.552	.100	.453	5.549	.000

^a. Dependent Variable: OBSERVED QI SCORE,CINFX

Table 7.3b
Observed Infection QI Regressed on FAP with Gamma Dummies

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.489 ^a	.239	.219	.13954

a. Predictors: (Constant) FAP:PREVALENCE OF INFECTNS/HEALTH CNDTN, Above .20, Below -.20

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.215E-02	.031		.722	.471
	FAP:PREVALENCE OF INFECTNS/HEALTH CNDTN	.579	.102	.468	5.665	.000
	Gamma above .20	3.448E-02	.043	.068	.796	.428
	Gamma below -.20	-1.374E-02	.027	-.043	-.502	.616

a. Dependent Variable: OBSERVED QI SCORE,CINFX

Similar results were obtained for Pressure sores, Inappropriate behavior and bladder incontinence (additional tables can be made available upon request). In each case, the introduction of the dummy variables for the Gamma value exceeding +/- .20 failed to significantly attenuate the observed relationship between the FAP and the QI. These results suggest that the FAP cannot be considered an adequate and robust measure of ascertainment bias. Rather, to the extent that our Gamma statistic measures the presence of directional measurement bias, it appears to be weakly, but independently (if at all) associated with the QI in a way that does not meaningfully affect the relationship between the FAP and the QI.

Future analyses could be designed to re-examine these data to determine whether the relative ranking of the facilities on the various QIs is altered when FAP-adjusted and non FAP-adjusted versions are used and when adjustment is based solely on the Gamma statistic that is available for each of the facilities participating in the validation study. We anticipate that, as we have seen in comparing FAP-adjusted and non FAP-adjusted data from all US nursing facilities, facilities' rankings may change, with more facilities scored near the median of the QI distribution. In light of the statistical and graphical analyses presented above, we anticipate that adjusting the facility QI distribution only with the Gamma statistic measured for each facility will not materially affect the distribution. Nonetheless, it is the next logical step in the analysis.

8.0 Conclusions, Recommendations and Next Steps

8.1 Conclusions and Recommendations Regarding the Validity of These Quality Indicators

In this national validation study, there is strong evidence that many of the set of 45 reviewed quality indicators capture meaningful aspects of nursing facility performance, and are reliably measured. We highly recommend for use by CMS and nursing facilities any of the QIs that fall into the Level I validation category, as these QIs have the strongest degree of evidence that they represent real care processes in nursing facilities. The chronic care quality indicators with the highest level of validity include:

- Residents with indwelling catheters;
- Residents who are bladder or bowel incontinent (high and low risk, high risk, low risk);
- Residents with a urinary tract infection;
- Residents with infections;
- Residents with pain;
- Residents with pressure sores (high and low risk);
- Residents with pressure sores (high risk);
- Residents who had an unexpected loss of function in some basic daily activities;
- Residents with worsening function in some basic daily activities;
- Residents who have declined in their ability to locomote;
- Residents who walk as well or better than the previous assessment; and
- Residents with worsening bladder continence.

Four post-acute care quality indicators are highly valid, including:

- Short-stay residents with delirium;¹⁰
- Short-stay residents with pain;
- Short-stay residents who have not improved since admission; and
- Short-stay residents who walk well or better on day 14 as on day 15 of their stay.

The chronic quality indicators that we recommend rejecting for further use at this time are:

- Residents with inappropriate behavior (high risk and low risk);
- Residents who have unexplained weight loss;
- Residents on antipsychotics without a diagnosis of psychosis (high risk and low risk);
- Residents whose behavior has worsened; and
- Residents with worsening pressure sores.

The post-acute care indicator that proved not to be valid is “Short-stay residents whose pressure sores have not gotten better” and therefore should be rejected for use by CMS.

¹⁰ Again, this QI has a very low rate of occurrence (three percent) in our study sample. The national distribution of this indicator should be examined as CMS makes a final determination as to this QI’s overall utility.

Those QIs that fall into the Level II – Mid Valid category are deemed appropriate for use in measuring nursing facility quality, as they do offer evidence of validity; they are simply not as highly recommended to CMS as those QIs falling into the “Top” (Level I) validation category. In making final determinations about the utility of these QIs for performance improvement, public reporting or other purposes, CMS may want to review both the prevalence and the reliability of these indicators.

A special note is warranted on the “Residents engaging in little or no activity” quality indicator. While based on the validation effort it was judged to fall into the Mid-Valid (Level II) category, the MDS item on which the indicator is based was found to have poor reliability. Should CMS choose to utilize this indicator for public reporting, facilities will need instruction on proper coding of this assessment item.

In addition to determining which of these sets of nursing facility quality indicators are “valid”, or reflecting the care outcomes and issues they are purported to reflect, these results provide evidence that quality indicators measure aspects of care quality that may be amenable to modification through facility practice. For example, facility staffing and policies, practices or procedures are found to be related to resident quality outcomes and therefore may be modified by facilities to enhance quality of care delivery.

8.1.1 Conclusions Regarding the Validity and Utility of the Facility Admission Profile Method of Risk Adjustment

At this time, the Project Team does not recommend the FAP for broad scale application as currently operationalized. From the series of three analyses described in this chapter, we find that

- Non FAP-adjusted and FAP-adjusted quality indicators were equally valid in all but nine instances. In three, two of which (“Residents who walk as well or better on day 14 as on day 5 of their stay – PAC” and “Residents with pain – PAC”) are currently in the CMS Nursing Home Quality Initiative pilot project, validity was higher for the FAP-adjusted measures. For the other four, validity for the FAP-adjusted measures was lower. The FAP models did not out-perform the non-FAP models; they did not provide scores that were systematically superior.
- There is no evidence of systematic bias in facility reporting of the set of prevalence-based QIs evaluated here: the FAP therefore cannot be considered an adequate and robust measure of ascertainment bias.

In light of these findings, each of which might require additional work, we find no reason to continue to support the universal application of the FAP as currently operationalized. Nonetheless, our analyses also suggest that there are very real inter-facility differences in the mix of residents admitted and who remain to be served by the facility and that these differences are related to the distribution of facilities as measured by the non FAP-adjusted QIs as well as those relying only upon resident-level adjustment. Thus, we feel that additional research focusing on the testing of alternate resident- and facility-level adjustment variables is needed.

8.2 Next Steps

Much additional research undertaken by this project team is not presented here, as some remains preliminary and some issues are still under evaluation. One necessary next step in this process of making final recommendations to CMS about the utility of this set of quality indicators is to continue work on exploring alternatives to the facility admission profile. Composite measures, such as a “proximity to death” index or a casemix index score, appear promising as alternative risk adjusters. These measures should be further conceptualized, and then modeled against the national MDS dataset to determine their performance and potential utility.

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Appendices

- A. Descriptive Statistics Regarding Facility Sample
- B. Facility Recruitment Package (not available electronically)
- C. Data Collection Training Manual and Instruments (not available electronically)
- D. Description of Quality Indicator Calculation
- E. Operational Definitions for all Tested QIs
- F. Detailed Description of all Validation Scales
- G. Facility and “Gold” Rater Correspondence
- H. Reliability and Measurement Bias Discussion and Findings
- I. Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales
- J. Relationship Between Past Acute Quality Indicators and Hypothesized Validation Scales
- K. Item-Specific Preventive and Responsive Analyses
- L. List of Validation Elements Included in Final Multivariate Models, by QI
- M. Comparison of PAC QI Validation Results for all Facilities versus TCU Sample Only

Appendix A

Descriptive Statistics Regarding Facility Sample

Table A1

Descriptive Statistics Regarding Facility Sample

STATE	MEAN CERTIFIED BEDS	MEAN MEDICARE- ONLY CERTIFIED BEDS	CHAIN	HOSPITAL- BASED	FOR PROFIT	RURAL
US (N=16,709)	102	4	55.81%	11.48%	65.01%	37.27%
CA STATE (N=1,338)	92	4	63.15%	15.10%	75.56%	5.31%
CA STUDY PARTICIPANTS (N=37)	84	2	81.08%	45.95%	62.16%	0.00%
CA STUDY REFUSERS (N=40)	87	3	57.50%	40.00%	65.00%	0.00%
IL STATE (N=858)	116	5	47.32%	10.14%	65.73%	37.06%
IL STUDY PARTICIPANTS (N=41)	116	14	41.46%	39.02%	43.90%	4.88%
IL STUDY REFUSERS (N=55)	132	8	49.09%	25.45%	60.00%	3.64%
MO STATE (N=543)	93	3	53.78%	10.50%	64.09%	54.14%
MO STUDY PARTICIPANTS (N=28)	108	7	57.14%	7.14%	57.14%	3.57%
MO STUDY REFUSERS (N=35)	117	7	54.29%	14.29%	62.86%	0.00%
OH STATE (N=1,000)	93	2	57.20%	7.20%	72.80%	29.50%
OH STUDY PARTICIPANTS (N=35)	97	8	45.71%	34.29%	60.00%	0.00%
OH STUDY REFUSERS (N=27)	99	7	55.56%	22.22%	55.56%	0.00%

Table A1**Descriptive Statistics Regarding Facility Sample**

STATE	MEAN CERTIFIED BEDS	MEAN MEDICARE- ONLY CERTIFIED BEDS	CHAIN	HOSPITAL- BASED	FOR PROFIT	RURAL
PA STATE (N=771)	124	5	51.10%	12.84%	43.71%	20.62%
PA STUDY PARTICIPANTS (N=45)	123	9	37.78%	26.67%	31.11%	0.00%
PA STUDY REFUSERS (N=42)	104	6	57.14%	30.95%	42.86%	0.00%
TN STATE (N=352)	110	3	62.78%	14.49%	67.61%	45.74%
TN STUDY PARTICIPANTS (N=33)	130	3	57.58%	21.21%	54.55%	27.27%
TN STUDY REFUSERS (N=44)	124	2	77.27%	9.09%	81.82%	20.45%

Sources: POS data for CY 2001

Appendix B

Facility Recruitment Package

(Not Available Electronically)

Appendix C

Data Collection Training Manual and Instruments

(Not Available Electronically)

Appendix D

Description of Quality Indicator Calculation

Steps Used In Validation QI Calculation

This chapter outlines the processing steps used to calculate raw and adjusted QIs for the mega QI Validation Task using the 4th quarter of 2001 (2001Q4) and the 1st quarter of 2002 (2002Q1) as the target periods. The processing steps were as follows:

- 1. Obtain all MDS records from CMS for 1998, 1999, 2000, 2001 and 2002 through Quarter 1 (2002Q1).**
- 2. Select QI calculation samples.**
 - 2.1. Select 6 Chronic Care (CC) QI calculation samples for 6 target quarters: 2000Q2, 2000Q3, 2000Q4, 2001Q1, 2001Q4 and 2002Q1. The first four samples, based on a simple random sample of 10% of facilities, will be used to build logistic regression models; the fifth and sixth samples, using data from all facilities, will be used for reporting.**
 - 2.1.1. Selection based on the specifications in the record selection document.
 - 2.1.2. Selection is by resident.
 - 2.1.3. Selection is for the entire nation.
 - 2.1.4. Each resident in a sample has the following CC records selected:
 - 2.1.4.1. A target assessment (most recent) in the target quarter.
 - 2.1.4.2. A prior assessment preceding target assessment if available.
 - 2.1.4.3. An assessment preceding the prior assessment if available
 - 2.1.4.4. A most recent full assessment if available.
 - 2.2. Select 6 Post Acute Care (PAC) QI calculation samples for 6 target quarters: 2000Q2, 2000Q3, 2000Q4, 2001Q1, 2001Q4 and 2002Q1. The first four samples, based on a simple random sample of 10% of facilities, will be used to build logistic regression models; the fifth and sixth samples, using data from all facilities, will be used for reporting.**
 - 2.2.1. Selection based on the specifications in the record selection document.
 - 2.2.2. Selection is by resident.
 - 2.2.3. Selection is for the entire nation.
 - 2.2.4. Each resident in a sample has the following PAC records selected:
 - 2.2.4.1. A 14-day SNF PPS assessment (most recent) in the target quarter and preceding quarter.
 - 2.2.4.2. A 5-day SNF PPS assessment from the same stay if available.
 - 2.2.4.3. A recent admission assessment if available.
- 3. Create a resident-level QI calculation file for each of the 6 target quarters. The resident-level QI calculation file for a target quarter has 1 record for every resident in either the CC QI calculation sample or the PAC QI calculation sample for that quarter. Each record contains variables corresponding to the 7 assessments which could potentially be selected for each resident:**
 - 3.1. A CC target assessment (most recent) in the target quarter.
 - 3.2. A CC prior assessment preceding target assessment if available.
 - 3.3. A CC assessment preceding the prior assessment if available.
 - 3.4. A CC most recent full assessment if available.
 - 3.5. A PAC 14-day SNF PPS assessment (most recent) in the target quarter and preceding quarter.
 - 3.6. A PAC 5-day SNF PPS assessment from the same stay if available.
 - 3.7. A recent admission assessment if available.

Steps Used In Validation QI Calculation

4. **Calculate resident-level QI scores and covariate scores for each resident in each of the 6 target quarters and store the resulting values in the resident-level QI calculation files for each of the 6 target quarters.**
 - 4.1. For each CC and PAC QI separately.
 - 4.1.1. **Resident-level QI calculation.** For each resident for a target quarter, determine if the resident should be excluded from QI calculation. The exclusion rules for QI calculation are given for each CC and PAC QI in the QI operational definitions matrix.
 - 4.1.1.1. If the resident is excluded, then store a missing value for that QI in the resident-level QI calculation record appropriate to that resident for a target quarter.
 - 4.1.2. If the resident is not excluded, determine if the resident triggers the QI (is to be included in the QI numerator). The triggering (numerator) rules for QI calculation are given for each CC and PAC QI in the QI operational definitions matrix.
 - 4.1.2.1.1. If the resident triggers the QI, then store a value of 1 for that QI in the resident-level QI calculation record appropriate to that resident for a target quarter.
 - 4.1.2.1.2. If the resident does not trigger the QI, then store a value of 0 for that QI in the resident-level QI calculation record appropriate to that resident for a target quarter.
 - 4.1.3. **Resident-level covariate calculation.** For each covariate associated with the QI.
 - 4.1.4. For each resident for a target quarter, determine if the resident should be excluded from covariate calculation. The exclusion rules for covariate are given for each CC and PAC QI in the QI operational definitions matrix.
 - 4.1.4.1.1. If the resident is excluded, then store a missing value for that covariate in the resident-level QI calculation record appropriate to that resident for a target quarter.
 - 4.1.5. If the resident is not excluded, determine if the resident triggers the covariate (value 1). The triggering rules for covariate calculation are given for each CC and PAC QI in the QI operational definitions matrix.
 - 4.1.5.1.1.1. If the resident triggers the covariate, then store a value of 1 for that covariate in the resident-level QI calculation record appropriate to that resident for a target quarter.
 - 4.1.5.1.1.2. If the resident does not trigger the covariate, then store a value of 0 for that covariate in the resident-level QI calculation record appropriate to that resident for a target quarter.
5. **At this point, the resident-level QI calculation file for each of the 6 target quarters has a score for each QI and for each covariate associated with a QI.**
6. **Select Facility Admission Profile (FAP) calculation samples.**
 - 6.1. **Select 6 Chronic Care (CC) FAP calculation samples for 6 target quarters: 2000Q2, 2000Q3, 2000Q4, 2001Q1, 2001Q4 and 2002Q1. The first four**

Steps Used In Validation QI Calculation

samples will be used to build logistic regression models; the fifth and sixth samples will be used for reporting.

- 6.1.1. Selection based on the specifications in the record selection document.
- 6.1.2. Selection is by resident.
- 6.1.3. Selection is for the entire nation.
- 6.1.4. Each resident in a sample has the following CC record selected:
 - 6.1.4.1. The most recent admission assessment in the year ending with the target quarter.
- 6.2. Select 6 Post Acute Care (PAC) FAP calculation samples for 6 target quarters: 2000Q2, 2000Q3, 2000Q4, 2001Q1, 2001Q4 and 2002Q1. The first four samples will be used to build logistic regression models; the fifth and sixth samples will be used for reporting.**
 - 6.2.1. Selection based on the specifications in record selection document.
 - 6.2.2. Selection is by resident.
 - 6.2.3. Selection is for the entire nation.
 - 6.2.4. Each resident in a sample has the following PAC record selected:
 - 6.2.4.1. The most recent PPS 5-day assessment in the year ending with the target quarter.
- 7. Create a resident-level FAP calculation file for each of the 6 target quarters. The resident-level FAP calculation file for a target quarter has 1 record for every resident in that FAP sample and contains variables from the admission assessment (CC) or PPS 5-day assessment (PAC) which was selected for that resident.**
- 8. Calculate resident-level FAP scores for each resident in each of the 6 target quarters and store the resulting values in the resident-level FAP calculation files for each of the 6 target quarters.**
 - 8.1. For each CC and PAC FAP separately.
 - 8.1.1. **Resident-level FAP calculation.** For each resident in a target quarter, determine if the resident should be excluded from FAP calculation. The exclusion rules for FAP calculation are given for each CC and PAC QI in the QI operational definitions matrix.
 - 8.1.1.1. If the resident is excluded, then store a missing value for that FAP in the resident-level FAP calculation record appropriate to that resident for a target quarter.
 - 8.1.2. If the resident is not excluded, calculate the resident-level FAP score according to the rules for FAP calculation given for each CC and PAC QI in the QI operational definitions matrix and store the calculated value for that FAP in the resident-level FAP calculation record appropriate to that resident for a target quarter.
 - 8.1.2.1.1. If the FAP is a prevalence measure with numerator and denominator defined, then the FAP score will be a 1 if the numerator conditions are satisfied and a 0 otherwise.
 - 8.1.2.1.2. If the FAP is based on a scale, then the FAP score is the computed scale score.

Steps Used In Validation QI Calculation

9. Create a facility-level output file for each facility for each of the 6 target quarters. The facility-level output file for a target quarter has 1 record for each facility in the universe of facilities.
10. Calculate facility-level FAP scores for each facility for each of the 6 target quarters and store the resulting values in the facility-level output files for each of the 6 target quarters.
 - 10.1. For each CC and PAC FAP separately.
 - 10.1.1. **Facility-level FAP calculation.** Compute the average FAP values for a QI for each facility for each of the 6 target quarters.
 - 10.1.1.1. Store the resulting averages in the facility-level output record for each facility for each of the 6 target quarters.
 - 10.1.1.2. A facility-level FAP result for one of the target quarters is missing if there are no residents in the corresponding resident-level calculation file for the target quarter
11. At this point, the facility-level output file for each of the 6 target quarters has mean values for each FAP for each QI.
12. For each of the five target periods, replicate the facility-level FAP mean for each FAP for each CC QI and each PAC QI into the resident-level QI calculation records for all residents within a facility.
13. At this point, the resident-level QI calculation file for each of the 6 target quarters has resident-level values for each CC and PAC QI, resident-level values for each covariate associated with a QI, and the facility-level mean FAP value for the FAP associated with each QI.
14. A pooled resident-level QI calculation file is created by combining all resident-level QI calculation records from the 4 files for the 2000Q2, 2000Q3, 2000Q4 and 2001Q1 target quarters. This pooled resident file is used to build logistic regression models to predict each QI.
15. The SAS logistic regression procedure is then run to obtain a logistic model for each CC QI and PAC QI to predict the resident-level QI score from the facility-level FAP and resident-level covariates (if any) associated with a QI. The pooled data from the first four target quarters (2000Q2, 2000Q3, 2000Q4, and 2001Q1) are used to build these models.
 - 15.1. Input data file is the pooled resident-level QI calculation file (across the 4 target quarters).
 - 15.2. Dependent variable is the resident-level QI score.
 - 15.3. Predictors are the facility-level FAP (if specified) and the resident-level covariates (if any).
 - 15.4. Output values are the logistic regression coefficients for each QI. The coefficients for each QI include a constant, a FAP coefficient (if applicable), and a coefficient for each covariate (if applicable).
16. The logistic model coefficients from the pooled resident-level QI calculation sample are then used to calculate expected QI scores for each CC QI and PAC QI for each resident for the fifth (2001Q4) and sixth (2002Q1) target quarters.
 - 16.1. The formula used for this calculation is given in the description of the expected score QI calculation.

Steps Used In Validation QI Calculation

- 16.2. For each QI, the input data for this calculation are the facility-level FAP and resident-level covariate scores (if applicable) from the resident level QI calculation file, as well as the logistic coefficients from Step 16.
- 16.3. The expected QI scores for each QI for each resident are stored in the resident-level QI calculation file for the 2001Q4 and 2002Q1 target quarters.
- 17. Calculate the overall mean observed QI rate for the 2001Q4 and 2002Q1 target quarters across all states.**
 - 17.1. For each CC and PAC QI separately.
 - 17.1.1. Overall mean observed QI rate calculation.**
 - 17.1.1.1. For each resident with non-missing data on the QI score (not excluded) in the resident-level QI calculation file for 2001Q4 and 2002Q1 (across all states):
 - 17.1.1.1.1. Count the total number of these residents and retain the result as the overall QI denominator count across all states.
 - 17.1.1.1.2. Count the total number of these residents triggering the QI (QI score of 1) and retain the result as the overall QI numerator count across all states.
 - 17.1.1.2. Divide the overall QI numerator by the overall QI denominator and retain the result as the overall observed QI rate.
- 18. Calculate facility-level observed QI rate and facility-level expected QI rate for each facility for the 2001Q4 and 2002Q1 target quarter and store the resulting values in the facility-level output file for that target quarter.**
 - 18.1. For each CC and PAC QI separately.
 - 18.1.1. Facility-level observed QI and expected QI rate calculation.**
 - 18.1.1.1. For each resident in the facility with non-missing data on the QI score (not excluded) and on all covariate scores (if applicable):
 - 18.1.1.1.1. Count the total number of these residents in the facility and store the result in the facility-level output record as the QI denominator count for the facility.
 - 18.1.1.1.2. Count the total number of these residents triggering the QI (QI score of 1) and store the result in the facility-level output record as the QI numerator count for the facility.
 - 18.1.1.1.3. Average the expected QI score for all of these residents and store in the facility-level output table as the expected QI rate for the facility.
 - 18.1.1.2. Divide the facility-level QI numerator by the facility-level QI denominator and store the result in the facility-level output record as the observed QI rate.
- 19. Calculate facility-level adjusted QI score for each facility for the 2001Q4 and 2002Q1 target quarters and store the resulting value in the facility-level output file for that target quarter.**
 - 19.1. For each CC and PAC QI separately.
 - 19.1.1. Facility-level adjusted QI score calculation.**
 - 19.2. The formula for this calculation is given in description of the adjusted score QI calculation.

Steps Used In Validation QI Calculation

- 19.2.1.1.1. For each QI, the input data for this calculation are the facility-level observed and expected QI rates from the facility output table, as well as the overall observed QI rate from Step 17.
- 19.2.1.1.2. The adjusted QI score for each QI for each facility is stored in the facility output file for 2001Q4 and 2002Q1.
- 19.2.1.1.3. The adjusted QI score will be missing if either the facility-level observed QI rate or the facility-level expected QI rate is missing.

Calculation of the Expected QI Score

The resident-level expected QI score for a QI is an estimate of the risk that a resident will trigger the QI. This risk estimate is based on consideration of:

1. The facility-level admission and assessment practices of the facility, as measured by the Facility Admission Profile (FAP) for the QI, if specified.
2. The resident-level covariates associated with the QI if specified.

(It should be noted that a few of the QIs do not have an adjustment model in the specifications; these QIs will not have an expected or adjusted score.)

The expected score for many of the QIs considers the facility-level FAP defined for the QI. The facility-level FAP for a QI is the facility average of the resident-level FAP scores based on the most recent admission assessment a resident in the last 12 months. The rules for resident-level FAP calculation are given for each CC and PAC QI in the QI operational definitions matrix.

Note that the FAP sample is based upon all admissions during a 12-month period and contains residents who may not be included in any of the individual QI samples (although there will be overlap). Furthermore, note that each facility-level FAP score is replicated for all residents associated with a facility. Thus for a particular QI, the FAP score is a constant for all residents associated with a given facility in the QI's logistic regression model.

For some QIs, the expected QI score considers resident-level covariates associated with the QI; such QIs may or may not also consider the facility-level FAP covariate. For other QIs, resident-level covariates are not considered and the expected QI score is based solely on the FAP. The QI operational definitions matrix presents the resident-level covariates (if any) associated with each QI and the logic for calculating each covariate.

For each QI, a resident-level logistic regression equation for the expected score has been statistically derived from analysis of a pooled sample of all residents from a 10 percent random sample of all facilities for four target quarters: Quarter 2 of 2000 (2000Q2) through Quarter 1 of 2001 (2001Q1). These logistic regression equations were derived using the resident-level QI score as the dependent variable. The predictor variables were the facility-level FAP and any resident-level covariates associated with the QI.

The resulting logistic regression equations are of the form:

$$\frac{1}{1 + e^{-X}}$$

Where **e** is the base of natural logarithms and **X** is a linear combination of the logistic regression coefficients and the predictor variables of the form:

Calculation of the Expected QI Score

$$C_0 + C_{FAP} * FAP + C_1 * COV_A + C_2 * COV_B + \dots$$

Where C_0 is the logistic regression constant, C_{FAP} is the logistic regression coefficient for the Facility Admission Profile (where applicable), FAP is the facility-level Facility Admission Profile score for the resident's facility (where applicable), C_1 is the logistic regression coefficient for the first covariate (where applicable), COV_A is the resident-level score for the first covariate (where applicable), C_2 is the logistic regression coefficient for the second covariate (where applicable), and COV_B is the resident-level score for the second covariate (where applicable).

For each QI, such a logistic regression equation is applied to each resident and the result is the resident-level expected score for the QI.

As an example, consider the actual calculation used for the expected score for the CC "Percent of Residents with Pressure Sores with FAP Adjustment" QI (PRU01). This QI does not consider any resident covariates (only the FAP is considered) and the actual equation used was:

$$\frac{1}{1 + e^{-(-2.72659 + 2.21735 * F_CPRU1)}}$$

Where F_CPRU1 is the facility-level FAP for PRU01.

The PAC "Percent of Short-Stay Residents with Delirium with FAP Adjustment" QI (PAC_DEL0X) provides an example of a QI that considers a FAP variable and a resident-level covariate. The covariate for that QI is lack of prior residential history in a nursing home, residential care facility, or MH/MR facility. The equation used for this QI was:

$$\frac{1}{1 + e^{-(-3.65433 + 7.26925 * F_DEL0X - 0.22714 * ResHist)}}$$

Where F_DEL0X is the facility-level FAP for DEL0X and $ResHist$ is the resident-level covariate indicating lack of prior residential history.

The CC "Percent of Residents with Pain" QI (PAI0X) provides an example of a QI that considers only a resident-level covariate. The covariate for that QI is an indicator of independence in daily decision-making on the prior assessment. The equation used for this QI was:

Calculation of the Expected QI Score

$$\frac{1}{1 + e^{-(-2.49156 + 0.86520 * \text{IndpDec})}}$$

Where IndpDec is the resident-level covariate indicating independence in daily decision-making.

Calculation of the Adjusted QI Score

The adjusted QI score is a facility-level QI adjusted for the specific risk for that QI in the facility. The risk-adjusted QI score can be thought of as estimate of the facility's QI rate if the facility had residents with average risk.

The facility-level adjusted score is calculated on the basis of the facility-level observed QI rate, the facility-level average expected QI rate, and the national average observed QI rate.

The actual calculation of the adjusted score uses the following equation:

$$\text{Adj} = \frac{1}{1 + e^{-[\text{Ln}(\text{Obs}/(1-\text{Obs})) - \text{Ln}(\text{Exp}/(1-\text{Exp})) + \text{Ln}(\text{Nat}/(1-\text{Nat}))]}}$$

Where **Adj** is the facility-level adjusted QI score, **Obs** is the facility-level observed QI rate, **Exp** is the facility-level expected QI rate, **Nat** is the national observed QI rate, and **Ln** indicates a natural logarithm.

Note that the observed QI rate (**Obs**) is modified in two special cases before applying the equation:

1. When **Obs** equals 0, then **Obs** is reset as follows before using in the equation:

$$\text{Obs} = \frac{1}{(4 * \text{QI_den})}$$

where QI_den is the observed QI denominator value (number of residents).

2. When **Obs** equals 1, then Obs is reset as follows before using in the equation:

$$\text{Obs} = 1 - \frac{1}{(4 * \text{QI_den})}$$

where QI_den is the observed QI denominator value (number of residents).

The adjusted score equation will produce adjusted scores in the range of 0 to 1. These adjusted scores can then be converted to percentages for ease of interpretation.

These adjusted score calculations are applied to QIs that use expected scores based on the Facility Admission Profile (FAP) and/or resident-level covariates.

Appendix E

Operational Definitions for all Tested QIs

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
PHYSICAL FUNCTIONING Late-Loss ADL worsening	<p>Numerator: Residents with worsening (increasing item score) in Late-Loss ADL self-performance at target relative to prior assessment.</p> <p>Residents meet the definition of Late-Loss ADL worsening when at least two of the following are true:</p> <ol style="list-style-type: none"> 1. $G1a(A)[t] - G1a(A)[t-1] > 0$, or 2. $G1b(A)[t] - G1b(A)[t-1] > 0$, or 3. $G1h(A)[t] - G1h(A)[t-1] > 0$, or 4. $G1i(A)[t] - G1i(A)[t-1] > 0$, <p>OR at least one of the following is true:</p> <ol style="list-style-type: none"> 1. $G1a(A)[t] - G1a(A)[t-1] > 1$, or 2. $G1b(A)[t] - G1b(A)[t-1] > 1$, or 3. $G1h(A)[t] - G1h(A)[t-1] > 1$, or 4. $G1i(A)[t] - G1i(A)[t-1] > 1$. <p>Note: Late-Loss ADL items values of 8 are recoded to 4 for evaluation of change.</p> <p>Denominator: All residents with a valid target and a valid prior assessment.</p> <p>Exclusions: Residents meeting any of the following conditions:</p> <ol style="list-style-type: none"> 1. None of the four Late-Loss ADLs ($G1a(A)$, $G1b(A)$, $G1h(A)$, and $G1i(A)$) can show decline because each of the four have a value of 4 (total dependence) or a value 8 (activity did not occur) on the prior assessment $[t-1]$. 2. The QM did not trigger (resident not included in the numerator) AND there is missing data on any one of the four Late-Loss ADLs ($G1a(A)$, $G1b(A)$, $G1h(A)$, or $G1i(A)$) on the target assessment $[t]$ or prior assessment $[t-1]$. 3. The resident is comatose ($B1 = 1$) or comatose status is unknown ($B1 = \text{missing}$) on the target assessment. 4. The resident has end-stage disease ($J5c = \text{checked}$) or end-stage disease status is unknown ($J5c = \text{missing}$) on the target assessment. 5. The resident is receiving hospice care ($P1ao = \text{checked}$) or hospice status is unknown ($P1ao = \text{missing}$) on the target assessment or the most recent full assessment. 6. The resident is in a facility with a Chronic Care 		(CHSRA)

Items refer to MDS 2.0.

For Chronic Care QMs: $[t]$ indicates target assessment, $[t-1]$ prior assessment, and $[t-2]$ assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: $[t]$ indicates SNF PPS 14-day assessment and $[t-1]$ SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
PHYSICAL FUNCTIONING			
	Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months).		
ADL worsening following improvement (cumulative, longitudinal indicator over 3 assessments)	<p>Numerator: Residents with ADL Long Form score (ADLLF) showing worsening (increasing ADLLF score) following improvement (decreasing ADLLF score): $ADLLF[t] > ADLLF[t-1] < ADLLF[t-2]$.</p> <p>The ADL Long Form Scale (ADLLF) is defined in Technical Comment #1 below.</p> <p>Denominator: All residents with a valid target assessment, a valid prior assessment, and a valid prior-1 assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The ADLLF score is missing on either the target [t] or the prior [t-1] assessment. 2. The ADLLF score is missing on the prior-1 assessment [t-2] and the ADLLF score is below the ceiling on the prior assessment ($ADLLF[t-1] < 28$). 3. The ADLLF score is at the scale floor on the prior-1 assessment ($ADLLF[t-2] = 0$). 4. The ADLLF score is at the scale ceiling on the prior assessment ($ADLLF[t-1] = 28$). 5. The resident is comatose ($B1 = 1$) or comatose status is unknown ($B1 = \text{missing}$) on the target assessment. 6. The resident has end-stage disease ($J5c = \text{checked}$) or status is unknown ($J5c = \text{missing}$) on the target assessment. 7. The resident is receiving hospice care ($P1ao = \text{checked}$) or hospice status is unknown ($P1ao = \text{missing}$) on the target assessment or the most recent full assessment. 8. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months). 		(MEGAQI)
ADL improvement: improvement in ADLs among residents who exhibited a capacity for improvement at the prior assessment.	<p>Numerator: Residents with ADL Long Form scale (ADLLF) lower at target assessment relative to prior assessment, implying improvement ($ADLLF[t] < ADLLF[t-1]$).</p> <p>Denominator: All residents with a valid target assessment and a valid prior assessment AND with any</p>		(MEGAQI)

Items refer to MDS 2.0.

For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
PHYSICAL FUNCTIONING			
<p><i>Note: This is a 'good' QM. Higher values on this QM imply good quality of care relative to ADL improvement. This is different from most other QMs, where a high value implies the possibility of poorer care in that specific area.</i></p>	<p>one of the following Inclusion Indicators of ADL functional rehabilitation capacity in items G8a through G8d on the prior assessment OR on the most recent full assessment:</p> <ol style="list-style-type: none"> 1. Resident believes there is capability of increased independence (G8a = checked). 2. Staff believes there is capability of increased independence (G8b = checked). 3. Resident able to perform tasks/activity but is very slow (G8c = checked). 4. Difference in ADL self -performance or support comparing mornings to evenings (G8d = checked). <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The ADLLF score is missing on the target assessment [t]. 2. The ADLLF score is missing on the prior assessment [t-1] and the ADLLF score is below the ceiling on the target assessment (ADLLF[t] < 28). 3. The ADLLF score is at the scale floor on the prior assessment (ADLLF[t-1] = 0). 4. The resident is comatose (B1 = 1) or comatose status is unknown (B1 = missing) on the target assessment. 5. The resident has end-stage disease (J5c = checked) or status is unknown (J5c = missing) on the target assessment. 6. The resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the target assessment or the most recent full assessment. 7. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months). 		
Locomotion worsening	<p>Numerator: Total number of residents whose value for locomotion self-performance is greater at target relative to prior assessment (G1e(A)[t]>G1e(A)[t-1]).</p> <p>Denominator: All residents with a valid target assessment and a valid prior assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The G1e(A) value is missing on the target 	<p>Facility admission profile FAP_MOB01: mean level of mobility (G1e(A), treating 8's (activity did not occur) as 4's (total dependence)) among facility admissions (AA8a = 01) over previous 12 months.</p> <p>Exclusions: Admission assessments (AA8a = 01) with missing data on G1e(A).</p> <p>Covariates:</p> <ol style="list-style-type: none"> 1. Indicator of recent falls on the prior assessment: Covariate = 1 if J4a checked OR J4b checked. Covariate = 0 if J4a not checked AND J4b not checked. 	(LTCQ)

Items refer to MDS 2.0.

For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
PHYSICAL FUNCTIONING			
	<p>assessment [t].</p> <ol style="list-style-type: none"> The G1e(A) value is missing on the prior assessment [t-1] and the G1e(A) value shows some dependence on the target assessment (G1e(A)[t]> 0). The G1e(A) value on the prior assessment is 4 (total dependence) or 8 (activity did not occur). The resident is comatose (B1 = 1) or comatose status is unknown (B1 = missing) on the target assessment. The resident has end-stage disease (J5c = checked) or status is unknown (J5c = missing) on the target assessment. The resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the target assessment or the most recent full assessment. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months). 	<ol style="list-style-type: none"> Indicator of extensive support or more dependence in eating on the prior assessment: Covariate = 1 if G1h(A) = 3, 4, or 8. Covariate = 0 if G1h(A) = 0, 1, or 2. Indicator of extensive support or more dependence in toileting on the prior assessment: Covariate = 1 if G1i(A) = 3, 4, or 8. Covariate = 0 if G1i(A) = 0, 1, or 2. 	
<p>Maintenance or improvement in walking performance in persons with walking capacity.</p> <p><i>Note: This is a 'good' QM. Higher values on this QM imply good quality of care relative to ADL improvement. This is different from most other QMs, where a high value implies the possibility of poorer care in that specific area.</i></p>	<p>Numerator: Residents with walking in corridor performance scores at the target assessment equal to or less than at the prior assessment (G1d(A)[t]≤G1d(A)[t-1]).</p> <p>Denominator: All residents with a valid target assessment and a valid prior assessment AND one of the following Inclusion Indicators:</p> <ol style="list-style-type: none"> Capacity to stand (G3a[t-1] = 0, 1, or 2) on the prior assessment or the most recent full assessment. Capacity to walk (G1d(A)[t-1] = 0, 1, 2, or 3) on the prior assessment. <p>Exclusions: Residents satisfying the following condition:</p> <ol style="list-style-type: none"> The G1d(A) value is missing on the target assessment [t] or the prior assessment [t-1]. The resident is comatose (B1 = 1) or comatose status is unknown (B1 = missing) on the target assessment. The resident has end-stage disease (J5c = checked) or status is unknown (J5c = missing) on the target assessment. The resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the target assessment or the most 	<p>Facility admission profile FAP_WAL0X: mean locomotion level (G1d(A), treating 8's (activity did not occur) as 4's (total dependence)) among facility admissions (AA8a = 01) over previous 12 months. Exclusions: Admission assessments (AA8a = 01) with missing data on G1d(A).</p>	(MEGAQI)

Items refer to MDS 2.0.

For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
PHYSICAL FUNCTIONING			
	<p>recent full assessment.</p> <p>5. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months).</p>		

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
COGNITIVE AND PSYCHOSOCIAL FUNCTIONING			
Cognition worsening	<p>Numerator: Residents with score on cognitive performance scale (CPS, Morris et al. 1994, defined below) that is higher on target relative to prior assessment (CPS[t]>CPS[t-1]). (See CPS definition under Technical Comment #1 below.)</p> <p>Denominator: All residents with a valid target assessment and a valid prior assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> The CPS score has a missing value on the target assessment [t]. The CPS score has a missing value on the prior assessment [t-1] and the CPS score shows some impairment on the target assessment (CPS[t] > 0). The CPS score on the prior assessment [t-1] is at the maximum value of 6. The resident is comatose (B1 = 1) or comatose status is unknown (B1= missing) on the target assessment. The resident has end-stage disease (J5c = checked) or status is unknown (J5c = missing) on the target assessment. The resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the target assessment or the most recent full assessment. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no 	<p>Facility admission profile FAP_COG01: mean CPS score among admissions (AA8a = 01) over previous 12 months. (See CPS definition under Technical Comment #1 in the Numerator and Denominator column.)</p> <p>Exclusions: Admission assessments (AA8a = 01) with a missing value on the CPS.</p> <p>Covariates:</p> <ol style="list-style-type: none"> Indicator that resident has bowel incontinence on the prior assessment: Covariate = 1 if H1a = 4. Covariate = 0 if H1a = 0, 1, 2, or 3. Indicator that resident fell in the past 30 days on the prior assessment. Covariate = 1 if J4a is checked. Covariate = 0 if J4a is not checked. Indicator that resident has weight loss on the prior assessment: Covariate = 1 if K3a = 1. Covariate = 0 if K3a = 0. Indicator that resident age (see definition below) is greater than 76 on the assessment reference date (A3a) of the prior assessment: Covariate = 1 if age > 76. Covariate = 0 if age <= 76. (See age definition under Technical Comment #1 below.) 	(LTCQ)

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For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
COGNITIVE AND PSYCHOSOCIAL FUNCTIONING			
	admission assessments with AA8a = 01 in the facility over the previous 12 months).		
Worsening Communication	<p>Numerator: Residents with a Communication Scale score (sum of 'ability to understand others' (C6) and 'making self understood' (C4)) that is greater at the target assessment relative to the prior assessment ($C4[t] + C6[t] > C4[t-1] + C6[t-1]$).</p> <p>Denominator: All residents with a valid target assessment and a valid prior assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The Communication Scale score is missing on the target assessment [t]. 2. The Communication Scale score is missing on the prior assessment [t-1] and the Communication Scale score shows some impairment on the target assessment ($\text{Communication Scale}[t] > 0$). 3. The Communication Scale score on the prior assessment [t-1] is at the maximum value of 6. 4. The resident is comatose ($B1 = 1$) or comatose status is unknown ($B1 = \text{missing}$) on the target assessment. 5. The resident has end-stage disease ($J5c = \text{checked}$) or status is unknown ($J5c = \text{missing}$) on the target assessment. 6. The resident is receiving hospice care ($P1ao = \text{checked}$) or hospice status is unknown ($P1ao = \text{missing}$) on the target assessment or the most recent full assessment. 7. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months). 	<p>Facility admission profile FAP_COM01: mean Communication Scale score among facility admissions (AA8a= 01) over previous 12 months. (See Communication Scale definition under Technical Comment #1 in the Numerator and Denominator column.)</p> <p>Exclusions: Admission assessments (AA8a = 01) with a missing value on the Communication Scale.</p> <p>Covariates:</p> <ol style="list-style-type: none"> 1. Indicator that resident requires extensive assistance or is totally dependent in eating on the prior assessment: Covariate = 1 if $G1h(A) = 3, 4, \text{ or } 8$. Covariate = 0 if $G1h(A) = 0, 1, \text{ or } 2$. 2. Indicator that resident has a short term memory problem on the prior assessment: Covariate = 1 if $B2a = 1$. Covariate = 0 if $B2a = 0$. 	(LTCQ)
Delirium: failure to prevent new delirium or recurrence of delirium	<p>Numerator: Residents satisfying any of the following 3 conditions:</p> <ol style="list-style-type: none"> 1. Any delirium symptom that departs from usual functioning ($B5a[t] \text{ through } B5f[t] = 2$) on target assessment. 2. Any delirium symptom ($B5a \text{ through } B5f$) that departs from usual functioning on the prior assessment AND is present on the target assessment (e.g., for B5a: $B5a[t-1] = 2$ and $B5a[t] =$ 	<p>Facility admission profile FAP_DELOX: prevalence of any delirium symptom representing a departure from usual functioning ($B5a \text{ through } B5f=2$) among admissions (AA8a = 01) over previous 12 months.</p> <p>Numerator: Admission assessments (AA8a = 01) with a value of 2 on any item B5a through B5f.</p> <p>Denominator: All admission assessments (AA8a = 01).</p> <p>Exclusions: Admission assessments (AA8a = 01) that do not satisfy the numerator condition AND that have missing data</p>	(MEGAQI)

Items refer to MDS 2.0.

For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
COGNITIVE AND PSYCHOSOCIAL FUNCTIONING			
	<p>1). 3. Any delirium symptom (B5a through B5f) that was not present on the prior assessment AND is present on the target assessment (e.g., for B5a: B5a[t-1] = 0 and B5a[t] = 1) AND the Cognitive Performance Scale (CPS) score indicates that cognitive impairment is not severe (CPS = 0, 1, 2, or 3) on the target assessment. (CPS is defined in the Technical Comments for COG01 in the Numerator and Denominator column.)</p> <p>Denominator: All residents with a valid target assessment and a valid prior assessment.</p> <p>Exclusions: Residents satisfying the following condition:</p> <ol style="list-style-type: none"> 1. The QM did not trigger (resident not included in the numerator) and there is a missing value on any of the items B5a through B5f on the target assessment [t]. 2. The QM did not trigger (resident not included in the numerator) and, for any of the items B5a through B5f, there is missing data on the prior assessment [t-1] for an item and the value for the same item on the target assessment [t] is > 0 showing delirium (e.g., for B5a: B5a[t-1] = missing AND B5a[t-1] > 0). 3. The resident is comatose (B1 = 1) or comatose status is unknown (B1 = missing) on the target assessment. 4. The resident has end-stage disease (J5c = checked) or status is unknown (J5c = missing) on the target assessment. 5. The resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the target assessment or the most recent full assessment. 6. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months). 	on any item B5a through B5f.	
Behavior symptoms affecting others (BEH01, CHSRA; high & low	Numerator: Residents with behavioral symptoms affecting others on target assessment, including any verbally abusive behavior (E4b(A)>0), physically abusive behavior (E4c(A)>0) or socially inappropriate behavior	Facility admission profile FAP_BEH01: mean of the sum of behavior item scores (E4a(A), E4b(A), E4c(A), E4d(A)) among facility admissions (AA8a = 01) over previous 12 months. Exclusions: Admission assessments (AA8a = 01) with missing	(CHSRA)

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For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
<p>COGNITIVE AND PSYCHOSOCIAL FUNCTIONING</p> <p>risk) (BEH02, CHSRA; high risk) (BEH03, CHSRA; low risk)</p> <p><i>Three separate QMs are calculated. BEH01 includes all residents regardless of risk ("Denominator, high & low risk" criteria). BEH02 is limited to residents with high risk ("Denominator, high risk" criteria). BEH03 is limited to residents with low risk ("Denominator, low risk" criteria).</i></p>	<p>(E4d(A)>0).</p> <p>Denominator, high & low risk: All residents with a valid target assessment.</p> <p>Denominator, high risk: All residents with a valid target assessment and one of the following Inclusion Criteria:</p> <ol style="list-style-type: none"> 1. Cognitive impairment on the target assessment as indicated by B4 > 0 AND B2a = 1. 2. A psychotic disorder on the target assessment or most recent full assessment as indicated by any of the following conditions: <ol style="list-style-type: none"> 2.1. An ICD9 diagnosis code of 295.00 through 295.95 on items I3a through I3e. 2.2. An ICD9 diagnosis code of 297.00 through 298.9 on items I3a through I3e. 2.3. Schizophrenia (I1gg = checked). 3. A bipolar disorder on the target assessment or most recent full assessment as indicated by any of the following conditions: <ol style="list-style-type: none"> 3.1. An ICD9 diagnosis code of 296.00 through 296.99 on items I3a through I3e. 3.2. Manic depression (I1ff = checked). <p>Denominator, low risk: All residents with a valid target assessment and not qualifying as high risk.</p> <p>Exclusions:</p> <ol style="list-style-type: none"> 1. Residents satisfying any of the following conditions are excluded from all risk groups (high & low, high, and low) <ol style="list-style-type: none"> 1.1. The target assessment is an admission (AA8a = 01) assessment. 1.2. The resident is comatose (B1 = 1) or comatose status is unknown (B1= missing) on the target assessment. 1.3. The QM did not trigger (resident is not included in the QM numerator) AND the value of E4b(A), E4c(A), or E4d(A) is missing on the target assessment. 1.4. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months). 	<p>data on any item E4a(A), E4b(A), E4c(A), or E4d(A).</p> <p>Note: FAP_BEH01 is used for all three risk groupings: high & low (BEH01), high (BEH02), and low (BEH03).</p>	

Items refer to MDS 2.0.

For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
COGNITIVE AND PSYCHOSOCIAL FUNCTIONING			
	<p>2. Residents satisfying any of the following conditions are excluded from the high risk group and the low risk group (but not the combined high & low risk group):</p> <p>2.1. The resident does not qualify as high risk and the value of B2a or B4 is missing on the target assessment.</p> <p>2.2. The resident does not qualify as high risk and the value of I1gg is missing on both the target assessment and the most recent full assessment.</p> <p>2.3. The resident does not qualify as high risk and the value of I1ff is missing on both the target assessment and the most recent full assessment.</p>		
Worsening behavioral symptoms	<p>Numerator: Residents with more behavioral symptoms present at target assessment ([t]) relative to prior assessment ([t-1]). Included symptoms are Wandering (E4a(A)>0), Verbally abusive behavior (E4b(A)>0), Physically abusive behavior (E4c(A)>0), and Socially inappropriate behavior (E4d(A)>0). Specifically: Count(E4a(A) > 0, E4b(A) > 0, E4c(A) > 0, E4d(A) > 0) at time [t] > Count(E4a(A) > 0, E4b(A) > 0, E4c(A) > 0, E4d(A) > 0) at time [t-1]</p> <p>Denominator: All residents with a valid target assessment and a valid prior assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> All four behavior symptoms are present on the prior assessment: E4a(A) > 0 AND E4b(A) > 0 AND E4c(A) > 0 AND E4d(A) > 0. Any of the four behavior items (E4a(A), E4b(A), E4c(A), E4d(A)) are missing on the target assessment [t] or prior assessment [t-1]. The resident is comatose (B1 = 1) or comatose status is unknown (B1= missing) on the target assessment. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months). 	<p>Facility admission profile FAP_BEH04: mean of the sum of behavior item scores (E4a(A), E4b(A), E4c(A), E4d(A)) among facility admissions (AA8a = 01) over previous 12 months.</p> <p>Exclusions: Admission assessments (AA8a = 01) with missing data on any item E4a(A), E4b(A), E4c(A), or E4d(A).</p> <p>Covariates:</p> <ol style="list-style-type: none"> Indicator of modes of expression including speech on the prior assessment OR the most recent full assessment: Covariate = 1 if C3a = checked. Covariate = 0 if C3a = not checked. Indicator of moderately or severely impaired cognitive skills on the prior assessment: Covariate = 1 if B4 > 1. Covariate = 0 if B4 = 0 or 1. Indicator of motor agitation on the prior assessment: Covariate = 1 if E1n = 1 or 2. Covariate = 0 if E1n = 0. 	(LTCQ)

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For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
COGNITIVE AND PSYCHOSOCIAL FUNCTIONING			
Depressed/Anxious mood worsening	<p>Numerator: The total number of residents whose Mood Scale score is greater on target assessment relative to prior assessment (Mood Scale [t] > Mood Scale [t-1]. (The Mood Scale is defined in the Technical Comments below.)</p> <p>Denominator: All residents with a valid target assessment and a valid prior assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The Mood Scale score is missing on the target assessment [t]. 2. The Mood Scale score is missing on the prior assessment [t-1] and the Mood Scale score indicates symptoms present on the target assessment (Mood Scale[t] > 0). 3. The Mood Scale score is at a maximum (value 8) on the prior assessment. 4. The resident is comatose (B1=1) or comatose status is unknown (B1=missing) on the target assessment. 5. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months). 	<p>Facility admission profile FAP_MOD03: mean Depression Rating Scale score (DRS; Burrows et al. 2001) among facility admissions (AA8a = 01) over previous 12 months. (The definition for the DRS is given in Technical Comment #1 below.)</p> <p>Exclusions: Admission assessments (AA8a = 01) with a missing value for the Depression Rating Scale.</p> <p>Covariates:</p> <ol style="list-style-type: none"> 1. Indicator of independent through extensive assistance transferring on the prior assessment: Covariate = 1 if G1b(A) = 0, 1, 2, or 3. Covariate = 0 if G1b(A) = 4 or 8. 2. Indicator of pain on the prior assessment: Covariate = 1 if J2a = 1 or 2. Covariate = 0 if J2a = 0. 3. Indicator of discharge planned in 3 months on the prior assessment or most recent full assessment: Covariate = 1 if Q1c = 1 or 2. Covariate = 0 if Q1c = 0 or 3. 	(LTCQ)
Little or no activity	<p>Numerator: Residents with little or no activity (N2>1) on target assessment.</p> <p>Denominator: All residents with a valid target assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. The value of N2 is missing on the target assessment. 3. The resident is comatose (B1 = 1) or comatose status is unknown (B1 = missing) on the target assessment. 4. The resident has end-stage disease (J5c = checked) or status is unknown (J5c = missing) on the target assessment. 		(CHSRA)

Items refer to MDS 2.0.

For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
COGNITIVE AND PSYCHOSOCIAL FUNCTIONING			
	<p>5. The resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the target assessment or the most recent full assessment.</p> <p>6. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months).</p>		

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
CATHETER & CONTINENCE			
New insertion of indwelling catheter	<p>Numerator: Residents with an indwelling catheter (H3d[t]=checked) on the target assessment that did not have an indwelling catheter at prior assessment (H3d[t-1]= not checked).</p> <p>Denominator: All residents with a valid target assessment and a valid prior assessment.</p> <p>Exclusions: Residents satisfying the following condition:</p> <ol style="list-style-type: none"> H3d is missing on either the target assessment or the prior assessment. The resident has end-stage disease (J5c = checked) or status is unknown (J5c = missing) on the target assessment. The resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the target assessment or the most recent full assessment. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months). 	<p>Covariates:</p> <ol style="list-style-type: none"> Indicator of bowel incontinence on the prior assessment: Covariate = 1 if H1a = 4. Covariate = 0 if H1a = 0, 1, 2, or 3. Indicator of pressure ulcers on the prior assessment: Covariate = 1 if M2a = 3 or 4. Covariate = 0 if M2a = 0. 	(LTCQ)
Prevalence of indwelling catheters	<p>Numerator: Indwelling catheter on target assessment (H3d=checked).</p>	<p>Covariates:</p> <ol style="list-style-type: none"> Indicator of bowel incontinence on the prior assessment: Covariate = 1 if H1a = 4. 	(CHSRA)

Items refer to MDS 2.0.

For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
CATHETER & CONTINENCE			
	<p>Denominator: All residents with a valid target assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. H3d is missing on the target assessment. 3. The resident has end-stage disease (J5c = checked) or status is unknown (J5c = missing) on the target assessment. 4. The resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the target assessment or the most recent full assessment. 5. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months). 	<ol style="list-style-type: none"> 2. Covariate = 0 if H1a = 0, 1, 2, or 3. Indicator of pressure ulcers on the prior assessment: Covariate = 1 if M2a = 3 or 4. Covariate = 0 if M2a = 0. 	
<p>Bladder or bowel incontinence prevalence</p> <p>(CNT01, CHSRA: High & Low risk) (CNT05, CHSRA: High risk) (CNT06, CHSRA: Low risk)</p> <p><i>Three separate QMs are calculated. CNT01 includes all residents regardless of risk ("Denominator, high & low risk" criteria). CNT05 is limited to residents with high risk ("Denominator, high risk" criteria). CNT06 is limited to residents with low risk ("Denominator, low risk" criteria).</i></p>	<p>Numerator: Residents who were frequently incontinent or fully incontinent on target assessment (H1a=3 or 4, or H1b=3 or 4).</p> <p>Denominator, high & low risk: All residents with a valid target assessment.</p> <p>Denominator, high risk: All residents with a valid target assessment and any one of the following Inclusion Criteria:</p> <ol style="list-style-type: none"> 1. Severe cognitive impairment on the target assessment as indicated by B4 = 3 AND B2a = 1. 2. Totally dependent in mobility ADLs on the target assessment: G1a(A) = 4 or 8 AND G1b(A) = 4 or 8 AND G1e(A) = 4 or 8. <p>Denominator, low risk: All residents with a valid target assessment and not qualifying as high risk.</p> <p>Exclusions:</p> <ol style="list-style-type: none"> 1. Residents satisfying any of the following conditions are excluded from all risk groups (high & low, high, and low): <ol style="list-style-type: none"> 1.1. The target assessment is an admission (AA8a = 01) assessment. 1.2. The QM did not trigger (resident is not 	<p>Facility admission profile FAP_CNT01: prevalence of residents who are frequently or fully incontinent in either bowel or bladder (H1a=3 or 4, or H1b=3 or 4) among facility admissions (AA8a = 01) over previous 12 months.</p> <p>Numerator: Admission assessments (AA8a = 01) with H1a = 3 or 4 OR H1b = 3 or 4).</p> <p>Denominator: All admission assessments (AA8a = 01).</p> <p>Exclusions: Admission assessments (AA8a = 01) that do not satisfy the numerator condition AND that have missing data on either H1a or H1b.</p> <p>Note: FAP_CNT01 is used for all 3 risk groupings: high & low (CNT01), high (CNT05), and low (CNT06).</p>	(CHSRA)

Items refer to MDS 2.0.

For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
CATHETER & CONTINENCE			
	<p>included in the QM numerator) AND the value of H1a or H1b is missing on the target assessment.</p> <ol style="list-style-type: none"> 1.3. The resident is comatose (B1 = 1) or comatose status is unknown (B1 = missing) on the target assessment. 1.4. The resident has end-stage disease (J5c = checked) or status is unknown (J5c = missing) on the target assessment. 1.5. The resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the target assessment or the most recent full assessment. 1.6. The resident has an indwelling catheter (H3d = checked) or indwelling catheter status is unknown (H3d = missing) on the target assessment. 1.7. The resident has an ostomy (H3i = checked) or ostomy status is unknown (H3i = missing) on the target assessment. 1.8. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months). <ol style="list-style-type: none"> 2. Residents satisfying any of the following conditions are excluded from the high risk group and the low risk group (but not the combined high & low risk group): <ol style="list-style-type: none"> 2.1. The resident does not qualify as high risk and the value of B2a or B4 is missing on the target assessment. 2.2. The resident does not qualify as high risk and any of the mobility ADLs (G1a(A), G1b(A), and G1e(A)) is missing on the target assessment. 2.3. The resident does not qualify as high risk and any of the mobility ADLs (G1a(A), G1b(A), and G1e(A)) is missing on the target assessment. 		
Worsening bowel continence	<p>Numerator: Residents with a value for bowel incontinence greater at target assessment relative to prior assessment (H1a[t]>H1a[t-1]).</p> <p>Denominator: All residents with a valid target assessment and a valid prior assessment.</p>	<p>Covariates:</p> <ol style="list-style-type: none"> 1. Indicator of short term memory problem on the prior assessment: Covariate = 1 if B2a = 1. Covariate = 0 if B2a = 0. 2. Indicator of dressing problem or dressing did not occur on the 	(LTCQ)

Items refer to MDS 2.0.

For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
CATHETER & CONTINENCE			
	<p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The value of H1a on the prior assessment is the maximum value (H1a[t-1] = 4). 2. The H1a value is missing on the target assessment [t]. 3. The H1a value is missing on the prior assessment [t-1] and the H1a value shows some impairment on the target assessment (H1a[t] > 0). 4. The resident is comatose (B1 = 1) or comatose status is unknown (B1 = missing) on the target assessment. 5. The resident has end-stage disease (J5c = checked) or status is unknown (J5c = missing) on the target assessment. 6. The resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the target assessment or the most recent full assessment. 7. The resident has an ostomy present (H3i checked) or ostomy status is unknown (H3i = missing) on the target assessment. 8. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months). 	<p>prior assessment:</p> <p>Covariate = 1 if G1g(A) = 3, 4, or 8. Covariate = 0 if G1g(A) = 0, 1, or 2.</p> <ol style="list-style-type: none"> 3. Indicator of bladder incontinence on the prior assessment: Covariate = 1 if H1b = 3 or 4. Covariate = 0 if H1b = 0, 1, or 2. 	
Worsening bladder continence	<p>Numerator: Residents with a value for bladder incontinence greater at target assessment relative to prior assessment (H1b[t] > H1b[t-1]).</p> <p>Denominator: All residents with a valid target assessment and a valid prior assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The value of H1b on the prior assessment is the maximum value (H1b[t-1] = 4). 2. The H1b value is missing on the target assessment [t]. 3. The H1b value is missing on the prior assessment [t-1] and the H1b value shows some impairment on the target assessment (H1b[t] > 0). 4. The resident is comatose (B1 = 1) or comatose status is unknown (B1 = missing) on the target 	<p>Facility admission profile FAP_CNT03: mean bladder incontinence (H1b) level among admissions (AA8a = 01) over previous 12 months.</p> <p>Exclusions:</p> <ol style="list-style-type: none"> 1. Admission assessments (AA8a = 01) with any catheter (H3c, H3d, or H3e) checked. 2. Admission assessments (AA8a = 01) with missing data on H1b, H3c, H3d, or H3e. <p>Covariates:</p> <ol style="list-style-type: none"> 1. Indicator of short term memory problem on the prior assessment: Covariate = 1 if B2a = 1. Covariate = 0 if B2a = 0. 2. Indicator of dressing problem or dressing did not occur on the prior assessment: Covariate = 1 if G1g(A) = 3, 4, or 8. Covariate = 0 if G1g(A) = 0, 1, or 2. 	(LTCQ)

Items refer to MDS 2.0.

For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
CATHETER & CONTINENCE			
	<p>assessment.</p> <p>5. The resident has end-stage disease (J5c = checked) or status is unknown (J5c = missing) on the target assessment.</p> <p>6. The resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the target assessment or the most recent full assessment.</p> <p>7. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months).</p>	<p>3. Indicator of severe decision making problem on the prior assessment: Covariate = 1 if B4 = 3. Covariate = 0 if B4 = 0, 1, or 2.</p> <p>4. Indicator of weight loss on the prior assessment: Covariate = 1 if K3a = 1. Covariate = 0 if K3a = 0.</p>	
Prevalence of urinary tract infections	<p>Numerator: Residents with urinary tract infection on target assessment (I2j = checked).</p> <p>Denominator: All residents with a valid target assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> The target assessment is an admission (AA8a = 01) assessment. I2j is missing on the target assessment. The resident has end-stage disease (J5c = checked) or status is unknown (J5c = missing) on the target assessment. The resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the target assessment or the most recent full assessment. 		(CHSRA)

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
CLINICAL COMPLEXITY			
Falls prevalence among those without recent history of falls	<p>Numerator: Residents who had a fall in the last 30 days recorded on the target assessment (J4a[t]=checked).</p> <p>Denominator: All residents with a valid target assessment and a valid prior assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> The prior assessment indicates a fall in the last 30 days (J4a[t-1] = checked). 	<p>Covariates:</p> <ol style="list-style-type: none"> Indicator that resident is not bedfast on the prior assessment: Covariate = 1 if G6a not checked. Covariate = 0 if G6a is checked. Indicator that resident wanders on the prior assessment: Covariate = 1 if E4a(A) = 1, 2, or 3. Covariate = 0 if E4a(A) = 0. Indicator that resident has an unsteady gait and is cognitively impaired on the prior assessment. Covariate = 1 if J1n checked (value 1) AND CPS >=2. 	(LTCQ)

Items refer to MDS 2.0.

For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
CLINICAL COMPLEXITY			
	2. The value of J4a is missing on the target assessment [t] or prior assessment [t-1].	(CPS is defined in the Technical Comments for COG01 in the Numerator and Denominator column.) Covariate = 0 if J1n not checked (value 0) OR CPS < 2.	
Infections prevalence	<p>Numerator: Residents with any of the following infections or health conditions noted on the target or most recent full assessment (only if the most recent full assessment is a non-admission assessment with AA8a = 02, 03, or 04):</p> <ol style="list-style-type: none"> 1. Pneumonia (I2e=checked) on the target assessment or most recent full assessment (if the most recent full is a non-admission assessment), 2. Respiratory infection (I2f=checked) on the target assessment or most recent full assessment (if the most recent full is a non-admission assessment), 3. Septicemia (I2g=checked) on the target assessment or most recent full assessment (if the most recent full is a non-admission assessment), 4. Urinary tract infection (I2j=checked) on the target assessment only, 5. Viral hepatitis (I2k=checked) on the target assessment or most recent full assessment (if the most recent full is a non-admission assessment), 6. Wound infection (I2l=checked) on the target assessment or most recent full assessment (if the most recent full is a non-admission assessment), 7. Fever (J1h=checked) on the target assessment or most recent full assessment (if the most recent full is a non-admission assessment), 8. Recurrent lung aspiration (J1k=checked) on the target assessment or most recent full assessment (if the most recent full is a non-admission assessment). <p>Denominator: All residents with a valid target assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. The QM did not trigger (resident is not included in the QM numerator) AND the urinary tract infection item (I2j) is missing on the target assessment. 3. The QM did not trigger and the value of any of the other infections or health conditions (I2e, I2f, I2g, I2k, I2l, J1h, or J1k) selected from the target 	<p>Facility admission profile FAP_INF0X: Mean proportion of residents with any one of a set of selected infections and health conditions (I2e, I2f, I2g, I2j, I2k, I2l, J1h, and J1k) checked among facility admissions (AA8a = 01) over previous 12 months.</p> <p>Numerator: Admission assessments (AA8a = 01) with I2e, I2f, I2g, I2j, I2k, I2l, J1h, or J1k checked (value 1).</p> <p>Denominator: All admission assessments (AA8a = 01).</p> <p>Exclusions: Admission assessments (AA8a = 01) that do not satisfy the numerator conditions AND that have missing data on any item I2e, I2f, I2g, I2j, I2k, I2l, J1h, and J1k.</p>	(MEGAQI)

Items refer to MDS 2.0.

For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
CLINICAL COMPLEXITY			
	<p>assessments or most recent full assessment is missing.</p> <p>4. The resident has end-stage disease (J5c = checked) or status is unknown (J5c = missing) on the target assessment.</p> <p>5. The resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the target assessment or the most recent full assessment.</p> <p>6. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months).</p>		
Prevalence of feeding tubes	<p>Numerator: All residents with a feeding tube at target assessment (K5b=checked).</p> <p>Denominator: All residents with a valid target assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> The target assessment is an admission (AA8a = 01) assessment. K5b is missing on the target assessment. The resident is comatose (B1 = 1) or comatose status is unknown (B1 = missing) on the target assessment. The resident has end-stage disease (J5c = checked) or status is unknown (J5c = missing) on the target assessment. The resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the target assessment or the most recent full assessment. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months). 	<p>Facility admission profile FAP_NUT01: feeding tube prevalence (K5b=checked) among admissions (AA8a = 01) over previous 12 months.</p> <p>Numerator: Admission assessments (AA8a = 01) with K5b = checked (value 1).</p> <p>Denominator: All admission assessments (AA8a = 01).</p> <p>Exclusions: Admission assessments (AA8a = 01) with missing data on K5b.</p> <p>Covariates:</p> <ol style="list-style-type: none"> Indicator of swallowing problem AND cerebrovascular accident on the prior assessment or most recent full assessment: Covariate = 1 if K1b checked (value 1) for swallowing problem AND I1t checked (value 1) for CVA. Covariate = 0 if K1b not checked (value 0) OR I1t not checked (value 0). Indicator of Amyotropic Lateral Sclerosis, Multiple Sclerosis OR Huntington's disease on the prior assessment or most recent full assessment: Covariate = 1 if I3a through I3e = 335.20 for amyotropic lateral sclerosis OR if I1w checked (value 1) for multiple sclerosis) OR I3a through I3e = 333.4 for Huntington's. Covariate = 0 if covariate not = 1 AND I1w not checked (value 0). 	(Ramsey)
Low body mass index (BMI) prevalence	<p>Numerator: Total number of residents with Body Mass Index (BMI) less than or equal to 19kg/m² on the target assessment or most recent full assessment (only if the most recent full assessment is a non-admission assessment with AA8a = 02, 03, or 04).</p> <p>BMI = weight (Kg)/height² (m²) = ((K2b*0.45)/(((K2a)*.0254)^2))</p>	<p>Facility admission profile FAP_BMI0X: mean BMI among facility admissions (AA8a = 01) over previous 12 months.</p> <p>BMI = weight (Kg)/height² (m²) = ((K2b*0.45)/(((K2a)*.0254)^2))</p> <p>Exclusions:</p> <ol style="list-style-type: none"> Admission assessments (AA8a = 01) with missing data on either K2a or K2b. Admission assessments (AA8a = 01) with an implausible 	(MEGAQI)

Items refer to MDS 2.0.

For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
CLINICAL COMPLEXITY			
	<p>Denominator: All residents with a valid target assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. The selected value for either K2a or K2b from the target assessment or most recent full assessment is missing. 3. The computed BMI value is outside of a plausible range. The BMI value is < 12 OR > 40. 4. Resident has end-stage disease (J5c = checked) or the status of end-stage disease is unknown (J5c = missing) on the target assessment. 5. The resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the target assessment or the most recent full assessment. 6. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months). 	BMI value (<12 or > 40).	
Weight loss prevalence	<p>Numerator: Residents with weight loss (K3a=1) on target assessment.</p> <p>Denominator: All residents with a valid target assessment.</p> <p>Exclusions: Residents satisfying the following condition:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. The value of K3a is missing on the target assessment. 3. Resident has end-stage disease (J5c = checked) or the status of end-stage disease is unknown (J5c = missing) on the target assessment. 4. The resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the target assessment or the most recent full assessment. 5. The resident is on a planned weight loss program (K5h = checked) or planned weight loss status is unknown (K5h = missing) on the target assessment. 6. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no 	<p>Facility admission profile FAP_WGT01: prevalence of recent weight loss (K3a=1) among admissions (AA8a = 01) over previous 12 months.</p> <p>Numerator: Admission assessments (AA8a = 01) with K3a = 1. Denominator: All admission assessments (AA8a = 01). Exclusions: Admission assessments (AA8a = 01) with missing data on K3a.</p> <p>Covariates:</p> <ol style="list-style-type: none"> 1. Indicator of long term memory problem on the prior assessment: Covariate = 1 if B2b = 1. Covariate = 0 if B2b = 0. 2. Indicator of bed mobility problem on the prior assessment: Covariate = 1 if G1a(A) = 3, 4, or 8. Covariate = 0 if G1a(A) = 0, 1, or 2. 3. Indicator of physically abusive behavior on the prior assessment: Covariate = 1 if E4c(A) = 2 or 3. Covariate = 0 if E4c(A) = 0 or 1. 	(LTCQ)

Items refer to MDS 2.0.

For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
CLINICAL COMPLEXITY			
	admission assessments with AA8a = 01 in the facility over the previous 12 months).		
Pain, inadequate management	<p>Numerator: Residents with moderate pain at least daily (J2a=2 AND J2b=2) OR horrible/excruciating pain at any frequency (J2b=3) on the target assessment.</p> <p>Denominator: All residents with a valid target assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. Either J2a or J2b is missing on the target assessment. 3. The values of J2a and J2b are inconsistent on the target assessment. 4. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months). 	<p>Facility admission profile FAP_PA10X: mean Pain Scale score among admissions (AA8a = 01) over previous 12 months. (The Pain Scale is defined in the Technical Comments below.)</p> <p>Exclusions: Admission assessments (AA8a = 01) with a missing value on the Pain Scale.</p> <p>Covariates: Indicator of independence or modified independence in daily decision making on the prior assessment: Covariate = 1 if B4 = 0 or 1. Covariate = 0 if B4 = 2 or 3.</p>	(MEGAQI)
Pain, worsening	<p>Numerator: Residents with greater pain at target assessment relative to prior assessment, defined by greater score on the Pain Scale. (The Pain Scale is defined in the Technical Comments for the Covariate column for PA10X.)</p> <p>Denominator: All residents with a valid target assessment and a valid prior assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The Pain Scale value is missing on the target assessment [t]. 2. The Pain Scale value is missing on the prior assessment [t-1] and the Pain Scale value shows presence of pain on the target assessment (Pain Scale[t] > 0). 3. The Pain Scale score is a maximum (value 3) on the prior assessment. 4. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months). 	<p>Facility admission profile FAP_PAN01: mean Pain Scale score among admissions over previous 12 months. (The Pain Scale is defined in the Technical Comments for the Covariate column for PA10X.)</p> <p>Exclusions: Admission assessments (AA8a = 01) with a missing value on the Pain Scale.</p> <p>Covariates:</p> <ol style="list-style-type: none"> 1. Indicator of independence or modified independence in daily decision making on the prior assessment: Covariate = 1 if B4 = 0 or 1. Covariate = 0 if B4 = 2 or 3. 	(LTCQ)
Pressure ulcer (stage 1-4) prevalence	Numerator: Residents with pressure ulcers (Stage 1-4) on target assessment (M2a >0 OR I3a-e = 707.0)	Facility admission profile FAP_PRU01: prevalence of stage1-4 pressure ulcers (M2a >0 OR I3a-e = 707.0) among admissions	(CHSRA)

Items refer to MDS 2.0.

For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
CLINICAL COMPLEXITY (PRU01, CHSRA: High & Low Risk) (PRU02, CHSRA: High Risk) (PRU03, CHSRA: Low Risk) <i>Three separate QMs are calculated. PRU01 includes all residents regardless of risk ("Denominator, high & low risk" criteria). PRU02 is limited to residents with high risk ("Denominator, high risk" criteria). PRU03 is limited to residents with low risk ("Denominator, low risk" criteria).</i>	<p>Denominator, high & low risk: All residents with a valid target assessment.</p> <p>Denominator, high risk: All residents with a valid target assessment and any one of the following Inclusion Criteria:</p> <ol style="list-style-type: none"> 1. Impaired in mobility or transfer on the target assessment as indicated by G1a(A) = 3, 4, or 8 OR G1b(A) = 3, 4, or 8. 2. Comatose on the target assessment as indicated by B1 = 1. 3. Suffer malnutrition on the target assessment as indicated by I3a through I3e = 260, 261, 262, 263.0, 263.1, 263.2, 263.8, or 263.9. 4. End stage disease on the target assessment as indicated by J5c = checked (value 1). <p>Denominator, low risk: All residents with a valid target assessment and not qualifying as high risk.</p> <p>Exclusions:</p> <ol style="list-style-type: none"> 1. Residents satisfying any of the following conditions are excluded from all risk groups (high & low, high, and low): <ol style="list-style-type: none"> 1.1. The target assessment is an admission (AA8a = 01) assessment. 1.2. The QM did not trigger (resident is not included in the QM numerator) AND the value of M2a is missing on the target assessment. 1.3. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months). 2. Residents satisfying any of the following conditions are excluded from the high risk group and the low risk group (but not the combined high & low risk group): <ol style="list-style-type: none"> 2.1. The resident does not qualify as high risk AND the value of G1a(A) or G1b(A) is missing on the target assessment. 2.2. The resident does not qualify as high risk AND the value of B1 is missing on the target assessment. 2.3. The resident does not qualify as high risk AND the value of J5c is missing on the target 	(AA8a = 01) occurring over previous 12 months. Numerator: Admission assessments (AA8a = 01) with M2a > 0 OR I3a-e = 707.0. Denominator: All admission assessments (AA8a = 01). Exclusions: Admission assessments (AA8a = 01) that do not satisfy the numerator condition AND that have missing data on M2a. Note: FAP_PRU01 is used for all 3 risk groupings (high & low, high, and low).	

Items refer to MDS 2.0.

For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
CLINICAL COMPLEXITY			
	assessment.		
Worsening pressure ulcers	<p>Numerator: Total number of residents evidencing more severe pressure ulcers on the target assessment versus the prior assessment (M2a[t] is greater than M2a[t-1]).</p> <p>Denominator: All residents with a valid target assessment and a valid prior assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The M2a value is missing on the target assessment [t]. 2. The M2a value is missing on the prior assessment [t-1] and the M2a value shows presence of ulcers on the target assessment (M2a[t] > 0). 3. Item M2a is a maximum (value 4) on the prior assessment. 4. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months). 	<p>Facility admission profile FAP_PRU04: prevalence of stage 1-4 pressure ulcers (M2a > 0 OR I3a-e = 707.0) among admissions (AA8a = 01) occurring over previous 12 months.</p> <p>Numerator: Admission assessments (AA8a = 01) with M2a > 0 OR I3a-e = 707.0.</p> <p>Denominator: All admission assessments (AA8a = 01).</p> <p>Exclusions: Admission assessments (AA8a = 01) that do not satisfy the numerator condition AND that have missing data on M2a.</p> <p>Covariates:</p> <ol style="list-style-type: none"> 1. Indicator of transfer problem or transfer did not occur on the prior assessment: Covariate = 1 if G1b(A) = 3, 4, or 8. Covariate = 0 if G1b(A) = 0, 1, or 2. 2. Indicator of unstable functional status on the prior assessment: Covariate = 1 if J5a = checked (value 1). Covariate = 0 if J5a = not checked (value 0). 3. Indicator of bed mobility problem or activity did not occur on the prior assessment: Covariate = 1 if G1a(A) = 3, 4, or 8. Covariate = 0 if G1a(A) = 0, 1, or 2. 4. Indicator of locomotion problem or activity did not occur on the prior assessment: Covariate = 1 if G1e(A) = 3, 4, or 8. Covariate = 0 if G1e(A) = 0, 1, or 2. 	(LTCQ)
Burns, skin tears or cuts prevalence	<p>Numerator: Total number of residents who have burns, skin tears, or cuts (M4b = checked OR M4f = checked) on the target or most recent full assessment (only if the most recent full assessment is a non-admission assessment with AA8a = 02, 03, or 04).</p> <p>Denominator: All residents with a valid target assessment.</p> <p>Exclusions: Residents satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission assessment (AA8a = 01). 2. The QI is not triggered (numerator condition not satisfied) AND M4b or M4f has a missing value on the target assessment or most recent full assessment. 3. The resident is in a facility with a Chronic Care 	<p>Facility admission profile FAP_BUR0X: prevalence of burns, skin tears or cuts (M4b = checked or M4f = checked) among facility admissions (AA8a = 01) over previous 12 months.</p> <p>Numerator: Admission assessments (AA8a = 01) with M4b = checked (value 1) OR M4f = checked (value 1).</p> <p>Denominator: All admission assessments (AA8a = 01).</p> <p>Exclusions: Admission assessments (AA8a = 01) that do not satisfy the numerator condition AND that have missing data on M4b or M4f.</p>	(MEGAQI)

Items refer to MDS 2.0.

For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
CLINICAL COMPLEXITY			
	Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months).		
Restraints (physical) used daily, prevalence	<p>Numerator: Residents who were physically restrained daily (P4c or P4d or P4e = 2) on target assessment.</p> <p>Denominator: All residents with a valid target assessment.</p> <p>Exclusions: Residents satisfying the following condition:</p> <ol style="list-style-type: none"> 1. The target assessment is an admission (AA8a = 01) assessment. 2. The QM is not triggered (numerator condition not satisfied) AND P4c, P4d, or P4e has a missing value. 3. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months). 		(CHSRA)

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
DRUGS			
<p>Prevalence of antipsychotic use in the absence of psychotic and related conditions</p> <p>(DRG01, CHSRA; high and low risk) (DRG02, CHSRA; high risk) (DRG03, CHSRA; low risk)</p> <p><i>Three separate QMs are calculated. DRG01 includes all residents regardless of risk ("Denominator, high & low risk" criteria). DRG02 is limited to residents with high risk ("Denominator, high risk" criteria). DRG03 is limited to residents with low risk ("Denominator, low risk")</i></p>	<p>Numerator: Residents receiving antipsychotics (O4a>0) on target assessment.</p> <p>Denominator, high & low risk: All residents with a valid target assessment.</p> <p>Denominator, high risk: All residents with a valid target assessment and BOTH of the following Inclusion Criteria:</p> <ol style="list-style-type: none"> 1. Behavior problems on the target assessment as indicated by verbal abuse (E4b(A) > 0) OR physical abuse (E4c(A) > 0) OR socially inappropriate/disruptive behavior (E4d(A) > 0). AND 2. Cognitive impairment on the target assessment as indicated by decision problems (B4 > 0) AND short-term memory problems (B2a = 1). <p>Denominator, low risk: All residents with a valid target assessment and not qualifying as high risk.</p>	<p>Facility admission profile FAP_DRG01: prevalence of antipsychotic use (O4a>0) among admissions (AA8a = 01) over previous 12 months.</p> <p>Numerator: Admission assessments (AA8a = 01) with O4a > 0. Denominator: All admission assessments (AA8a = 01). Exclusions: Admission assessments (AA8a = 01) that have missing data on O4a.</p> <p>Note: FAP_DRG01 is used for all 3 risk groupings (high & low, high, and low).</p>	(CHSRA)

Items refer to MDS 2.0.

For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
DRUGS criteria).	<p>Exclusions:</p> <ol style="list-style-type: none"> Residents satisfying any of the following conditions are excluded from all risk groups (high & low, high, and low): <ol style="list-style-type: none"> The target assessment is an admission (AA8a = 01) assessment. A psychiatric disorder is indicated by ICD9 diagnosis code on the target assessment or most recent full assessment: I3a through I3e = 295.00-295.95 or 297.00-298.9. Schizophrenia is indicated on the target assessment or most recent full assessment by I1gg = checked or the value of I1gg is missing. Tourette syndrome is indicated by ICD9 diagnosis code on the target assessment or most recent full assessment: I3a through I3e=307.23. Huntington's syndrome is indicated by ICD9 diagnosis code on the target assessment or most recent full assessment: I3a through I3e=333.4. Hallucinations are present on the target assessment only: J1i = checked (value 1) or the value of J1i is missing. The value of Q4a is missing on the target assessment. Resident has end-stage disease (J5c = checked) or the status of end-stage disease is unknown (J5c = missing) on the target assessment. The resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the target assessment or the most recent full assessment. The resident is in a facility with a Chronic Care Admission Sample size of 0 (i.e., there are no admission assessments with AA8a = 01 in the facility over the previous 12 months). Residents satisfying any of the following conditions are excluded from the high risk group and the low risk group (but not the combined high & low risk group): <ol style="list-style-type: none"> The resident does not qualify as high risk 		

Items refer to MDS 2.0.

For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
DRUGS			
	<p>AND the value of B4 or B2a is missing on the target assessment.</p> <p>2.2. The resident does not qualify as high risk AND the value of E4b(A), E4c(A), or E4d(A) is missing on the target assessment.</p>		

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
POST ACUTE CARE			
Failure to improve and manage delirium symptoms / Post-Acute Care	<p>Numerator: Patients at SNF PPS 14-day assessment with at least one symptom of delirium that represents a departure from usual functioning (at least one B5a through B5f = 2).</p> <p>Denominator: All patients with a valid SNF PPS 14-day assessment (AA8b = 7).</p> <p>Exclusions: Patients satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. Comatose (B1=1) or comatose status unknown (B1 = missing) on the SNF PPS 14-day assessment. 2. Patients with end-stage disease (J5c=checked (value 1)) or end-stage disease status unknown (J5c = missing) on the SNF PPS 14-day assessment. 3. The resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the SNF PPS 14-day assessment. 4. The QM did not trigger (patient not included in the numerator) and there is a missing value on any of the items B5a through B5f on the SNF PPS 14-day assessment. 5. The patient is in a facility with a Post Acute Care Admission Sample size of 0 (i.e., there are no SNF PPS 5-day assessments with AA8b = 1 in the facility over the previous 12 months). 	<p>Facility admission (5-day) profile FAP_PAC_DELOX: Proportion of residents with at least one symptom of delirium that represents a departure from normal functioning demonstrated on SNF PPS 5-day assessments (AA8b = 1) over previous 12 months (one or more of the items B5a through B5f = 2).</p> <p>Numerator: SNF PPS 5-day assessments (AA8b = 1) with at least one B5a through B5f = 2.</p> <p>Denominator: All SNF PPS 5-day assessments (AA8b = 1).</p> <p>Exclusion: SNF PPS 5-day assessments (AA8b = 1) that do not satisfy the numerator condition AND that have missing data on any item B5a through B5f.</p> <p>Covariates:</p> <ol style="list-style-type: none"> 1. Indicator of prior residential history preceding the current SNF stay for the patient: Covariate = 1 if there is NO prior residential history indicated by the following condition being satisfied: <ol style="list-style-type: none"> 1) There is a recent admission assessment (AA8a = 01) available for the patient AND AB5a through AB5e are not checked (value 0) AND AB5f is checked (value 1) on that assessment. Covariate = 0 if there is prior residential history indicated by either of the following conditions being satisfied: <ol style="list-style-type: none"> 1) There is a recent admission assessment (AA8a = 01) AND any of the items AB5a through AB5e are checked (value 1) OR AB5f is not checked (value 0) on that assessment. 2) There is no recent admission assessment (AA8a = 01). 	(MEGAQI)
Failure to improve during early post-acute period / Post-Acute Care	<p>Numerator: SNF PPS patients who satisfy one of the following three conditions based on the ADL Long Form scale (ADLLF) defined in the Technical Comments below:</p> <ol style="list-style-type: none"> 1. The patient was fully independent on the ADLLF at the SNF PPS 5-day assessment AND failed to remain independent at the SNF PPS 14-day 	<p>Facility admission profile FAP_PAC_ADLOX: No FAP is used for this QM.</p> <p>Covariates:</p> <ol style="list-style-type: none"> 1. Indicator of NO prior residential history preceding the current SNF stay for the patient: Covariate = 1 if there is NO prior residential history 	(MEGAQI)

Items refer to MDS 2.0.

For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
POST ACUTE CARE			
	<p>assessment (ADLLF[t-1]=0 AND ADLLF[t]>0).</p> <p>2. When only 1 point improvement is possible, the patient failed to improve 1 point from the SNF PPS 5-day assessment to the SNF PPS 14-day assessment (ADLLF[t-1] = 1 AND ADLLF[t] > 0.</p> <p>3. When 2 points or more improvement is possible, the patient failed to improve at least 2 points on ADLLF scale from the SNF PPS 5-day assessment to the SNF PPS 14-day assessment (ADLLF[t-1]>1 AND ADLLF[t-1]-ADLLF[t]<2).</p> <p>Denominator: All patients with a valid SNF PPS 14-day assessment (AA8b = 7) AND a valid preceding SNF PPS 5-day assessment (AA8b = 1).</p> <p>Exclusions: Patients satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. Patients in coma (B1=1) or coma status unknown (B1 = missing) on the SNF PPS 14-day assessment. 2. Patients with end-stage disease (J5c=checked (value 1)) or end-stage disease status unknown (J5c = missing) on the SNF PPS 14-day assessment. 3. The resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the SNF PPS 14-day assessment. 4. The ADLLF score is missing on the 14-day assessment [t]. 5. The ADLLF score is missing on the 5-day assessment [t-1] and the ADLLF score shows some dependence on the 14-day assessment (ADLLF[t] > 0). 6. The patient is in a facility with a Post Acute Care Admission Sample size of 0 (i.e., there are no SNF PPS 5-day assessments with AA8b = 1 in the facility over the previous 12 months). 	<p>indicated by the following condition being satisfied:</p> <ol style="list-style-type: none"> 1) There is a recent admission assessment (AA8a = 01) available for the patient AND AB5a through AB5e are not checked (value 0) AND AB5f is checked (value 1) on that assessment. <p>Covariate = 0 if there is prior residential history indicated by either of the following conditions being satisfied:</p> <ol style="list-style-type: none"> 1) There is a recent admission assessment (AA8a = 01) AND any of the items AB5a through AB5e are checked (value 1) OR AB5f is not checked (value 0) on that assessment. 2) There is no recent admission assessment (AA8a = 01). 	
Failure to improve bladder incontinence / Post-Acute Care	<p>Numerator: SNF PPS patients who satisfy any of the following three conditions:</p> <ol style="list-style-type: none"> 1. On the SNF PPS 5-day assessment, the patient did not have a catheter (H3d[t-1] not checked (value 0)) AND was fully bladder continent (H1b[t-1] = 0). AND On the SNF PPS 14-day assessment, the patient had a catheter (H3d[t] checked (value 1)) OR was less than fully bladder continent (H1b[t] >0). 	<p>Facility admission profile FAP_PAC_CNT0X: proportion of residents fully continent (H1b = 0) and with no catheter (H3d = not checked (value 0)) among SNF PPS 5-day assessments (AA8b = 1) over previous 12 months.</p> <p>Numerator: SNF PPS 5-day assessments (AA8b = 1) with H1b = 0 AND H3d = not checked (value 0).</p> <p>Denominator: All SNF PPS 5-day assessments (AA8b = 1).</p> <p>Exclusion: SNF PPS 5-day assessments with missing data on H1b OR H3d.</p>	(MEGAQI)

Items refer to MDS 2.0.

For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
POST ACUTE CARE	<p>2. On the SNF PPS 5-day assessment (AA8b = 1), the patient did not have a catheter (H3d[t-1] not checked (value 0)) AND was less than fully bladder continent (H1b[t-1] > 0). AND On the SNF PPS 14-day assessment (AA8b = 7), the patient had a new catheter (H3d[t] = checked (value 1)) OR was the same or worse on bladder continence (H1b[t] >= H1b[t-1])</p> <p>3. On the SNF PPS 5-day assessment (AA8b = 1), the patient did have a catheter (H3d[t-1] checked (value 1)). AND On the SNF PPS 14-day assessment (AA8b = 7), the patient still had a catheter (H3d[t] = checked (value 1)) OR had no catheter but was frequently or fully incontinent (H3d[t] not checked (value 0) AND H1b[t] > 2)</p> <p>Denominator: All patients with a valid SNF PPS 14-day assessment (AA8b = 7) AND a valid preceding SNF PPS 5-day assessment (AA8b = 1).</p> <p>Exclusions: Patients satisfying the following condition:</p> <ol style="list-style-type: none"> 1. There are missing values for H1b or H3d on either the SNF PPS 5-day or 14-day assessment. 2. The resident is comatose (B1 = 1) or comatose status is unknown (B1 = missing) on the SNF PPS 14-day assessment. 3. Patients with end-stage disease (J5c = checked (value 1)) or end-stage disease status unknown (J5c = missing) on the SNF PPS 14-day assessment. 4. The resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the SNF PPS 14-day assessment. 5. The resident has paraplegia (I1x = 1) or paraplegia status unknown (I1x missing) on the SNF PPS 14-day assessment. 6. The resident has quadriplegia (I1z = 1) or quadriplegia status unknown (I1z missing) on the SNF PPS 14-day assessment. 7. The patient is in a facility with a Post Acute Care Admission Sample size of 0 (i.e., there are no SNF PPS 5-day assessments with AA8b = 1 in the facility over the previous 12 months). 		

Items refer to MDS 2.0.

For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
POST ACUTE CARE			
Inadequate Pain Management / Post-Acute Care	<p>Numerator: Patients at SNF PPS 14-day assessment with moderate pain at least daily (J2a=2 and J2b=2) OR horrible/excruciating pain at any frequency (J2b=3).</p> <p>Denominator: All patients with a valid SNF PPS 14-day assessment (AA8b = 7).</p> <p>Exclusions: Patients satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. Either J2a or J2b is missing on the 14-day assessment. 2. The values of J2a and J2b are inconsistent on the 14-day assessment. 3. The patient is in a facility with a Post Acute Care Admission Sample size of 0 (i.e., there are no SNF PPS 5-day assessments with AA8b = 1 in the facility over the previous 12 months). 	<p>Facility admission profile FAP_PAC_PA10X: mean Pain Scale score among SNF PPS 5-day assessments (AA8b = 1) over previous 12 months.</p> <p>The Pain Scale is defined in the technical comments below.</p> <p>Exclusions: SNF PPS 5-day assessments (AA8b = 1) with a missing value on the Pain Scale.</p>	(MEGAQI)
Failure to prevent pressure ulcers or improve existing pressure ulcers / Post-Acute Care	<p>Numerator: SNF PPS patients who satisfy either of the following conditions:</p> <ol style="list-style-type: none"> 1. On the SNF PPS 5-day assessment, the patient had no pressure ulcers (M2a[t-1] = 0) AND, on the SNF PPS 14-day assessment, the patient has at least a stage 1 pressure ulcer (M2a[t] = 1, 2, 3, or 4). 2. On the SNF PPS 5-day assessment, the patient had a pressure ulcer (M2a[t-1] = 1, 2, 3, or 4) AND on the SNF PPS 14-day assessment, pressure ulcers worsened or failed to improve (M2a[t] >= M2a[t-1]). <p>Denominator: All patients with a valid SNF PPS 14-day assessment (AA8b = 7) AND a valid preceding SNF PPS 5-day assessment (AA8b = 1).</p> <p>Exclusions: Patients satisfying the following condition:</p> <ol style="list-style-type: none"> 1. M2a is missing on the 14-day assessment [t]. 2. M2a is missing on the 5-day assessment [t-1] and M2a shows presence of ulcers on the 14-day assessment (M2a = 1, 2, 3, or 4). 3. The patient is in a facility with a Post Acute Care Admission Sample size of 0 (i.e., there are no SNF PPS 5-day assessments with AA8b = 1 in the facility over the previous 12 months). 	<p>Facility admission profile FAP_PAC_PRU0X: prevalence of stage 1-4 pressure ulcers (M2a>0 OR I3a-e = 707.0) among SNF PPS 5-day assessments (AA8b = 1) over previous 12 months.</p> <p>Numerator: SNF PPS 5-day assessments (AA8b = 1) with M2a >= 0 OR I3a through I3e = 707.0.</p> <p>Denominator: All SNF PPS 5-day assessments (AA8b = 1).</p> <p>Exclusions: SNF PPS 5-day assessments (AA8b = 1) that do not satisfy the numerator condition AND have a missing value on M2a.</p> <p>Covariates:</p> <ol style="list-style-type: none"> 1. Indicator of history of unresolved pressure ulcer on the SNF PPS 5-day assessment: Covariate = 1 if M3 = 1. Covariate = 0 if M3 = 0. 2. Indicator of requiring limited or more assistance in bed mobility on the SNF PPS 5-day assessment: Covariate = 1 if G1a(A) = 2, 3, 4, or 8. Covariate = 0 if G1a(A) = 0 or 1. 3. Indicator of bowel incontinence at least one/week on the SNF PPS 5-day assessment: Covariate = 1 if H1a 2, 3, or 4. Covariate = 0 if H1a = 0 or 1. 4. Indicator of diabetes or peripheral vascular disease on the SNF PPS 5-day assessment: Covariate = 1 if I1a checked (value 1) OR I1j checked (value 1). Covariate = 0 if I1a not checked (value 0) AND I1j not checked (value 0). 	(MEGAQI)

Items refer to MDS 2.0.

For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
POST ACUTE CARE			
		<p>5. Indicator of low Body Mass Index (BMI) on the SNF PPS 5-day assessment: Covariate = 1 if BMI >= 12 AND <= 19. Covariate = 0 if BMI > 19 AND <= 40. Where: $BMI = \text{weight (Kg)} / \text{height}^2 (\text{m}^2) = ((K2b * 0.45) / (((K2a) * .0254)^2))$ (Note: An implausible BMI value < 12 or > 40 will be treated as a missing value on this covariate.)</p>	
Failure to improve or prevent respiratory problems / Post-Acute Care	<p>Numerator: SNF PPS patients who have the same or a higher count of selected respiratory conditions on the SNF PPS 14-day assessment than on the SNF PPS 5-day assessment (Respiratory_Count[t] >= Respiratory_Count[t-1]). The respiratory conditions included in the count (range 0 to 4) are: 1. Pneumonia (I2e=checked (value 1)). 2. Inability to lie flat due to shortness of breath (J1b=checked (value 1)). 3. Shortness of breath (J1l=checked (value 1)). 4. Recurrent aspirations (J1k=checked (value 1)).</p> <p>Denominator: All patients with a valid SNF PPS 14-day assessment (AA8b = 7) AND a valid preceding SNF PPS 5-day assessment (AA8b = 1).</p> <p>Exclusions: Patients satisfying the following condition: 1. I2e, J1b, J1l, or J1k is missing on the 5-day OR the 14-day assessment. 2. Patients with end-stage disease (J5c=checked (value 1)) or end-stage disease status unknown (J5c = missing) on the SNF PPS 14-day assessment. 3. The patient is in a facility with a Post Acute Care Admission Sample size of 0 (i.e., there are no SNF PPS 5-day assessments with AA8b = 1 in the facility over the previous 12 months).</p>	<p>Facility admission profile FAP_PAC_RSP0X: mean count of number of selected respiratory conditions among SNF PPS 5-day assessments (AA8b = 1) over previous 12 months. The respiratory conditions included in the count (range 0 to 4) are: 1. Pneumonia (I2e=checked (value 1)). 2. Inability to lie flat due to shortness of breath (J1b=checked (value 1)). 3. Shortness of breath (J1l=checked (value 1)). 4. Recurrent aspirations (J1k=checked (value 1)).</p> <p>Exclusions: SNF PPS 5-day assessments (AA8b = 1) with a missing value on I2e, J1b, J1l, or J1k.</p> <p>Covariates: 1. Indicator of asthma on the SNF PPS 5-day assessment: Covariate = 1 if I1hh checked (value 1). Covariate = 0 if I1hh not checked (value 0). 2. Indicator of Emphysema/COPD on the SNF PPS 5-day assessment: Covariate = 1 if I1ii checked (value 1). Covariate = 0 if I1ii not checked (value 0).</p>	(MEGAQI)
Improvement in Walking / Post-Acute Care	<p>Numerator: SNF PPS patients who satisfy either of the following conditions: 1. Independence in walking is maintained from the SNF PPS 5-day assessment to the SNF PPS 14-day assessment: (G1c(A)[t-1]=0 AND G1d(A)[t-1]=0) AND</p>	<p>Facility admission profile FAP_PAC_WAL0X: mean sum of walking in room (G1c(A)) and walking in corridor (G1d(A)) among SNF PPS 5-day assessments (AA8b = 1) over previous 12 months. Note: Convert 8's (activity did not occur) to 4's (total dependence) on G1d(A) and G1c(A) before summing</p>	(MEGAQI)

Items refer to MDS 2.0.

For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Indicator	Numerator & Denominator Definition(s) and Exclusions	Covariate(s)	Developer
POST ACUTE CARE			
<p><i>Note: This is a 'good' QM. Higher values on this QM imply good quality of care relative to ADL improvement. This is different from most other QMs, where a high value implies the possibility of poorer care in that specific area.</i></p>	<p>(G1c(A)[t]=0 AND G1d(A)[t]=0).</p> <p>2. Improvement in walking ability is evidenced from the SNF PPS 5-day assessment to the SNF PPS 14-day assessment: $(G1c(A)[t-1] + G1d(A)[t-1]) > (G1c(A)[t] + G1d(A)[t]).$ <p>Note: Convert 8's (activity did not occur) to 4's (total dependence) on G1d(A) and G1c(A) for this comparison.</p> <p>Denominator: All patients with a valid SNF PPS 14-day assessment (AA8b = 7) and a valid preceding SNF PPS 5-day assessment (AA8b = 1).</p> <p>Exclusions: Patients satisfying any of the following conditions:</p> <ol style="list-style-type: none"> 1. Comatose (B1=1) or comatose status unknown (B1 = missing) on the SNF PPS 14-day assessment. 2. End-stage disease (J5c=checked (value 1)) or end-stage disease status unknown (J5c = missing) on the SNF PPS 14-day assessment. 3. The resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the SNF PPS 14-day assessment. 4. Ventilator dependent (P1al checked (value 1)) or ventilator status is unknown (P1al = missing) on the SNF PPS 14-day assessment. 5. Quadriplegic (I1z = checked (value 1)) or quadriplegic status is unknown (I1z = missing) on the SNF PPS 14-day assessment. 6. Paraplegic (I1x = checked (value 1)) or paraplegic status is unknown (I1x = missing) on the SNF PPS 14-day assessment. 7. G1c(A) or G1d(A) is missing on either the 5-day or 14-day assessment. 8. The patient is in a facility with a Post Acute Care Admission Sample size of 0 (i.e., there are no SNF PPS 5-day assessments with AA8b = 1 in the facility over the previous 12 months). </p>	<p>these items.</p> <p>Exclusions: SNF PPS 5-day assessments (AA8b = 1) with a missing value on G1c(A) or G1d(A).</p>	

Items refer to MDS 2.0.

For Chronic Care QMs: [t] indicates target assessment, [t-1] prior assessment, and [t-2] assessment preceding the prior assessment (prior-1 assessment)

For Post Acute Care QMs: [t] indicates SNF PPS 14-day assessment and [t-1] SNF PPS 5-day assessment

Appendix F

Detailed Description of all Validation Scales

Complex Mental Health Care on Site (JNM) VAL1+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	1	0	Sum of Wgt.	208
50%	2		Mean	2.288462
		Largest	Std. Dev.	1.582959
75%	3	6		
90%	4	7	Variance	2.50576
95%	5	8	Skewness	.6985034
99%	7	8	Kurtosis	3.7569

SCALE DESCRIPTION

This scale captures the breadth of mental health professionals available and that perform liaison work in the facility. The value represented by the scale is the count of the number of four professionals available, and the number of the four that do liaison work: psychiatrist, psychologist geriatric nurse specialist, psychiatric social worker. Numerical values range from 0 to 8, and higher values imply more specialists available. The items for a highly internally consistent set (KR20=0.88).

ITEMS IN SCALE

item	label/description
as13ba	AS 13ba. psychologist available
as13ca	AS 13ca. ger nurse spec available
as13da	AS 13da. psych soc worker available
as13abc	AS 13abc. psychiatrist does liaison
as13bbc	AS 13bbc. psychologist does liaison
as13cbc	AS 13cbc. ger nurse spec does liaison
as13dbc	AS 13dbc. psych soc worker does liaison
as13aa	AS 13aa. psychiatrist available

LEVEL-1 QIs

qi	varlab
COG01	Cognition worsening (LTCQ)
COM01	Communication worsening (LTCQ)
MOD03	Depression new or worse (LTCQ)
BEH01	Behavior high & low risk (CHSRA)
BEH02	Behavior high risk (CHSRA)
BEH03	Behavior low risk (CHSRA)
BEH04	Behavior worsening (LTCQ)
DepWOTx	Depression without treatment (CHSRA)

LEVEL-2 QIs

qi	varlab
DEL0X	Delirium not remitting (MEGAQI)
BUR0X	Burns abrasions bruises (MEGAQI)
RES01	Restraints (CHSRA)

Monitor Change in Function/Cognitive Care (JNM)
VAL2+

Percentiles		Smallest		
1%	3	0		
5%	6	1		
10%	7	3	Obs	208
25%	9	3	Sum of Wgt.	208
50%	12		Mean	11.25481
		Largest	Std. Dev.	3.177134
75%	14	16		
90%	15	16	Variance	10.09418
95%	16	16	Skewness	-.7111526
99%	16	16	Kurtosis	3.357183

SCALE DESCRIPTION

This scale captures the tendency of caregivers in the facility to observe and communicate about changes in the resident's cognitive and behavioral functioning or areas related to such functioning (i.e., medications). The numerical value for this scale is the count of the number of sixteen areas where good cognitive or behavioral monitoring is occurring (see list of items.) Higher values imply greater vigilance. The KR20 internal consistency reliability for this scale is 0.77.

ITEMS IN SCALE

item	varlab
as18a	AS 18a. pract-ask resid or family-cog chg?
as18c	AS 18c. pract-ask resid or fam-behav chg?
as18d	AS 18d. pract-obs med changes?
as18e	AS 18e. pract-obs chg in eating, sleeping?
as18g	AS 18g. pract-monit chgs in funct atatus?
as27b1	AS 27b.1 daily repts-behav function
as27d1	AS 27d.1 daily repts-commun change
as27g1	AS 27g.1 daily repts-funct status chge
as28fa	AS 28fa. routin commun change?
as28ia	AS 28ia. routin functional status?
as31	AS 31. look for cognitive status change?
as32a	AS 32a. cogn status monit?-assessments
as32b	AS 32b. cogn status monit?-memory check
as14bb	AS 14bb. num residents in reminisce grp
as18b	AS 18b. pract-chart behav across shifts?
as28ea	AS 28ea. routin behav function?

LEVEL-1 QIs

qi	varlab
----	--------

COG01	Cognition worsening (LTCQ)
COM01	Communication worsening (LTCQ)
ADL01	ADL decline (CHSRA)
ADL02	ADL dec. following imprvnt (MEGAQI)

LEVEL-2 QIs

qi	varlab
none	
Bedfast	Bedfast (CHSRA)

Education on Restraints (Berg) VAL4+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	0		Mean	.1730769
		Largest	Std. Dev.	.3792265
75%	0	1		
90%	1	1	Variance	.1438127
95%	1	1	Skewness	1.728317
99%	1	1	Kurtosis	3.98708

SCALE DESCRIPTION

This scale captures the facility's use of educational programs for restraints for licensed and un-licensed staff. The scale is constructed as a count from 0-2 indicating the presence of educational programs regarding restraints from CNAs & LPN/LVN, but the two never occur in the absence of one another when weekly restraint use is present, so the value is a de facto dichotomous indicator of educational programs for restraints. The two educational items are highly correlated (cor=0.86).

ITEMS IN SCALE

item	varlab
as26ja	AS 26ja. rev prog-restraints-cna?
as26jb	AS 26jb. rev prog-restraints-rn,lpn\lvn?
as28kb3	AS 28kb.3 weekly restraints

LEVEL-1 QIs

qi	varlab
RES01	Restraints (CHSRA)

LEVEL-2 QIs

qi	varlab
FAL01	Falls increase (LTCQ)

Communication of Falls (BERG) VAL5+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	0		Mean	.1394231
		Largest	Std. Dev.	.3472232
75%	0	1		
90%	1	1	Variance	.1205639
95%	1	1	Skewness	2.081928
99%	1	1	Kurtosis	5.334425

SCALE DESCRIPTION

This scale captures the facility's tendency to use various communication pathways regarding falls of varying level of formality (verbal informal, verbal formal, and written formal). The scale is a dichotomous indicator, taking on a value of 1 if all three pathways are present, 0 otherwise.

Internal consistency reliability is not reported as this scale is not composed as a summary, additive index.

ITEMS IN SCALE

item	varlab
as29a1	AS 29a.1 falls-verb inform
as29a2	AS 29a.2 falls-verb form
as29a3	AS 29a.3 falls-written form

LEVEL-1 QIs

qi	varlab
FAL01	Falls increase (LTCQ)

LEVEL-2 QIs

qi	varlab
none	

Licensed Nurse Involved in Care Planning (JNM)
VAL6+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	1	0	Obs	206
25%	2	0	Sum of Wgt.	206
50%	3		Mean	2.203883
		Largest	Std. Dev.	.9961802
75%	3	3		
90%	3	3	Variance	.9923751
95%	3	3	Skewness	-.9209112
99%	3	3	Kurtosis	2.572049

SCALE DESCRIPTION

This scale captures the tendency of staff of varying levels to participate in the care planning process. The numerical value is a sum of three indicators: whether or not the (1) charge nurse, (2) RN's, or (3) LPNs contribute to the care plan. The internal consistency reliability for this scale is (KR20) 0.70.

ITEMS IN SCALE

item	varlab
as9a	AS 9a. chg nurse contrib to pat care plan
as9b	AS 9b. rns contrib to patient care plan
as9c	AS 9c. lpns contrib to patient care plan

LEVEL-1 QIs

qi	varlab
MOD03	Depression new or worse (LTCQ)
DepWOTx	Depression without treatment (CHSRA)

LEVEL-2 QIs

qi	varlab
COG01	Cognition worsening (LTCQ)
COM01	Communication worsening (LTCQ)
BEH01	Behavior high & low risk (CHSRA)
BEH02	Behavior high risk (CHSRA)
BEH03	Behavior low risk (CHSRA)
PRU01	PU high & low risk (CHSRA)
PRU02	PU high risk (CHSRA)
PRU03	PU low risk (CHSRA)
PRU04	PU onset or worsening (LTCQ)

Preventative Activities (JNM) VAL7+

	Percentiles	Smallest		
1%	3	2		
5%	3	2		
10%	4	3	Obs	208
25%	5	3	Sum of Wgt.	208
50%	6		Mean	6.283654
		Largest	Std. Dev.	2.040963
75%	7	11		
90%	9	11	Variance	4.165529
95%	10	11	Skewness	.3853347
99%	11	11	Kurtosis	2.821589

SCALE DESCRIPTION

This scale captures the number of areas relating to preventative activities engaged by facility caregivers. Types of activities include education, training programs for residents, goal setting with residents (see items include for complete list of areas). The numerical value for this scale is the sum of the number of preventative activities practiced by caregivers or facilitated by the institution. The items included form an scale of marginal internal consistency (KR20=0.54).

ITEMS IN SCALE

item	varlab
as14eb	AS 14eb. num residents in dress training
as20b	AS 20b. regular education of residents
as20c	AS 20c. regular education for families
as21d	AS 21d. r\r prog-ambulation, gait train
as21a	AS 21a. r\r programs for eating training
as40	AS 40. obs staff for good ulcer prevent?
as41	AS 41. observe staff for fall prevention?
qi4ca	MRR 4c.a goals for prevent-cognit status
qi4cb	MRR 4c.b goals for prevent-communication
qi4cf	MRR 4c.f goals for prevent-adl improv
qi4cg	MRR 4c.g goals for prevent-adl decline
qi4ch	MRR 4c.h goals for prevent-mobility\walk

LEVEL-1 QIs

qi	varlab
COG01	Cognition worsening (LTCQ)
COM01	Communication worsening (LTCQ)
WAL0X	Walking performance (MEGAQI)

LEVEL-2 QIs

qi	varlab
SOC02	Little or no activities (CHSRA)

Polypharmacy Monitoring (JNM) VAL8+

	Percentiles	Smallest		
1%	1	0		
5%	2	1		
10%	4	1	Obs	208
25%	6	1	Sum of Wgt.	208
50%	7		Mean	7.543269
		Largest	Std. Dev.	3.040476
75%	10	15		
90%	12	15	Variance	9.244496
95%	12	15	Skewness	.1720853
99%	15	16	Kurtosis	2.900126

SCALE DESCRIPTION

This scale represents the facility's commitment to monitoring of medication, in particular psycho-active medication use and associated conditions/features. Sixteen indicators are included (see items included for complete list), including monitoring of delirium, cognitive status, level of formality of communication regarding polypharmacy and adverse drug reactions). The items included form an internally consistent scale (KR20=0.70).

ITEMS IN SCALE

item	varlab
as28cb3	AS 28cb.3 weekly delirium?
as16	AS 16. docum policy-monitor neurolep drugs
as17	AS 17. freq drug use review by med direct
as18d	AS 18d. pract-obs med changes?
as25d	AS 25d. policy rev-use of hi risk meds
as26ia	AS 26ia. rev prog-polypharmac-cna?
as26ib	AS 26ib. rev prog-polypharmac-rn,lpn\lvn?
as28aa	AS 28aa. routin adv drug reaction?
as28ab	AS 28ab.2 adm adv drug reaction
as29e2	AS 29e.2 adverse drug react-verb form
as32a	AS 32a. cogn status monit?-assessments
as32b	AS 32b. cogn status monit?-memory check
as28ab3	AS 28ab.3 weekly adv drug reaction
as29e3	AS 29e.3 adverse drug react-written form
as29e2	AS 29e.2 adverse drug react-verb form
as29e3	AS 29e.3 adverse drug react-written form

LEVEL-1 QIs

qi	varlab
COG01	Cognition worsening (LTCQ)
COM01	Communication worsening (LTCQ)

LEVEL-2 QIs

qi	varlab
DEL0X	Delirium not remitting (MEGAQI)
DRG01	Antipsychotic high & low risk (CHSRA)
DRG02	Antipsychotic high risk (CHSRA)
DRG03	Antipsychotic low risk (CHSRA)

Aggressive Cog/Com Care Strategy (JNM) VAL9+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	1		Mean	1.778846
		Largest	Std. Dev.	2.137572
75%	3	6		
90%	6	6	Variance	4.569212
95%	6	6	Skewness	.8219366
99%	6	6	Kurtosis	2.231258

SCALE DESCRIPTION

This scale represents the tendency of charts reviewed in the facility to document the presence of aggressive communication and cognitive care strategies. The scale is the additive sum of nine indicators, each signaling whether the facility lies in the top 30th percentile in regards to the presence of a care plan for communication, recent updates to the care plan for cognition and communication, and the presence of goals for cognition and communication. The items included form an internally consistent scale (KR20=0.86).

ITEMS IN SCALE

item	varlab
qi4b	MRR 4.b on care plan-communication
qi4aa	MRR 4a.a recent update-cognit status
qi4ab	MRR 4a.b recent update-communicat
qi4ba	MRR 4b.a goals for improve-cognit status
qi4bb	MRR 4b.b goals for improve-communication
qi4ca	MRR 4c.a goals for prevent-cognit status
qi4cb	MRR 4c.b goals for prevent-communication
qi4da	MRR 4d.a nurse interven-cognitive status
qi4db	MRR 4d.b nurse interven-communication

LEVEL-1 QIs

qi	varlab
DEL0X	Delirium not remitting (MEGAQI)

LEVEL-2 QIs

qi	varlab
COG01	Cognition worsening (LTCQ)

COM01	Communication worsening (LTCQ)
FAL01	Falls increase (LTCQ)
Bedfast	Bedfast (CHSRA)

General Management Instability JNM) VAL10-

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	1		Mean	1.057692
		Largest	Std. Dev.	1.226337
75%	2	4		
90%	3	4	Variance	1.503902
95%	3	5	Skewness	1.024237
99%	4	5	Kurtosis	3.244645

SCALE DESCRIPTION

This scale captures the tendency of management and director level staff to turnover in the facility. The numerical value for this scale is the count of six areas that have experienced a change in the past two years: management, administration, nursing director, re-habilitation services contractor, nurse agency contractor, and if the DON was employed less than one year. The items included form a scale of marginal internal consistency (KR20=0.50).

ITEMS IN SCALE

item	varlab
as2a	AS 2a. manag contr change last 2 years
as2b	AS 2b. admin contr change last 2 years
as2c	AS 2c. nurs dir contr change last 2 years
as2d	AS 2d. rehab serv cont change last 12 mos
as2e	AS 2e. nurse agcy cont change lasr 12 mos
as3y	AS 3y. num of years don employed

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
MOB01	Mobility decline (LTCQ)
ADL03	ADL imprvmnt in res. w/capacity (MEGAQI)
ADL01	ADL decline (CHSRA)
CAT01	Indwelling urin cath (LTCQ)
CNT01	Incontinence hi & lo risk (CHSRA)
CNT05	Incontinence high risk (CHSRA)

CNT06	Incontinence low risk (CHSRA)
BEH04	Behavior worsening (LTCQ)
MOD03	Depression new or worse (LTCQ)
PAN01	Pain worsening (LTCQ)
PAI0X	Pain poorly managed (MEGAQI)
DepWOTx	Depression without treatment (CHSRA)

Facility Management contract change (YH) VAL11-

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	207
25%	0	0	Sum of Wgt.	207
50%	0		Mean	.0821256
		Largest	Std. Dev.	.2752216
75%	0	1		
90%	0	1	Variance	.0757469
95%	1	1	Skewness	3.044001
99%	1	1	Kurtosis	10.26594

SCALE DESCRIPTION

This validation element is based on a single item, and is a dichotomous indicator as to whether the management contract has changed in the last 2 years. (Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
as2a	AS 2a. manag contr change last 2 years

LEVEL-1 QIs

qi	varlab
MOB01	Mobility decline (LTCQ)
CAT01	Indwelling urin cath (LTCQ)
CAT02	Catheter (CHSRA)
PRU01	PU high & low risk (CHSRA)
PRU02	PU high risk (CHSRA)
PRU03	PU low risk (CHSRA)
PRU04	PU onset or worsening (LTCQ)
INF0X	Infection flare-up (MEGAQI)
CNT04	UTI (CHSRA)

LEVEL-2 QIs

qi	varlab
MOD03	Depression new or worse (LTCQ)
BEH01	Behavior high & low risk (CHSRA)
BEH02	Behavior high risk (CHSRA)
BEH03	Behavior low risk (CHSRA)
BEH04	Behavior worsening (LTCQ)
ADL01	ADL decline (CHSRA)
RES01	Restraints (CHSRA)
DepWOTx	Depression without treatment (CHSRA)

Screening tools for infections (YH) VAL14+

	Percentiles	Smallest			
1%	0	0			
5%	0	0			
10%	0	0	Obs		204
25%	0	0	Sum of Wgt.		204
50%	0		Mean		.2058824
		Largest	Std. Dev.		.4053396
75%	0	1			
90%	1	1	Variance		.1643002
95%	1	1	Skewness		1.454786
99%	1	1	Kurtosis		3.116402

SCALE DESCRIPTION

This validation element is based on a single item, and is a dichotomous indicator as to whether the respondent to the administrator survey reported that a routine assessment is used for infections. (Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
as281a	AS 281a. routin infections?

LEVEL-1 QIs

qi	varlab
CNT04	UTI (CHSRA)

LEVEL-2 QIs

qi	varlab
CAT01	Indwelling urin cath (LTCQ)
CAT02	Catheter (CHSRA)

Use of QA nurse as38 (YH,VM) VAL16+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	0		Mean	.4230769
		Largest	Std. Dev.	.4952393
75%	1	1		
90%	1	1	Variance	.245262
95%	1	1	Skewness	.3113996
99%	1	1	Kurtosis	1.09697

SCALE DESCRIPTION

This validation element is based on a single item, and is a dichotomous indicator as to whether there is a quality assurance nurse present in the facility. (Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
as38	AS 38. facil has qualirty assurance nurse?

LEVEL-1 QIs

qi	varlab
INF0X	Infection flare-up (MEGAQI)
CNT04	UTI (CHSRA)
PRU01	PU high & low risk (CHSRA)
PRU02	PU high risk (CHSRA)
PRU03	PU low risk (CHSRA)
PRU04	PU onset or worsening (LTCQ)
FAL01	Falls increase (LTCQ)
BUR0X	Burns abrasions bruises (MEGAQI)

LEVEL-2 QIs

qi	varlab
RES01	Restraints (CHSRA)
CAT01	Indwelling urin cath (LTCQ)
CAT02	Catheter (CHSRA)
PAI0X	Pain poorly managed (MEGAQI)
PAN01	Pain worsening (LTCQ)

Formal Communication (BERG) VAL17+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	0		Mean	3.033654
		Largest	Std. Dev.	4.477946
75%	6	12		
90%	12	12	Variance	20.052
95%	12	12	Skewness	1.106123
99%	12	12	Kurtosis	2.545205

SCALE DESCRIPTION

This scale captures the breadth and intensity of formal communication pathways present in the facility. The numerical value is the sum of twelve clinical/functional areas that the facility has both formal written & verbal communication pathways (see list of included items for clinical/functional areas included). The dichotomous indicators that go into this summary index form an internally consistent set (KR20=0.97).

ITEMS IN SCALE

item	varlab
as29a2	AS 29a.2 falls-verb form
as29b2	AS 29b.2 pressure ulcers-verb form
as29c2	AS 29c.2 depression, mood-verb form
as29d2	AS 29d.2 delirium-verb form
as29e2	AS 29e.2 adverse drug react-verb form
as29f2	AS 29f.2 malnutrition-verb form
as29g2	AS 29g.2 pain-verb form
as29h2	AS 29h.2 bladder incontn-verb form
as29i2	AS 29i.2 behav funct declin-verb form
as29j2	AS 29j.2 communic change-verb form
as29k2	AS 29k.2 burns, abrasions-verb form
as29l2	AS 29l.2 funct state declin-verb form
as29a3	AS 29a.3 falls-written form
as29b3	AS 29b.3 pressure ulcers-written form
as29c3	AS 29c.3 depression, mood-written form
as29d3	AS 29d.3 delirium-written form
as29e3	AS 29e.3 adverse drug react-written form
as29f3	AS 29f.3 malnutrition-written form
as29g3	AS 29g.3 pain-written form
as29h3	AS 29h.3 bladder incontn-written form
as29i3	AS 29i.3 behav funct declin-written form
as29j3	AS 29j.3 communic change-written form
as29k3	AS 29k.3 burns, abrasions-written form
as29l3	AS 29l.3 funct state declin-written form

LEVEL-1 QIs

qi	varlab
FAL01	Falls increase (LTCQ)
PRU01	PU high & low risk (CHSRA)
PRU02	PU high risk (CHSRA)
PRU03	PU low risk (CHSRA)
PRU04	PU onset or worsening (LTCQ)
BMI0X	Low BMI (MEGAQI)
PAN01	Pain worsening (LTCQ)
PAI0X	Pain poorly managed (MEGAQI)

LEVEL-2 QIs

qi	varlab
BUR0X	Burns abrasions bruises (MEGAQI)
BEH01	Behavior high & low risk (CHSRA)
BEH02	Behavior high risk (CHSRA)
BEH03	Behavior low risk (CHSRA)
BEH04	Behavior worsening (LTCQ)

Behavioral Items (YH) VAL18+

	Percentiles	Smallest		
1%	24.63407	14.78798		
5%	31.28469	22.89582		
10%	35.84116	24.63407	Obs	208
25%	44.11671	24.63407	Sum of Wgt.	208
50%	52.7043		Mean	50
		Largest	Std. Dev.	10
75%	57.35201	64.94381		
90%	60.92919	64.94381	Variance	100
95%	63.20557	67.27316	Skewness	-.7843815
99%	64.94381	67.27316	Kurtosis	3.235792

SCALE DESCRIPTION

This scale captures the tendency of caregivers in the facility to provide high quality care regarding behavioral symptoms. A number of indicators are included representing the frequency of behavioral assessment, number of sources consulted for behavioral symptom changes, cognitive symptoms, CQI programs in-place regarding behavior, etc. (see list of included items for complete list of included areas). The numerical value for this scale is a transformed factor score (mean 50, SD 10) with higher values indicating higher quality care (alpha=0.64).

ITEMS IN SCALE

item	varlab
as18a	AS 18a. pract-ask resid or family-cog chg?
as18b	AS 18b. pract-chart behav across shifts?
as18c	AS 18c. pract-ask resid or fam-behav chg?
as18d	AS 18d. pract-obs med changes?
as18e	AS 18e. pract-obs chg in eating, sleeping?
as28eb3	AS 28eb.3 weekly behavioral function
as29i2	AS 29i.2 behav funct declin-verb form
as29i3	AS 29i.3 behav funct declin-written form
as31	AS 31. look for cognitive status change?
as32a	AS 32a. cogn status monit?-assessments
as32b	AS 32b. cogn status monit?-memory check
as32c	AS 32c. cogn status monit?-behav change
as32d	AS 32d. cogn status monit?-other
as39e	AS 39e. which incl in cqi-behav function
as42	AS 42. obs staff for behav sympt prevention
as32c	AS 32c. cogn status monit?-behav change
as32d	AS 32d. cogn status monit?-other
as39e	AS 39e. which incl in cqi-behav function
as42	AS 42. obs staff for behav sympt prevention

LEVEL-1 QIs

qi	varlab
BEH01	Behavior high & low risk (CHSRA)
BEH02	Behavior high risk (CHSRA)
BEH03	Behavior low risk (CHSRA)
BEH04	Behavior worsening (LTCQ)

LEVEL-2 QIs

qi	varlab
COG01	Cognition worsening (LTCQ)
MOD03	Depression new or worse (LTCQ)
DepWOTx	Depression without treatment (CHSRA)

NP on staff as4 (YH, VM) VAL19+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	0		Mean	.1009615
		Largest	Std. Dev.	.3020046
75%	0	1		
90%	1	1	Variance	.0912068
95%	1	1	Skewness	2.648974
99%	1	1	Kurtosis	8.017061

SCALE DESCRIPTION

This validation element is based on a single item, and is a dichotomous indicator as to whether a nurse practitioner is on staff at the facility.
(Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
as4	AS 4. nurse practitioner on staff?

LEVEL-1 QIs

qi	varlab
PAI0X	Pain poorly managed (MEGAQI)
PAN01	Pain worsening (LTCQ)

LEVEL-2 QIs

qi	varlab
MOD03	Depression new or worse (LTCQ)
INF0X	Infection flare-up (MEGAQI)
CNT04	UTI (CHSRA)
DepWOTx	Depression without treatment (CHSRA)

Med Dir reviews Drugs last 30 days as17 (YH)
VAL20+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	207
25%	0	0	Sum of Wgt.	207
50%	0		Mean	.4830918
		Largest	Std. Dev.	.5009255
75%	1	1		
90%	1	1	Variance	.2509263
95%	1	1	Skewness	.0676716
99%	1	1	Kurtosis	1.004579

SCALE DESCRIPTION

This validation element is based on a single item, and is a dichotomous indicator as to whether the medical director reviews drugs within 30 days.
(Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
as17	AS 17. freq drug use review by med direct

LEVEL-1 QIs

qi	varlab
DRG01	Antipsychotic high & low risk (CHSRA)
DRG02	Antipsychotic high risk (CHSRA)
DRG03	Antipsychotic low risk (CHSRA)
DepWOTx	Depression without treatment (CHSRA)

LEVEL-2 QIs

qi	varlab
MOD03	Depression new or worse (LTCQ)
PAN01	Pain worsening (LTCQ)
PAI0X	Pain poorly managed (MEGAQI)

Screen, assess, manage pain depression (SC) VAL23+

	Percentiles	Smallest		
1%	42.27606	42.27606		
5%	42.27606	42.27606		
10%	42.27606	42.27606	Obs	208
25%	50.37987	42.27606	Sum of Wgt.	208
50%	50.37987		Mean	54.7045
		Largest	Std. Dev.	9.112957
75%	58.48367	74.69129		
90%	66.58749	74.69129	Variance	83.04598
95%	66.58749	74.69129	Skewness	.3347966
99%	74.69129	74.69129	Kurtosis	2.243254

SCALE DESCRIPTION

This scale is computed almost entirely from medical record review items, and captures the tendency of the caregivers in the facility to record screening and assessments of depression and pain, and the presence of treatments are in place for pain and depression. The numerical value represented by this validation scale is the count of eleven of such elements that are present. Higher values indicate more good care practices insofar as screening, assessment and management of pain and depression are concerned (KR20 = 0.65).

ITEMS IN SCALE

item	varlab
gild	MRR 1.d record of assess-depression
qi3ed	MRR 3e.d current treatment-depression
qilk	MRR 1.k record of assess-pain
qilak	MRR 1a.k physician assess-pain
qi3ek	MRR 3e.k current treatment-pain
qi4dk	MRR 4d.k nurse interven-pain
qi3d	MRR 3.d new problem-depression
qi3ad	MRR 3a.d doc in 72 hours-depression
qi3k	MRR 3.k new problem-pain
qi3ak	MRR 3a.k doc in 72 hours-pain
as25h	AS 25h. policy rev-pain management
as25c	AS 25c. policy rev-depression management

LEVEL-1 QIs

qi	varlab
PAI0X	Pain poorly managed (MEGAQI)
PAN01	Pain worsening (LTCQ)
MOD03	Depression new or worse (LTCQ)
DepWOTx	Depression without treatment (CHSRA)

LEVEL-2 QIs

qi	varlab
SOC02	Little or no activities (CHSRA)

Daily Screening of mood as27h1 (YH) VAL24+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	1		Mean	.5865385
		Largest	Std. Dev.	.4936422
75%	1	1		
90%	1	1	Variance	.2436826
95%	1	1	Skewness	-.3514579
99%	1	1	Kurtosis	1.123523

SCALE DESCRIPTION

This validation element is based on a single item, and is a dichotomous indicator as to whether the facility has a policy regarding the daily reporting of mood or anxious symptoms displayed by residents from CNAs. (Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
as27h1	AS 27h.1 daily repts-depress, anxiety

LEVEL-1 QIs

qi	varlab
DepWOTx	Depression without treatment (CHSRA)

LEVEL-2 QIs

qi	varlab
MOD03	Depression new or worse (LTCQ)

Medications Committee as35 (YH) VAL25+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	207
25%	0	0	Sum of Wgt.	207
50%	1	Largest	Mean	.6135266
			Std. Dev.	.4881217
75%	1	1		
90%	1	1	Variance	.2382627
95%	1	1	Skewness	-.4662845
99%	1	1	Kurtosis	1.217421

SCALE DESCRIPTION

This validation element is based on a single item, and is a dichotomous indicator as to whether the facility has a medications committee.
(Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
as35	AS 35. meds committee in facility?

LEVEL-1 QIs

qi	varlab
DepWOTx	Depression without treatment (CHSRA)

LEVEL-2 QIs

qi	varlab
MOD03	Depression new or worse (LTCQ)
DRG01	Antipsychotic high & low risk (CHSRA)
DRG02	Antipsychotic high risk (CHSRA)
DRG03	Antipsychotic low risk (CHSRA)
PAN01	Pain worsening (LTCQ)
PAI0X	Pain poorly managed (MEGAQI)

CQI for pain as39 (YH) VAL26+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	206
25%	0	0	Sum of Wgt.	206
50%	1		Mean	.5728155
		Largest	Std. Dev.	.4958745
75%	1	1		
90%	1	1	Variance	.2458915
95%	1	1	Skewness	-.2944008
99%	1	1	Kurtosis	1.086672

SCALE DESCRIPTION

This validation element is based on a single item, and is a dichotomous indicator as to whether the facility has a continuous quality improvement program in place for pain.

(Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
as39	

LEVEL-1 QIs

qi	varlab
PAI0X	Pain poorly managed (MEGAQI)
PAN01	Pain worsening (LTCQ)

LEVEL-2 QIs

qi	varlab
BEH01	Behavior high & low risk (CHSRA)
BEH02	Behavior high risk (CHSRA)
BEH03	Behavior low risk (CHSRA)
MOD03	Depression new or worse (LTCQ)
DepWOTx	Depression without treatment (CHSRA)

Skin Care Preventive Stratgz v1 (JNM) VAL29+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	205
25%	1	0	Sum of Wgt.	205
50%	1		Mean	1.121951
		Largest	Std. Dev.	.68582
75%	1	3		
90%	2	3	Variance	.4703491
95%	2	4	Skewness	1.485638
99%	3	5	Kurtosis	8.969409

SCALE DESCRIPTION

This scale combines walk-through observation items and reports from the respondent to the administrator survey to provide a measure of preventative strategies for skin care. Administrative survey reports of lotion or cream or whirlpool soaks, and observations of residents with safety devices, repositioning devices, and pressure relieving devices define this additive scale. The numerical value for the scale (0-6) indicates increasing use of skin care preventative strategies. The scale has poor internal consistency reliability (KR20=0.37, but see VAL31).

ITEMS IN SCALE

item	varlab
as18j	AS 18j. pract-apply lotion or cream?
as18k	AS 18k. pract-whirlpool soaks?
wpm20	WT 20. residents with safety devices
wpm22	WT 22. observe repositioning devices
wpm23	WT 23. pressure reducing devices on bed
wpm24	WT 24. pressure reducing devices bone on

LEVEL-1 QIs

qi	varlab
PRU01	PU high & low risk (CHSRA)
PRU02	PU high risk (CHSRA)
PRU03	PU low risk (CHSRA)
PRU04	PU onset or worsening (LTCQ)
BUR0X	Burns abrasions bruises (MEGAQI)

LEVEL-2 QIs

qi	varlab
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CNT02	Bowel incont decline (LTCQ)
CNT03	Bladder incont decline (LTCQ)

Skin Care Prev Stratgz walk-through (JNM) VAL31+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	207
25%	1	0	Sum of Wgt.	207
50%	2		Mean	1.898551
		Largest	Std. Dev.	1.429355
75%	3	4		
90%	4	4	Variance	2.043056
95%	4	4	Skewness	.0288391
99%	4	4	Kurtosis	1.664136

SCALE DESCRIPTION

This scale is similar to VAL29 but includes only walk-through observation items.

The numerical value for the scale (0-4) indicates increasing observations of good skin care prevention strategies. The included items have high internal consistency reliability (KR20=0.69).

ITEMS IN SCALE

item	varlab
wpm20	WT 20. residents with safety devices
wpm22	WT 22. observe repositioning devices
wpm23	WT 23. pressure reducing devices on bed
wpm24	WT 24. pressure reducing devices bone on

LEVEL-1 QIs

qi	varlab
PRU01	PU high & low risk (CHSRA)
PRU02	PU high risk (CHSRA)
PRU03	PU low risk (CHSRA)
PRU04	PU onset or worsening (LTCQ)
BUR0X	Burns abrasions bruises (MEGAQI)

LEVEL-2 QIs

qi	varlab
CNT02	Bowel incont decline (LTCQ)
CNT03	Bladder incont decline (LTCQ)

Incontinence Management (JNM) VAL32+

	Percentiles	Smallest		
1%	1	0		
5%	2	1		
10%	3	1	Obs	208
25%	5	1	Sum of Wgt.	208
50%	7		Mean	6.485577
		Largest	Std. Dev.	2.544253
75%	8	11		
90%	10	12	Variance	6.473221
95%	10	12	Skewness	-.1049022
99%	12	13	Kurtosis	2.476646

SCALE DESCRIPTION

This scale uses medical record review items and administrator survey items to generate a count of the number of good incontinence management items practiced. Medical record review items are converted to dichotomous facility-level indicators if the care practice is present a rate in the top 30th percentile. Please refer to list of included items for scope of care practices included. The numerical value for the scale is the count of 13 indicators of high quality incontinence care are provided. The items form an internally consistent set (KR20=0.64).

ITEMS IN SCALE

item	varlab
qilp	MRR 1.p record of assess-bladder contin
qi4bp	MRR 4b.p goals for improv-bladder contin
qi4cp	MRR 4c.p goals for prevent-bladder contin
as4	AS 4. nurse practitioner on staff?
as26ea	AS 26ea. rev prog-incontin prev-cna?
as26eb	AS 26eb. rev prog-incont prev-rn,lpn\lvn?
as27c1	AS 27c.1 daily repts-incontin patterns
as29h2	AS 29h.2 bladder incontin-verb form
as37ad	AS 37ad. what cqi projs-pressure ulcers?
as37ag	AS 37ag. what cqi projs-urinary incont?
as39d	AS 39d. which incl in cqi-urinary catheter
as39g	AS 39g. which incl in cqi-bladder incontin
as28db	AS 28db.2 adm bladdr incontinence
as28db3	AS 28db.3 weekly bladdr incontinence
as28db4	AS 28db.4 quarterly bladdr incontinence

LEVEL-1 QIs

qi	varlab
CNT01	Incontinence hi & lo risk (CHSRA)

CNT05	Incontinence high risk (CHSRA)
CNT06	Incontinence low risk (CHSRA)
CNT02	Bowel incont decline (LTCQ)
ADL01	ADL decline (CHSRA)
ADL02	ADL dec. following imprvnt (MEGAQI)
CAT01	Indwelling urin cath (LTCQ)
Bedfast	Bedfast (CHSRA)

LEVEL-2 QIs

qi	varlab
PRU01	PU high & low risk (CHSRA)
PRU02	PU high risk (CHSRA)
PRU03	PU low risk (CHSRA)
MOB01	Mobility decline (LTCQ)
WAL0X	Walking performance (MEGAQI)

Cont Ed Fx Decline (JNM) VAL34+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	206
25%	0	0	Sum of Wgt.	206
50%	1		Mean	1.131068
		Largest	Std. Dev.	.9198652
75%	2	2		
90%	2	2	Variance	.846152
95%	2	2	Skewness	-.2617868
99%	2	2	Kurtosis	1.238557

SCALE DESCRIPTION

This scale indicates the presence of continuing education for functional decline for licensed and un-licensed staff. The scale is constructed as a count from 0-2. The two items comprising the sum are highly correlated ($r=0.72$).

ITEMS IN SCALE

item	varlab
as26ca	AS 26ca. rev prog-funct declin risk-cna?
as26cb	AS 26cb. rev prog-funct declin-rn,lpn\lvn?

LEVEL-1 QIs

qi	varlab
ADL01	ADL decline (CHSRA)
ADL02	ADL dec. following imprvnt (MEGAQI)
WAL0X	Walking performance (MEGAQI)
MOB01	Mobility decline (LTCQ)
Bedfast	Bedfast (CHSRA)

LEVEL-2 QIs

qi	varlab
BMI0X	Low BMI (MEGAQI)
CNT04	UTI (CHSRA)
CNT03	Bladder incont decline (LTCQ)

Effort at Mobility Enhancement (JNM) VAL35+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	1	0	Obs	208
25%	2	0	Sum of Wgt.	208
50%	3		Mean	3.596154
		Largest	Std. Dev.	2.550056
75%	5	9		
90%	7	9	Variance	6.502787
95%	8	10	Skewness	.5223018
99%	9	10	Kurtosis	2.352201

SCALE DESCRIPTION

This scale measures the presence of policies and care practices conducive to promoting mobility or walking performance. The scale uses items drawn from the medical record review, administrator survey, and walk-through. Please refer to list of included items for complete coverage of areas. The numerical score for the scale is the count of eleven indicators of care practices or policies supportive of good mobility (0-11). The items included form an internally consistent set (KR20=0.67).

ITEMS IN SCALE

item	varlab
qila	MRR 1a.a physician assess-cog status
qi3h	MRR 3.h new problem-mobility\walking
qi3ah	MRR 3a.h doc in 72 hours-mobility\walk
qi3eh	MRR 3e.h current treatment-mobil\walking
qi4bh	MRR 4b.h goals for improv-mobility\walk
qi4ch	MRR 4c.h goals for prevent-mobility\walk
qi4dh	MRR 4d.h nurse interven-mobility\walking
as9d	AS 9d. r\r aides contrib to pat care plan
as14ab	AS 14ab. num residents in exerc program
as14db	AS 14db. num residents in mobil sessions
as22	AS 22. propor of res-r\r care last 39 days
as23	AS 23. frequency of r\r programs
as29l2	AS 29l.2 funct state declin-verb form
wpm17	WT 17. residents walking with devices
wpm18	WT 18. staff help residents walking

LEVEL-1 QIs

qi	varlab
WAL0X	Walking performance (MEGAQI)
MOB01	Mobility decline (LTCQ)

Bedfast

Bedfast (CHSRA)

LEVEL-2 QIs

qi	varlab
ADL01	ADL decline (CHSRA)
ADL03	ADL imprvmnt in res. w/capacity (MEGAQI)
CNT01	Incontinence hi & lo risk (CHSRA)
CNT05	Incontinence high risk (CHSRA)
CNT06	Incontinence low risk (CHSRA)
CNT02	Bowel incont decline (LTCQ)
CNT03	Bladder incont decline (LTCQ)

Focus on Incontinence (JNM) VAL36+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	1	0	Obs	208
25%	2	0	Sum of Wgt.	208
50%	4		Mean	4.389423
		Largest	Std. Dev.	2.646168
75%	6	10		
90%	8	10	Variance	7.002206
95%	9	10	Skewness	.2794782
99%	10	10	Kurtosis	2.121024

SCALE DESCRIPTION

This scale measures the presence of policies and care practices conducive to promoting or improving level of continence. The scale uses items from the medical record review, administrator survey, and walk-through. Please refer to list of included items for complete coverage of areas. The numerical score for the scale is the count of eleven indicators of care practices or policies supportive of good mobility (0-11). The items included form an internally consistent set (KR20=0.76).

ITEMS IN SCALE

item	varlab
qilp	MRR 1.p record of assess-bladder contin
qi4p	MRR 4.p on care plan-bladder continence
qi4ap	MRR 4a.o recent update-bladder contin
qi4bp	MRR 4b.p goals for improv-bladder contin
qi4cp	MRR 4c.p goals for prevent-bladder contin
qi4dp	MRR 4d.p nurse interven-bladder contin
wpm3	WT 3. odors of urine or feces noticeable
wpm18	WT 18. staff help residents walking
as14fb	AS 14fb. num resid in bladder training
as26ea	AS 26ea. rev prog-incontin prev-cna?
as26eb	AS 26eb. rev prog-incont prev-rn,lpn\lvn?
as37ag	AS 37ag. what cqi projs-urinary incont?
as39g	AS 39g. which incl in cqi-bladder incont

LEVEL-1 QIs

qi	varlab
CNT01	Incontinence hi & lo risk (CHSRA)
CNT05	Incontinence high risk (CHSRA)
CNT06	Incontinence low risk (CHSRA)
CNT02	Bowel incont decline (LTCQ)

CNT03	Bladder incont decline (LTCQ)
ADL01	ADL decline (CHSRA)
ADL02	ADL dec. following imprvnt (MEGAQI)
CAT01	Indwelling urin cath (LTCQ)

LEVEL-2 QIs

qi	varlab
PRU01	PU high & low risk (CHSRA)
PRU02	PU high risk (CHSRA)
PRU03	PU low risk (CHSRA)
MOB01	Mobility decline (LTCQ)
WAL0X	Walking performance (MEGAQI)

CDCPI-Incontinence (JNM) VAL37+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	1	0	Obs	208
25%	2	0	Sum of Wgt.	208
50%	3		Mean	3.394231
		Largest	Std. Dev.	2.193175
75%	5	8		
90%	6	9	Variance	4.810015
95%	7	9	Skewness	.4469646
99%	9	9	Kurtosis	2.424392

SCALE DESCRIPTION

This scale measures care processes across multiple domains. This scale includes items related to ADL functioning and the presence of care planning goals. The numerical value is the number of eleven indicators of high quality functional care are provided (0-11). The items included (listed below) form an moderately internally consistent set (KR20=61).

ITEMS IN SCALE

item	varlab
qi4da	MRR 4d.a nurse interven-cognitive status
qi4dd	MRR 4d.d nurse interven-depression
qi4du	MRR 4d.u nurse interven-social isolation
qi4bf	MRR 4b.f goals for improve-adl improv
qi4cf	MRR 4c.f goals for prevent-adl improv
qi4bg	MRR 4b.g goals for improv-adl decline
qi4cg	MRR 4c.g goals for prevent-adl decline
qi4bh	MRR 4b.h goals for improv-mobility\walk
qi4ch	MRR 4c.h goals for prevent-mobility\walk
as14eb	AS 14eb. num residents in dress training
as14db	AS 14db. num residents in mobil sessions

LEVEL-1 QIs

qi	varlab
ADL03	ADL imprvmnt in res. w/capacity (MEGAQI)
ADL01	ADL decline (CHSRA)
ADL02	ADL dec. following imprvnt (MEGAQI)
WAL0X	Walking performance (MEGAQI)
MOB01	Mobility decline (LTCQ)

LEVEL-2 QIs

qi
RES01

varlab
Restrains (CHSRA)

CDCPI-Nutritional (JNM) VAL38+

	Percentiles	Smallest		
1%	0	0		
5%	1	0		
10%	1	0	Obs	208
25%	2	1	Sum of Wgt.	208
50%	3		Mean	3.418269
		Largest	Std. Dev.	1.552014
75%	5	6		
90%	5	7	Variance	2.408747
95%	6	7	Skewness	.1530063
99%	7	8	Kurtosis	2.489535

SCALE DESCRIPTION

This scale measures care processes across multiple domains. This scale includes items related to nutrition. (see list of items). The numerical score is the count of 8 items (0-8). Higher values indicate more care practices present that suggest high quality care with regards to nutrition and eating. The items included do not form an internally consistent set (KR20=0.36) and therefore the scale is considered an index of essentially randomly occurring care practices supportive of good nutrition.

ITEMS IN SCALE

item	varlab
qi4bn	MRR 4b.n goals for improve-undernutrit
qi4cn	MRR 4c.n goals for prevent-undernutrit
as14ib	AS 14ib. num residents use reg snacks
as28jb3	AS 28jb.3 weekly malnutrition
as36	AS 36. nutritrion committee at facility?
as37ab	AS 37ab. what cqi projs-nutrition?
wml8	WT 8. pleasant atmosphere in facility
wml9	WT 9. homelike appearance in facility

LEVEL-1 QIs

qi	varlab
need to re-review	

LEVEL-2 QIs

qi	varlab
need to re-review	

CDCPI-Psychosocial (JNM) VAL39+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	1	0	Obs	208
25%	2	0	Sum of Wgt.	208
50%	3		Mean	3.076923
		Largest	Std. Dev.	1.98882
75%	4	8		
90%	6	8	Variance	3.955407
95%	7	8	Skewness	.4659738
99%	8	8	Kurtosis	2.686325

SCALE DESCRIPTION

This scale measures care processes across multiple domains. This scale includes items related to psychosocial functioning (see list of items). The numerical score is the count of 9 indicators (0-9). Higher scores imply greater number of high quality care practices regarding assessment of symptoms of depression/anxiety, presence of care planning goals for mental health symptoms, and goals in to improve social isolation. The items in this scale form an internally consistent set (KR20=0.62).

ITEMS IN SCALE

item	varlab
qi4ba	MRR 4b.a goals for improve-cognit status
qi4ca	MRR 4c.a goals for prevent-cognit status
qi4bd	MRR 4b.d goals for improv-depression
qi4cd	MRR 4c.d goals for prevent-depression
qi4bu	MRR 4b.u goals for improv-soc isolation
qi4cu	MRR 4c.u goals for prevent-soc isolation
as28bb	AS 28bb.2 adm depression, anxiety
as28bb3	AS 28bb.3 weekly depression, anxiety
as28bb5	AS 28bb.5 annually depression, anxiety
wpm11	WT 11. variety of activities available
wpm12	WT 12. out of bed, not for nap or bedtime

LEVEL-1 QIs

qi	varlab
COG01	Cognition worsening (LTCQ)
SOC02	Little or no activities (CHSRA)

LEVEL-2 QIs

qi
none

varlab

CDCPI-Clinical Complications (JNM) VAL40+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	1	0	Obs	208
25%	2	0	Sum of Wgt.	208
50%	3.5		Mean	3.596154
		Largest	Std. Dev.	2.254439
75%	5	9		
90%	7	9	Variance	5.082497
95%	8	9	Skewness	.4100912
99%	9	9	Kurtosis	2.651601

SCALE DESCRIPTION

This scale measures care processes across multiple domains. This scale includes items related to the presence of clinical complexities. The numerical score is the count of 9 indicators (0-9). Higher scores imply greater number of high quality care practices regarding assessment and goal setting for handling clinical complexities and co-morbidities. The items in this scale form an internally consistent set (KR20=0.58).

ITEMS IN SCALE

item	varlab
qi4bc	MRR 4b.c goals for improve-delirium
qi4cc	MRR 4c.c goals for prevent-delirium
qi4bk	MRR 4b.k goals for improve-pain
qi4ck	MRR 4c.k goals for prevent-pain
qi4bs	MRR 4b.s goals for improv-press ulcers
qi4cs	MRR 4c.s goals for prevent-press ulcers
qi4dc	MRR 4d.c nurse interven-delirium
qi4dk	MRR 4d.k nurse interven-pain
qi4ds	MRR 4d.s nurse interven-pressure ulcers
wpm23	WT 23. pressure reducing devices on bed
wpm24	WT 24. pressure reducing devices bone on
as28cb	AS 28cb.2 adm delirium?
as28cb3	AS 28cb.3 weekly delirium?
as28cb4	AS 28cb.4 quarterly delirium?
as28hb	AS 28hb.2 adm pain
as28hb3	AS 28hb.3 weekly pain
as28hb4	AS 28hb.4 quarterly pain

LEVEL-1 QIs

qi	varlab
PRU04	PU onset or worsening (LTCQ)

PRU01	PU high & low risk (CHSRA)
PRU02	PU high risk (CHSRA)
PRU03	PU low risk (CHSRA)
PAI0X	Pain poorly managed (MEGAQI)
PAN01	Pain worsening (LTCQ)
DEL0X	Delirium not remitting (MEGAQI)

LEVEL-2 QIs

qi	varlab
none	

CDCPI-Ambiance (JNM) VAL41+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	2		Mean	2.408654
		Largest	Std. Dev.	2.344965
75%	4	7		
90%	6	7	Variance	5.498862
95%	7	7	Skewness	.5953721
99%	7	7	Kurtosis	2.00596

SCALE DESCRIPTION

This scale captures positive aspects of the overall ambience of the facility. The items that are used in constructing this scale are drawn from the walk-through observations. The specific items included are the degree that rooms are personalized, a subjective rating of pleasant and homelike atmosphere, level of familiarity of the staff and residents, resident's appearance. The numerical value is the sum of the number of seven indicators that are rated 4 or 5 on a 1-5 rating scale. The derived components form an internally consistent scale (KR20=0.84).

ITEMS IN SCALE

item	varlab
wpm1	WT 1. rooms personalized
wpm8	WT 8. pleasant atmosphere in facility
wpm9	WT 9. homelike appearance in facility
wpm14	WT 14. staff call residents by name
wpm16	WT 16. residents well groomed
wpm25	WT 25. rate atmosphere
wpm26	WT 26. rate environment

LEVEL-1 QIs

qi	varlab
RES01	Restraints (CHSRA)
SOC02	Little or no activities (CHSRA)

LEVEL-2 QIs

qi	varlab
BEH01	Behavior high & low risk (CHSRA)
BEH02	Behavior high risk (CHSRA)

BEH03	Behavior low risk (CHSRA)
MOD03	Depression new or worse (LTCQ)
WAL0X	Walking performance (MEGAQI)
COG01	Cognition worsening (LTCQ)
DepWOTx	Depression without treatment (CHSRA)

CDCPI3-Cross Domain Quality Response (JNM) VAL42+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	1	0	Obs	208
25%	2	0	Sum of Wgt.	208
50%	3		Mean	2.961538
		Largest	Std. Dev.	1.361465
75%	4	5		
90%	5	5	Variance	1.853586
95%	5	5	Skewness	-.3678878
99%	5	5	Kurtosis	2.496652

SCALE DESCRIPTION

This scale captures overall tendencies towards positive care practices over multiple domains. The numerical value is the factor score underlying the other Cross-Domain Care Process Indices (VAL #37-41). The items form an internally consistent scale (alpha=0.68).

ITEMS IN SCALE

item	varlab
val37	
val38	
val39	
val40	
val41	

LEVEL-1 QIs

qi	varlab
ADL03	ADL imprvmnt in res. w/capacity (MEGAQI)
ADL01	ADL decline (CHSRA)
ADL02	ADL dec. following imprvnt (MEGAQI)
WAL0X	Walking performance (MEGAQI)
MOB01	Mobility decline (LTCQ)
COG01	Cognition worsening (LTCQ)
SOC02	Little or no activities (CHSRA)
PRU04	PU onset or worsening (LTCQ)
PRU01	PU high & low risk (CHSRA)
PRU02	PU high risk (CHSRA)
PRU03	PU low risk (CHSRA)
PAI0X	Pain poorly managed (MEGAQI)
PAN01	Pain worsening (LTCQ)
DEL0X	Delirium not remitting (MEGAQI)
RES01	Restraints (CHSRA)

LEVEL-2 QIs

qi	varlab
RES01	Restraints (CHSRA)
BEH01	Behavior high & low risk (CHSRA)
BEH02	Behavior high risk (CHSRA)
BEH03	Behavior low risk (CHSRA)
MOD03	Depression new or worse (LTCQ)
WAL0X	Walking performance (MEGAQI)
COG01	Cognition worsening (LTCQ)

Percent Single Bedded Rooms, Deciles (JNM) VAL44+

	Percentiles	Smallest		
1%	1	1		
5%	1	1		
10%	1	1	Obs	205
25%	3	1	Sum of Wgt.	205
50%	5		Mean	5.429268
		Largest	Std. Dev.	2.93577
75%	8	10		
90%	9	10	Variance	8.618747
95%	10	10	Skewness	-.0074703
99%	10	10	Kurtosis	1.753551

SCALE DESCRIPTION

This scale represents the proportion of beds in the facility that are located in rooms with no other beds. The numerical value for this scale [1-10] represents the decile in which the actual percentage fell. That is, a facility with a value of 1 fell in the bottom 10% of facilities, and those with a score of 10 fell in the top 10% of facilities in terms of percent of beds that were in single rooms.

(Internal consistency reliability not applicable)

ITEMS IN SCALE

item	varlab
ass1	AS s1. how many beds
ass2	AS s2. how many single bedded rooms

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
MOD03	Depression new or worse (LTCQ)
SOC02	Little or no activities (CHSRA)
BEH01	Behavior high & low risk (CHSRA)
BEH02	Behavior high risk (CHSRA)
BEH03	Behavior low risk (CHSRA)
BEH04	Behavior worsening (LTCQ)

Pain Assessment (ASSESS) (VM) VAL45+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	.0666667	0	Obs	206
25%	.1851852	0	Sum of Wgt.	206
50%	.4913793		Mean	.5272408
		Largest	Std. Dev.	.3858157
75%	.85	1.4		
90%	1.045455	1.461538	Variance	.1488537
95%	1.15	1.571429	Skewness	.4901412
99%	1.461538	1.724138	Kurtosis	2.434425

SCALE DESCRIPTION

This scale captures the tendency of residents in the facility with pain to get an assessment by a physician. Each chart reviewed in the medical record review is scored on a 0-2 scale: 0=default value, 1=if there is some record in the chart of pain, and 2 if there is some record of pain in the chart and is a record of an assessment by a physician. The numerical value for the validation scale is the average of this 0-2 score for each chart within the facility. Higher value implies greater tendency for folks in pain to get assessed by a physician. (Internal consistency NA).

ITEMS IN SCALE

item	varlab
qilk	MRR 1.k record of assess-pain
qilak	MRR 1a.k physician assess-pain

LEVEL-1 QIs

qi	varlab
PAI0X	Pain poorly managed (MEGAQI)
PAN01	Pain worsening (LTCQ)

LEVEL-2 QIs

qi	varlab
none	

Change Response (CHNGRESP) (VM) VAL46+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	206
25%	.0769231	0	Sum of Wgt.	206
50%	.1666667		Mean	.2097677
		Largest	Std. Dev.	.178232
75%	.3	.7241379		
90%	.4642857	.8	Variance	.0317667
95%	.5185185	.8275862	Skewness	1.149782
99%	.8	.862069	Kurtosis	4.407319

SCALE DESCRIPTION

This scale captures the tendency of caregivers in the facility to change care plan in response to pain. For all charts in the record review, the scale is initialized at 0 and is 1 if there is evidence that the resident's pain status changed, 2 if pain changed and at least 2 of the following: evidence of assessment w/in 72 hours, notification of physician, therapies notified, referral or consult ordered, or a treatment was in place. The numerical value is the average for all charts in the facility.
(Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
qi3ak	MRR 3a.k doc in 72 hours-pain
qi3bk	MRR 3b.k phys notified of chg-pain
qi3ck	MRR 3c.k ther notified of chg-pain
qi3dk	MRR 3d.k refer w specialist-pain
qi3ek	MRR 3e.k current treatment-pain
qi3k	MRR 3.k new problem-pain

LEVEL-1 QIs

qi	varlab
PAI0X	Pain poorly managed (MEGAQI)
PAN01	Pain worsening (LTCQ)

LEVEL-2 QIs

qi	varlab
none	

Pain Care Planning Specificity (PAINPLAN) (VM)
VAL47+

	Percentiles	Smallest		
1%	1.363636	1.153846		
5%	1.714286	1.269231		
10%	1.862069	1.363636	Obs	206
25%	1.958333	1.62069	Sum of Wgt.	206
50%	2		Mean	1.951193
		Largest	Std. Dev.	.1148198
75%	2	2		
90%	2	2	Variance	.0131836
95%	2	2	Skewness	-3.991965
99%	2	2	Kurtosis	22.52974

SCALE DESCRIPTION

This scale captures the propensity of caregivers to keep current care plans regarding pain. Among all charts reviewed where pain was noted as a problem in the care plan, this scale is initialized at a value of "1" if and only if the chart contains a record that pain is a problem noted on the care plan. Among these, if goals are specified for improvement or prevention of decline or interventions are in place, the score is set to "2". The numerical value for the facility level validation scale is the average of these scores for the facility (internal consistency NA).

ITEMS IN SCALE

item	varlab
qi4ak	MRR 4a.k recent update-pain
qi4bk	MRR 4b.k goals for improve-pain
qi4ck	MRR 4c.k goals for prevent-pain
qi4dk	MRR 4d.k nurse interven-pain

LEVEL-1 QIs

qi	varlab
PAI0X	Pain poorly managed (MEGAQI)
PAN01	Pain worsening (LTCQ)

LEVEL-2 QIs

qi	varlab
none	

Match of MDS & Care Plan (MATCHPLAN) (VM) VAL48+					

	Percentiles	Smallest			
1%	0	0			
5%	0	0			
10%	.0344828	0	Obs		206
25%	.1	0	Sum of Wgt.		206
50%	.2034483		Mean		.2322915
		Largest	Std. Dev.		.1812215
75%	.32	.7407407			
90%	.4642857	.76	Variance		.0328412
95%	.6206896	.8214286	Skewness		1.099664
99%	.76	.9	Kurtosis		4.122754

SCALE DESCRIPTION

This scale captures the tendency of the care plan to match the data recorded in the facility MDS assessment. The numerical value for this score is the proportion of charts with an MDS Pain Index score of 1 or higher (Fries, et al. Gerontologist 41(2):173, 2001) and also have evidence of pain care planning (based on scale #47) . As an index of agreement internal consistency reliability is not applicable.

ITEMS IN SCALE

item	varlab
val47	
j2a	
j2b	

LEVEL-1 QIs

qi	varlab
PAI0X	Pain poorly managed (MEGAQI)
PAN01	Pain worsening (LTCQ)

LEVEL-2 QIs

qi	varlab
none	

Ownership Change as1 (VM) VAL49-

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	0		Mean	.1201923
		Largest	Std. Dev.	.3259708
75%	0	1		
90%	1	1	Variance	.106257
95%	1	1	Skewness	2.335939
99%	1	1	Kurtosis	6.456612

SCALE DESCRIPTION

This scale is based on a single item, and is a binary indicator signaling facilities that have had an ownership change in the last two years.
(Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
as1	AS 1. ownership change last 2 years

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
MOB01	Mobility decline (LTCQ)
ADL03	ADL imprvmnt in res. w/capacity (MEGAQI)
ADL01	ADL decline (CHSRA)
CAT01	Indwelling urin cath (LTCQ)
CNT01	Incontinence hi & lo risk (CHSRA)
CNT05	Incontinence high risk (CHSRA)
CNT06	Incontinence low risk (CHSRA)
BEH04	Behavior worsening (LTCQ)
MOD03	Depression new or worse (LTCQ)
PAN01	Pain worsening (LTCQ)
PAI0X	Pain poorly managed (MEGAQI)

DON employed <12M (VM) VAL51-

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	206
25%	0	0	Sum of Wgt.	206
50%	0		Mean	.2184466
		Largest	Std. Dev.	.4141986
75%	0	1		
90%	1	1	Variance	.1715605
95%	1	1	Skewness	1.362821
99%	1	1	Kurtosis	2.857281

SCALE DESCRIPTION

This scale is based on a single item, and is a binary indicator signaling facilities that have a Director of Nursing that has been employed at the facility for less than one year.
(Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
as3y	AS 3y. num of years don employed
as3m	AS 3m. num of months don employed

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
PAN01	Pain worsening (LTCQ)
PAI0X	Pain poorly managed (MEGAQI)
CAT01	Indwelling urin cath (LTCQ)
CAT02	Catheter (CHSRA)
INF0X	Infection flare-up (MEGAQI)
NUT01	Tube feeding (RAMSEY)
CNT04	UTI (CHSRA)

RN+LPN FTE/BED (VM) VAL52+

	Percentiles	Smallest		
1%	1	1		
5%	1	1		
10%	2	1	Obs	202
25%	3	1	Sum of Wgt.	202
50%	5.5		Mean	5.519802
		Largest	Std. Dev.	2.882803
75%	8	10		
90%	10	10	Variance	8.310551
95%	10	10	Skewness	-.0017142
99%	10	10	Kurtosis	1.779385

SCALE DESCRIPTION

This is an index of the level of staffing in the facility conditional on the average care demands of the facility's residents. The numerical value is the residual of the number of licensed staff FTE per bed regressed on the average CMI for the residents in the facility. High values imply that the facility has a higher level of staffing given case mix.
(Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
as5aa	AS 5aa. rn hours worked in pay period
as5ba	AS 5ba. lpn\lvn hours worked in pay period
as5a	AS 5a. length of pay period
ass1	AS s1. how many beds
CMI	

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
PAN01	Pain worsening (LTCQ)
PAI0X	Pain poorly managed (MEGAQI)
PRU01	PU high & low risk (CHSRA)
PRU02	PU high risk (CHSRA)
PRU03	PU low risk (CHSRA)
PRU04	PU onset or worsening (LTCQ)
INF0X	Infection flare-up (MEGAQI)
CNT04	UTI (CHSRA)

ADL01	ADL decline (CHSRA)
ADL03	ADL imprvmnt in res. w/capacity (MEGAQI)
WAL0X	Walking performance (MEGAQI)
MOB01	Mobility decline (LTCQ)
Bedfast	Bedfast (CHSRA)

5%+ RN, LPN Float, Contract (VM) VAL53-

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	201
25%	0	0	Sum of Wgt.	201
50%	0		Mean	.1840796
		Largest	Std. Dev.	.3885168
75%	0	1		
90%	1	1	Variance	.1509453
95%	1	1	Skewness	1.63035
99%	1	1	Kurtosis	3.658042

SCALE DESCRIPTION

This scale is a binary indicator signaling facilities that use greater than 5% of their licensed staff as "floats" or contract workers as opposed to regular facility staff. Higher values imply proportionally more of the licensed caregivers are floats or contract workers.

(Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
as5aa	AS 5aa. rn hours worked in pay period
as5ba	AS 5ba. lpn\lvn hours worked in pay period
as5ac	AS 5ac. hours worked by rn floats
as5bc	AS 5bc. hours worked by lpn\lvn floats
as5ad	AS 5ad. hours worked by rn contr
as5bd	AS 5bd. hours worked by lpn\lvn contr

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
PAN01	Pain worsening (LTCQ)
PAI0X	Pain poorly managed (MEGAQI)
BMI0X	Low BMI (MEGAQI)
WGT01	Weight loss (LTCQ)
MOD03	Depression new or worse (LTCQ)
CNT04	UTI (CHSRA)
INF0X	Infection flare-up (MEGAQI)
PRU01	PU high & low risk (CHSRA)

PRU02	PU high risk (CHSRA)
PRU03	PU low risk (CHSRA)
PRU04	PU onset or worsening (LTCQ)

Lic Staff turnover last 6mo (% ,Deciles)(VM) VAL55-				

	Percentiles	Smallest		
1%	1	1		
5%	1	1		
10%	1	1	Obs	195
25%	3	1	Sum of Wgt.	195
50%	5		Mean	5.384615
		Largest	Std. Dev.	2.912959
75%	8	10		
90%	9	10	Variance	8.485329
95%	10	10	Skewness	-.0149498
99%	10	10	Kurtosis	1.805318

SCALE DESCRIPTION

This scale captures the proportion of licensed staff that have turned over in the past six months. The numerical value for this scale is the decile in which the facility falls in the sample-wide distribution of proportion of licensed staff turnover. Higher values imply greater licensed staff turnover.
(Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
as5ab	AS 5ab. number of rns on staff
as5bb	AS 5bb. number of lpn\lvns on staff
as8a1	AS 8a.1 rn\lpn\lvn staff - last 6 mnths

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
PAN01	Pain worsening (LTCQ)
PAI0X	Pain poorly managed (MEGAQI)
BMI0X	Low BMI (MEGAQI)
WGT01	Weight loss (LTCQ)
MOD03	Depression new or worse (LTCQ)
CNT04	UTI (CHSRA)
INF0X	Infection flare-up (MEGAQI)
PRU01	PU high & low risk (CHSRA)
PRU02	PU high risk (CHSRA)
PRU03	PU low risk (CHSRA)
PRU04	PU onset or worsening (LTCQ)

30%+ Six Mo CNA Turnover (VM) val56-

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	159
25%	0	0	Sum of Wgt.	159
50%	1	Largest	Mean	.7169811
			Std. Dev.	.4518888
75%	1	1		
90%	1	1	Variance	.2042035
95%	1	1	Skewness	-.963364
99%	1	1	Kurtosis	1.92807

SCALE DESCRIPTION

This scale is a binary indicator signaling facilities that have had a greater than 30% turnover in CNA Staff in the past six months.
(Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
as8b1	AS 8b.1 cna last 6 mnths
as5bb	AS 5bb. number of lpn\lvns on staff
as5cb	AS 5cb. number of na\cnas on staff

LEVEL-1 QIs

qi	varlab
CAT01	Indwelling urin cath (LTCQ)
CAT02	Catheter (CHSRA)

LEVEL-2 QIs

qi	varlab
PAN01	Pain worsening (LTCQ)
PAIOX	Pain poorly managed (MEGAQI)
WGT01	Weight loss (LTCQ)
SOC02	Little or no activities (CHSRA)
PRU01	PU high & low risk (CHSRA)
PRU02	PU high risk (CHSRA)
PRU03	PU low risk (CHSRA)
PRU04	PU onset or worsening (LTCQ)

CNA Involved in Care Planning (VM, JT) VAL57+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	207
25%	1	0	Sum of Wgt.	207
50%	2		Mean	1.961353
		Largest	Std. Dev.	1.306613
75%	3	4		
90%	4	4	Variance	1.707237
95%	4	4	Skewness	.2678542
99%	4	4	Kurtosis	1.84066

SCALE DESCRIPTION

This scale captures the tendency of CNA's in the facility to participate in the care planning process. The numerical value for this scale is the sum of four indicators of CNA participation in care planning: whether CNA's contribute to care planning, CNAs regularly attend care planning meetings, whether or not care planning meetings are scheduled into the CNA's work day, and whether care planning meetings are part of the work culture on units. The internal consistency reliability for these items indicates that the items form a reliable scale (KR20=0.72).

ITEMS IN SCALE

item	varlab
as9f	AS 9f. cnas contrib to patient care plan
as10	AS 10. cna attend care planning meeting?
as11a	AS 11a. plan mtgs sched in cna work day
as11b	AS 11b. plan mtgs part of culture on units

LEVEL-1 QIs

qi	varlab
WGT01	Weight loss (LTCQ)

LEVEL-2 QIs

qi	varlab
PAN01	Pain worsening (LTCQ)
PAI0X	Pain poorly managed (MEGAQI)
MOD03	Depression new or worse (LTCQ)
COG01	Cognition worsening (LTCQ)
PRU01	PU high & low risk (CHSRA)
PRU02	PU high risk (CHSRA)

PRU03	PU low risk (CHSRA)
BEH01	Behavior high & low risk (CHSRA)
BEH02	Behavior high risk (CHSRA)
BEH03	Behavior low risk (CHSRA)

Poor Pain Assessment Policies as25h (VM) VAL58-

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	207
25%	0	0	Sum of Wgt.	207
50%	0	Largest	Mean	.2560386
			Std. Dev.	.4375015
75%	1	1	Variance	.1914075
90%	1	1	Skewness	1.117952
95%	1	1	Kurtosis	2.249816
99%	1	1		

SCALE DESCRIPTION

This scale is based on a single item, and is a binary indicator identifying those facilities where the respondent to the administrator survey reported that the policies, practices and procedures regarding pain are not always reviewed with newly-hired licensed staff. (Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
as25h	AS 25h. policy rev-pain management

LEVEL-1 QIs

qi	varlab
PAI0X	Pain poorly managed (MEGAQI)
PAN01	Pain worsening (LTCQ)

LEVEL-2 QIs

qi	varlab
none	

Poor Pain Education as26da+b (VM) VAL59-

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	0		Mean	.5096154
		Largest	Std. Dev.	.7420456
75%	1	2	Variance	.5506317
90%	2	2	Skewness	1.069173
95%	2	2	Kurtosis	2.633172
99%	2	2		

SCALE DESCRIPTION

This additive scale identifies facilities with increasingly poor educational practices regarding pain. The scale value is initialized at "2", and is a "1" if training regarding pain management in the cognitively impaired is offered to licensed staff or CNAs, and a "0" if offered to both licensed staff and CNA's. (KR20=0.65).

ITEMS IN SCALE

item	varlab
as26da	AS 26da. rev prog-pain manage-cna
as26db	AS 26db. rev prog-pain manage-rn,lpn\lvn?

LEVEL-1 QIs

qi	varlab
PAI0X	Pain poorly managed (MEGAQI)
PAN01	Pain worsening (LTCQ)

LEVEL-2 QIs

qi	varlab
none	

No Stand Pain Asmt Admin and (Wkly or Qrtly) (VM)				
val61-				

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	0		Mean	.2932692
		Largest	Std. Dev.	.4563591
75%	1	1		
90%	1	1	Variance	.2082637
95%	1	1	Skewness	.9081861
99%	1	1	Kurtosis	1.824802

SCALE DESCRIPTION

This binary indicator identifies facilities that do not have standardized pain assessment conducted or protocols for screening implemented at admission and either weekly or quarterly.
(Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
as28ha	AS 28ha. routin pain?

LEVEL-1 QIs

qi	varlab
PAI0X	Pain poorly managed (MEGAQI)
PAN01	Pain worsening (LTCQ)

LEVEL-2 QIs

qi	varlab
none	

Num CQI Approaches in Use (VM) val64+

	Percentiles	Smallest		
1%	0	0		
5%	1	0		
10%	2	0	Obs	208
25%	3	0	Sum of Wgt.	208
50%	4		Mean	3.961538
		Largest	Std. Dev.	1.303456
75%	5	5		
90%	5	5	Variance	1.698997
95%	5	5	Skewness	-1.385068
99%	5	5	Kurtosis	4.478979

SCALE DESCRIPTION

This scale captures the tendency of facilities to use CQI or performance Improvement approaches (project teams, action taken on project team findings, management is trained in CQI/TQM principles, overall reviews, and CQI/TQM is incorporated into an incentive plan.) The numerical value for this validation scale is the count of these five items, and higher values imply greater commitment to CQI. The items comprising this scale form an internally consistent set (KR20=0.71).

ITEMS IN SCALE

item	varlab
as43a	AS 43a. how use cqi tech-form proj teams
as43b	AS 43b. how use cqi tech-act on team find
as43c	AS 43c. how use cqi tech-train management
as43d	AS 43d. how use cqi tech-conduct review
as43e	AS 43e. how use cqi tech-use cqi\tqm meas

LEVEL-1 QIs

qi	varlab
PAI0X	Pain poorly managed (MEGAQI)
PAN01	Pain worsening (LTCQ)
PRU01	PU high & low risk (CHSRA)
PRU02	PU high risk (CHSRA)
PRU03	PU low risk (CHSRA)
DRG01	Antipsychotic high & low risk (CHSRA)
DRG02	Antipsychotic high risk (CHSRA)
DRG03	Antipsychotic low risk (CHSRA)

LEVEL-2 QIs

qi	varlab
INF0X	Infection flare-up (MEGAQI)
CNT04	UTI (CHSRA)
CNT01	Incontinence hi & lo risk (CHSRA)
CNT05	Incontinence high risk (CHSRA)
CNT06	Incontinence low risk (CHSRA)
CNT02	Bowel incont decline (LTCQ)
CNT03	Bladder incont decline (LTCQ)
RES01	Restraints (CHSRA)

Record of MH Prof (RNJ) val65+

	Percentiles	Smallest		
1%	1	1		
5%	1	1		
10%	1	1	Obs	166
25%	1	1	Sum of Wgt.	166
50%	3		Mean	3.825301
		Largest	Std. Dev.	2.607604
75%	5	10		
90%	8	10	Variance	6.799598
95%	9	10	Skewness	.6856596
99%	10	10	Kurtosis	2.439079

SCALE DESCRIPTION

This scale captures the tendency of charts to reflect assessment by a mental health professional. The numerical value is based on the proportion of charts where an assessment by a mental health professional would be indicated (see conditions below) and such an assessment was recorded. The scale takes on values between 1 and 10 corresponding to the proportion of eligible charts with MH professional assessment (1=0 to 10%, 2=11 to 20%,...10=90-100 %). (Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
qilba	MRR 1b.a psychiatrist assess-cog status
qilca	MRR 1c.a other assess-cognitive status
qilbb	MRR 1b.b psychiatrist assess-commun
qilcb	MRR 1c.b other assess-communication
qilbc	MRR 1b.c psychiatrist assess-delirium
qilcc	MRR 1c.c other assess-delirium
qilbd	MRR 1b.d psychiatrist assess-depress
qilcd	MRR 1c.d other assess-depress
qilbe	MRR 1b.e psychiatrist assess-behavior
qilce	MRR 1c.e other assess-behavior
qilbj	MRR 1b.j psychiatrist assess-anti-psych
qilcj	MRR 1c.j other assess-anti-psych
qilbu	MRR 1b.u psychiatrist assess-soc isolation
qilcu	MRR 1c.u other assess-soc isolation

LEVEL-1 QIs

qi	varlab
DepWOTx	Depression without treatment (CHSRA)

LEVEL-2 QIs

qi	varlab
MOD03	Depression new or worse (LTCQ)
BEH01	Behavior high & low risk (CHSRA)
BEH02	Behavior high risk (CHSRA)
BEH03	Behavior low risk (CHSRA)
BEH04	Behavior worsening (LTCQ)
DEL0X	Delirium not remitting (MEGAQI)

Presence of MH prof (RNJ) VAL66+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	0		Mean	.7259615
		Largest	Std. Dev.	1.010524
75%	1	4		
90%	2	4	Variance	1.021158
95%	3	4	Skewness	1.440982
99%	4	4	Kurtosis	4.465093

SCALE DESCRIPTION

This scale is an additive scale reflecting data collected in the administrator survey capturing reports of the presence of mental health professionals. Scale values range between 0 and 4 and reflect the count of whether or not psychiatrists, psychologists, geriatric nurse specialists, or psychiatric/clinical social workers are available in the facility. These four items form a moderately internally consistent set (KR20=0.64).

ITEMS IN SCALE

item	varlab
as13aa	AS 13aa. psychiatrist available
as13ba	AS 13ba. psychologist available
as13ca	AS 13ca. ger nurse spec available
as13da	AS 13da. psych soc worker available

LEVEL-1 QIs

qi	varlab
DEL0X	Delirium not remitting (MEGAQI)
BEH04	Behavior worsening (LTCQ)
DepWOTx	Depression without treatment (CHSRA)

LEVEL-2 QIs

qi	varlab
MOD03	Depression new or worse (LTCQ)
BEH01	Behavior high & low risk (CHSRA)
BEH02	Behavior high risk (CHSRA)
BEH03	Behavior low risk (CHSRA)

Formal Delirium/Depression Approach (RNJ) val67+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	1	0	Sum of Wgt.	208
50%	2		Mean	1.961538
		Largest	Std. Dev.	1.215226
75%	2.5	4		
90%	4	4	Variance	1.476774
95%	4	4	Skewness	.1060037
99%	4	4	Kurtosis	2.397966

SCALE DESCRIPTION

This is an additive scale based on four derived indicators of the formality of the approach to delirium. The four indicators include: (1) the frequency of assessment for delirium and (2) depression, and (3) the presence of continuing education programs for CNAs in regards to depression and (4) delirium. The included indicators form a moderately internally consistent set (KR20=0.66).

ITEMS IN SCALE

item	varlab
as26aa	AS 26aa. rev prog-delirium-cna?
as26ab	AS 26ab. rev prog-delirium-rn,lpn\lvn?
as28bb	AS 28bb.2 adm depression, anxiety
as28cb	AS 28cb.2 adm delirium?
as28bb3	AS 28bb.3 weekly depression, anxiety
as28cb3	AS 28cb.3 weekly delirium?
as28bb4	AS 28bb.4 quarterly depression, anxiety
as28cb4	AS 28cb.4 quarterly delirium?

LEVEL-1 QIs

qi	varlab
DEL0X	Delirium not remitting (MEGAQI)
MOD03	Depression new or worse (LTCQ)
COG01	Cognition worsening (LTCQ)

LEVEL-2 QIs

qi	varlab
none	

Personalized Rooms (RNJ) val70+

	Percentiles	Smallest		
1%	1	1		
5%	1	1		
10%	1	1	Obs	208
25%	2	1	Sum of Wgt.	208
50%	3		Mean	3.004808
		Largest	Std. Dev.	1.338748
75%	4	5		
90%	5	5	Variance	1.792247
95%	5	5	Skewness	-.2267545
99%	5	5	Kurtosis	1.833271

SCALE DESCRIPTION

This scale captures the extent that observers conducting the walk-through assessment in the morning, mealtime and evening find the rooms to be personalized. The numerical score is the factor score representing the shared variance for the three times of observation. Higher scores indicate greater number of rooms felt to be personalized by the observers. The items form an internally consistent set (alpha=0.96).

ITEMS IN SCALE

item	varlab
waml	WT 1. rooms personalized
wml1	WT 1. rooms personalized
wpml	WT 1. rooms personalized

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
SOC02	Little or no activities (CHSRA)
MOD03	Depression new or worse (LTCQ)
DEL0X	Delirium not remitting (MEGAQI)

Observation of Movement Scale (JS) val72+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	2		Mean	2.091346
		Largest	Std. Dev.	1.947703
75%	3	6		
90%	6	6	Variance	3.793548
95%	6	6	Skewness	.6577935
99%	6	6	Kurtosis	2.330471

SCALE DESCRIPTION

This scale is based on observations made on the walk-through, and captures the tendency of the caregivers in the facility to encourage residents to be up and about: observations of residents ambulating, observations of staff assisting resident in mobility tasks. The scale includes observations made in the morning and evening. The numerical score for the scale is the number of six observations that are found to be often or very often. The derived indicators included in the scale form an internally consistent set (KR20=0.83).

ITEMS IN SCALE

item	varlab
wam12	WT 12. out of bed, not for nap or bedtime
wam17	WT 17. residents walking with devices
wam18	WT 18. staff help residents walking
wpm12	WT 12. out of bed, not for nap or bedtime
wpm17	WT 17. residents walking with devices
wpm18	WT 18. staff help residents walking

LEVEL-1 QIs

qi	varlab
ADL01	ADL decline (CHSRA)
ADL02	ADL dec. following imprvnt (MEGAQI)
ADL03	ADL imprvmnt in res. w/capacity (MEGAQI)
MOB01	Mobility decline (LTCQ)
WAL0X	Walking performance (MEGAQI)
Bedfast	Bedfast (CHSRA)

LEVEL-2 QIs

qi
none

varlab

Focus on Catheter (JNM) VAL74+

	Percentiles	Smallest		
1%	0	0		
5%	1	0		
10%	2	0	Obs	208
25%	5	1	Sum of Wgt.	208
50%	7		Mean	6.971154
		Largest	Std. Dev.	3.409157
75%	9	14		
90%	12	14	Variance	11.62235
95%	12	16	Skewness	.1596413
99%	14	17	Kurtosis	2.601246

SCALE DESCRIPTION

This scale captures the tendency of caregivers in the facility to attend to care practices and goals regarding bladder continence. See list of included items for full coverage. Medical record review items are converted to facility level binary indicators of the chart-level distribution is in the top 30th percentile. The numerical value for this scale is the additive sum of 18 indicators of high quality bladder continence care. The included items form an internally consistent set (KR20=0.71).

ITEMS IN SCALE

item	varlab
qilp	MRR 1.p record of assess-bladder contin
qi4p	MRR 4.p on care plan-bladder continence
qi4ap	MRR 4a.o recent update-bladder contin
qi4bp	MRR 4b.p goals for improv-bladder contin
qi4cp	MRR 4c.p goals for prevent-bladder contin
qi4dp	MRR 4d.p nurse interven-bladder contin
qi4o	MRR 4.o on care plan-urinary catheter
qi4ao	MRR 4a.o recent update-urinsry catheter
qi4bo	MRR 4b.o goals for improve-urinary cath
qi4co	MRR 4c.o goals for prevent-urinary cath
qi4do	MRR 4d.o nurse interven-urinary catheter
as14fb	AS 14fb. num resid in bladder training
as26ea	AS 26ea. rev prog-incontin prev-cna?
as26eb	AS 26eb. rev prog-incont prev-rn,lpn\lvn?
as37ag	AS 37ag. what cqi projs-urinary incont?
as25g	AS 25g. policy rev-use of catheters
as39d	AS 39d. which incl in cqi-urinary catheter
as39g	AS 39g. which incl in cqi-bladder incont

LEVEL-1 QIs

qi	varlab
CAT01	Indwelling urin cath (LTCQ)
CAT02	Catheter (CHSRA)
CNT03	Bladder incont decline (LTCQ)

LEVEL-2 QIs

qi	varlab
CNT01	Incontinence hi & lo risk (CHSRA)
CNT05	Incontinence high risk (CHSRA)
CNT06	Incontinence low risk (CHSRA)

Physical Restraints (JA) VAL75+

	Percentiles	Smallest		
1%	-1.234876	-1.427581		
5%	-.7024661	-1.253605		
10%	-.5750239	-1.234876	Obs	208
25%	-.3197159	-1.16289	Sum of Wgt.	208
50%	-.0073641		Mean	-.0049683
		Largest	Std. Dev.	.4754297
75%	.3187663	.8699543		
90%	.6872487	.880581	Variance	.2260334
95%	.7893812	.9575474	Skewness	-.1554418
99%	.880581	1.11575	Kurtosis	2.88632

SCALE DESCRIPTION

This scale captures the tendency of caregivers in the facility to attend to care practices and goals regarding the use of restraints. See list of included items for full coverage. Medical record review items are converted to facility level binary indicators of the chart-level distribution is in the top 30th percentile. The numerical value for this scale is factor score underlying the covariance of the 16 included indicators of judicious physical restraint training and policies. The items included form an internally consistent set ($\alpha=0.76$).

ITEMS IN SCALE

item	varlab
as21b	AS 21b. r\r progs-passive rantge of motion
as25f	AS 25f. policy rev-use of restraints
as26ja	AS 26ja. rev prog-restraints-cna?
as26jb	AS 26jb. rev prog-restraints-rn,lpn\lvn?
as33	AS 33. facility has falls committee?
as33c	AS 33c. falls review after every fall?
as37ae	AS 37ae. what cqi projs-restraints?
wam20	WT 20. residents with safety devices
qi11	MRR 1.1 record of assess-restraints
qi21	MRR 2.1 doc problem-restraints
qi31	MRR 3.1 new problem-restraints
qi41	MRR 4.1 on care plan-delirium
qi4b1	MRR 4b.1 goals for improve-restraints
qi4c1	MRR 4c.1 goals for prevent-restraints
qi4d1	MRR 4d.1 nurse interven-restraints
as28ka	AS 28ka. routin restraints?
as28kb	AS 28kb.2 adm restraints
as28kb3	AS 28kb.3 weekly restraints
as28kb4	AS 28kb.4 quarterly restraints
as28kb5	AS 28kb.5 annually restraints
as28kb6	AS 28kb.6 other restraints

LEVEL-1 QIs

qi
RES01

varlab
Restrains (CHSRA)

LEVEL-2 QIs

qi
none

varlab

Observed PU, Burns Tx & Prevention (JA) VAL77+

Percentiles		Smallest		
1%	1	1		
5%	1	1		
10%	1.2	1	Obs	208
25%	1.6	1	Sum of Wgt.	208
50%	2.2		Mean	2.196154
		Largest	Std. Dev.	.8237915
75%	2.8	4		
90%	3.4	4	Variance	.6786325
95%	3.8	4.2	Skewness	.4170715
99%	4	4.2	Kurtosis	2.338349

SCALE DESCRIPTION

This scale captures the tendency of facilities to engage in activities consistent with good preventive actions for skin care. The numerical value for this scale is the factor score underlying the covariation of five markers of good preventive skin care: observations of residents with safety devices, observation of nurses repositioning, observation of repositioning devices, and observations of pressure relieving devices, and observation of 'bone-on' pressure relieving devices. The included items form an internally consistent set (alpha=0.88).

ITEMS IN SCALE

item	varlab
wam20	WT 20. residents with safety devices
wam21	WT 21. nurses turn and reposition res
wam22	WT 22. observe repositioning devices
wam23	WT 23. pressure reducing devices on bed
wam24	WT 24. pressure reducing devices bone on

LEVEL-1 QIs

qi	varlab
PRU01	PU high & low risk (CHSRA)
PRU02	PU high risk (CHSRA)
PRU03	PU low risk (CHSRA)
PRU04	PU onset or worsening (LTCQ)
BUR0X	Burns abrasions bruises (MEGAQI)

LEVEL-2 QIs

qi	varlab
RES01	Restraints (CHSRA)

Number of CNA Training Topics (JT) VAL78+

	Percentiles	Smallest		
1%	0	0		
5%	4	0		
10%	5	0	Obs	207
25%	6	1	Sum of Wgt.	207
50%	8		Mean	7.874396
		Largest	Std. Dev.	2.440291
75%	10	11		
90%	11	11	Variance	5.955021
95%	11	11	Skewness	-.7558869
99%	11	11	Kurtosis	3.329837

SCALE DESCRIPTION

This scale uses administrative survey data to create an additive measure capturing the number of continuing education programs available for CNA's. Eleven training areas are included (see list of included items). The numerical value for this scale is the number of areas where training is available. The included indicators form an internally consistent set (KR20=0.76).

ITEMS IN SCALE

item	varlab
as26aa	AS 26aa. rev prog-delirium-cna?
as26ba	AS 26ba. rev prog-ulcer prevent-cna?
as26ca	AS 26ca. rev prog-funct declin risk-cna?
as26da	AS 26da. rev prog-pain manage-cna
as26ea	AS 26ea. rev prog-incontin prev-cna?
as26fa	AS 26fa. rev prog-commun chg-cna?
as26ga	AS 26ga. rev prog-behav funct-cna?
as26ha	AS 26ha. rev prog-burns, abras-cna?
as26ia	AS 26ia. rev prog-polypharmac-cna?
as26ja	AS 26ja. rev prog-restraints-cna?
as26ka	AS 26ka. rev prog-infect ctrl-cna?

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
PRU01	PU high & low risk (CHSRA)
PRU02	PU high risk (CHSRA)

PRU03	PU low risk (CHSRA)
PRU04	PU onset or worsening (LTCQ)
INF0X	Infection flare-up (MEGAQI)
PAN01	Pain worsening (LTCQ)
PAI0X	Pain poorly managed (MEGAQI)

Nutrition CQI (JT) VAL79+

	Percentiles	Smallest			
1%	0	0			
5%	0	0			
10%	0	0	Obs		201
25%	1	0	Sum of Wgt.		201
50%	1		Mean		.7960199
		Largest	Std. Dev.		.4039605
75%	1	1			
90%	1	1	Variance		.1631841
95%	1	1	Skewness		-1.469248
99%	1	1	Kurtosis		3.158689

SCALE DESCRIPTION

This validation element is based on a single item, and is a binary indicator that identifies facilities that have a nutrition CQI or Performance Improvement project. (Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
as37ab	AS 37ab. what cqi projs-nutrition?

LEVEL-1 QIs

qi	varlab
WGT01	Weight loss (LTCQ)
BMI0X	Low BMI (MEGAQI)

LEVEL-2 QIs

qi	varlab
NUT01	Tube feeding (RAMSEY)

Frequency of Comprehensive Assessments (JT) VAL80+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	2	0	Sum of Wgt.	208
50%	5		Mean	6.201923
		Largest	Std. Dev.	5.18802
75%	10	17		
90%	15	17	Variance	26.91555
95%	16	18	Skewness	.6223987
99%	17	19	Kurtosis	2.226198

SCALE DESCRIPTION

This validation scale captures frequency of assessments by a physician in 21 care areas using medical record review items. The facility level score on this validation scale is the count of twenty one areas where the facility ranks in the top 30th percentile in terms of the number of 20 charts reviewed that had an assessment by a physician noted. Higher values mean more care areas where a large proportion of residents receive physician assessments. The included items form an internally consistent set (KR20=0.88).

ITEMS IN SCALE

item	varlab
qila	MRR 1.a record of assess-cognit status
qilb	MRR 1.b record of assess-communication
qilc	MRR 1.c record of assess-delirium
qild	MRR 1.d record of assess-depression
qile	MRR 1.e record of assess-behav problems
qilf	MRR 1.f record of assess-adl improvement
qilg	MRR 1.g record of assess-adl decline
qilh	MRR 1.h record of assess-mobility\walking
qili	MRR 1.i record of assess-falls
qilj	MRR 1.j record of assess-drugs
qilk	MRR 1.k record of assess-pain
qill	MRR 1.l record of assess-restraints
qilm	MRR 1.m record of assess-feed tube
qiln	MRR 1.n record of assess-undernutr
qilo	MRR 1.o record of assess-indwell cath
qilp	MRR 1.p record of assess-bladder contin
qilq	MRR 1.q record of assess-bowel contin
qilr	MRR 1.r record of assess-infectionond
qils	MRR 1.s record of assess-pressure ulcers
qilt	MRR 1.t record of assess-burns, abrasions
qilu	MRR 1.u record of assess-soc isolation

LEVEL-1 QIs

qi	varlab
MOD03	Depression new or worse (LTCQ)
PAN01	Pain worsening (LTCQ)
PAI0X	Pain poorly managed (MEGAQI)
DepWOTx	Depression without treatment (CHSRA)

LEVEL-2 QIs

qi	varlab
DEL0X	Delirium not remitting (MEGAQI)
COG01	Cognition worsening (LTCQ)
CNT03	Bladder incont decline (LTCQ)
WGT01	Weight loss (LTCQ)

% Res w/Tx Plans for Weight Loss (JT) VAL81+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	.033908	0	Sum of Wgt.	208
50%	.070197		Mean	.0864734
		Largest	Std. Dev.	.0743268
75%	.1371473	.2857143		
90%	.1851852	.2857143	Variance	.0055245
95%	.2222222	.3	Skewness	.9032617
99%	.2857143	.3666667	Kurtosis	3.567228

SCALE DESCRIPTION

This scale captures the tendency of residents in the facility to have treatment plans for weight loss in place. The data are based on the medical record review, and the numerical value corresponds to the proportion of charts reviewed that the resident has a treatment plan for weight loss in place. Scale values range from 0 to 0.41 and reflect the actual proportion of charts reviewed where a treatment plan for weight loss is in place.
(Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
qi3en	MRR 3e.n current treatment-undernutrition

LEVEL-1 QIs

qi	varlab
WGT01	Weight loss (LTCQ)
BMI0X	Low BMI (MEGAQI)

LEVEL-2 QIs

qi	varlab
PRU01	PU high & low risk (CHSRA)
PRU02	PU high risk (CHSRA)
PRU03	PU low risk (CHSRA)
PRU04	PU onset or worsening (LTCQ)

PT Asst FTE /100 Beds (BERG) VAL83+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	193
25%	0	0	Sum of Wgt.	193
50%	.6849315		Mean	1.554614
		Largest	Std. Dev.	2.501163
75%	2.01875	10.125		
90%	4.490741	10.86957	Variance	6.255815
95%	5.645833	11.25	Skewness	3.1911
99%	11.25	19.16667	Kurtosis	17.46271

SCALE DESCRIPTION

This scale captures the staffing intensity relative to physical therapy assistants. The numerical value is the number of full-time equivalent (FTE) physical therapy assistants per 100 beds. Higher values indicate greater staffing intensity.
(Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
as5ga	AS 5ga. pt asst hours worked in pay period
as5a	AS 5a. length of pay period
ass1	AS s1. how many beds

LEVEL-1 QIs

qi	varlab
WAL0X	Walking performance (MEGAQI)

LEVEL-2 QIs

qi	varlab
ADL01	ADL decline (CHSRA)
ADL03	ADL imprvmnt in res. w/capacity (MEGAQI)
MOB01	Mobility decline (LTCQ)
Bedfast	Bedfast (CHSRA)

OT & OT Asst FTE /100 Beds (BERG) VAL86+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	192
25%	0	0	Sum of Wgt.	192
50%	.9729799		Mean	2.180503
		Largest	Std. Dev.	3.247138
75%	3.081003	10.52632		
90%	6.666667	10.81081	Variance	10.54391
95%	8.875	12.5	Skewness	2.981313
99%	12.5	25.83333	Kurtosis	17.3537

SCALE DESCRIPTION

This scale captures the staffing intensity relative to occupational therapy (therapists & assistants). The numerical value is the number of OT and OT assistants FTE's per 100 beds. Higher values mean greater staffing intensity.
(Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
as5fa	AS 5fa. occ thrap hours worked in period
as5ha	AS 5ha. ot asst hours worked in pay period
ass1	AS s1. how many beds

LEVEL-1 QIs

qi	varlab
ADL03	ADL imprvmnt in res. w/capacity (MEGAQI)
ADL01	ADL decline (CHSRA)
ADL02	ADL dec. following imprvnt (MEGAQI)

LEVEL-2 QIs

qi	varlab
COG01	Cognition worsening (LTCQ)

Level of OT PT Staffing (BERG) VAL87+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	191
25%	0	0	Sum of Wgt.	191
50%	2		Mean	1.329843
		Largest	Std. Dev.	.9353296
75%	2	2		
90%	2	2	Variance	.8748416
95%	2	2	Skewness	-.6986427
99%	2	2	Kurtosis	1.515102

SCALE DESCRIPTION

This scale captures the level of staffing in Occupational and physical therapy. Each facility has a scale on this index from 0 to 2. The default value is 0. Facilities can get a score of 1 if they have in-house PT & contract OT, and can get a value of 2 if they have in-house OT and in house PT. Higher values reflect greater commitment to staffing ancillary therapies.
(Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
as5eb	AS 5eb. number of phys theraps on staff
as5fb	AS 5fb. number of occ theraps on staff

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
ADL01	ADL decline (CHSRA)
ADL02	ADL dec. following imprvnt (MEGAQI)
ADL03	ADL imprvmnt in res. w/capacity (MEGAQI)
WAL0X	Walking performance (MEGAQI)
MOB01	Mobility decline (LTCQ)
Bedfast	Bedfast (CHSRA)

Cognitive Behavioral Care Practices (PILOT) VAL88+

	Percentiles	Smallest		
1%	0	0		
5%	1	0		
10%	1	0	Obs	208
25%	3	0	Sum of Wgt.	208
50%	4		Mean	3.259615
		Largest	Std. Dev.	1.112035
75%	4	4		
90%	4	4	Variance	1.236622
95%	4	4	Skewness	-1.538903
99%	4	4	Kurtosis	4.480067

SCALE DESCRIPTION

This scale is an additive scale reflecting the presence of care practices consistent with good cognitive and behavioral management. The scale is derived from one created in the validation pilot. The numerical value is the sum of five indicators of good care: whether respondents to the administrator survey indicated that the extent of family involvement, charting behavior across shifts, vigilance in medication effects, and were present "a lot" . The items included form a moderately internally consistent scale (KR20=0.68).

ITEMS IN SCALE

item	varlab
as18a	AS 18a. pract-ask resid or family-cog chg?
as18b	AS 18b. pract-chart behav across shifts?
as18c	AS 18c. pract-ask resid or fam-behav chg?
as18d	AS 18d. pract-obs med changes?

LEVEL-1 QIs

qi	varlab
COG01	Cognition worsening (LTCQ)
BEH01	Behavior high & low risk (CHSRA)
BEH02	Behavior high risk (CHSRA)
BEH03	Behavior low risk (CHSRA)
BEH04	Behavior worsening (LTCQ)

LEVEL-2 QIs

qi	varlab
DEL0X	Delirium not remitting (MEGAQI)

Emphasis on Mission (PILOT) VAL89+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	1	0	Obs	207
25%	1	0	Sum of Wgt.	207
50%	2		Mean	2.115942
		Largest	Std. Dev.	.9684774
75%	3	3		
90%	3	3	Variance	.9379485
95%	3	3	Skewness	-.7795867
99%	3	3	Kurtosis	2.505484

SCALE DESCRIPTION

This scale captures the tendency of the management of the facility to disseminate the nursing Mission Statement to staff. Three indicators are included: whether or not the Mission Statement is shared with newly admitted residents & families, included in the facility brochure, and whether or not it is distributed via the facility newsletter.

The items in this scale form a moderately internally consistent scale (KR20=0.60).

ITEMS IN SCALE

item	varlab
as24b	AS 24b. mission statem-expl to residents
as24c	AS 24c. mission ststem-incl in brochure
as24a	AS 24a. mission statem-employee eval based

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
RES01	Restraints (CHSRA)
PRU01	PU high & low risk (CHSRA)
PRU02	PU high risk (CHSRA)
PRU03	PU low risk (CHSRA)
PRU04	PU onset or worsening (LTCQ)

Long Stay Staff deciles (PILOT) VAL90+

	Percentiles	Smallest		
1%	1	1		
5%	1	1		
10%	1	1	Obs	208
25%	3	1	Sum of Wgt.	208
50%	5.5		Mean	5.480769
		Largest	Std. Dev.	2.875789
75%	8	10		
90%	9	10	Variance	8.27016
95%	10	10	Skewness	.0015813
99%	10	10	Kurtosis	1.772046

SCALE DESCRIPTION

This scale captures the proportion of staff in three key areas that have been present in the facility for two or more years. The three key areas include licensed staff (RN, LPN, LVN) Certified Nursing Assistants, Certified Nursing Assistants, and Activities staff). The numerical value represented by this validation construct is the decile of the factor score underlying the co-variation of long-stay staff in these three areas. Higher values indicate greater long-stay staff. The coefficient alpha internal consistency reliability for this scale is 0.69

ITEMS IN SCALE

item	varlab
as8a3	AS 8a.3 rn\lpn\lvn staff - 2+ years
as8b3	AS 8b.3 cna 2+ years
as8c3	AS 8c.3 activity staff 2+ years
as5ab	AS 5ab. number of rns on staff
as5bb	AS 5bb. number of lpn\lvns on staff
as5cb	AS 5cb. number of na\cnas on staff
as5db	AS 5db. number of actdir\aidess on staff

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
PAN01	Pain worsening (LTCQ)
PAI0X	Pain poorly managed (MEGAQI)
NUT01	Tube feeding (RAMSEY)

INF0X	Infection flare-up (MEGAQI)
CNT04	UTI (CHSRA)
MOD03	Depression new or worse (LTCQ)
PRU01	PU high & low risk (CHSRA)
PRU02	PU high risk (CHSRA)
PRU03	PU low risk (CHSRA)
PRU04	PU onset or worsening (LTCQ)
SOC02	Little or no activities (CHSRA)

Restorative Eating Care Provided (PILOT) VAL92+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	205
25%	0	0	Sum of Wgt.	205
50%	1		Mean	1.156098
		Largest	Std. Dev.	1.012193
75%	2	4		
90%	2	4	Variance	1.024534
95%	3	4	Skewness	.792966
99%	4	4	Kurtosis	3.35464

SCALE DESCRIPTION

This validation scale measures the tendency of the facility to offer different types of nutritionally oriented activities: eating/swallowing/meal training, regular use of between meal snacks, use of finger foods, and weekly or more frequent weight evaluation. This scale is based on one developed in the validation pilot, and while all indicators are positively correlated the four indicators comprise an only marginally internally consistent scale (KR20=0.49).

ITEMS IN SCALE

item	varlab
as14ca	AS 14ca. meal training in last week
as14ia	AS 14ia. regular snacks in last week
as14ja	AS 14ja. use finger foods in last week
as14ha	AS 14ha. weight eval in last week

LEVEL-1 QIs

qi	varlab
WGT01	Weight loss (LTCQ)

LEVEL-2 QIs

qi	varlab
none	

Activities in NH (PILOT) VAL93+

	Percentiles	Smallest		
1%	0	0		
5%	1	0		
10%	1	0	Obs	208
25%	1	0	Sum of Wgt.	208
50%	2		Mean	2.033654
		Largest	Std. Dev.	.8867365
75%	3	3		
90%	3	3	Variance	.7863016
95%	3	3	Skewness	-.3572735
99%	3	3	Kurtosis	1.984966

SCALE DESCRIPTION

This validation scale measures the level of activity displayed by facility residents or encouraged of residents. The scale uses walk-through and administrator survey items: whether or not residents are encouraged to engage in facility-wide activities "a lot" and if "often" or "very often" residents were observed to be out of bed and activities were available. This scale is based on one devised in the validation Pilot, and while the items are all positively correlated the items form a marginally internally consistent scale (KR20=0.41).

ITEMS IN SCALE

item	varlab
as18f	AS 18f. pract-encour res to participate?
wpm11	WT 11. variety of activities available
wpm12	WT 12. out of bed, not for nap or bedtime

LEVEL-1 QIs

qi	varlab
SOC02	Little or no activities (CHSRA)
MOD03	Depression new or worse (LTCQ)

LEVEL-2 QIs

qi	varlab
PAN01	Pain worsening (LTCQ)
PAI0X	Pain poorly managed (MEGAQI)

Informal Pathways Communication (PILOT) VAL97+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	1		Mean	1.096154
		Largest	Std. Dev.	.9064368
75%	2	2		
90%	2	2	Variance	.8216276
95%	2	2	Skewness	-.1901619
99%	2	2	Kurtosis	1.249717

SCALE DESCRIPTION

This scale measures the presence of informal communication pathways among staff for depression and residents communication skills. The numerical value for this scale is the count of two indicators noting the presence of informal communication pathways in the two areas. The two items are highly inter-correlated ($r=0.64$) and the resulting additive scale is internally consistent ($KR20=0.79$).

ITEMS IN SCALE

item	varlab
as29c1	AS 29c.1 depression, mood-verb inform
as29j1	AS 29j.1 communic change-verb inform

LEVEL-1 QIs

qi	varlab
COM01	Communication worsening (LTCQ)

LEVEL-2 QIs

qi	varlab
MOD03	Depression new or worse (LTCQ)
DepWOTx	Depression without treatment (CHSRA)

Direct Care Staff Involved for Residents who Fall
(PILOT) VAL98+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	175
25%	3	0	Sum of Wgt.	175
50%	4		Mean	3.874286
		Largest	Std. Dev.	1.943504
75%	5	7		
90%	6	7	Variance	3.777209
95%	7	7	Skewness	-.5101593
99%	7	7	Kurtosis	2.511374

SCALE DESCRIPTION

This scale captures the level of activity of the falls committee in the home, including the involvement of direct care staff, intensity of review of falls, size of falls committee, and representation of physical therapy and other therapies on the falls committee. The numerical value for this scale is the number of indicators of an involved falls committee (0-7). The items included in the scale (and listed below) are all positively correlated with the first principal component underlying the items, but the internal consistency of the items is marginal (KR20=0.52).

ITEMS IN SCALE

item	varlab
as33	AS 33. facility has falls committee?
as33b	AS 33b. unit staff on falls committee?
as33c	AS 33c. falls review after every fall?
as33ac	AS 33ac. num falls committee members-cn
as33ad	AS 33ad. num falls comm mems phys therap
as33ae	AS 33ae. num falls comm mems-other therap

LEVEL-1 QIs

qi	varlab
FAL01	Falls increase (LTCQ)

LEVEL-2 QIs

qi	varlab
CNT01	Incontinence hi & lo risk (CHSRA)
CNT05	Incontinence high risk (CHSRA)
CNT06	Incontinence low risk (CHSRA)

Training & Policy for Suspicious Skin (PILOT)
VAL99+

	Percentiles	Smallest		
1%	6	3		
5%	8	6		
10%	9	6	Obs	208
25%	11	6	Sum of Wgt.	208
50%	12		Mean	11.90385
		Largest	Std. Dev.	2.135593
75%	13	15		
90%	14	15	Variance	4.560758
95%	15	15	Skewness	-.9931256
99%	15	15	Kurtosis	4.087123

SCALE DESCRIPTION

This scale measures the level of training and policy intensity for monitoring and notification of suspicious skin condition. The numerical value is the count of fifteen indicators of high intensity monitoring or involvement in skin condition monitoring/notification. The numerical value used is the count of these fifteen indicators - suggestive of high quality skin care - are present as indicated by the respondent to the administrator survey. The included indicators form an moderately internally consistent set (KR20=0.61).

ITEMS IN SCALE

item	varlab
as25b	AS 25b. policy rev-docum methods for ulcers
as25a	AS 25a. policy rev-pressure relieving dev
as25p	AS 25p. policy rev-positioning
as26ba	AS 26ba. rev prog-ulcer prevent-cna?
as30g	AS 30g. skin policy-notify physician immed
as30b	AS 30b. skin policy-sched risk assessment
as30f	AS 30f. skin policy-notify np immediately
as30c	AS 30c. skin policy-frequent re-observe
as30e	AS 30e. skin policy-obtain consultation
as30d	AS 30d. skin policy-implement treatment
as26ha	AS 26ha. rev prog-burns, abras-cna?
as26hb	AS 26hb. rev prog-burns, abras-rn,lpn\lvn?
as30a	AS 30a. skin policy-sched freq observation
as26bb	AS 26bb. rev prog-ulcer preven-rn,lpn\lvn?
as26ab	AS 26ab. rev prog-delirium-rn,lpn\lvn?

LEVEL-1 QIs

qi	varlab
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BUR0X	Burns abrasions bruises (MEGAQI)
PRU01	PU high & low risk (CHSRA)
PRU02	PU high risk (CHSRA)
PRU03	PU low risk (CHSRA)
PRU04	PU onset or worsening (LTCQ)

LEVEL-2 QIs

qi	varlab
none	

Policies & Procedures Dep/Del (PILOT) VAL100+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	2	0	Sum of Wgt.	208
50%	4		Mean	3.447115
		Largest	Std. Dev.	2.168526
75%	5	8		
90%	6	8	Variance	4.702504
95%	7	9	Skewness	.0706226
99%	8	9	Kurtosis	2.287594

SCALE DESCRIPTION

This scale measures the level of intensity of monitoring, assessing and recording anxious complaints, mood symptoms, and indicators of delirium. The numerical value represented by this scale is the count of nine indicators of more frequent assessments of mood, and delirious symptoms and associated features (see list of included items below). The items comprising this scale form an internally consistent set (KR20=0.70).

ITEMS IN SCALE

item	varlab
qila	MRR 1.a record of assess-cognit status
qild	MRR 1.d record of assess-depression
qilc	MRR 1.c record of assess-delirium
as28bb4	AS 28bb.4 quarterly depression, anxiety
as28ab4	AS 28ab.4 quarterly adv drug reaction
as28ba	AS 28ba. routin depression, anxiety?
as28bb	AS 28bb.2 adm depression, anxiety
as28ca	AS 28ca. routin delirium?
as28cb	AS 28cb.2 adm delirium?

LEVEL-1 QIs

qi	varlab
DepWOTx	Depression without treatment (CHSRA)

LEVEL-2 QIs

qi	varlab
MOD03	Depression new or worse (LTCQ)
DEL0X	Delirium not remitting (MEGAQI)

Number of Policies Reviewed with New Hires (PILOT)
VAL101+

	Percentiles	Smallest		
1%	0	0		
5%	4	0		
10%	6	0	Obs	208
25%	11	0	Sum of Wgt.	208
50%	14		Mean	12.46635
		Largest	Std. Dev.	4.077607
75%	16	16		
90%	16	16	Variance	16.62688
95%	16	16	Skewness	-1.359338
99%	16	16	Kurtosis	4.203614

SCALE DESCRIPTION

This scale represents the facility's commitment to reviewing care policies with new hires, and the breadth of the clinical areas encompassed in this commitment. Sixteen care areas are included in this scale (see list below) and the numerical value represented by the scale score is the count of the number of these areas reviewed with new hires. The items that go into this scale form an internally consistent set (KR20=0.91).

ITEMS IN SCALE

item	varlab
as25a	AS 25a. policy rev-pressure relieving dev
as25b	AS 25b. policy rev-docum methods for ulcers
as25c	AS 25c. policy rev-depression management
as25d	AS 25d. policy rev-use of hi risk meds
as25e	AS 25e. policy rev-use of feeding tubes
as25f	AS 25f. policy rev-use of restraints
as25g	AS 25g. policy rev-use of catheters
as25h	AS 25h. policy rev-pain management
as25i	AS 25i. policy rev-safety issues
as25j	AS 25j. policy rev-facility mission
as25k	AS 25k. policy rev-infection control
as25l	AS 25l. policy rev-patient rights
as25m	AS 25m. policy rev-abuse, neglect
as25n	AS 25n. policy rev-body mechanics
as25o	AS 25o. policy rev-weights
as25p	AS 25p. policy rev-positioning

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
BMI0X	Low BMI (MEGAQI)
CNT04	UTI (CHSRA)
BEH01	Behavior high & low risk (CHSRA)
BEH02	Behavior high risk (CHSRA)
BEH03	Behavior low risk (CHSRA)

COGimp Improvement Scale (JNM)val103+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	0		Mean	.8798077
		Largest	Std. Dev.	1.067742
75%	2	3		
90%	3	3	Variance	1.140073
95%	3	3	Skewness	.813347
99%	3	3	Kurtosis	2.258743

SCALE DESCRIPTION

This scale uses a combination of medical record review data elements (indicators defined within the top 30th percentile) and administrative survey items (see list below) to create a summative index of four items capturing the facility's tendency to engage in assessment and goal setting activities to promote cognitive functioning.

The numerical value represented by the scale score is the count of the number of items present.

The items included form a moderately internally consistent set (KR20=0.66).

ITEMS IN SCALE

item		varlab
qi4ba	MRR 4b.a goals for improve-cognit	status
qi4ca	MRR 4c.a goals for prevent-cognit	status
qi4da	MRR 4d.a nurse interven-cognitive	status

(qila not included for psychometric reasons)

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
COG01	Cognition worsening (LTCQ)

Comm Improvement Scale (JNM)val104+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	1		Mean	1.1875
		Largest	Std. Dev.	1.158225
75%	2	4		
90%	3	4	Variance	1.341486
95%	3	4	Skewness	.6963668
99%	4	4	Kurtosis	2.456272

SCALE DESCRIPTION

This scale uses a combination of medical record review data elements (indicators defined within the top 30th percentile) and administrative survey items (see list below) to create a summative index of four items capturing the facility's tendency to engage in assessment and goal setting activities to promote communicative improvement (of the resident). The numerical value represented by the scale score is the count of the number of items present. The items included form a marginal internally consistent set (KR20=0.55).

ITEMS IN SCALE

item	varlab
qilb	MRR 1.b record of assess-communication
qi4bb	MRR 4b.b goals for improve-communication
qi4cb	MRR 4c.b goals for prevent-communication
qi4db	MRR 4d.b nurse interven-communication

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
COM01	Communication worsening (LTCQ)

Delirium Improvement Scale (JNM)val105+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	0		Mean	1.120192
		Largest	Std. Dev.	1.431183
75%	2	4		
90%	4	4	Variance	2.048286
95%	4	4	Skewness	.8883324
99%	4	4	Kurtosis	2.276636

SCALE DESCRIPTION

This scale uses a combination of medical record review data elements (indicators defined within the top 30th percentile) and administrative survey items (see list below) to create a summative index of four items capturing the facility's tendency to engage in assessment and goal setting activities to resolve or otherwise address symptoms of delirium.

The numerical value represented by the scale score is the count of the number of items present.

The items included form a highly internally consistent set (KR20=0.78).

ITEMS IN SCALE

item	varlab
qi1c	MRR 1.c record of assess-delirium
qi4bc	MRR 4b.c goals for improve-delirium
qi4cc	MRR 4c.c goals for prevent-delirium
qi4dc	MRR 4d.c nurse interven-delirium

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
DEL0X	Delirium not remitting (MEGAQI)

Mood Improvement Scale (JNM)val106+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	1		Mean	1.173077
		Largest	Std. Dev.	1.28869
75%	2	4		
90%	3	4	Variance	1.660721
95%	4	4	Skewness	.7069332
99%	4	4	Kurtosis	2.196092

SCALE DESCRIPTION

This scale uses a combination of medical record review data elements (indicators defined within the top 30th percentile) and administrative survey items (see list below) to create a summative index of four items capturing the facility's tendency to engage in assessment and goal setting activities to promote optimal affective functioning.

The numerical value represented by the scale score is the count of the number of items present.

The items included form a moderately internally consistent set (KR20=0.67).

ITEMS IN SCALE

item	varlab
qild	MRR 1.d record of assess-depression
qi4bd	MRR 4b.d goals for improv-depression
qi4cd	MRR 4c.d goals for prevent-depression
qi4dd	MRR 4d.d nurse interven-depression

LEVEL-1 QIs

qi	varlab
DepWOTx	Depression without treatment (CHSRA)

LEVEL-2 QIs

qi	varlab
MOD03	Depression new or worse (LTCQ)

Behavior Improvement Scale (JNM)val107+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	1		Mean	1.158654
		Largest	Std. Dev.	1.350907
75%	2	4		
90%	3	4	Variance	1.824949
95%	4	4	Skewness	.8060716
99%	4	4	Kurtosis	2.281622

SCALE DESCRIPTION

This scale uses a combination of medical record review data elements (indicators defined within the top 30th percentile) and administrative survey items (see list below) to create a summative index of four items capturing the facility's tendency to engage in assessment and goal setting activities to promote or manage behavioral symptoms. The numerical value represented by the scale score is the count of the number of items present. The items included form a highly internally consistent set (KR20=0.74).

ITEMS IN SCALE

item	varlab
qile	MRR 1.e record of assess-behav problems
qi4be	MRR 4b.e goals for improve-behav probs
qi4ce	MRR 4c.e goals for prevent-behav problems
qi4de	MRR 4d.e nurse interven-behav problems

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
BEH01	Behavior high & low risk (CHSRA)
BEH02	Behavior high risk (CHSRA)
BEH03	Behavior low risk (CHSRA)
BEH04	Behavior worsening (LTCQ)

ADLimp Improvement Scale (JNM)val108+

	Percentiles	Smallest			
1%	0	0			
5%	0	0			
10%	0	0	Obs		208
25%	0	0	Sum of Wgt.		208
50%	0		Mean		1.177885
		Largest	Std. Dev.		1.636566
75%	3	4			
90%	4	4	Variance		2.678349
95%	4	4	Skewness		.8594757
99%	4	4	Kurtosis		1.955615

SCALE DESCRIPTION

This scale uses a combination of medical record review data elements (indicators defined within the top 30th percentile) and administrative survey items (see list below) to create a summative index of four items capturing the facility's tendency to engage in assessment and goal setting activities to promote improvement in ADL functioning.

The numerical value represented by the scale score is the count of the number of items present.

The items included form a highly internally consistent set (KR20=0.92).

ITEMS IN SCALE

item	varlab
qilf	MRR 1.f record of assess-adl improvement
qi4bf	MRR 4b.f goals for improve-adl improv
qi4cf	MRR 4c.f goals for prevent-adl improv
qi4df	MRR 4d.f nurse interven-adl improvement

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
ADL03	ADL imprvmnt in res. w/capacity (MEGAQI)

ADLdec Improvement Scale (JNM)val109+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	1		Mean	1.163462
		Largest	Std. Dev.	1.355686
75%	2	4		
90%	3	4	Variance	1.837886
95%	4	4	Skewness	.809549
99%	4	4	Kurtosis	2.300092

SCALE DESCRIPTION

This scale uses a combination of medical record review data elements (indicators defined within the top 30th percentile) and administrative survey items (see list below) to create a summative index of four items capturing the facility's tendency to engage in assessment and goal setting activities to impede or otherwise delay functional decline.

The numerical value represented by the scale score is the count of the number of items present.

The items included form a highly internally consistent set (KR20=0.76).

ITEMS IN SCALE

item	varlab
qilg	MRR 1.g record of assess-adl decline
qi4bg	MRR 4b.g goals for improv-adl decline
qi4cg	MRR 4c.g goals for prevent-adl decline
qi4dg	MRR 4d.g nurse interven-adl decline

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
ADL02	ADL dec. following imprvnt (MEGAQI)
ADL01	ADL decline (CHSRA)

MobWalk Improvement Scale (JNM)val110+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	1		Mean	1.177885
		Largest	Std. Dev.	1.355644
75%	2	4		
90%	3	4	Variance	1.837769
95%	4	4	Skewness	.7363253
99%	4	4	Kurtosis	2.186132

SCALE DESCRIPTION

This scale uses a combination of medical record review data elements (indicators defined within the top 30th percentile) and administrative survey items (see list below) to create a summative index of four items capturing the facility's tendency to engage in assessment and goal setting activities to promote mobility or walking.

The numerical value represented by the scale score is the count of the number of items present.

The items included form a highly internally consistent set (KR20=0.73).

ITEMS IN SCALE

item	varlab
qilh	MRR 1.h record of assess-mobility\walking
qi4bh	MRR 4b.h goals for improv-mobility\walk
qi4ch	MRR 4c.h goals for prevent-mobility\walk
qi4dh	MRR 4d.h nurse interven-mobility\walking

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
WAL0X	Walking performance (MEGAQI)
MOB01	Mobility decline (LTCQ)

DROPPED

	Percentiles	Smallest			
1%	9	9			
5%	9	9			
10%	9	9	Obs		208
25%	9	9	Sum of Wgt.		208
50%	9		Mean		9
		Largest	Std. Dev.		0
75%	9	9			
90%	9	9	Variance		0
95%	9	9	Skewness		.
99%	9	9	Kurtosis		.

SCALE DESCRIPTION

This scale uses a combination of medical record review data elements (indicators defined within the top 30th percentile) and administrative survey items (see list below) to create a summative index of four items capturing the facility's tendency to engage in assessment and goal setting activities to prevent or manage tendency for resident's to fall.

The numerical value represented by the scale score is the count of the number of items present.

The items included form a marginal internally consistent set (KR20=0.39).

ITEMS IN SCALE

item	varlab
qili	MRR 1.i record of assess-falls
scale dropped	

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
FAL01	Falls increase (LTCQ)

Antipsyc Improvement Scale (JNM)val112+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	0	Largest	Mean	1.168269
			Std. Dev.	1.416109
75%	2	4		
90%	3	4	Variance	2.005365
95%	4	4	Skewness	.7749607
99%	4	4	Kurtosis	2.096004

SCALE DESCRIPTION

This scale uses a combination of medical record review data elements (indicators defined within the top 30th percentile) and administrative survey items (see list below) to create a summative index of four items capturing the facility's tendency to engage in assessment and goal setting activities to promote appropriate use of antipsychotic medication. The numerical value represented by the scale score is the count of the number of items present. The items included form a highly internally consistent set (KR20=0.77).

ITEMS IN SCALE

item	varlab
qi1j	MRR 1.j record of assess-drugs
qi4bj	MRR 4b.j goals for improv-drugs
qi4cj	MRR 4c.j goals for prevent-drugs
qi4dj	MRR 4d.j nurse interven-drugs

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
DRG01	Antipsychotic high & low risk (CHSRA)
DRG02	Antipsychotic high risk (CHSRA)
DRG03	Antipsychotic low risk (CHSRA)

Pain Improvement Scale (JNM)val113+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	1		Mean	1.173077
		Largest	Std. Dev.	1.410398
75%	2	4		
90%	4	4	Variance	1.989223
95%	4	4	Skewness	.8822107
99%	4	4	Kurtosis	2.357754

SCALE DESCRIPTION

This scale uses a combination of medical record review data elements (indicators defined within the top 30th percentile) and administrative survey items (see list below) to create a summative index of four items capturing the facility's tendency to engage in assessment and goal setting activities to promote detection and management of pain symptoms. The numerical value represented by the scale score is the count of the number of items present. The items included form a highly internally consistent set (KR20=0.76).

ITEMS IN SCALE

item	varlab
qilk	MRR 1.k record of assess-pain
qi4bk	MRR 4b.k goals for improve-pain
qi4ck	MRR 4c.k goals for prevent-pain
qi4dk	MRR 4d.k nurse interven-pain

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
PAN01	Pain worsening (LTCQ)
PAI0X	Pain poorly managed (MEGAQI)

Restrnt Improvement Scale (JNM)val114+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	1		Mean	1.072115
		Largest	Std. Dev.	1.296443
75%	2	4		
90%	3	4	Variance	1.680765
95%	4	4	Skewness	.9726217
99%	4	4	Kurtosis	2.694171

SCALE DESCRIPTION

This scale uses a combination of medical record review data elements (indicators defined within the top 30th percentile) and administrative survey items (see list below) to create a summative index of four items capturing the facility's tendency to engage in assessment and goal setting activities to attenuate use of restraints.

The numerical value represented by the scale score is the count of the number of items present.

The items included form a highly internally consistent set (KR20=0.74).

ITEMS IN SCALE

item	varlab
qi11	MRR 1.1 record of assess-restraints
qi4b1	MRR 4b.1 goals for improve-restraints
qi4c1	MRR 4c.1 goals for prevent-restraints
qi4d1	MRR 4d.1 nurse interven-restraints

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
RES01	Restraints (CHSRA)

Feedtube Improvement Scale (JNM)val115+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	1		Mean	1.125
		Largest	Std. Dev.	1.323788
75%	2	4		
90%	3	4	Variance	1.752415
95%	4	4	Skewness	.8340753
99%	4	4	Kurtosis	2.428203

SCALE DESCRIPTION

This scale uses a combination of medical record review data elements (indicators defined within the top 30th percentile) and administrative survey items (see list below) to create a summative index of four items capturing the facility's tendency to engage in assessment and goal setting activities to ensure appropriate use of feeding tubes.

The numerical value represented by the scale score is the count of the number of items present.

The items included form a highly internally consistent set (KR20=0.76).

ITEMS IN SCALE

item	varlab
qilm	MRR 1.m record of assess-feed tube
qi4bm	MRR 4b.m goals for improv-tube feeding
qi4cm	MRR 4c.m goals for prevent-tube feeding
qi4dm	MRR 4d.m nurse interven-tube feeding

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
NUT01	Tube feeding (RAMSEY)

LowBMI Improvement Scale (JNM)val116+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	1		Mean	1.192308
		Largest	Std. Dev.	1.341114
75%	2	4		
90%	3	4	Variance	1.798588
95%	4	4	Skewness	.7543137
99%	4	4	Kurtosis	2.244991

SCALE DESCRIPTION

This scale uses a combination of medical record review data elements (indicators defined within the top 30th percentile) and administrative survey items (see list below) to create a summative index of four items capturing the facility's tendency to engage in assessment and goal setting activities to promote maintenance of body weight.

The numerical value represented by the scale score is the count of the number of items present.

The items included form a highly internally consistent set (KR20=0.73).

ITEMS IN SCALE

item	varlab
qiln	MRR 1.n record of assess-undernutr
qi4bn	MRR 4b.n goals for improve-undernutrit
qi4cn	MRR 4c.n goals for prevent-undernutrit
qi4dn	MRR 4d.n nurse interven-undernutrition

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
BMI0X	Low BMI (MEGAQI)
WGT01	Weight loss (LTCQ)

IUCath Improvement Scale (JNM)val117+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	1		Mean	1.163462
		Largest	Std. Dev.	1.297419
75%	2	4		
90%	3	4	Variance	1.683296
95%	4	4	Skewness	.7588252
99%	4	4	Kurtosis	2.306327

SCALE DESCRIPTION

This scale uses a combination of medical record review data elements (indicators defined within the top 30th percentile) and administrative survey items (see list below) to create a summative index of four items capturing the facility's tendency to engage in assessment and goal setting activities to promote vigilance of indwelling urinary catheters. The numerical value represented by the scale score is the count of the number of items present. The items included form a highly internally consistent set (KR20=0.76).

ITEMS IN SCALE

item	varlab
qilo	MRR 1.o record of assess-indwell cath
qi4bo	MRR 4b.o goals for improve-urinary cath
qi4co	MRR 4c.o goals for prevent-urinary cath
qi4do	MRR 4d.o nurse interven-urinary catheter

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
CAT01	Indwelling urin cath (LTCQ)

BladCont Improvement Scale (JNM)val118+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	1		Mean	1.177885
		Largest	Std. Dev.	1.180392
75%	2	4		
90%	3	4	Variance	1.393325
95%	3	4	Skewness	.676959
99%	4	4	Kurtosis	2.411534

SCALE DESCRIPTION

This scale uses a combination of medical record review data elements (indicators defined within the top 30th percentile) and administrative survey items (see list below) to create a summative index of four items capturing the facility's tendency to engage in assessment and goal setting activities to promote improvement in bladder functioning.

The numerical value represented by the scale score is the count of the number of items present.

The items included form a marginal internally consistent set (KR20=0.52).

ITEMS IN SCALE

item	varlab
qilp	MRR 1.p record of assess-bladder contin
qi4bp	MRR 4b.p goals for improv-bladder contin
qi4cp	MRR 4c.p goals for prevent-bladder contin
qi4dp	MRR 4d.p nurse interven-bladder contin

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
CNT03	Bladder incont decline (LTCQ)
CNT01	Incontinence hi & lo risk (CHSRA)
CNT05	Incontinence high risk (CHSRA)
CNT06	Incontinence low risk (CHSRA)

BowlCont Improvement Scale (JNM)val119+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	1		Mean	1.168269
		Largest	Std. Dev.	1.218042
75%	2	4		
90%	3	4	Variance	1.483626
95%	4	4	Skewness	.7690187
99%	4	4	Kurtosis	2.53062

SCALE DESCRIPTION

This scale uses a combination of medical record review data elements (indicators defined within the top 30th percentile) and administrative survey items (see list below) to create a summative index of four items capturing the facility's tendency to engage in assessment and goal setting activities to promote improvement in bowel functioning.

The numerical value represented by the scale score is the count of the number of items present.

The items included form a marginal internally consistent set (KR20=0.58).

ITEMS IN SCALE

item	varlab
qilq	MRR 1.q record of assess-bowel contin
qi4bq	MRR 4b.q goals for improv-bowel contin
qi4cq	MRR 4c.q goals for prevent-bowel contin
qi4dq	MRR 4d.q nurse interven-bowel contin

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
CNT02	Bowel incont decline (LTCQ)
CNT01	Incontinence hi & lo risk (CHSRA)
CNT05	Incontinence high risk (CHSRA)
CNT06	Incontinence low risk (CHSRA)

Infectns Improvement Scale (JNM)val120+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	1		Mean	1.177885
		Largest	Std. Dev.	1.387345
75%	2	4		
90%	4	4	Variance	1.924726
95%	4	4	Skewness	.865434
99%	4	4	Kurtosis	2.360706

SCALE DESCRIPTION

This scale uses a combination of medical record review data elements (indicators defined within the top 30th percentile) and administrative survey items (see list below) to create a summative index of four items capturing the facility's tendency to engage in assessment and goal setting activities to promote good care for infections.

The numerical value represented by the scale score is the count of the number of items present.

The items included form a highly internally consistent set (KR20=0.80).

ITEMS IN SCALE

item	varlab
qilr	MRR 1.r record of assess-infectiond
qi4br	MRR 4b.r goals for improv-infections
qi4cr	MRR 4c.r goals for prevent-infections
qi4dr	MRR 4d.r nurse interven-infections

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
INF0X	Infection flare-up (MEGAQI)

PressUlc Improvement Scale (JNM)val121+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	1		Mean	.8798077
		Largest	Std. Dev.	.9220728
75%	1	3		
90%	2	3	Variance	.8502183
95%	3	3	Skewness	.7216078
99%	3	3	Kurtosis	2.52403

SCALE DESCRIPTION

This scale uses a combination of medical record review data elements (indicators defined within the top 30th percentile) and administrative survey items (see list below) to create a summative index of four items capturing the facility's tendency to engage in assessment and goal setting activities to promote fast resolution or prevention of pressure sores. The numerical value represented by the scale score is the count of the number of items present. The items included form a marginal internally consistent set (KR20=0.42).

ITEMS IN SCALE

item	varlab
qi4bs	MRR 4b.s goals for improv-press ulcers
qi4cs	MRR 4c.s goals for prevent-press ulcers
qi4ds	MRR 4d.s nurse interven-pressure ulcers

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
PRU01	PU high & low risk (CHSRA)
PRU02	PU high risk (CHSRA)
PRU03	PU low risk (CHSRA)

BurnTear Improvement Scale (JNM)val122+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	0		Mean	1.168269
		Largest	Std. Dev.	1.449822
75%	2	4		
90%	4	4	Variance	2.101983
95%	4	4	Skewness	.8109805
99%	4	4	Kurtosis	2.13514

SCALE DESCRIPTION

This scale uses a combination of medical record review data elements (indicators defined within the top 30th percentile) and administrative survey items (see list below) to create a summative index of four items capturing the facility's tendency to engage in assessment and goal setting activities to promote good skin care strategies.

The numerical value represented by the scale score is the count of the number of items present.

The items included form a highly internally consistent set (KR20=0.84).

ITEMS IN SCALE

item	varlab
qilt	MRR 1.t record of assess-burns, abrasions
qi4bt	MRR 4b.t goals for improv-burns, abras
qi4ct	MRR 4c.t goals for prevent-burns, abras
qi4dt	MRR 4d.t nurse interven-burns, abrasions

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
BUR0X	Burns abrasions bruises (MEGAQI)

NoActivt Improvement Scale (JNM)val123+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	1		Mean	1.1875
		Largest	Std. Dev.	1.389553
75%	2	4		
90%	3	4	Variance	1.930857
95%	4	4	Skewness	.7883846
99%	4	4	Kurtosis	2.211934

SCALE DESCRIPTION

This scale uses a combination of medical record review data elements (indicators defined within the top 30th percentile) and administrative survey items (see list below) to create a summative index of four items capturing the facility's tendency to engage in assessment and goal setting activities to promote social engagement or activity participation. The numerical value represented by the scale score is the count of the number of items present. The items included form a highly internally consistent set (KR20=0.80).

ITEMS IN SCALE

item	varlab
qilu	MRR 1.u record of assess-soc isolation
qi4bu	MRR 4b.u goals for improv-soc isolation
qi4cu	MRR 4c.u goals for prevent-soc isolation
qi4du	MRR 4d.u nurse interven-social isolation

LEVEL-1 QIs

qi	varlab
none	

LEVEL-2 QIs

qi	varlab
SOC02	Little or no activities (CHSRA)

PT FTE /100 Beds (BERG) VAL146+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	193
25%	0	0	Sum of Wgt.	193
50%	.7407407		Mean	1.771261
		Largest	Std. Dev.	2.60463
75%	2.33125	9.129465		
90%	5.55147	10.22727	Variance	6.784097
95%	7.85	12.5	Skewness	1.965342
99%	12.5	13.51351	Kurtosis	6.769558

SCALE DESCRIPTION

This scale measures the facility's level of physical therapist staffing, providing the number of full-time equivalents (FTE) per 100 beds. Higher values imply a greater number of PTs are available per resident. (Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
as5ea	AS 5ea. phys therap hours worked in period
as5a	AS 5a. length of pay period
ass1	AS s1. how many beds

LEVEL-1 QIs

qi	varlab
WAL0X	Walking performance (MEGAQI)

LEVEL-2 QIs

qi	varlab
ADL01	ADL decline (CHSRA)
ADL02	ADL dec. following imprvnt (MEGAQI)
ADL03	ADL imprvmnt in res. w/capacity (MEGAQI)
MOB01	Mobility decline (LTCQ)

Total Involvement in Care Planning (SC) val147+

	Percentiles	Smallest		
1%	0	0		
5%	1	0		
10%	2	0	Obs	206
25%	3	0	Sum of Wgt.	206
50%	4		Mean	3.859223
		Largest	Std. Dev.	1.547488
75%	5	6		
90%	6	6	Variance	2.394719
95%	6	6	Skewness	-.2785486
99%	6	6	Kurtosis	2.312735

SCALE DESCRIPTION

This scale captures the representation of six different clinical and ancillary caregivers on the care planning team. The six areas are listed below. The numerical value represented by this scale is the count of the six professionals represented on the care planning team. Higher values imply greater breadth and inclusion in the care planning process. The items included in this scale form a moderately internally consistent set (KR20=0.62).

ITEMS IN SCALE

item	varlab
as9a	AS 9a. chg nurse contrib to pat care plan
as9b	AS 9b. rns contrib to patient care plan
as9c	AS 9c. lpns contrib to patient care plan
as9d	AS 9d. r\r aides contrib to pat care plan
as9e	AS 9e. therap contrib to patient care plan
as9f	AS 9f. cnas contrib to patient care plan

LEVEL-1 QIs

qi	varlab
ADL01	ADL decline (CHSRA)
ADL02	ADL dec. following imprvnt (MEGAQI)
ADL03	ADL imprvmnt in res. w/capacity (MEGAQI)
FAL01	Falls increase (LTCQ)
MOB01	Mobility decline (LTCQ)
WGT01	Weight loss (LTCQ)
WAL0X	Walking performance (MEGAQI)

LEVEL-2 QIs

qi	varlab
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MOD03	Depression new or worse (LTCQ)
BEH01	Behavior high & low risk (CHSRA)
BEH02	Behavior high risk (CHSRA)
BEH03	Behavior low risk (CHSRA)
COG01	Cognition worsening (LTCQ)
COM01	Communication worsening (LTCQ)
PRU01	PU high & low risk (CHSRA)
PRU02	PU high risk (CHSRA)
PRU03	PU low risk (CHSRA)
PRU04	PU onset or worsening (LTCQ)
DepWOTx	Depression without treatment (CHSRA)

COG Change (based on val46) (VM) val148+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	206
25%	0	0	Sum of Wgt.	206
50%	.0377493		Mean	.0689167
		Largest	Std. Dev.	.0857445
75%	.1111111	.3		
90%	.2	.3214286	Variance	.0073521
95%	.25	.3333333	Skewness	1.572006
99%	.3214286	.5	Kurtosis	6.06779

SCALE DESCRIPTION

This scale captures the tendency of caregivers in the facility to change care plan in response to cognition. For all charts in the record review, the scale is initialized at 0 and is 1 if there is evidence that the resident's cognition status changed, 2 if pain changed and at least 2 of the following: evidence of assessment w/in 72 hours, notification of physician, therapies notified, referral or consult ordered, or a treatment was in place. The numerical value is the average for all charts in the facility.
(Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
qi3a	MRR 3.a new problem-cognitive status
qi3aa	MRR 3a.a doc in 72 hours-cog status
qi3ba	MRR 3b.a phys notified of chg-cog stat
qi3ca	MRR 3c.a ther notified of chg-cig stat
qi3da	MRR 3d.a refer w specialist-cog status
qi3ea	MRR 3e.a current treatment-cog status

LEVEL-1 QIs

qi	varlab
COG01	Cognition worsening (LTCQ)

LEVEL-2 QIs

qi	varlab
none	

COM Change (based on val46) (VM) val149+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	206
25%	0	0	Sum of Wgt.	206
50%	0		Mean	.0193978
		Largest	Std. Dev.	.0398052
75%	.0333333	.1785714		
90%	.0689655	.2	Variance	.0015845
95%	.0909091	.2	Skewness	2.588993
99%	.2	.2222222	Kurtosis	10.55169

SCALE DESCRIPTION

This scale captures the tendency of caregivers in the facility to change care plan in response to changes in the resident's communicative skills. For all charts in the record review, the scale is initialized at 0 and is 1 if there is evidence that the resident's status changed, 2 if changed and at least 2 of the following: evidence of assessment w/in 72 hours, notification of physician, therapies notified, referral or consult ordered, or a treatment was in place. The numerical value is the average for all charts in the facility. (Internal consistency NA).

ITEMS IN SCALE

item	varlab
qi3b	MRR 3.b new problem-communicatiion
qi3ab	MRR 3a.b doc in 72 hours-communication
qi3bb	MRR 3b.b phys notified of chg-communic
qi3cb	MRR 3c.b ther notified of chg-commun
qi3db	MRR 3d.b refer w specialist-commun
qi3eb	MRR 3e.b current treatment-communicatn

LEVEL-1 QIs

qi	varlab
COM01	Communication worsening (LTCQ)

LEVEL-2 QIs

qi	varlab
none	

DEL Change (based on val46) (VM) val150+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	206
25%	0	0	Sum of Wgt.	206
50%	0		Mean	.047219
		Largest	Std. Dev.	.069094
75%	.0740741	.2758621		
90%	.1333333	.28	Variance	.004774
95%	.1818182	.3333333	Skewness	2.313143
99%	.28	.4666667	Kurtosis	10.85788

SCALE DESCRIPTION

This scale captures the tendency of caregivers in the facility to change care plan in response to changes in the resident's delirium symptoms. For all charts in the record review, the scale is initialized at 0 and is 1 if there is evidence that the resident's status changed, 2 if changed and at least 2 of the following: evidence of assessment w/in 72 hours, notification of physician, therapies notified, referral or consult ordered, or a treatment was in place. The numerical value is the average for all charts in the facility. (Internal consistency NA).

ITEMS IN SCALE

item	varlab
qi3c	MRR 3.c new problem-delirium
qi3ac	MRR 3a.c doc in 72 hours-delirium
qi3bc	MRR 3b.c phys notified of chg-delirium
qi3cc	MRR 3c.c ther notified of chg-delirium
qi3dc	MRR 3d.c refer w specialist-delirium
qi3ec	MRR 3e.c current treatment-delirium

LEVEL-1 QIs

qi	varlab
DEL0X	Delirium not remitting (MEGAQI)

LEVEL-2 QIs

qi	varlab
none	

MOD Change (based on val46) (VM) val151+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	206
25%	0	0	Sum of Wgt.	206
50%	.0666667		Mean	.0889105
		Largest	Std. Dev.	.1020762
75%	.137931	.3793103		
90%	.2413793	.4137931	Variance	.0104195
95%	.2962963	.44	Skewness	1.433355
99%	.4137931	.5333334	Kurtosis	4.993957

SCALE DESCRIPTION

This scale captures the tendency of caregivers in the facility to change care plan in response to changes in the resident's affective functioning. For all charts in the record review, the scale is initialized at 0 and is 1 if there is evidence that the resident's status changed, 2 if changed and at least 2 of the following: evidence of assessment w/in 72 hours, notification of physician, therapies notified, referral or consult ordered, or a treatment was in place. The numerical value is the average for all charts in the facility. (Internal consistency NA).

ITEMS IN SCALE

item	varlab
qi3d	MRR 3.d new problem-depression
qi3ad	MRR 3a.d doc in 72 hours-depression
qi3bd	MRR 3b.d phys notified of chg-depression
qi3cd	MRR 3c.d ther notified of chg-depression
qi3dd	MRR 3d.d refer w specialist-depression
qi3ed	MRR 3e.d current treatment-depression

LEVEL-1 QIs

qi	varlab
MOD03	Depression new or worse (LTCQ)
DepWOTx	Depression without treatment (CHSRA)

LEVEL-2 QIs

qi	varlab
none	

BEH Change (based on val46) (VM) val152+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	206
25%	0	0	Sum of Wgt.	206
50%	.0714286		Mean	.0932223
		Largest	Std. Dev.	.1013801
75%	.137931	.3928571		
90%	.2413793	.4	Variance	.0102779
95%	.3	.4666667	Skewness	1.325648
99%	.4	.5185185	Kurtosis	4.802193

SCALE DESCRIPTION

This scale captures the tendency of caregivers in the facility to change care plan in response to changes in the resident's behavioral functioning. For all charts in the record review, the scale is initialized at 0 and is 1 if there is evidence that the resident's status changed, 2 if changed and at least 2 of the following: evidence of assessment w/in 72 hours, notification of physician, therapies notified, referral or consult ordered, or a treatment was in place. The numerical value is the average for all charts in the facility. (Internal consistency NA).

ITEMS IN SCALE

item	varlab
qi3e	MRR 3.e new problem-behav problems
qi3ae	MRR 3a.e doc in 72 hours-behav problems
qi3be	MRR 3b.e phys notified of chg-behav probs
qi3ce	MRR 3c.e ther notified of chg-behav probs
qi3de	MRR 3d.e refer w specialist-behav probs
qi3ee	MRR 3e.e current treatment-behav prob

LEVEL-1 QIs

qi	varlab
BEH01	Behavior high & low risk (CHSRA)
BEH02	Behavior high risk (CHSRA)
BEH03	Behavior low risk (CHSRA)
BEH04	Behavior worsening (LTCQ)

LEVEL-2 QIs

qi	varlab
none	

ADI Change (based on val46) (VM) val153+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	206
25%	0	0	Sum of Wgt.	206
50%	.0384615		Mean	.1204369
		Largest	Std. Dev.	.1803624
75%	.1481481	.6896552		
90%	.4074074	.75	Variance	.0325306
95%	.5909091	.7857143	Skewness	2.000967
99%	.75	.8571429	Kurtosis	6.49604

SCALE DESCRIPTION

This scale captures the tendency of caregivers in the facility to change care plan in response to changes in improving ADL status of the resident. For all charts in the record review, the scale is initialized at 0 and is 1 if there is evidence that the resident's status changed, 2 if changed and at least 2 of the following: evidence of assessment w/in 72 hours, notification of physician, therapies notified, referral or consult ordered, or a treatment was in place. The numerical value is the average for all charts in the facility. (Internal consistency NA).

ITEMS IN SCALE

item	varlab
qi3f	MRR 3.f new problem-adl improvement
qi3af	MRR 3a.f doc in 72 hours-adl improvement
qi3bf	MRR 3b.f phys notified of chg-adl improv
qi3cf	MRR 3c.f ther notified of chg-adl improv
qi3df	MRR 3d.f refer w specialist-adl improve
qi3ef	MRR 3e.f current treatment-adl improve

LEVEL-1 QIs

qi	varlab
ADL03	ADL imprvmnt in res. w/capacity (MEGAQI)

LEVEL-2 QIs

qi	varlab
none	

ADD Change (based on val46) (VM) val154+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	206
25%	0	0	Sum of Wgt.	206
50%	.0740741		Mean	.1320905
		Largest	Std. Dev.	.1688581
75%	.2	.6818182		
90%	.3448276	.7391304	Variance	.0285131
95%	.4814815	.7777778	Skewness	1.942163
99%	.7391304	.9285714	Kurtosis	7.295704

SCALE DESCRIPTION

This scale captures the tendency of caregivers in the facility to change care plan in response to changes in declining ADL status of the resident. For all charts in the record review, the scale is initialized at 0 and is 1 if there is evidence that the resident's status changed, 2 if changed and at least 2 of the following: evidence of assessment w/in 72 hours, notification of physician, therapies notified, referral or consult ordered, or a treatment was in place. The numerical value is the average for all charts in the facility. (Internal consistency NA).

ITEMS IN SCALE

item	varlab
qi3g	MRR 3.g new problem-adl decline
qi3ag	MRR 3a.g doc in 72 hours-adl decline
qi3bg	MRR 3b.g phys notified of chg-adl decline
qi3cg	MRR 3c.g ther notified of chg-adl decline
qi3dg	MRR 3d.grefer w specialist-adl decline
qi3eg	MRR 3e.g current treatment-adl decline

LEVEL-1 QIs

qi	varlab
ADL01	ADL decline (CHSRA)
ADL02	ADL dec. following imprvnt (MEGAQI)

LEVEL-2 QIs

qi	varlab
none	

MOB Change (based on val46) (VM) val155+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	206
25%	.0333333	0	Sum of Wgt.	206
50%	.124359		Mean	.2109656
		Largest	Std. Dev.	.2575461
75%	.2857143	.9166667		
90%	.6	1.033333	Variance	.06633
95%	.7586207	1.037037	Skewness	1.894465
99%	1.033333	1.607143	Kurtosis	7.474715

SCALE DESCRIPTION

This scale captures the tendency of caregivers in the facility to change care plan in response to changes in the resident's level of mobility. For all charts in the record review, the scale is initialized at 0 and is 1 if there is evidence that the resident's status changed, 2 if changed and at least 2 of the following: evidence of assessment w/in 72 hours, notification of physician, therapies notified, referral or consult ordered, or a treatment was in place. The numerical value is the average for all charts in the facility. (Internal consistency NA).

ITEMS IN SCALE

item	varlab
qi3h	MRR 3.h new problem-mobolity\walking
qi3ah	MRR 3a.h doc in 72 hours-mobility\walk
qi3bh	MRR 3b.h phys notified of chg-mobil\walk
qi3ch	MRR 3c.h ther notified of chg-mobil\walk
qi3dh	MRR 3d.h refer w specialist-mobil\walk
qi3eh	MRR 3e.h current treatment-mobil\walking

LEVEL-1 QIs

qi	varlab
MOB01	Mobility decline (LTCQ)
WAL0X	Walking performance (MEGAQI)

LEVEL-2 QIs

qi	varlab
none	

FAL Change (based on val46) (VM) val156+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	206
25%	.0344828	0	Sum of Wgt.	206
50%	.1155556		Mean	.1468956
		Largest	Std. Dev.	.1351112
75%	.2307692	.4761905		
90%	.3448276	.5172414	Variance	.018255
95%	.4137931	.6428571	Skewness	1.0697
99%	.5172414	.6785714	Kurtosis	4.13215

SCALE DESCRIPTION

This scale captures the tendency of caregivers in the facility to change care plan in response to changes in the resident's risk for a fall. For all charts in the record review, the scale is initialized at 0 and is 1 if there is evidence that the resident's status changed, 2 if changed and at least 2 of the following: evidence of assessment w/in 72 hours, notification of physician, therapies notified, referral or consult ordered, or a treatment was in place. The numerical value is the average for all charts in the facility. (Internal consistency NA).

ITEMS IN SCALE

item	varlab
qi3i	MRR 3.i new problem w delirium
qi3ai	MRR 3a.i doc in 72 hours-falls
qi3bi	MRR 3b.i phys notified of chg-falls
qi3ci	MRR 3c.i ther notified of chg-falls
qi3di	MRR 3d.i refer w specialist-falls
qi3ei	MRR 3e.i current treatment-falls

LEVEL-1 QIs

qi	varlab
FAL01	Falls increase (LTCQ)

LEVEL-2 QIs

qi	varlab
none	

DRG Change (based on val46) (VM) val157+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	206
25%	0	0	Sum of Wgt.	206
50%	.0344828		Mean	.0555901
		Largest	Std. Dev.	.0722503
75%	.08	.2962963		
90%	.1428571	.3	Variance	.0052201
95%	.2105263	.3043478	Skewness	1.547343
99%	.3	.3103448	Kurtosis	5.191354

SCALE DESCRIPTION

This scale captures the tendency of caregivers in the facility to change care plan in response to changes in the residents use of antipsychotic meds. For all charts in the record review, the scale is initialized at 0 and is 1 if there is evidence that the resident's status changed, 2 if changed and at least 2 of the following: evidence of assessment w/in 72 hours, notification of physician, therapies notified, referral or consult ordered, or a treatment was in place. The numerical value is the average for all charts in the facility. (Internal consistency NA).

ITEMS IN SCALE

item	varlab
qi3j	MRR 3.j new problem-drugs
qi3aj	MRR 3a.j doc in 72 hours-drugs
qi3bj	MRR 3b.j phys notified of chg-drugs
qi3cj	MRR 3c.j ther notified of chg-drugs
qi3dj	MRR 3d.j refer w specialist-drugs
qi3ej	MRR 3e.j current treatment-drugs

LEVEL-1 QIs

qi	varlab
DRG01	Antipsychotic high & low risk (CHSRA)
DRG02	Antipsychotic high risk (CHSRA)
DRG03	Antipsychotic low risk (CHSRA)

LEVEL-2 QIs

qi	varlab
none	

RES Change (based on val46) (VM) val158+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	206
25%	0	0	Sum of Wgt.	206
50%	0		Mean	.0281937
		Largest	Std. Dev.	.0499167
75%	.037037	.1904762		
90%	.0769231	.2222222	Variance	.0024917
95%	.137931	.25	Skewness	2.330191
99%	.2222222	.2857143	Kurtosis	9.171563

SCALE DESCRIPTION

This scale captures the tendency of caregivers in the facility to change care plan in response to changes in the use of restraints. For all charts that were in the record review, the scale is initialized at 0 and is 1 if there is evidence that the resident's status changed, 2 if changed and at least 2 of the following: evidence of assessment w/in 72 hours, notification of physician, therapies notified, referral or consult ordered, or a treatment was in place. The numerical value is the average for all charts in the facility. (Internal consistency NA).

ITEMS IN SCALE

item	varlab
qi3l	MRR 3.1 new problem-restraints
qi3al	MRR 3a.1 doc in 72 hours-restraints
qi3bl	MRR 3b.1 phys notified of chg-restraints
qi3cl	MRR 3c.1 ther notified of chg-restraints
qi3dl	MRR 3d.1 refer w specialist-restraints
qi3el	MRR 3e.1 current treatment-restraints

LEVEL-1 QIs

qi	varlab
RES01	Restraints (CHSRA)

LEVEL-2 QIs

qi	varlab
none	

NUT Change (based on val46) (VM) val159+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	206
25%	0	0	Sum of Wgt.	206
50%	0		Mean	.03068
		Largest	Std. Dev.	.0536685
75%	.0666667	.2068966		
90%	.1071429	.2068966	Variance	.0028803
95%	.1538462	.2307692	Skewness	1.879285
99%	.2068966	.2333333	Kurtosis	5.951236

SCALE DESCRIPTION

This scale captures the tendency of caregivers in the facility to change care plan in response to changes in the nutritional status of the resident. For all charts in the record review, the scale is initialized at 0 and is 1 if there is evidence that the resident's status changed, 2 if changed and at least 2 of the following: evidence of assessment w/in 72 hours, notification of physician, therapies notified, referral or consult ordered, or a treatment was in place. The numerical value is the average for all charts in the facility. (Internal consistency NA).

ITEMS IN SCALE

item	varlab
qi3m	MRR 3.m new problem-tube feeding
qi3am	MRR 3a.m doc in 72 hours-tube feeding
qi3bm	MRR 3b.m phys notified of chg-tube feeding
qi3cm	MRR 3c.m ther notified of chg-tube feeding
qi3dm	MRR 3d.m refer w specialist-tube feeding
qi3em	MRR 3e.m current treatment-tube feeding

LEVEL-1 QIs

qi	varlab
NUT01	Tube feeding (RAMSEY)

LEVEL-2 QIs

qi	varlab
none	

WGT Change (based on val46) (VM) val160+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	206
25%	.0344828	0	Sum of Wgt.	206
50%	.137931		Mean	.1514251
		Largest	Std. Dev.	.1327962
75%	.2333333	.5		
90%	.3214286	.5714286	Variance	.0176348
95%	.3809524	.6	Skewness	1.009756
99%	.5714286	.7	Kurtosis	4.186769

SCALE DESCRIPTION

This scale captures the tendency of caregivers in the facility to change care plan in response to changes in the resident's weight or weight loss. For all charts in the record review, the scale is initialized at 0 and is 1 if there is evidence that the resident's status changed, 2 if changed and at least 2 of the following: evidence of assessment w/in 72 hours, notification of physician, therapies notified, referral or consult ordered, or a treatment was in place. The numerical value is the average for all charts in the facility. (Internal consistency NA).

ITEMS IN SCALE

item	varlab
qi3n	MRR 3.n new problem-undernutrition
qi3an	MRR 3a.n doc in 72 hours-undernutrition
qi3bn	MRR 3b.n phys notified of chg-undernutrit
qi3cn	MRR 3c.n ther notified of chg-undernutrit
qi3dn	MRR 3d.n refer w specialist-undernutrition
qi3en	MRR 3e.n current treatment-undernutrition

LEVEL-1 QIs

qi	varlab
BMI0X	Low BMI (MEGAQI)
WGT01	Weight loss (LTCQ)

LEVEL-2 QIs

qi	varlab
none	

CAT Change (based on val46) (VM) val161+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	206
25%	0	0	Sum of Wgt.	206
50%	.037037		Mean	.0696104
		Largest	Std. Dev.	.0926728
75%	.1071429	.3703704		
90%	.2068966	.3793103	Variance	.0085883
95%	.2413793	.44	Skewness	1.796667
99%	.3793103	.5	Kurtosis	6.729243

SCALE DESCRIPTION

This scale captures the tendency of caregivers in the facility to change care plan in response to changes in the resident's catheter. For all charts that were in the record review, the scale is initialized at 0 and is 1 if there is evidence that the resident's status changed, 2 if changed and at least 2 of the following: evidence of assessment w/in 72 hours, notification of physician, therapies notified, referral or consult ordered, or a treatment was in place. The numerical value is the average for all charts in the facility. (Internal consistency NA).

ITEMS IN SCALE

item	varlab
qi3o	MRR 3.o new problem-urinary catheter
qi3ao	MRR 3a.o doc in 72 hours-urinary catheter
qi3bo	MRR 3b.o phys notified of chg-urinary cath
qi3co	MRR 3c.o ther notified of chg-urinary cath
qi3do	MRR 3d.o refer w specialist-urinary catheter
qi3eo	MRR 3e.o current treatment-urinary catheter

LEVEL-1 QIs

qi	varlab
CAT01	Indwelling urin cath (LTCQ)

LEVEL-2 QIs

qi	varlab
none	

BLA Change (based on val46) (VM) val162+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	206
25%	0	0	Sum of Wgt.	206
50%	0		Mean	.0343736
		Largest	Std. Dev.	.05081
75%	.0666667	.173913		
90%	.1071429	.1785714	Variance	.0025817
95%	.1428571	.2068966	Skewness	1.853156
99%	.1785714	.3181818	Kurtosis	7.599785

SCALE DESCRIPTION

This scale captures the tendency of caregivers in the facility to change care plan in response to changes in the resident's level of bladder continence. All Charts in the record review, the scale is initialized at 0 and is 1 if there is evidence that the resident's status changed, 2 if changed and at least 2 of the following: evidence of assessment w/in 72 hours, notification of physician, therapies notified, referral or consult ordered, or a treatment was in place. The numerical value is the average for all charts in the facility. (Internal consistency NA).

ITEMS IN SCALE

item	varlab
qi3p	MRR 3.p new problem-bladder continence
qi3ap	MRR 3a.p doc in 72 hours-bladder contin
qi3bp	MRR 3b.p phys notif of chg-bladder contin
qi3cp	MRR 3c.p ther notif of chg-bladder contin
qi3dp	MRR 3d.p refer w specialist-bladder contin
qi3ep	MRR 3e.p current treatment-bladder contin

LEVEL-1 QIs

qi	varlab
CNT03	Bladder incont decline (LTCQ)
CNT01	Incontinence hi & lo risk (CHSRA)
CNT05	Incontinence high risk (CHSRA)
CNT06	Incontinence low risk (CHSRA)

LEVEL-2 QIs

qi	varlab
none	

BOW Change (based on val46) (VM) val163+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	0		Mean	.0116268
		Largest	Std. Dev.	.0269791
75%	0	.1153846		
90%	.04	.1333333	Variance	.0007279
95%	.0714286	.1363636	Skewness	2.837367
99%	.1333333	.16	Kurtosis	11.87326

SCALE DESCRIPTION

This scale captures the tendency of caregivers in the facility to change care plan in response to changes in the resident's level of bowel continence. For all charts in the record review, the scale is initialized at 0 and is 1 if there is evidence that the resident's status changed, 2 if changed and at least 2 of the following: evidence of assessment w/in 72 hours, notification of physician, therapies notified, referral or consult ordered, or a treatment was in place. The numerical value is the average for all charts in the facility. (Internal consistency NA).

ITEMS IN SCALE

item	varlab
qi3q	MRR 3.q new problem-bowel continence
qi3aq	MRR 3a.q doc in 72 hours-bowel contin
qi3bq	MRR 3b.q phys notif of chg-bowel contin
qi3cq	MRR 3c.q ther notif of chg-bowel contin
qi3dq	MRR 3d.q refer w specialist-bowel contin
qi3eq	MRR 3e.q current treatment-bowel contin

LEVEL-1 QIs

qi	varlab
CNT02	Bowel incont decline (LTCQ)
CNT01	Incontinence hi & lo risk (CHSRA)
CNT05	Incontinence high risk (CHSRA)
CNT06	Incontinence low risk (CHSRA)

LEVEL-2 QIs

qi	varlab
none	

INF Change (based on val46) (VM) val164+

	Percentiles	Smallest		
1%	0	0		
5%	.0666667	0		
10%	.0833333	0	Obs	208
25%	.1952381	0	Sum of Wgt.	208
50%	.3333333		Mean	.3593815
		Largest	Std. Dev.	.2188422
75%	.5	.862069		
90%	.6666667	.8888889	Variance	.0478919
95%	.76	.9259259	Skewness	.5484843
99%	.8888889	1.111111	Kurtosis	2.929917

SCALE DESCRIPTION

This scale captures the tendency of caregivers in the facility to change care plan in response to changes in the resident's status in re infections. For all charts in the record review, the scale is initialized at 0 and is 1 if there is evidence that the resident's status changed, 2 if changed and at least 2 of the following: evidence of assessment w/in 72 hours, notification of physician, therapies notified, referral or consult ordered, or a treatment was in place. The numerical value is the average for all charts in the facility. (Internal consistency NA).

ITEMS IN SCALE

item	varlab
qi3r	MRR 3.r new problem-infections
qi3ar	MRR 3a.r doc in 72 hours-infections
qi3br	MRR 3b.r phys notif of chg-infections
qi3cr	MRR 3c.r ther notif of chg-infections
qi3dr	MRR 3d.r refer w specialist-infections
qi3er	MRR 3e.r current treatment-infections

LEVEL-1 QIs

qi	varlab
INF0X	Infection flare-up (MEGAQI)
CNT04	UTI (CHSRA)

LEVEL-2 QIs

qi	varlab
none	

PRU Change (based on val46) (VM) val165+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	.0408333	0	Sum of Wgt.	208
50%	.137931		Mean	.1633256
		Largest	Std. Dev.	.1458643
75%	.2320513	.5862069		
90%	.35	.75	Variance	.0212764
95%	.4137931	.7586207	Skewness	1.407435
99%	.75	.7619048	Kurtosis	5.838603

SCALE DESCRIPTION

This scale captures the tendency of caregivers in the facility to change care plan in response to changes in the resident's pressure sores. For all charts in the record review, the scale is initialized at 0 and is 1 if there is evidence that the resident's status changed, 2 if changed and at least 2 of the following: evidence of assessment w/in 72 hours, notification of physician, therapies notified, referral or consult ordered, or a treatment was in place. The numerical value is the average for all charts in the facility. (Internal consistency NA).

ITEMS IN SCALE

item	varlab
qi3s	MRR 3.s new problem-pressure ulcers
qi3as	MRR 3a.s doc in 72 hours-pressure ulcers
qi3bs	MRR 3b.s phys notif of chg-pressure ulcers
qi3cs	MRR 3c.s ther notif of chg-pressure ulcers
qi3ds	MRR 3d.s refer w specialist-pressure ulcers
qi3es	MRR 3e.s current treatment-pressure ulcers

LEVEL-1 QIs

qi	varlab
PRU01	PU high & low risk (CHSRA)
PRU02	PU high risk (CHSRA)
PRU03	PU low risk (CHSRA)
PRU04	PU onset or worsening (LTCQ)

LEVEL-2 QIs

qi	varlab
none	

BUR Change (based on val46) (VM) val166+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	.0344828	0	Sum of Wgt.	208
50%	.0909091		Mean	.1331115
		Largest	Std. Dev.	.1399105
75%	.1923077	.5238096		
90%	.3043478	.5666667	Variance	.019575
95%	.4583333	.6071429	Skewness	1.594947
99%	.5666667	.7916667	Kurtosis	5.933088

SCALE DESCRIPTION

This scale captures the tendency of caregivers in the facility to change care plan in response to changes in the resident's skin condition. For all charts that were in the record review, the scale is initialized at 0 and is 1 if there is evidence that the resident's status changed, 2 if changed and at least 2 of the following: evidence of assessment w/in 72 hours, notification of physician, therapies notified, referral or consult ordered, or a treatment was in place. The numerical value is the average for all charts in the facility. (Internal consistency NA).

ITEMS IN SCALE

item	varlab
qi3t	MRR 3.t new problem-burns, abrasions
qi3at	MRR 3a.t doc in 72 hours-burns, abrasions
qi3bt	MRR 3b.t phys notif of chg-burns, abras
qi3ct	MRR 3c.t ther notif of chg-burns, abras
qi3dt	MRR 3d.t refer w specialist-burns, abrasions
qi3et	MRR 3e.t current treatment-burns, abrasions

LEVEL-1 QIs

qi	varlab
BUR0X	Burns abrasions bruises (MEGAQI)

LEVEL-2 QIs

qi	varlab
none	

SOC Change (based on val46) (VM) val167+

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	208
25%	0	0	Sum of Wgt.	208
50%	0		Mean	.0204198
		Largest	Std. Dev.	.0456744
75%	0	.1818182		
90%	.0714286	.2142857	Variance	.0020862
95%	.1333333	.2173913	Skewness	2.824972
99%	.2142857	.2692308	Kurtosis	11.48496

SCALE DESCRIPTION

This scale captures the tendency of caregivers in the facility to change care plan in response to changes in the resident's level of social engagement. All charts in the record review, the scale is initialized at 0 and is 1 if there is evidence that the resident's status changed, 2 if changed and at least 2 of the following: evidence of assessment w/in 72 hours, notification of physician, therapies notified, referral or consult ordered, or a treatment was in place. The numerical value is the average for all charts in the facility. (Internal consistency NA).

ITEMS IN SCALE

item	varlab
qi3u	MRR 3.u new problem-social isolation
qi3au	MRR 3a.u doc in 72 hours-social isolation
qi3bu	MRR 3b.u phys notif of chg-soc isolation
qi3cu	MRR 3c.u ther notif of chg-soc isolation
qi3du	MRR 3d.u refer w specialist-socila isolation
qi3eu	MRR 3e.u current treatment-social isolation

LEVEL-1 QIs

qi	varlab
SOC02	Little or no activities (CHSRA)

LEVEL-2 QIs

qi	varlab
none	

Match of K2 & Care Plan (MATCHPLAN) (VM) VAL168+				

	Percentiles	Smallest		
1%	.1333333	.08		
5%	.2758621	.1		
10%	.32	.1333333	Obs	206
25%	.4333333	.1904762	Sum of Wgt.	206
50%	.5536399		Mean	.5734583
		Largest	Std. Dev.	.1953091
75%	.7142857	.9666666		
90%	.862069	1	Variance	.0381456
95%	.8928571	1	Skewness	.1059362
99%	1	1	Kurtosis	2.509303

SCALE DESCRIPTION

This scale captures the tendency of the care plan to match data recorded elsewhere in the medical chart. The numerical value for this score is the proportion of charts with pain noted as a problem in the chart and also have evidence of pain care planning with regards to pain.
(Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
qi2k	MRR 2.k doc problem-pain
qi4K	
qi4ak	MRR 4a.k recent update-pain
qi4bK	
qi4ck	MRR 4c.k goals for prevent-pain
qi4dk	MRR 4d.k nurse interven-pain

LEVEL-1 QIs

qi	varlab
PAI0X	Pain poorly managed (MEGAQI)
PAN01	Pain worsening (LTCQ)

LEVEL-2 QIs

qi	varlab
none	

Match of Chart & Care Plan (COG) VAL169+

	Percentiles	Smallest		
1%	0	0		
5%	.6538461	0		
10%	.7777778	.3333333	Obs	192
25%	.9023809	.375	Sum of Wgt.	192
50%	1		Mean	.9210405
		Largest	Std. Dev.	.1523203
75%	1	1		
90%	1	1	Variance	.0232015
95%	1	1	Skewness	-3.327256
99%	1	1	Kurtosis	17.23802

SCALE DESCRIPTION

This scale captures the tendency of the care plan to match data recorded elsewhere in the medical chart. The numerical value for this score is the proportion of charts with cognition noted as a problem in the chart and also have evidence of pain care planning with regards to pain.
(Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
qi2a	MRR 2.a doc problem-cognitive status
qi4a	MRR 4.a on care plan-cognitive status
qi4aa	MRR 4a.a recent update-cognit status
qi4ba	MRR 4b.a goals for improve-cognit status
qi4ca	MRR 4c.a goals for prevent-cognit status
qi4da	MRR 4d.a nurse interven-cognitive status

LEVEL-1 QIs

qi	varlab
COG01	Cognition worsening (LTCQ)

LEVEL-2 QIs

qi	varlab
none	

Match of Chart & Care Plan (MOD) VAL170+

	Percentiles	Smallest		
1%	0	0		
5%	.5	0		
10%	.75	0	Obs	194
25%	.8666667	.2857143	Sum of Wgt.	194
50%	1		Mean	.8991624
		Largest	Std. Dev.	.1851803
75%	1	1		
90%	1	1	Variance	.0342918
95%	1	1	Skewness	-2.729341
99%	1	1	Kurtosis	11.42806

SCALE DESCRIPTION

This scale captures the tendency of the care plan to match data recorded elsewhere in the medical chart. The numerical value for this score is the proportion of charts with affective functioning noted as a problem in the chart and care plan.
(Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
qi2d	MRR 2.d doc problem-depression
qi4d	MRR 4.d on care plan-cognitive status
qi4ad	MRR 4a.d recent update-depression
qi4bd	MRR 4b.d goals for improv-depression
qi4cd	MRR 4c.d goals for prevent-depression
qi4dd	MRR 4d.d nurse interven-depression

LEVEL-1 QIs

qi	varlab
MOD03	Depression new or worse (LTCQ)
DepWOTx	Depression without treatment (CHSRA)

LEVEL-2 QIs

qi	varlab
none	

Match of Chart & Care Plan (ADI) VAL171+

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	137
25%	.5	0	Sum of Wgt.	137
50%	.875		Mean	.7222176
		Largest	Std. Dev.	.3578526
75%	1	1		
90%	1	1	Variance	.1280584
95%	1	1	Skewness	-1.09298
99%	1	1	Kurtosis	2.753384

SCALE DESCRIPTION

This scale captures the tendency of the care plan to match data recorded elsewhere in the medical chart. The numerical value for this score is the proportion of charts with ADL functioning noted as a problem in the chart and care plan.
(Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
qi2f	MRR 2.f doc problem-adl improvement
qi4f	MRR 4.f on care plan-delirium
qi4af	MRR 4a.f recent update-adl improvement
qi4bf	MRR 4b.f goals for improve-adl improv
qi4cf	MRR 4c.f goals for prevent-adl improv
qi4df	MRR 4d.f nurse interven-adl improvement

LEVEL-1 QIs

qi	varlab
ADL03	ADL imprvmnt in res. w/capacity (MEGAQI)

LEVEL-2 QIs

qi	varlab
none	

Match of Chart & Care Plan (MOB) VAL172+

	Percentiles	Smallest		
1%	.2857143	.1428571		
5%	.6666667	.2857143		
10%	.7777778	.5	Obs	199
25%	.9047619	.5384616	Sum of Wgt.	199
50%	1		Mean	.9341925
		Largest	Std. Dev.	.1245138
75%	1	1		
90%	1	1	Variance	.0155037
95%	1	1	Skewness	-2.983607
99%	1	1	Kurtosis	14.7687

SCALE DESCRIPTION

This scale captures the tendency of the care plan to match data recorded elsewhere in the medical chart. The numerical value for this score is the proportion of charts with mobility functioning noted as a problem in the chart and care plan.
(Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
qi2h	MRR 2.h doc problem-mobolity\walking
qi4h	MRR 4.h on care plan-communication
qi4ah	MRR 4a.h recent update-mobility\walking
qi4bh	MRR 4b.h goals for improv-mobility\walk
qi4ch	MRR 4c.h goals for prevent-mobility\walk
qi4dh	MRR 4d.h nurse interven-mobility\walking

LEVEL-1 QIs

qi	varlab
MOB01	Mobility decline (LTCQ)
WAL0X	Walking performance (MEGAQI)

LEVEL-2 QIs

qi	varlab
none	

Match of Chart & Care Plan (INF) VAL173+

	Percentiles	Smallest			
1%	0	0			
5%	.1333333	0			
10%	.4	0	Obs		179
25%	.6	0	Sum of Wgt.		179
50%	.8571429		Mean		.7679908
		Largest	Std. Dev.		.2721518
75%	1	1			
90%	1	1	Variance		.0740666
95%	1	1	Skewness		-1.15596
99%	1	1	Kurtosis		3.702884

SCALE DESCRIPTION

This scale captures the tendency of the care plan to match data recorded elsewhere in the medical chart. The numerical value for this score is the proportion of charts with infection noted as a problem in the chart and care plan. (Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
qi2r	MRR 2.r doc problem-infections
qi4r	MRR 4.r on care plan-infections
qi4ar	MRR 4a.r recent update-infections
qi4br	MRR 4b.r goals for improv-infections
qi4cr	MRR 4c.r goals for prevent-infections
qi4dr	MRR 4d.r nurse interven-infections

LEVEL-1 QIs

qi	varlab
INF0X	Infection flare-up (MEGAQI)

LEVEL-2 QIs

qi	varlab
none	

Match of Chart & Care Plan (PRU) VAL174+

	Percentiles	Smallest		
1%	.1111111	0		
5%	.25	0		
10%	.375	.1111111	Obs	202
25%	.52	.1666667	Sum of Wgt.	202
50%	.7142857		Mean	.69131
		Largest	Std. Dev.	.2398549
75%	.9	1		
90%	1	1	Variance	.0575304
95%	1	1	Skewness	-.5216469
99%	1	1	Kurtosis	2.602947

SCALE DESCRIPTION

This scale captures the tendency of the care plan to match data recorded elsewhere in the medical chart. The numerical value for this score is the proportion of charts with pressure ulcers noted as a problem in the chart and care plan.
(Internal consistency reliability not applicable).

ITEMS IN SCALE

item	varlab
qi2s	MRR 2.s doc problem-pressure ulcers
qi4s	MRR 4.s on care plan-pressure ulcers
qi4as	MRR 4a.s recent update-pressure ulcers
qi4bs	MRR 4b.s goals for improv-press ulcers
qi4cs	MRR 4c.s goals for prevent-press ulcers
qi4ds	MRR 4d.s nurse interven-pressure ulcers

LEVEL-1 QIs

qi	varlab
PRU01	PU high & low risk (CHSRA)
PRU02	PU high risk (CHSRA)
PRU03	PU low risk (CHSRA)
PRU04	PU onset or worsening (LTCQ)
BUR0X	Burns abrasions bruises (MEGAQI)

LEVEL-2 QIs

qi	varlab
none	

Appendix G

Facility and “Gold” Rater Correspondence

Appendix G: Facility and "Gold" Rater Correspondence

Behavior Symptoms: High and Low Risk (BEH1)

	Facility ID	facility rated BEH1	gold rated BEH1	false pos BEH1	false neg BEH1	kappa BEH1	gamma BEH1
1	1	.11	.00	.11	.00	.01	1.00
2	2	.11	.07	.04	.00	.78	.36
3	18	.04	.09	.00	.04	.65	-.52
4	19	.14	.24	.00	.10	.67	-.50
5	20	.04	.03	.00	.00	1.00	.00
6	60	.03	.00	.03	.00	.03	1.00
7	89	.92	.92	.04	.04	.45	.00
8	92	.26	.30	.07	.11	.54	-.10
9	97	.29	.14	.14	.00	.59	.58
10	98	.17	.13	.04	.00	.83	.29
11	111	.12	.04	.08	.00	.47	.69
12	119	.24	.14	.14	.03	.45	.33
13	124	.07	.07	.00	.00	1.00	.00
14	130	.00	.00	.00	.00	1.00	.00
15	136	.04	.04	.00	.00	1.00	.00
16	138	.21	.07	.14	.00	.44	.72
17	147	.00	.00	.00	.00	1.00	.00
18	148	.00	.00	.00	.00	1.00	.00
19	167	.12	.08	.04	.00	.78	.36
20	298	.07	.04	.04	.00	.65	.52
21	302	.00	.00	.00	.00	1.00	.00
22	315	.04	.04	.00	.00	1.00	.00
23	319	.00	.00	.00	.00	1.00	.00
24	324	.23	.14	.09	.00	.70	.46
25	325	.12	.04	.12	.04	-.06	-.09
26	371	.24	.16	.08	.00	.75	.40
27	490	.29	.03	.25	.00	.17	.91
28	502	.15	.07	.07	.00	.63	.54
29	530	.26	.10	.16	.00	.50	.67
30	536	.27	.20	.10	.03	.63	.24
31	541	.40	.37	.07	.03	.79	.11
32	544	.07	.14	.03	.10	.27	-.23
33	573	.14	.03	.10	.00	.36	.78
34	607	.10	.13	.00	.03	.84	-.28
35	610	.04	.11	.00	.08	.47	-.69
36	613	.07	.11	.04	.07	.34	-.16
37	622	.00	.07	.00	.07	.01	-1.00
38	632	.33	.30	.03	.00	.92	.14
39	648	.07	.17	.03	.13	.21	-.26
40	649	.13	.20	.00	.07	.76	-.38
41	669	.18	.18	.00	.00	1.00	.00
42	676	.43	.37	.07	.00	.86	.24
43	677	.07	.10	.00	.03	.78	-.36

Behavior Symptoms: High and Low Risk (BEH1)

	Facility ID	facility rated BEH1	gold rated BEH1	false pos BEH1	false neg BEH1	kappa BEH1	gamma BEH1
44	709	.23	.23	.07	.07	.63	.00
45	732	.21	.17	.03	.00	.89	.20
46	733	.17	.07	.10	.00	.53	.64
47	739	.12	.12	.00	.00	1.00	.00
48	740	.78	.74	.04	.00	.90	.18
49	757	.10	.20	.00	.10	.62	-.56
50	762	.00	.00	.00	.00	1.00	.00
51	763	.03	.00	.03	.00	.03	1.00
52	769	.07	.07	.00	.00	1.00	.00
53	773	.15	.15	.00	.00	1.00	.00
54	774	.11	.11	.00	.00	1.00	.00
55	776	.00	.10	.00	.11	.01	-1.00
56	784	.10	.07	.03	.00	.78	.36
57	785	.32	.28	.07	.04	.75	.13
58	786	.04	.10	.00	.07	.47	-.69
59	799	.23	.20	.03	.00	.90	.18
60	800	.03	.03	.00	.00	1.00	.00
61	803	.14	.21	.03	.10	.52	-.26
62	804	.00	.00	.00	.00	1.00	.00
63	805	.00	.00	.00	.00	1.00	.00
64	823	.04	.04	.00	.00	1.00	.00
65	824	.00	.00	.00	.00	1.00	.00
66	825	.18	.14	.04	.00	.87	.23
67	831	.63	.47	.23	.07	.41	.30
68	833	.21	.25	.04	.08	.65	-.15
69	834	.15	.33	.04	.22	.32	-.41
70	836	.28	.28	.08	.08	.60	.00
71	842	.25	.27	.05	.09	.66	-.23
72	845	.11	.15	.07	.11	.18	-.06
73	848	.20	.13	.10	.03	.52	.26
74	857	.07	.28	.00	.21	.33	-.81
75	858	.30	.34	.03	.07	.77	-.12
76	859	.00	.18	.00	.18	.00	-1.00
77	861	.22	.26	.07	.11	.49	-.10
78	869	.08	.19	.04	.15	.20	-.25
79	876	.19	.22	.07	.11	.43	-.10
80	878	.20	.23	.00	.03	.90	-.18
81	882	.30	.30	.05	.05	.76	.00
82	884	.16	.16	.04	.04	.70	.00
83	886	.14	.18	.04	.07	.60	-.16
84	887	.15	.26	.04	.15	.44	-.33
85	890	.28	.31	.07	.10	.58	-.10
86	891	.38	.28	.10	.00	.77	.38
87	894	.22	.33	.04	.15	.55	-.32
88	906	.04	.31	.00	.24	.28	-.78

Behavior Symptoms: High and Low Risk (BEH1)

	Facility ID	facility rated BEH1	gold rated BEH1	false pos BEH1	false neg BEH1	kappa BEH1	gamma BEH1
89	912	.13	.13	.07	.07	.42	.00
90	913	.10	.23	.00	.13	.53	-.63
91	917	.00	.00	.00	.00	1.00	.00
92	924	.04	.11	.00	.07	.47	-.69
93	934	.64	.31	.39	.04	.22	.59
94	943	.15	.12	.08	.04	.51	.17
95	945	.26	.35	.04	.13	.59	-.25
96	953	.10	.10	.07	.07	.26	.00
97	954	.23	.15	.08	.00	.75	.39
98	959	.04	.08	.00	.08	.46	-1.08
99	962	.58	.42	.15	.00	.70	.46
100	963	.04	.04	.00	.00	1.00	.00
101	968	.16	.27	.12	.24	-.03	.02
102	970	.09	.05	.05	.00	.65	.52
103	980	.29	.10	.24	.05	.13	.22
104	986	.00	.04	.00	.04	.02	-1.00
105	991	.27	.26	.04	.04	.80	.00
106	996	.27	.00	.31	.00	.43	.57
107	1003	.08	.13	.04	.08	.33	-.16
108	1006	.30	.22	.07	.00	.81	.32
109	1016	.04	.04	.00	.00	1.00	.00
110	1019	.00	.05	.00	.05	.02	-1.00
111	1025	.00	.04	.00	.04	.02	-1.00
112	1026	.07	.18	.04	.14	.20	-.25
113	1029	.14	.18	.07	.11	.34	-.09
114	1033	.04	.04	.00	.00	1.00	.00
115	1037	.40	.33	.17	.13	.38	-.04
116	1039	.21	.11	.11	.00	.61	.56
117	1040	.21	.27	.00	.08	.80	-.37
118	1043	.30	.14	.22	.07	.17	.17
119	1044	.33	.27	.13	.07	.53	.17
120	1054	.07	.07	.00	.00	1.00	.00
121	1060	.00	.00	.00	.00	1.00	.00
122	1072	.27	.23	.09	.05	.64	.16
123	1074	.04	.09	.00	.09	.45	-1.09
124	1076	.00	.00	.00	.00	1.00	.00
125	1077	.05	.15	.00	.10	.46	-.70
126	1079	.26	.17	.09	.00	.75	.40
127	1080	.14	.14	.03	.03	.71	.00
128	1084	.20	.24	.08	.12	.42	-.10
129	1085	.32	.25	.11	.04	.65	.23
130	1091	.21	.29	.04	.11	.62	-.24
131	1097	.23	.31	.04	.12	.61	-.25
132	1100	.07	.17	.00	.10	.52	-.64
133	1102	.21	.21	.07	.07	.58	.00

Behavior Symptoms: High and Low Risk (BEH1)

	Facility ID	facility rated BEH1	gold rated BEH1	false pos BEH1	false neg BEH1	kappa BEH1	gamma BEH1
134	1106	.14	.10	.10	.05	.32	.15
135	1115	.22	.26	.09	.13	.40	-.10
136	1118	.23	.15	.12	.04	.51	.27
137	1137	.07	.11	.00	.04	.78	-.36
138	1141	.23	.37	.03	.17	.53	-.37
139	1142	.25	.40	.04	.18	.54	-.31
140	1144	.17	.20	.03	.07	.67	-.15
141	1148	.34	.48	.03	.17	.58	-.35
142	1149	.11	.24	.00	.14	.53	-.64
143	1152	.14	.27	.00	.14	.59	-.58
144	1153	.00	.19	.00	.19	.00	-1.00
145	1158	.08	.23	.00	.16	.43	-.72
146	1160	.00	.10	.00	.10	.01	-1.00
147	1162	.00	.07	.00	.07	.01	-1.00
148	1163	.26	.30	.04	.09	.68	-.15
149	1165	.00	.00	.00	.00	1.00	.00
150	1166	.31	.19	.19	.08	.29	.20
151	1174	.33	.23	.10	.00	.76	.39
152	1176	.04	.04	.04	.04	-.04	.00
153	1178	.20	.14	.10	.07	.40	-.05
154	1181	.19	.19	.04	.04	.75	.00
155	1188	.10	.07	.03	.00	.78	.36
156	1209	.03	.07	.00	.03	.65	-.52
157	1218	.03	.03	.00	.00	1.00	.00
158	1236	.00	.00	.00	.00	1.00	.00
159	1241	.33	.23	.10	.00	.76	.39
160	1246	.08	.12	.00	.04	.78	-.36
161	1249	.28	.21	.10	.03	.63	.24
162	1255	.24	.21	.03	.00	.90	.18
163	1264	.30	.23	.07	.00	.83	.29
164	1280	.00	.04	.00	.04	.02	-1.00
165	1287	.00	.00	.00	.00	1.00	.00
166	1294	.07	.18	.00	.11	.52	-.65
167	1308	.25	.14	.11	.00	.67	.50
168	1321	.20	.33	.03	.17	.50	-.38
169	1323	.15	.22	.00	.07	.76	-.39
170	1325	.07	.00	.07	.00	.01	1.00
171	1329	.17	.32	.07	.21	.26	-.22
172	1330	.54	.43	.14	.04	.65	.29
173	1337	.27	.19	.08	.00	.79	.35
174	1345	.07	.07	.03	.03	.46	.00
175	1349	.24	.28	.00	.03	.91	-.16
176	1350	.07	.13	.03	.10	.27	-.23
177	1354	.17	.20	.07	.07	.55	.10
178	1355	.30	.27	.13	.10	.43	.07

Behavior Symptoms: High and Low Risk (BEH1)

	Facility ID	facility rated BEH1	gold rated BEH1	false pos BEH1	false neg BEH1	kappa BEH1	gamma BEH1
179	1357	.04	.03	.00	.00	1.00	.00
180	1366	.28	.34	.03	.10	.68	-.22
181	1368	.00	.00	.00	.00	1.00	.00
182	1372	.11	.07	.07	.04	.34	.16
183	1374	.04	.13	.00	.09	.47	-.70
184	1377	.17	.21	.00	.03	.89	-.20
185	1380	.00	.00	.00	.00	1.00	.00
186	1381	.13	.07	.10	.03	.27	.23
187	1383	.23	.33	.03	.13	.59	-.31
188	1384	.04	.04	.04	.04	-.04	.00
189	1385	.17	.24	.03	.10	.58	-.25
190	1386	.23	.33	.00	.12	.72	-.43
191	1391	.00	.13	.00	.13	.01	-1.00
192	2009	.39	.32	.11	.04	.69	.22
193	2013	.11	.14	.00	.04	.84	-.28
194	2039	.21	.31	.00	.10	.73	-.42
195	2087	.07	.10	.00	.03	.78	-.36
196	2088	.07	.17	.00	.10	.52	-.64
197	2124	.37	.37	.00	.00	1.00	.00
198	2231	.14	.14	.00	.00	1.00	.00
199	2236	.30	.25	.04	.00	.91	.17
200	3075	.38	.47	.07	.14	.58	-.11
201	5002	.06	.06	.00	.00	1.00	.00
202	5004	.00	.00	.00	.00	1.00	.00
203	5019	.04	.12	.00	.08	.47	-.69
204	5020	.10	.07	.03	.00	.78	.36
205	5021	.14	.11	.07	.04	.51	.17
206	5025	.08	.04	.04	.00	.65	.52
207	5030	.00	.00	.00	.00	1.00	.00
208	5041	.00	.03	.00	.03	.03	-1.00
209	5048	.00	.00	.00	.00	1.00	.00

Behavior Symptoms: High Risk (BEH2)

	Facility ID	facility rated BEH2	gold rated BEH2	false pos BEH2	false neg BEH2	kappa BEH2	gamma BEH2
1	1	.00	.00	.00	.00	.	.
2	2	.12	.09	.04	.00	.78	.37
3	18	.08	.22	.00	.11	.62	-.56
4	19	.16	.28	.00	.12	.66	-.51
5	20	.06	.04	.00	.00	1.00	.00
6	60	.11	.00	.00	.00	1.00	.00

Behavior Symptoms: High Risk (BEH2)

	Facility ID	facility rated BEH2	gold rated BEH2	false pos BEH2	false neg BEH2	kappa BEH2	gamma BEH2
7	89	.91	.92	.04	.04	.29	.57
8	92	.33	.38	.10	.14	.50	-.10
9	97	.33	.17	.14	.00	.65	.52
10	98	.33	.21	.08	.00	.80	.33
11	111	.14	.05	.10	.00	.46	.70
12	119	.33	.17	.20	.05	.39	.33
13	124	.14	.12	.00	.00	1.00	.00
14	130	.00	.00	.00	.00	1.00	.00
15	136	.10	.09	.00	.00	1.00	.00
16	138	.26	.08	.18	.00	.42	.73
17	147	.00	.00	.00	.00	.	.
18	148	.00	.00	.00	.00	1.00	.00
19	167	.11	.11	.00	.00	1.00	.00
20	298	.11	.06	.06	.00	.64	.53
21	302	.00	.00	.00	.00	1.00	.00
22	315	.11	.11	.00	.00	1.00	.00
23	319	.00	.00	.00	.00	1.00	.00
24	324	.21	.13	.07	.00	.76	.39
25	325	.12	.08	.08	.08	.25	-.65
26	371	.31	.21	.14	.00	.66	.51
27	490	.33	.04	.29	.00	.16	.91
28	502	.22	.10	.11	.00	.61	.56
29	530	.29	.11	.18	.00	.48	.68
30	536	.25	.20	.15	.05	.50	.63
31	541	.50	.41	.05	.05	.82	.00
32	544	.12	.15	.06	.06	.53	.23
33	573	.17	.05	.14	.00	.35	.79
34	607	.13	.14	.00	.04	.83	-.29
35	610	.07	.15	.00	.15	.44	-.72
36	613	.11	.16	.06	.11	.31	-.15
37	622	.00	.07	.00	.17	.00	-1.00
38	632	.39	.31	.00	.00	1.00	.00
39	648	.04	.18	.00	.14	.35	-.79
40	649	.17	.22	.00	.04	.87	-.20
41	669	.18	.19	.00	.00	1.00	.00
42	676	.48	.36	.10	.00	.81	.32
43	677	.10	.13	.00	.00	1.00	.00
44	709	.32	.30	.12	.12	.50	.00
45	732	.23	.21	.05	.00	.87	.26
46	733	.18	.07	.06	.00	.77	.38
47	739	.16	.18	.00	.00	1.00	.00
48	740	.80	.74	.05	.00	.84	.22
49	757	.16	.26	.00	.06	.84	-.24
50	762	.00	.00	.00	.00	1.00	.00
51	763	.00	.00	.00	.00	1.00	.00
52	769	.18	.13	.00	.00	1.00	.00

Behavior Symptoms: High Risk (BEH2)

	Facility ID	facility rated BEH2	gold rated BEH2	false pos BEH2	false neg BEH2	kappa BEH2	gamma BEH2
53	773	.24	.18	.00	.00	1.00	.00
54	774	.19	.17	.00	.00	1.00	.00
55	776	.00	.14	.00	.19	.00	-1.00
56	784	.13	.09	.05	.00	.78	.37
57	785	.37	.39	.07	.07	.73	.00
58	786	.10	.23	.00	.20	.42	-.73
59	799	.27	.20	.04	.00	.90	.18
60	800	.00	.17	.00	.00	.	.
61	803	.19	.20	.05	.05	.72	.08
62	804	.00	.00	.00	.00	1.00	.00
63	805	.00	.00	.00	.00	1.00	.00
64	823	.05	.05	.00	.00	1.00	.00
65	824	.00	.00	.00	.00	.	.
66	825	.29	.22	.07	.00	.83	.34
67	831	.73	.50	.27	.08	.28	.27
68	833	.24	.24	.05	.05	.73	.00
69	834	.13	.38	.00	.27	.50	-.57
70	836	.29	.30	.06	.06	.74	.07
71	842	.32	.32	.06	.12	.61	-.26
72	845	.20	.19	.13	.13	.18	.00
73	848	.35	.19	.18	.00	.59	.64
74	857	.11	.30	.00	.28	.40	-.70
75	858	.33	.38	.04	.08	.75	-.13
76	859	.00	.20	.00	.22	.00	-1.00
77	861	.30	.33	.13	.06	.61	.26
78	869	.11	.26	.06	.25	.14	-.20
79	876	.36	.32	.09	.27	.33	-.25
80	878	.30	.31	.00	.00	1.00	.00
81	882	.30	.33	.10	.00	.81	.61
82	884	.24	.09	.10	.00	.77	.28
83	886	.17	.23	.05	.09	.58	-.17
84	887	.24	.35	.07	.20	.47	-.13
85	890	.38	.32	.13	.06	.63	.35
86	891	.30	.24	.09	.00	.79	.39
87	894	.26	.38	.06	.17	.53	-.16
88	906	.06	.31	.00	.31	.38	-.67
89	912	.10	.13	.05	.05	.55	.21
90	913	.13	.27	.00	.14	.63	-.50
91	917	.00	.00	.00	.00	.	.
92	924	.11	.30	.00	.25	.38	-.76
93	934	.68	.24	.47	.06	.33	-3.89
94	943	.22	.17	.18	.00	.56	.61
95	945	.29	.40	.00	.17	.69	-.54
96	953	.11	.14	.08	.17	.11	-.59
97	954	.35	.21	.13	.00	.72	.44
98	959	.00	.33	.00	.33	.	.

Behavior Symptoms: High Risk (BEH2)

	Facility ID	facility rated BEH2	gold rated BEH2	false pos BEH2	false neg BEH2	kappa BEH2	gamma BEH2
99	962	.61	.50	.08	.00	.83	.15
100	963	.33	.25	.00	.00	.	.
101	968	.25	.31	.17	.33	-.05	.04
102	970	.33	.14	.17	.00	.59	.58
103	980	.46	.07	.50	.10	-.02	-1.28
104	986	.00	.00	.00	.00	.	.
105	991	.33	.35	.00	.08	.85	-.29
106	996	.26	.00	.25	.00	.60	.40
107	1003	.07	.00	.00	.00	1.00	.00
108	1006	.38	.36	.15	.00	.71	.41
109	1016	.50	1.00	.00	.00	.	.
110	1019	.00	.25	.00	.50	.	.
111	1025	.00	.11	.00	.00	1.00	.00
112	1026	.08	.25	.07	.13	.39	.10
113	1029	.21	.29	.11	.11	.57	.20
114	1033	.17	.14	.00	.00	1.00	.00
115	1037	.39	.31	.13	.13	.52	-.59
116	1039	.24	.13	.14	.00	.60	.57
117	1040	.25	.39	.00	.11	.76	-.43
118	1043	.35	.19	.20	.13	.32	-.66
119	1044	.38	.42	.08	.15	.59	.08
120	1054	.50	.40	.00	.00	1.00	.00
121	1060	.00	.00	.00	.00	1.00	.00
122	1072	.32	.31	.15	.08	.52	.02
123	1074	.06	.11	.00	.13	.44	-1.13
124	1076	.00	.00	.00	.00	1.00	.00
125	1077	.05	.13	.00	.06	.64	-.53
126	1079	.32	.19	.11	.00	.73	.42
127	1080	.17	.17	.04	.04	.70	.00
128	1084	.17	.26	.06	.18	.36	-.26
129	1085	.43	.25	.15	.05	.59	.18
130	1091	.22	.30	.04	.11	.62	-.25
131	1097	.29	.33	.05	.10	.68	-.08
132	1100	.06	.16	.00	.13	.56	-.53
133	1102	.27	.27	.10	.10	.54	.00
134	1106	.13	.11	.06	.06	.43	.00
135	1115	.17	.29	.06	.18	.43	-.10
136	1118	.21	.16	.11	.05	.52	.32
137	1137	.18	.13	.00	.00	1.00	.00
138	1141	.23	.44	.00	.18	.64	-.47
139	1142	.30	.44	.04	.22	.47	-.38
140	1144	.26	.29	.05	.05	.75	.06
141	1148	.33	.55	.00	.24	.56	-.61
142	1149	.13	.30	.00	.19	.54	-.57
143	1152	.23	.32	.00	.15	.69	-.42
144	1153	.00	.25	.00	.31	.20	-.80

Behavior Symptoms: High Risk (BEH2)

	Facility ID	facility rated BEH2	gold rated BEH2	false pos BEH2	false neg BEH2	kappa BEH2	gamma BEH2
145	1158	.10	.26	.00	.19	.42	-.74
146	1160	.00	.50	.00	1.00	.	.
147	1162	.00	.33	.00	1.00	.	.
148	1163	.38	.37	.07	.07	.73	.07
149	1165	.00	.00	.00	.00	.	.
150	1166	.33	.23	.23	.09	.25	.18
151	1174	.37	.29	.13	.00	.73	.42
152	1176	.06	.05	.06	.06	-.06	.00
153	1178	.26	.21	.11	.11	.47	-.30
154	1181	.25	.23	.05	.05	.73	.00
155	1188	.20	.14	.07	.00	.76	.39
156	1209	.00	.04	.00	.05	.02	-1.00
157	1218	.00	.00	.00	.00	.	.
158	1236	.00	.00	.00	.00	.	.
159	1241	.39	.26	.11	.00	.77	.42
160	1246	.14	.18	.00	.07	.76	-.38
161	1249	.37	.24	.11	.05	.65	.15
162	1255	.27	.19	.05	.00	.88	.22
163	1264	.36	.27	.08	.00	.82	.31
164	1280	.00	.00	.00	.00	1.00	.00
165	1287	.00	.00	.00	.00	1.00	.00
166	1294	.06	.15	.00	.13	.45	-.71
167	1308	.32	.21	.11	.00	.73	.43
168	1321	.24	.40	.04	.20	.46	-.38
169	1323	.17	.25	.00	.09	.75	-.40
170	1325	.09	.00	.10	.00	.01	1.00
171	1329	.23	.35	.10	.20	.31	-.15
172	1330	.61	.46	.17	.04	.56	.38
173	1337	.42	.22	.08	.00	.84	.32
174	1345	.10	.07	.05	.05	.45	.00
175	1349	.20	.27	.00	.05	.88	-.18
176	1350	.10	.12	.05	.10	.32	-.15
177	1354	.13	.20	.09	.09	.47	.51
178	1355	.33	.27	.15	.11	.40	.07
179	1357	.00	.00	.00	.00	1.00	.00
180	1366	.32	.41	.05	.14	.60	-.25
181	1368	.00	.00	.00	.00	.	.
182	1372	.19	.07	.14	.00	.44	.71
183	1374	.07	.21	.00	.14	.44	-.72
184	1377	.22	.26	.00	.05	.88	-.22
185	1380	.00	.00	.00	.00	.	.
186	1381	.16	.08	.11	.05	.32	.15
187	1383	.27	.33	.04	.08	.74	-.04
188	1384	.00	.07	.00	.00	.	.
189	1385	.18	.25	.00	.13	.63	-.63
190	1386	.29	.35	.00	.10	.79	-.34

Behavior Symptoms: High Risk (BEH2)

	Facility ID	facility rated BEH2	gold rated BEH2	false pos BEH2	false neg BEH2	kappa BEH2	gamma BEH2
191	1391	.00	.21	.00	.22	.00	-1.00
192	2009	.42	.35	.12	.04	.68	.22
193	2013	.13	.17	.00	.04	.83	-.29
194	2039	.26	.35	.00	.09	.80	-.34
195	2087	.10	.14	.00	.05	.77	-.37
196	2088	.09	.21	.00	.14	.51	-.66
197	2124	.37	.37	.00	.00	1.00	.00
198	2231	.15	.17	.00	.00	1.00	.00
199	2236	.42	.33	.05	.00	.89	.20
200	3075	.41	.50	.08	.12	.62	-.04
201	5002	.20	.20	.00	.00	1.00	.00
202	5004	.00	.00	.00	.00	1.00	.00
203	5019	.17	.50	.00	.25	.64	-.42
204	5020	.27	.18	.10	.00	.74	.41
205	5021	.50	.30	.25	.13	.25	.13
206	5025	.25	.10	.13	.00	.61	.56
207	5030	.	.	.	.	.	.
208	5041	.00	.08	.00	.08	.01	-1.00
209	5048	.00	.00	.00	.00	1.00	.00

Behavior Symptoms: Low Risk (BEH3)

	Facility ID	facility rated BEH3	gold rated BEH3	false pos BEH3	false neg BEH3	kappa BEH3	gamma BEH3
1	1	.17	.00	.33	.00	.	.
2	2	.00	.00	.00	.00	.	.
3	18	.00	.00	.00	.00	1.00	.00
4	19	.00	.00	.00	.00	.	.
5	20	.00	.00	.00	.00	1.00	.00
6	60	.00	.00	.00	.00	1.00	.00
7	89	1.00	.	.	.	.	.
8	92	.00	.00	.00	.00	1.00	.00
9	97	.14	.00	.00	.00	.	.
10	98	.00	.00	.00	.00	1.00	.00
11	111	.00	.00	.00	.00	1.00	.00
12	119	.00	.00	.00	.00	1.00	.00
13	124	.00	.00	.00	.00	1.00	.00
14	130	.00	.00	.00	.00	1.00	.00
15	136	.00	.00	.00	.00	1.00	.00
16	138	.00	.00	.00	.00	1.00	.00
17	147	.00	.00	.00	.00	1.00	.00
18	148	.00	.00	.00	.00	1.00	.00
19	167	.13	.00	.14	.00	.00	1.00
20	298	.00	.00	.00	.00	1.00	.00
21	302	.00	.00	.00	.00	.	.

Behavior Symptoms: Low Risk (BEH3)

	Facility ID	facility rated BEH3	gold rated BEH3	false pos BEH3	false neg BEH3	kappa BEH3	gamma BEH3
22	315	.00	.00	.00	.00	1.00	.00
23	319	.00	.00	.00	.00	1.00	.00
24	324	.25	.14	.00	.00	1.00	.00
25	325	.11	.00	.13	.00	.01	1.00
26	371	.11	.09	.00	.00	1.00	.00
27	490	.00	.00	.00	.00	1.00	.00
28	502	.00	.00	.00	.00	1.00	.00
29	530	.00	.00	.00	.00	.	.
30	536	.30	.	.	.	.	.
31	541	.13	.00	.00	.00	.	.
32	544	.00	.11	.00	.13	.01	-1.00
33	573	.00	.00	.00	.00	1.00	.00
34	607	.00	.00	.00	.00	.	.
35	610	.00	.00	.00	.00	1.00	.00
36	613	.00	.00	.00	.00	1.00	.00
37	622	.00	.06	.00	.06	.01	-1.00
38	632	.14	.00	.	.	.	.
39	648	.17	.13	.20	.00	.40	1.20
40	649	.00	.00	.00	.00	.	.
41	669	.18	.00	.00	.00	.	.
42	676	.33	.38	.00	.00	1.00	.00
43	677	.05	.07	.00	.07	.46	-1.08
44	709	.09	.10	.00	.00	1.00	.00
45	732	.14	.00	.00	.00	1.00	.00
46	733	.15	.00	.00	.00	.	.
47	739	.00	.00	.00	.00	1.00	.00
48	740	.50	.75	.00	.00	.	.
49	757	.00	.09	.00	.13	.01	-1.00
50	762	.00	.00	.00	.00	1.00	.00
51	763	.05	.00	.06	.00	.01	1.00
52	769	.00	.00	.00	.00	1.00	.00
53	773	.00	.00	.00	.00	1.00	.00
54	774	.00	.00	.00	.00	1.00	.00
55	776	.00	.00	.00	.00	1.00	.00
56	784	.00	.00	.00	.00	1.00	.00
57	785	.22	.09	.00	.00	1.00	.00
58	786	.00	.00	.00	.00	1.00	.00
59	799	.00	.	.	.	.	.
60	800	.03	.00	.00	.00	1.00	.00
61	803	.00	.25	.00	.25	.	.
62	804	.00	.00	.00	.00	1.00	.00
63	805	.00	.00	.00	.00	1.00	.00
64	823	.00	.00	.00	.00	1.00	.00
65	824	.00	.00	.00	.00	1.00	.00
66	825	.07	.00	.00	.00	1.00	.00

Behavior Symptoms: Low Risk (BEH3)

	Facility ID	facility rated BEH3	gold rated BEH3	false pos BEH3	false neg BEH3	kappa BEH3	gamma BEH3
67	831	.00	.00	.00	.00	.	.
68	833	.00	.33	.00	1.00	.	.
69	834	.18	.17	.20	.20	.09	-1.04
70	836	.25	.20	.20	.20	.14	-.90
71	842	.00	.00	.00	.00	.	.
72	845	.00	.09	.00	.09	.01	-1.00
73	848	.00	.00	.00	.00	1.00	.00
74	857	.00	.00	.00	.00	.	.
75	858	.00	.00	.00	.00	.	.
76	859	.00	.13	.00	.14	.01	-1.00
77	861	.00	.11	.00	.00	1.00	.00
78	869	.00	.00	.00	.00	1.00	.00
79	876	.06	.00	.13	.00	.01	1.00
80	878	.00	.18	.00	.00	1.00	.00
81	882	.30	.20	.00	.00	1.00	.00
82	884	.00	.21	.00	.14	.67	-.33
83	886	.00	.00	.00	.00	1.00	.00
84	887	.00	.00	.00	.00	1.00	.00
85	890	.15	.29	.00	.14	.65	-.70
86	891	.67	.50	.00	.00	1.00	.00
87	894	.13	.17	.00	.00	1.00	.00
88	906	.00	.	.	.	.	.
89	912	.20	.14	.14	.14	.18	-.82
90	913	.00	.00	.00	.00	.	.
91	917	.00	.00	.00	.00	1.00	.00
92	924	.00	.00	.00	.00	1.00	.00
93	934	.33	.42	.33	.00	.	.
94	943	.00	.07	.00	.00	1.00	.00
95	945	.17	.25	.00	.00	.	.
96	953	.10	.07	.00	.00	1.00	.00
97	954	.00	.00	.00	.00	1.00	.00
98	959	.04	.00	.00	.00	1.00	.00
99	962	.33	.33	.00	.00	.	.
100	963	.00	.00	.00	.00	1.00	.00
101	968	.08	.20	.10	.20	-.15	.14
102	970	.00	.00	.00	.00	1.00	.00
103	980	.00	.14	.00	.00	1.00	.00
104	986	.00	.05	.00	.05	.02	-1.00
105	991	.13	.10	.00	.00	1.00	.00
106	996	.29	.00	.50	.00	.	.
107	1003	.10	.21	.11	.11	.40	1.12
108	1006	.00	.08	.00	.00	1.00	.00
109	1016	.00	.00	.00	.00	1.00	.00
110	1019	.00	.00	.00	.00	1.00	.00
111	1025	.00	.00	.00	.00	1.00	.00

Behavior Symptoms: Low Risk (BEH3)

	Facility ID	facility rated BEH3	gold rated BEH3	false pos BEH3	false neg BEH3	kappa BEH3	gamma BEH3
112	1026	.00	.08	.00	.00	.	.
113	1029	.07	.07	.00	.00	1.00	.00
114	1033	.00	.00	.00	.00	1.00	.00
115	1037	.50	.38	.50	.00	.	.
116	1039	.00	.00	.00	.00	.	.
117	1040	.00	.00	.00	.00	1.00	.00
118	1043	.14	.08	.00	.00	1.00	.00
119	1044	.29	.00	.09	.00	.80	.20
120	1054	.00	.00	.00	.00	1.00	.00
121	1060	.00	.00	.00	.00	1.00	.00
122	1072	.00	.11	.00	.00	.	.
123	1074	.00	.00	.00	.00	.	.
124	1076	.00	.00	.00	.00	1.00	.00
125	1077	.00	.25	.00	.50	.	.
126	1079	.00	.00	.00	.00	.	.
127	1080	.00	.00	.00	.00	1.00	.00
128	1084	.29	.17	.00	.00	1.00	.00
129	1085	.00	.25	.00	.00	.	.
130	1091	.00	.00	.00	.00	.	.
131	1097	.00	.00	.00	.00	.	.
132	1100	.08	.20	.00	.00	1.00	.00
133	1102	.00	.00	.00	.00	1.00	.00
134	1106	.20	.00	.33	.00	.	.
135	1115	.40	.00	.00	.00	.	.
136	1118	.29	.00	.00	.00	.	.
137	1137	.00	.00	.00	.00	1.00	.00
138	1141	.25	.00	.00	.00	1.00	.00
139	1142	.00	.20	.00	.00	1.00	.00
140	1144	.00	.00	.00	.00	1.00	.00
141	1148	.38	.29	.14	.00	.70	.47
142	1149	.08	.11	.00	.11	.44	-1.11
143	1152	.00	.00	.00	.00	.	.
144	1153	.00	.00	.00	.00	1.00	.00
145	1158	.00	.00	.00	.00	.	.
146	1160	.00	.00	.00	.00	1.00	.00
147	1162	.00	.00	.00	.00	1.00	.00
148	1163	.00	.00	.00	.00	.	.
149	1165	.00	.00	.00	.00	1.00	.00
150	1166	.00	.00	.00	.00	.	.
151	1174	.00	.00	.00	.00	.	.
152	1176	.00	.00	.00	.00	1.00	.00
153	1178	.00	.00	.00	.00	1.00	.00
154	1181	.00	.00	.00	.00	1.00	.00
155	1188	.00	.00	.00	.00	1.00	.00
156	1209	.11	.14	.00	.00	1.00	.00

Behavior Symptoms: Low Risk (BEH3)

	Facility ID	facility rated BEH3	gold rated BEH3	false pos BEH3	false neg BEH3	kappa BEH3	gamma BEH3
157	1218	.04	.04	.00	.00	1.00	.00
158	1236	.00	.00	.00	.00	1.00	.00
159	1241	.25	.14	.14	.00	.68	.39
160	1246	.00	.00	.00	.00	1.00	.00
161	1249	.10	.00	.25	.00	.00	1.00
162	1255	.14	.50	.00	.00	.	.
163	1264	.00	.00	.00	.00	1.00	.00
164	1280	.00	.06	.00	.07	.01	-1.00
165	1287	.00	.00	.00	.00	1.00	.00
166	1294	.08	.25	.00	.13	.61	-.56
167	1308	.11	.00	.13	.00	.01	1.00
168	1321	.00	.00	.00	.00	1.00	.00
169	1323	.00	.00	.00	.00	.	.
170	1325	.06	.00	.06	.00	.02	1.00
171	1329	.00	.25	.00	.14	.50	-.50
172	1330	.20	.00	.00	.00	.	.
173	1337	.14	.00	.25	.00	.50	.50
174	1345	.00	.00	.00	.00	.	.
175	1349	.33	.33	.00	.00	.	.
176	1350	.00	.25	.00	.25	.	.
177	1354	.33	.	.	.	.	.
178	1355	.00	.	.	.	.	.
179	1357	.05	.05	.00	.00	1.00	.00
180	1366	.14	.14	.00	.00	1.00	.00
181	1368	.00	.00	.00	.00	1.00	.00
182	1372	.00	.08	.00	.09	.01	-1.00
183	1374	.00	.00	.00	.00	1.00	.00
184	1377	.00	.00	.00	.00	1.00	.00
185	1380	.00	.00	.00	.00	1.00	.00
186	1381	.09	.00	.00	.00	1.00	.00
187	1383	.00	.	.	.	.	.
188	1384	.04	.00	.00	.00	1.00	.00
189	1385	.17	.23	.09	.09	.50	.27
190	1386	.00	.25	.00	.33	.	.
191	1391	.00	.00	.00	.00	1.00	.00
192	2009	.00	.00	.00	.00	.	.
193	2013	.00	.00	.00	.00	.	.
194	2039	.00	.17	.00	.17	.00	-1.00
195	2087	.00	.00	.00	.00	1.00	.00
196	2088	.00	.00	.00	.00	1.00	.00
197	2124	.	.	.	.	.	.
198	2231	.00	.00	.00	.00	.	.
199	2236	.00	.00	.00	.00	1.00	.00
200	3075	.00	.25	.00	.00	.	.
201	5002	.00	.00	.00	.00	1.00	.00

Behavior Symptoms: Low Risk (BEH3)

	Facility ID	facility rated BEH3	gold rated BEH3	false pos BEH3	false neg BEH3	kappa BEH3	gamma BEH3
202	5004	.00	.00	.00	.00	1.00	.00
203	5019	.00	.00	.00	.00	1.00	.00
204	5020	.00	.00	.00	.00	1.00	.00
205	5021	.00	.00	.00	.00	1.00	.00
206	5025	.00	.00	.00	.00	1.00	.00
207	5030	.00	.00	.00	.00	1.00	.00
208	5041	.00	.00	.00	.00	1.00	.00
209	5048	.00	.00	.00	.00	1.00	.00

Little or No Activity (SOC2)

	Facility ID	facility rated SOC2	gold rated SOC2	false pos SOC2	false neg SOC2	kappa SOC2	gamma SOC2
1	1	.00	.40	.00	.11	.83	-.17
2	2	.04	.30	.00	.26	.17	-.91
3	18	.00	.13	.00	.14	.01	-1.00
4	19	.00	.28	.00	.29	.00	-1.00
5	20	.00	.40	.00	.43	.00	-1.00
6	60	.03	.33	.03	.33	-.06	.47
7	89	.00	.13	.00	.13	.01	-1.00
8	92	.00	.56	.00	.54	.07	-.93
9	97	.04	.07	.04	.07	-.05	.04
10	98	.09	.17	.00	.09	.62	-.55
11	111	.00	.44	.00	.44	.00	-1.00
12	119	.07	.69	.00	.64	.06	-.97
13	124	.00	.30	.00	.30	.00	-1.00
14	130	.07	.14	.00	.07	.63	-.54
15	136	.00	.32	.00	.29	.13	-.88
16	138	.03	.55	.00	.52	.06	-.97
17	147	.03	.03	.00	.00	1.00	.00
18	148	.00	.04	.00	.04	.03	-1.00
19	167	.17	.46	.04	.29	.33	-.20
20	298	.11	.26	.00	.15	.53	-.64
21	302	.84	.75	.13	.04	.35	.02
22	315	.26	.26	.07	.07	.61	.00
23	319	.03	.30	.00	.27	.15	-.92
24	324	.14	.23	.09	.18	.10	-.06
25	325	.00	.48	.00	.48	.00	-1.00
26	371	.16	.32	.04	.20	.36	-.38
27	490	.04	.14	.00	.11	.36	-.78
28	502	.35	.30	.04	.00	.91	.16
29	530	.10	.25	.05	.20	.17	-.22
30	536	.03	.47	.00	.43	.08	-.96
31	541	.17	.50	.00	.33	.33	-.80

Little or No Activity (SOC2)

	Facility ID	facility rated SOC2	gold rated SOC2	false pos SOC2	false neg SOC2	kappa SOC2	gamma SOC2
32	544	.00	.52	.00	.52	.00	-1.00
33	573	.10	.52	.00	.41	.19	-.89
34	607	.17	.33	.10	.24	.13	.07
35	610	.04	.37	.00	.36	.12	-.94
36	613	.11	.30	.00	.19	.46	-.70
37	622	.00	.63	.00	.66	.00	-1.00
38	632	.20	.40	.07	.27	.24	-.28
39	648	.10	.37	.00	.27	.32	-.81
40	649	.03	.47	.00	.43	.08	-.96
41	669	.30	.50	.04	.26	.42	-.45
42	676	.10	.47	.00	.37	.23	-.87
43	677	.14	.31	.03	.21	.33	-.41
44	709	.17	.67	.00	.50	.18	-.90
45	732	.00	.45	.00	.45	.00	-1.00
46	733	.13	.33	.03	.23	.29	-.43
47	739	.00	.27	.00	.27	.00	-1.00
48	740	.04	.15	.00	.11	.36	-.78
49	757	.27	.43	.03	.20	.50	-.41
50	762	.07	.61	.00	.54	.09	-.95
51	763	.00	.90	.00	.89	.04	-.96
52	769	.26	.82	.07	.63	-.05	.93
53	773	.15	.22	.00	.07	.76	-.39
54	774	.00	.36	.00	.36	.00	-1.00
55	776	.00	.87	.00	.88	.15	-.85
56	784	.07	.17	.00	.10	.52	-.64
57	785	.15	.38	.04	.26	.32	-.33
58	786	.54	.66	.04	.15	.60	-.19
59	799	.03	.33	.00	.30	.13	-.93
60	800	.37	.57	.03	.23	.48	-.44
61	803	.10	.66	.03	.59	.00	-.03
62	804	.03	.52	.00	.48	.06	-.97
63	805	.04	.34	.04	.32	.03	.59
64	823	.25	.93	.00	.68	.05	-.97
65	824	.04	.54	.00	.50	.07	-.96
66	825	.11	.89	.00	.79	.03	-.99
67	831	.48	.63	.07	.19	.49	.01
68	833	.00	.67	.00	.67	.00	-1.00
69	834	.30	.93	.00	.63	.07	-.97
70	836	.28	.68	.12	.52	-.10	.28
71	842	.50	.82	.05	.41	.04	-.64
72	845	.22	.37	.07	.22	.31	-.24
73	848	.23	.77	.07	.60	-.04	.20
74	857	.00	.34	.00	.34	.00	-1.00
75	858	.03	.41	.00	.38	.10	-.95
76	859	.18	.61	.04	.46	.12	-.42

Little or No Activity (SOC2)

	Facility ID	facility rated SOC2	gold rated SOC2	false pos SOC2	false neg SOC2	kappa SOC2	gamma SOC2
77	861	.15	.89	.00	.77	.03	-.98
78	869	.15	.77	.00	.62	.10	-.95
79	876	.04	.41	.00	.37	.11	-.94
80	878	.07	.63	.00	.57	.08	-.96
81	882	.25	.60	.10	.45	.00	.00
82	884	.26	.72	.09	.52	.04	.63
83	886	.00	.41	.00	.41	.00	-1.00
84	887	.04	.63	.00	.59	.04	-.98
85	890	.21	.69	.00	.48	.21	-.88
86	891	.21	.41	.10	.31	.08	-.09
87	894	.07	.59	.00	.52	.10	-.95
88	906	.23	.65	.00	.42	.27	-.84
89	912	.00	.33	.00	.31	.10	-.90
90	913	.07	.57	.00	.50	.10	-.95
91	917	.48	.90	.03	.45	.06	-.28
92	924	.19	.85	.00	.65	.11	-.92
93	934	.36	.48	.14	.29	.14	-.09
94	943	.08	.32	.00	.24	.31	-.82
95	945	.13	.26	.04	.17	.33	-.32
96	953	.00	.34	.00	.34	.00	-1.00
97	954	.19	.60	.04	.44	.14	-.42
98	959	.15	.54	.08	.38	.14	-.50
99	962	.04	.42	.00	.38	.10	-.95
100	963	.00	.25	.00	.25	.00	-1.00
101	968	.00	.23	.00	.24	.00	-1.00
102	970	.00	.23	.00	.23	.00	-1.00
103	980	.00	.48	.00	.48	.00	-1.00
104	986	.00	.42	.00	.42	.00	-1.00
105	991	.23	.56	.04	.38	.22	-.47
106	996	.08	.00	.00	.00	1.00	.00
107	1003	.13	.50	.00	.38	.25	-.86
108	1006	.37	.41	.11	.15	.46	-.07
109	1016	.16	.32	.04	.20	.36	-.38
110	1019	.05	.30	.00	.25	.22	-.88
111	1025	.04	.35	.00	.31	.14	-.92
112	1026	.04	.50	.00	.46	.07	-.96
113	1029	.37	.43	.15	.19	.31	.06
114	1033	.00	.29	.00	.29	.00	-1.00
115	1037	.28	.54	.04	.33	.28	-.56
116	1039	.14	.43	.04	.32	.20	-.44
117	1040	.11	.46	.04	.42	.02	-.42
118	1043	.15	.36	.04	.26	.28	-.42
119	1044	.03	.20	.00	.17	.24	-.86
120	1054	.00	.40	.00	.40	.00	-1.00
121	1060	.21	.24	.03	.07	.70	-.14

Little or No Activity (SOC2)

	Facility ID	facility rated SOC2	gold rated SOC2	false pos SOC2	false neg SOC2	kappa SOC2	gamma SOC2
122	1072	.05	.45	.00	.41	.11	-.94
123	1074	.08	.36	.00	.36	.14	-1.20
124	1076	.00	.60	.00	.60	.00	-1.00
125	1077	.05	.55	.05	.55	-.10	1.17
126	1079	.04	.25	.00	.21	.23	-.87
127	1080	.03	.24	.00	.21	.20	-.89
128	1084	.12	.20	.00	.08	.71	-.45
129	1085	.19	.57	.04	.44	.14	-.43
130	1091	.11	.64	.04	.57	.01	-.06
131	1097	.27	.62	.08	.42	.10	-.20
132	1100	.14	.10	.10	.07	.19	.06
133	1102	.07	.28	.00	.21	.33	-.81
134	1106	.29	.62	.05	.38	.22	-.42
135	1115	.00	.26	.00	.26	.00	-1.00
136	1118	.04	.46	.00	.42	.09	-.95
137	1137	.00	.26	.00	.26	.00	-1.00
138	1141	.07	.47	.00	.40	.15	-.92
139	1142	.04	.40	.04	.37	.09	.93
140	1144	.17	.20	.03	.07	.67	-.15
141	1148	.28	.34	.00	.07	.84	-.28
142	1149	.00	.45	.00	.45	.00	-1.00
143	1152	.55	.23	.32	.00	.39	.75
144	1153	.07	.30	.00	.22	.32	-.81
145	1158	.00	.31	.00	.33	.00	-1.00
146	1160	.00	.03	.00	.03	.03	-1.00
147	1162	.74	.04	.70	.00	.03	.99
148	1163	.04	.22	.00	.17	.28	-.84
149	1165	.00	.09	.00	.09	.01	-1.00
150	1166	.00	.15	.00	.15	.00	-1.00
151	1174	.43	.37	.13	.07	.59	.16
152	1176	.00	.29	.00	.29	.00	-1.00
153	1178	.00	.14	.00	.14	.01	-1.00
154	1181	.15	.37	.07	.30	.09	-.15
155	1188	.14	.10	.03	.00	.84	.28
156	1209	.03	.13	.03	.13	-.06	.12
157	1218	.00	.43	.00	.45	.00	-1.00
158	1236	.00	.21	.00	.21	.00	-1.00
159	1241	.36	.43	.11	.21	.34	-.16
160	1246	.26	.58	.00	.26	.54	-.54
161	1249	.31	.24	.14	.07	.49	.17
162	1255	.10	.59	.00	.48	.15	-.92
163	1264	.10	.13	.00	.03	.84	-.28
164	1280	.00	.41	.00	.42	.00	-1.00
165	1287	.23	.30	.07	.13	.49	-.17
166	1294	.32	.71	.04	.43	.19	-.50

Little or No Activity (SOC2)

	Facility ID	facility rated SOC2	gold rated SOC2	false pos SOC2	false neg SOC2	kappa SOC2	gamma SOC2
167	1308	.07	.07	.07	.07	-.08	.00
168	1321	.03	.43	.00	.40	.09	-.95
169	1323	.04	.37	.00	.33	.12	-.93
170	1325	.14	.28	.03	.17	.39	-.38
171	1329	.17	.50	.04	.39	.14	-.56
172	1330	.21	.71	.04	.54	.08	-.37
173	1337	.30	.59	.04	.33	.31	-.49
174	1345	.13	.47	.00	.33	.30	-.82
175	1349	.38	.66	.00	.28	.49	-.68
176	1350	.17	.57	.00	.40	.27	-.85
177	1354	.20	.37	.00	.17	.60	-.57
178	1355	.07	.67	.00	.60	.07	-.96
179	1357	.39	.59	.00	.18	.66	-.48
180	1366	.21	.69	.00	.48	.21	-.88
181	1368	.00	.11	.00	.11	.01	-1.00
182	1372	.43	.57	.00	.14	.72	-.44
183	1374	.19	.35	.00	.06	.88	-.15
184	1377	.10	.10	.00	.00	1.00	.00
185	1380	.14	.24	.00	.00	1.00	.00
186	1381	.07	.30	.03	.28	.08	-.23
187	1383	.03	.47	.00	.43	.08	-.96
188	1384	.00	.46	.00	.46	.00	-1.00
189	1385	.00	.48	.00	.45	.29	-.72
190	1386	.04	.37	.00	.35	.12	-.94
191	1391	.10	.40	.00	.30	.29	-.83
192	2009	.11	.25	.00	.14	.53	-.64
193	2013	.00	.00	.00	.00	1.00	.00
194	2039	.17	.41	.00	.24	.46	-.70
195	2087	.25	.45	.00	.15	.75	-.30
196	2088	.00	.10	.00	.10	.01	-1.00
197	2124	.00	.04	.00	.04	.02	-1.00
198	2231	.00	.24	.00	.24	.00	-1.00
199	2236	.07	.04	.04	.00	.65	.52
200	3075	.03	.47	.00	.43	.08	-.96
201	5002	.00	.00	.00	.00	1.00	.00
202	5004	.00	.05	.00	.05	.02	-1.00
203	5019	.42	.88	.04	.50	.04	-.19
204	5020	.27	.83	.00	.57	.14	-.93
205	5021	.46	.68	.07	.29	.30	-.31
206	5025	.15	.69	.00	.54	.15	-.92
207	5030	.00	.00	.00	.00	1.00	.00
208	5041	.07	.14	.03	.10	.27	-.23
209	5048	.04	.25	.00	.21	.20	-.89

Prevalence of Indwelling Catheter (CAT2)

	Facility ID	facility rated CAT2	gold rated CAT2	false pos CAT2	false neg CAT2	kappa CAT2	gamma CAT2
1	1	.38	.33	.05	.00	.90	.19
2	2	.08	.07	.00	.00	1.00	.00
3	18	.08	.00	.09	.00	.01	1.00
4	19	.07	.07	.00	.00	1.00	.00
5	20	.00	.00	.00	.00	1.00	.00
6	60	.23	.10	.13	.00	.53	.63
7	89	.00	.00	.00	.00	1.00	.00
8	92	.26	.11	.11	.00	.69	.48
9	97	.08	.04	.08	.00	.45	1.09
10	98	.33	.13	.13	.00	.67	.49
11	111	.16	.12	.04	.00	.83	.28
12	119	.14	.03	.10	.00	.36	.78
13	124	.00	.00	.00	.00	1.00	.00
14	130	.10	.14	.03	.07	.51	-.17
15	136	.29	.16	.14	.14	.32	.00
16	138	.00	.03	.00	.06	.01	-1.00
17	147	.37	.30	.07	.00	.85	.26
18	148	.38	.07	.25	.00	.45	.86
19	167	.04	.08	.00	.04	.65	-.52
20	298	.30	.22	.15	.07	.43	.17
21	302	.52	.62	.00	.08	.84	-.26
22	315	.19	.22	.04	.07	.66	-.15
23	319	.53	.47	.13	.07	.60	.16
24	324	.12	.00	.12	.00	.01	1.00
25	325	.15	.04	.10	.00	.46	.70
26	371	.04	.08	.00	.04	.65	-.52
27	490	.04	.03	.04	.04	-.04	.00
28	502	.19	.19	.00	.00	1.00	.00
29	530	.00	.00	.00	.00	1.00	.00
30	536	.00	.00	.00	.00	1.00	.00
31	541	.13	.13	.03	.03	.71	.00
32	544	.19	.14	.04	.00	.87	.23
33	573	.14	.17	.00	.04	.87	-.23
34	607	.00	.03	.00	.04	.02	-1.00
35	610	.00	.04	.00	.07	.01	-1.00
36	613	.14	.11	.00	.00	1.00	.00
37	622	.28	.20	.10	.03	.63	.24
38	632	.00	.03	.00	.00	1.00	.00
39	648	.12	.10	.00	.00	1.00	.00
40	649	.00	.00	.00	.00	1.00	.00
41	669	.00	.00	.00	.00	1.00	.00
42	676	.07	.00	.07	.00	.01	1.00
43	677	.14	.14	.00	.00	1.00	.00
44	709	.00	.00	.00	.00	1.00	.00
45	732	.12	.10	.00	.00	1.00	.00

Prevalence of Indwelling Catheter (CAT2)

	Facility ID	facility rated CAT2	gold rated CAT2	false pos CAT2	false neg CAT2	kappa CAT2	gamma CAT2
46	733	.27	.07	.13	.00	.59	.58
47	739	.08	.04	.04	.00	.65	.52
48	740	.14	.07	.05	.00	.78	.37
49	757	.07	.07	.00	.00	1.00	.00
50	762	.36	.39	.04	.07	.77	-.12
51	763	.37	.31	.04	.00	.92	.15
52	769	.36	.18	.21	.04	.39	.42
53	773	.00	.00	.00	.00	1.00	.00
54	774	.00	.00	.00	.00	1.00	.00
55	776	.36	.30	.09	.09	.62	.07
56	784	.14	.10	.00	.00	1.00	.00
57	785	.04	.10	.00	.09	.47	-.70
58	786	.32	.14	.18	.00	.52	.65
59	799	.09	.03	.05	.00	.65	.52
60	800	.13	.07	.10	.03	.27	.23
61	803	.08	.07	.00	.00	1.00	.00
62	804	.54	.14	.43	.04	.12	.39
63	805	.21	.21	.04	.00	.89	.21
64	823	.31	.21	.06	.13	.59	-.16
65	824	.17	.00	.17	.00	.00	1.00
66	825	.18	.11	.00	.00	1.00	.00
67	831	.17	.10	.04	.00	.83	.29
68	833	.00	.00	.00	.00	1.00	.00
69	834	.04	.04	.00	.00	1.00	.00
70	836	.11	.08	.00	.00	1.00	.00
71	842	.17	.09	.00	.00	1.00	.00
72	845	.00	.00	.00	.00	1.00	.00
73	848	.10	.07	.00	.00	1.00	.00
74	857	.09	.07	.05	.05	.45	.00
75	858	.06	.00	.06	.00	.02	1.00
76	859	.05	.03	.00	.00	1.00	.00
77	861	.27	.07	.13	.00	.59	.58
78	869	.00	.04	.00	.00	1.00	.00
79	876	.09	.07	.00	.00	1.00	.00
80	878	.05	.07	.00	.05	.64	-.53
81	882	.05	.11	.00	.06	.64	-.53
82	884	.18	.04	.12	.00	.45	.71
83	886	.26	.24	.04	.09	.68	-.15
84	887	.00	.00	.00	.00	1.00	.00
85	890	.00	.00	.00	.00	1.00	.00
86	891	.00	.00	.00	.00	1.00	.00
87	894	.11	.11	.00	.06	.77	-.38
88	906	.10	.04	.05	.00	.64	.53
89	912	.13	.07	.04	.00	.78	.36
90	913	.00	.00	.00	.00	1.00	.00

Prevalence of Indwelling Catheter (CAT2)

	Facility ID	facility rated CAT2	gold rated CAT2	false pos CAT2	false neg CAT2	kappa CAT2	gamma CAT2
91	917	.21	.24	.04	.07	.70	-.14
92	924	.52	.44	.15	.07	.56	.17
93	934	.07	.07	.00	.00	1.00	.00
94	943	.04	.04	.00	.00	1.00	.00
95	945	.19	.13	.10	.05	.49	.17
96	953	.10	.10	.03	.03	.63	.00
97	954	.23	.19	.04	.00	.88	.21
98	959	.54	.23	.38	.00	.57	.42
99	962	.04	.08	.04	.08	-.05	.04
100	963	.38	.08	.29	.00	.26	.85
101	968	.04	.00	.04	.00	.02	1.00
102	970	.18	.05	.14	.00	.35	.79
103	980	.00	.05	.00	.05	.02	-1.00
104	986	.76	.12	.64	.00	.08	.96
105	991	.11	.04	.07	.00	.47	.69
106	996	.00	.00	.00	.00	1.00	.00
107	1003	.17	.21	.00	.04	.86	-.24
108	1006	.07	.04	.04	.00	.65	.52
109	1016	.40	.28	.20	.08	.39	.22
110	1019	.25	.20	.05	.00	.86	.25
111	1025	.33	.19	.19	.04	.43	.38
112	1026	.14	.04	.11	.00	.36	.78
113	1029	.19	.11	.08	.00	.71	.45
114	1033	.59	.11	.48	.00	.16	.91
115	1037	.00	.04	.00	.04	.02	-1.00
116	1039	.14	.03	.10	.00	.36	.78
117	1040	.22	.12	.16	.04	.34	.32
118	1043	.04	.04	.00	.00	1.00	.00
119	1044	.17	.13	.03	.00	.87	.23
120	1054	.30	.10	.20	.00	.41	.74
121	1060	.05	.07	.00	.05	.64	-.53
122	1072	.33	.36	.00	.05	.90	-.19
123	1074	.08	.00	.18	.00	.00	1.00
124	1076	.13	.07	.07	.00	.63	.54
125	1077	.19	.10	.10	.00	.62	.56
126	1079	.04	.04	.00	.00	1.00	.00
127	1080	.14	.14	.03	.03	.71	.00
128	1084	.32	.00	.32	.00	.00	1.00
129	1085	.09	.11	.04	.04	.56	.21
130	1091	.13	.11	.00	.00	1.00	.00
131	1097	.09	.08	.00	.00	1.00	.00
132	1100	.07	.03	.03	.00	.65	.52
133	1102	.08	.07	.00	.00	1.00	.00
134	1106	.25	.19	.06	.06	.67	.00
135	1115	.06	.04	.00	.00	1.00	.00

Prevalence of Indwelling Catheter (CAT2)

	Facility ID	facility rated CAT2	gold rated CAT2	false pos CAT2	false neg CAT2	kappa CAT2	gamma CAT2
136	1118	.04	.12	.00	.08	.47	-.69
137	1137	.12	.07	.08	.04	.34	.16
138	1141	.20	.10	.13	.03	.36	.32
139	1142	.03	.00	.03	.00	.03	1.00
140	1144	.15	.00	.15	.00	.00	1.00
141	1148	.14	.17	.03	.07	.61	-.16
142	1149	.15	.10	.04	.00	.84	.28
143	1152	.60	.27	.10	.00	.82	.37
144	1153	.45	.34	.14	.03	.64	.29
145	1158	.08	.08	.04	.04	.46	.00
146	1160	.28	.23	.10	.07	.55	.10
147	1162	.00	.00	.00	.00	1.00	.00
148	1163	.11	.13	.05	.00	.77	.59
149	1165	.33	.13	.24	.05	.25	.33
150	1166	.09	.08	.00	.00	1.00	.00
151	1174	.10	.07	.05	.05	.45	.00
152	1176	.12	.07	.08	.04	.34	.16
153	1178	.14	.03	.10	.00	.46	.70
154	1181	.00	.00	.00	.00	1.00	.00
155	1188	.13	.03	.07	.00	.63	.54
156	1209	.05	.00	.05	.00	.02	1.00
157	1218	.42	.20	.19	.00	.58	.59
158	1236	.03	.03	.00	.00	1.00	.00
159	1241	.07	.00	.07	.00	.01	1.00
160	1246	.25	.15	.10	.05	.58	.17
161	1249	.07	.10	.00	.04	.78	-.36
162	1255	.07	.00	.07	.00	.01	1.00
163	1264	.14	.00	.14	.00	.01	1.00
164	1280	.30	.30	.04	.04	.82	.00
165	1287	.21	.23	.00	.00	1.00	.00
166	1294	.17	.10	.07	.00	.71	.44
167	1308	.10	.04	.05	.00	.64	.53
168	1321	.18	.07	.09	.00	.62	.55
169	1323	.25	.22	.00	.00	1.00	.00
170	1325	.24	.28	.00	.03	.91	-.16
171	1329	.12	.10	.04	.04	.62	.00
172	1330	.12	.10	.00	.00	1.00	.00
173	1337	.11	.07	.04	.00	.78	.36
174	1345	.28	.20	.08	.04	.69	.14
175	1349	.03	.03	.00	.00	1.00	.00
176	1350	.04	.07	.00	.04	.65	-.52
177	1354	.03	.00	.03	.00	.03	1.00
178	1355	.25	.20	.00	.00	1.00	.00
179	1357	.41	.31	.14	.03	.63	.29
180	1366	.11	.07	.04	.00	.78	.36

Prevalence of Indwelling Catheter (CAT2)

	Facility ID	facility rated CAT2	gold rated CAT2	false pos CAT2	false neg CAT2	kappa CAT2	gamma CAT2
181	1368	.25	.18	.11	.04	.58	.26
182	1372	.18	.11	.05	.00	.83	.29
183	1374	.09	.09	.00	.00	1.00	.00
184	1377	.10	.14	.00	.03	.84	-.28
185	1380	.28	.07	.21	.00	.33	.81
186	1381	.15	.07	.07	.00	.63	.54
187	1383	.04	.03	.00	.00	1.00	.00
188	1384	.44	.26	.22	.04	.45	.42
189	1385	.20	.14	.04	.00	.86	.24
190	1386	.15	.11	.04	.00	.84	.28
191	1391	.12	.13	.00	.04	.84	-.28
192	2009	.31	.18	.00	.00	1.00	.00
193	2013	.04	.04	.00	.00	1.00	.00
194	2039	.10	.14	.00	.03	.84	-.28
195	2087	.10	.10	.00	.00	1.00	.00
196	2088	.04	.07	.00	.04	.65	-.52
197	2124	.00	.00	.00	.00	1.00	.00
198	2231	.27	.27	.00	.00	1.00	.00
199	2236	.04	.00	.04	.00	.03	1.00
200	3075	.06	.03	.00	.00	1.00	.00
201	5002	.60	.60	.00	.00	1.00	.00
202	5004	.23	.18	.09	.05	.58	.17
203	5019	.24	.19	.04	.00	.88	.21
204	5020	.20	.20	.07	.07	.58	.00
205	5021	.27	.32	.00	.04	.91	-.15
206	5025	.35	.12	.23	.00	.40	.75
207	5030	.08	.28	.00	.20	.37	-.78
208	5041	.31	.31	.00	.00	1.00	.00
209	5048	.14	.11	.04	.00	.84	.28

Bladder/Bowel Incontinence (High and Low Risk) (CNT1)

	Facility ID	facility rated CNT1	gold rated CNT1	false pos CNT1	false neg CNT1	kappa CNT1	gamma CNT1
1	1	1.00	1.00	.00	.00	1.00	.00
2	2	.95	.87	.05	.00	.47	1.05
3	18	.65	.48	.24	.00	.51	.70
4	19	.62	.67	.00	.04	.92	-.14
5	20	.68	.63	.00	.00	1.00	.00
6	60	.17	.19	.00	.00	1.00	.00
7	89	.88	.96	.00	.08	.47	-.70
8	92	.68	.63	.05	.00	.90	.19
9	97	.67	.67	.00	.00	1.00	.00
10	98	.24	.26	.00	.06	.85	-.26
11	111	.58	.59	.05	.05	.79	.09
12	119	.52	.54	.00	.00	1.00	.00
13	124	.32	.27	.12	.08	.52	.10
14	130	.72	.67	.04	.00	.89	.18
15	136	.61	.62	.06	.00	.88	.33
16	138	.54	.56	.04	.04	.85	.00
17	147	.00	.00	.00	.00	1.00	.00
18	148	.12	.12	.00	.00	1.00	.00
19	167	.54	.58	.00	.04	.92	-.16
20	298	.58	.48	.12	.00	.75	.44
21	302	.83	.78	.00	.00	1.00	.00
22	315	.27	.33	.00	.00	1.00	.00
23	319	.36	.19	.00	.00	1.00	.00
24	324	.61	.52	.06	.00	.89	.22
25	325	.58	.46	.17	.00	.67	.57
26	371	.43	.41	.00	.00	1.00	.00
27	490	.88	.82	.04	.00	.81	.38
28	502	.57	.59	.00	.05	.91	-.17
29	530	.60	.60	.00	.00	1.00	.00
30	536	.50	.50	.00	.00	1.00	.00
31	541	.38	.42	.00	.09	.82	-.30
32	544	.65	.55	.10	.00	.79	.38
33	573	.64	.63	.00	.00	1.00	.00
34	607	.69	.76	.00	.11	.74	-.44
35	610	.63	.65	.00	.00	1.00	.00
36	613	.58	.71	.00	.13	.75	-.40
37	622	.10	.18	.00	.06	.80	-.28
38	632	.66	.64	.00	.00	1.00	.00
39	648	.44	.52	.00	.07	.85	-.26
40	649	.07	.13	.00	.07	.63	-.54
41	669	.74	.75	.04	.04	.80	.04
42	676	.48	.53	.03	.07	.79	-.08
43	677	.60	.63	.00	.00	1.00	.00
44	709	.40	.30	.10	.00	.78	.36
45	732	.23	.27	.04	.08	.69	-.14

Bladder/Bowel Incontinence (High and Low Risk) (CNT1)

	Facility ID	facility rated CNT1	gold rated CNT1	false pos CNT1	false neg CNT1	kappa CNT1	gamma CNT1
46	733	.50	.50	.04	.04	.85	.02
47	739	.33	.36	.00	.04	.91	-.17
48	740	.00	.00	.00	.00	1.00	.00
49	757	.26	.39	.00	.15	.67	-.49
50	762	.31	.35	.00	.00	1.00	.00
51	763	.17	.21	.00	.00	1.00	.00
52	769	.27	.22	.14	.00	.67	.78
53	773	.33	.37	.04	.07	.76	-.12
54	774	.29	.21	.07	.00	.81	.32
55	776	.48	.29	.11	.00	.79	.30
56	784	.24	.19	.04	.00	.88	.21
57	785	.35	.39	.05	.09	.72	-.14
58	786	.24	.29	.00	.00	1.00	.00
59	799	.32	.31	.04	.04	.84	.00
60	800	.04	.07	.00	.00	1.00	.00
61	803	.38	.33	.08	.00	.83	.31
62	804	.14	.20	.00	.00	1.00	.00
63	805	.00	.00	.00	.00	1.00	.00
64	823	.48	.45	.10	.10	.64	-.07
65	824	.10	.04	.05	.00	.64	.53
66	825	.60	.56	.08	.04	.75	.12
67	831	.68	.63	.08	.04	.75	.17
68	833	.67	.75	.08	.17	.40	-.17
69	834	.26	.44	.00	.17	.65	-.48
70	836	.50	.52	.05	.10	.70	-.08
71	842	.45	.52	.00	.10	.80	-.33
72	845	.52	.56	.00	.04	.93	-.14
73	848	.32	.50	.00	.18	.64	-.53
74	857	.48	.56	.08	.19	.46	-.30
75	858	.59	.62	.00	.07	.85	-.28
76	859	.54	.54	.08	.04	.75	.21
77	861	.55	.50	.05	.05	.83	.00
78	869	.62	.52	.08	.00	.84	.26
79	876	.33	.48	.04	.21	.50	-.38
80	878	.36	.43	.04	.11	.69	-.22
81	882	.20	.29	.07	.21	.32	-.25
82	884	.48	.54	.05	.19	.53	-.32
83	886	.38	.52	.11	.16	.49	.12
84	887	.42	.70	.04	.31	.35	-.39
85	890	.59	.59	.03	.03	.86	.00
86	891	.22	.28	.00	.04	.90	-.16
87	894	.64	.63	.00	.00	1.00	.00
88	906	.75	.80	.00	.04	.87	-.20
89	912	.23	.43	.00	.23	.52	-.65
90	913	.48	.62	.10	.24	.32	-.19

Bladder/Bowel Incontinence (High and Low Risk) (CNT1)

	Facility ID	facility rated CNT1	gold rated CNT1	false pos CNT1	false neg CNT1	kappa CNT1	gamma CNT1
91	917	.10	.05	.06	.00	.64	.53
92	924	.00	.08	.00	.00	1.00	.00
93	934	.44	.44	.12	.12	.53	.07
94	943	.35	.38	.04	.09	.72	-.14
95	945	.76	.47	.29	.00	.39	.82
96	953	.52	.52	.00	.09	.83	-.34
97	954	.58	.40	.21	.00	.59	.63
98	959	.08	.22	.00	.00	1.00	.00
99	962	.42	.50	.00	.05	.91	-.15
100	963	.13	.18	.07	.07	.59	.39
101	968	.48	.54	.08	.12	.60	-.03
102	970	.11	.19	.00	.11	.61	-.56
103	980	.52	.55	.10	.15	.49	-.20
104	986	.17	.09	.00	.00	1.00	.00
105	991	.59	.58	.05	.05	.82	.07
106	996	.46	.38	.00	.00	1.00	.00
107	1003	.32	.37	.05	.11	.65	-.15
108	1006	.64	.54	.12	.04	.67	.23
109	1016	.21	.11	.00	.00	1.00	.00
110	1019	.21	.20	.07	.00	.79	.42
111	1025	.12	.14	.07	.07	.52	.24
112	1026	.61	.59	.09	.04	.71	.31
113	1029	.52	.44	.09	.00	.83	.32
114	1033	.18	.25	.00	.00	1.00	.00
115	1037	.76	.61	.13	.00	.70	.40
116	1039	.57	.48	.05	.00	.91	.19
117	1040	.43	.48	.00	.00	1.00	.00
118	1043	.65	.56	.08	.00	.84	.28
119	1044	.24	.27	.00	.00	1.00	.00
120	1054	.06	.04	.00	.00	1.00	.00
121	1060	.11	.23	.00	.12	.60	-.57
122	1072	.79	.86	.00	.07	.76	-.39
123	1074	.50	.27	.14	.14	.62	2.84
124	1076	.00	.00	.00	.00	1.00	.00
125	1077	.47	.72	.00	.19	.63	-.46
126	1079	.82	.74	.05	.00	.86	.24
127	1080	.58	.56	.17	.13	.40	.17
128	1084	.84	.72	.16	.05	.23	1.60
129	1085	.77	.80	.04	.04	.70	.00
130	1091	.88	.88	.00	.00	1.00	.00
131	1097	.71	.88	.00	.17	.52	-.65
132	1100	.77	.72	.08	.08	.54	.11
133	1102	.52	.56	.00	.04	.93	-.14
134	1106	.81	.81	.00	.00	1.00	.00
135	1115	.65	.67	.05	.05	.79	.04

Bladder/Bowel Incontinence (High and Low Risk) (CNT1)

	Facility ID	facility rated CNT1	gold rated CNT1	false pos CNT1	false neg CNT1	kappa CNT1	gamma CNT1
136	1118	.88	.70	.17	.00	.49	.63
137	1137	.88	.80	.13	.04	.11	.52
138	1141	.65	.77	.05	.14	.48	.26
139	1142	.61	.66	.04	.11	.69	-.22
140	1144	.28	.40	.00	.16	.67	-.46
141	1148	.80	.71	.04	.00	.87	.19
142	1149	.71	.60	.13	.00	.74	.44
143	1152	.69	.69	.07	.13	.56	-.29
144	1153	.47	.61	.00	.07	.88	-.16
145	1158	.91	.92	.00	.00	1.00	.00
146	1160	.00	.18	.00	.22	.00	-1.00
147	1162	.00	.04	.00	.04	.02	-1.00
148	1163	.88	.65	.19	.00	.41	.85
149	1165	.00	.05	.00	.00	1.00	.00
150	1166	.70	.74	.00	.04	.89	-.19
151	1174	.69	.69	.00	.00	1.00	.00
152	1176	.80	.67	.22	.04	.27	.34
153	1178	.56	.50	.08	.04	.78	.12
154	1181	.77	.73	.04	.00	.91	.17
155	1188	.65	.50	.15	.00	.70	.49
156	1209	.86	.80	.07	.03	.61	.16
157	1218	.24	.17	.12	.12	.35	.00
158	1236	.04	.07	.00	.04	.65	-.52
159	1241	.61	.57	.07	.00	.86	.28
160	1246	.42	.45	.00	.00	1.00	.00
161	1249	.71	.62	.09	.00	.79	.39
162	1255	.67	.67	.05	.05	.75	.33
163	1264	.71	.76	.00	.04	.87	-.16
164	1280	.22	.16	.06	.06	.65	-.13
165	1287	.08	.09	.00	.00	1.00	.00
166	1294	.70	.71	.00	.00	1.00	.00
167	1308	.46	.44	.00	.00	1.00	.00
168	1321	.48	.50	.00	.04	.92	-.16
169	1323	.81	.76	.05	.00	.86	.25
170	1325	.06	.10	.00	.06	.64	-.53
171	1329	.75	.79	.05	.05	.72	.08
172	1330	.58	.64	.00	.04	.92	-.14
173	1337	.38	.56	.04	.21	.52	-.30
174	1345	.74	.74	.05	.05	.74	.00
175	1349	.71	.79	.00	.05	.82	-.16
176	1350	.64	.68	.00	.04	.92	-.15
177	1354	.72	.70	.03	.00	.91	.17
178	1355	.67	.67	.04	.04	.83	.00
179	1357	.27	.10	.13	.00	.59	.58
180	1366	.46	.56	.00	.08	.85	-.25

Bladder/Bowel Incontinence (High and Low Risk) (CNT1)

	Facility ID	facility rated CNT1	gold rated CNT1	false pos CNT1	false neg CNT1	kappa CNT1	gamma CNT1
181	1368	.14	.09	.05	.00	.77	.37
182	1372	.52	.52	.00	.00	1.00	.00
183	1374	.50	.50	.00	.00	1.00	.00
184	1377	.73	.72	.00	.00	1.00	.00
185	1380	.00	.04	.00	.00	1.00	.00
186	1381	.38	.37	.00	.00	1.00	.00
187	1383	.48	.48	.03	.03	.86	.00
188	1384	.00	.21	.00	.14	.50	-.50
189	1385	.71	.68	.04	.00	.90	.20
190	1386	.48	.54	.00	.05	.91	-.15
191	1391	.37	.31	.08	.00	.83	.29
192	2009	.61	.61	.00	.00	1.00	.00
193	2013	.37	.41	.00	.04	.92	-.14
194	2039	.76	.79	.00	.04	.87	-.25
195	2087	.68	.60	.08	.00	.81	.31
196	2088	.57	.63	.00	.07	.84	-.29
197	2124	.81	.81	.00	.00	1.00	.00
198	2231	.53	.48	.00	.00	1.00	.00
199	2236	.77	.71	.04	.04	.78	.00
200	3075	.54	.52	.00	.00	1.00	.00
201	5002	.00	.00	.00	.00	1.00	.00
202	5004	.29	.17	.06	.00	.84	.24
203	5019	.35	.33	.05	.05	.79	.00
204	5020	.09	.08	.00	.00	1.00	.00
205	5021	.11	.00	.06	.00	.50	.50
206	5025	.12	.14	.00	.00	1.00	.00
207	5030	.10	.00	.13	.00	.01	1.00
208	5041	.05	.05	.00	.00	1.00	.00
209	5048	.08	.12	.00	.00	1.00	.00

Bladder/Bowel Incontinence (High Risk) (CNT5)

	Facility ID	facility rated CNT5	gold rated CNT5	false pos CNT5	false neg CNT5	kappa CNT5	gamma CNT5
1	1	1.00	1.00	.00	.00	.	.
2	2	1.00	1.00	.00	.00	1.00	.00
3	18	1.00	1.00	.00	.00	.	.
4	19	.92	.93	.00	.00	1.00	.00
5	20	1.00	.92	.00	.00	1.00	.00
6	60	.	.	.	.	.	.
7	89	1.00	.92	.00	.00	.	.
8	92	1.00	.80	.00	.00	1.00	.00
9	97	1.00	.92	.00	.00	1.00	.00
10	98	1.00	1.00	.00	.00	.	.
11	111	.80	.57	.00	.00	1.00	.00

Bladder/Bowel Incontinence (High Risk) (CNT5)

	Facility ID	facility rated CNT5	gold rated CNT5	false pos CNT5	false neg CNT5	kappa CNT5	gamma CNT5
12	119	1.00	.91	.00	.00	.	.
13	124	1.00	1.00	.00	.00	.	.
14	130	1.00	1.00	.00	.00	.	.
15	136	1.00	1.00	.00	.00	.	.
16	138	.67	.73	.00	.11	.69	-.63
17	147	.	.	.	.	.	.
18	148	.	.	.	.	.	.
19	167	.80	.86	.00	.00	1.00	.00
20	298	1.00	.83	.00	.00	.	.
21	302	1.00	1.00	.00	.00	1.00	.00
22	315	1.00	1.00	.00	.00	.	.
23	319	1.00	1.00	.00	.00	.	.
24	324	1.00	1.00	.00	.00	.	.
25	325	1.00	.83	.00	.00	.	.
26	371	1.00	1.00	.00	.00	.	.
27	490	1.00	1.00	.00	.00	1.00	.00
28	502	1.00	1.00	.00	.00	1.00	.00
29	530	.50	.40	.00	.00	1.00	.00
30	536	1.00	1.00	.00	.00	.	.
31	541	.86	.86	.00	.00	1.00	.00
32	544	1.00	1.00	.00	.00	.	.
33	573	1.00	1.00	.00	.00	.	.
34	607	.90	.92	.00	.11	2.67	-.83
35	610	1.00	1.00	.00	.00	1.00	.00
36	613	1.00	1.00	.00	.00	1.00	.00
37	622	.	.	.	.	.	.
38	632	1.00	1.00	.00	.00	.	.
39	648	1.00	1.00	.00	.00	.	.
40	649	1.00	1.00	.00	.00	.	.
41	669	1.00	1.00	.00	.00	1.00	.00
42	676	1.00	1.00	.00	.00	.	.
43	677	1.00	1.00	.00	.00	.	.
44	709	1.00	1.00	.00	.00	.	.
45	732	1.00	1.00	.00	.00	.	.
46	733	.	.50	.	.	.	.
47	739	.50	.	.	.	.	.
48	740	.	.	.	.	.	.
49	757	.	1.00	.	.	.	.
50	762	.	.	.	.	.	.
51	763	1.00	1.00	.00	.00	.	.
52	769	.	1.00	.	.	.	.
53	773	.57	.50	.00	.00	1.00	.00
54	774	1.00	.67	.00	.00	.	.
55	776	1.00	1.00	.00	.00	.	.
56	784	1.00	1.00	.00	.00	.	.
57	785	1.00	.	.	.	.	.

Bladder/Bowel Incontinence (High Risk) (CNT5)

	Facility ID	facility rated CNT5	gold rated CNT5	false pos CNT5	false neg CNT5	kappa CNT5	gamma CNT5
58	786	1.00	1.00	.00	.00	.	.
59	799	1.00	.50	.00	.00	.	.
60	800	.	.	.	.	.	.
61	803	1.00	1.00	.00	.00	.	.
62	804	.	1.00	.	.	.	.
63	805	.	.	.	.	.	.
64	823	.88	1.00	.00	.00	.	.
65	824	.	.	.	.	.	.
66	825	1.00	1.00	.00	.00	.	.
67	831	1.00	.71	.00	.00	1.00	.00
68	833	1.00	1.00	.00	.00	.	.
69	834	.80	1.00	.00	.00	.	.
70	836	1.00	1.00	.00	.00	1.00	.00
71	842	.67	1.00	.00	.00	.	.
72	845	1.00	1.00	.00	.00	1.00	.00
73	848	1.00	1.00	.00	.00	.	.
74	857	.78	.83	.00	.14	3.00	-.80
75	858	1.00	.92	.00	.00	1.00	.00
76	859	1.00	1.00	.00	.00	.	.
77	861	1.00	1.00	.00	.00	1.00	.00
78	869	1.00	1.00	.00	.00	1.00	.00
79	876	.67	.88	.00	.17	.67	-.33
80	878	.60	1.00	.00	.00	.	.
81	882	1.00	1.00	.00	.00	.	.
82	884	1.00	.86	.00	.00	.	.
83	886	.00	.71	.	.	.	.
84	887	.67	1.00	.00	.00	.	.
85	890	.80	.83	.00	.00	1.00	.00
86	891	.50	.38	.00	.00	1.00	.00
87	894	.88	.88	.00	.00	1.00	.00
88	906	1.00	1.00	.00	.00	1.00	.00
89	912	.60	.90	.00	.25	.17	-.28
90	913	.89	.80	.11	.00	.69	.63
91	917	1.00	1.00	.00	.00	.	.
92	924	.	.00	.	.	.	.
93	934	.71	1.00	.00	.17	.50	-.50
94	943	1.00	.80	.00	.00	1.00	.00
95	945	.86	.83	.00	.00	.	.
96	953	1.00	1.00	.00	.00	.	.
97	954	1.00	.88	.00	.00	.	.
98	959	.	.	.	.	.	.
99	962	1.00	1.00	.00	.00	.	.
100	963	.	.	.	.	.	.
101	968	.50	1.00	.00	.00	.	.
102	970	.50	1.00	.00	.50	.	.
103	980	1.00	1.00	.00	.00	1.00	.00

Bladder/Bowel Incontinence (High Risk) (CNT5)

	Facility ID	facility rated CNT5	gold rated CNT5	false pos CNT5	false neg CNT5	kappa CNT5	gamma CNT5
104	986	.	.	.	.	.	.
105	991	.90	1.00	.00	.00	1.00	.00
106	996	.75	.	.	.	.	.
107	1003	1.00	1.00	.00	.00	.	.
108	1006	.50	.67	.00	.00	.	.
109	1016	.	.	.	.	.	.
110	1019	1.00	1.00	.00	.00	.	.
111	1025	.	.	.	.	.	.
112	1026	1.00	.71	.00	.00	.	.
113	1029	1.00	1.00	.00	.00	.	.
114	1033	.	.	.	.	.	.
115	1037	1.00	1.00	.00	.00	.	.
116	1039	.91	.75	.00	.00	1.00	.00
117	1040	1.00	1.00	.00	.00	.	.
118	1043	1.00	1.00	.00	.00	1.00	.00
119	1044	1.00	.67	.00	.00	.	.
120	1054	.	.	.	.	.	.
121	1060	.50	1.00	.00	.50	.	.
122	1072	1.00	1.00	.00	.00	.	.
123	1074	.60	.	.	.	.	.
124	1076	.	.	.	.	.	.
125	1077	.56	.78	.00	.13	.69	-.38
126	1079	1.00	1.00	.00	.00	.	.
127	1080	1.00	1.00	.00	.00	1.00	.00
128	1084	1.00	1.00	.00	.00	1.00	.00
129	1085	1.00	1.00	.00	.00	1.00	.00
130	1091	1.00	1.00	.00	.00	1.00	.00
131	1097	1.00	.92	.00	.00	1.00	.00
132	1100	1.00	1.00	.00	.00	1.00	.00
133	1102	.60	.80	.00	.00	.	.
134	1106	1.00	1.00	.00	.00	.	.
135	1115	1.00	1.00	.00	.00	.	.
136	1118	1.00	.82	.13	.00	2.01	100.00
137	1137	1.00	.86	.17	.00	-82.42	166.83
138	1141	1.00	1.00	.00	.00	1.00	.00
139	1142	1.00	.83	.00	.00	.	.
140	1144	1.00	.83	.00	.00	1.00	.00
141	1148	1.00	1.00	.00	.00	1.00	.00
142	1149	.91	1.00	.00	.00	1.00	.00
143	1152	1.00	.89	.00	.00	1.00	.00
144	1153	.75	1.00	.00	.25	.50	-.50
145	1158	1.00	1.00	.00	.00	1.00	.00
146	1160	.	.	.	.	.	.
147	1162	.	.	.	.	.	.
148	1163	1.00	.88	.00	.00	1.00	.00
149	1165	.	.	.	.	.	.

Bladder/Bowel Incontinence (High Risk) (CNT5)

	Facility ID	facility rated CNT5	gold rated CNT5	false pos CNT5	false neg CNT5	kappa CNT5	gamma CNT5
150	1166	.94	1.00	.00	.00	1.00	.00
151	1174	1.00	1.00	.00	.00	1.00	.00
152	1176	.91	.78	.13	.00	.31	.45
153	1178	1.00	1.00	.00	.00	1.00	.00
154	1181	1.00	1.00	.00	.00	.	.
155	1188	.86	1.00	.00	.00	1.00	.00
156	1209	1.00	1.00	.00	.00	1.00	.00
157	1218	.	.	.	.	.	.
158	1236	.	.	.	.	.	.
159	1241	1.00	1.00	.00	.00	1.00	.00
160	1246	1.00	1.00	.00	.00	.	.
161	1249	.92	.91	.00	.00	1.00	.00
162	1255	.90	.90	.14	.00	1.44	-.89
163	1264	.92	1.00	.00	.00	1.00	.00
164	1280	.	.	.	.	.	.
165	1287	1.00	1.00	.	.	.	.
166	1294	1.00	1.00	.00	.00	1.00	.00
167	1308	1.00	1.00	.00	.00	1.00	.00
168	1321	1.00	.83	.00	.00	1.00	.00
169	1323	1.00	1.00	.00	.00	1.00	.00
170	1325	.	.	.	.	.	.
171	1329	1.00	1.00	.00	.00	.	.
172	1330	1.00	.78	.00	.00	1.00	.00
173	1337	.67	.78	.00	.20	2.01	-142.86
174	1345	.82	.90	.00	.00	1.00	.00
175	1349	1.00	.87	.00	.00	.	.
176	1350	1.00	.88	.00	.00	1.00	.00
177	1354	1.00	.80	.00	.00	1.00	.00
178	1355	1.00	.80	.00	.00	1.00	.00
179	1357	.	.00	.	.	.	.
180	1366	.91	.75	.00	.00	1.00	.00
181	1368	.	.	.	.	.	.
182	1372	1.00	1.00	.00	.00	1.00	.00
183	1374	.75	1.00	.00	.00	.	.
184	1377	1.00	1.00	.00	.00	1.00	.00
185	1380	.	.	.	.	.	.
186	1381	1.00	.75	.00	.00	.	.
187	1383	1.00	.63	.00	.00	1.00	.00
188	1384	.	.50	.	.	.	.
189	1385	1.00	1.00	.00	.00	1.00	.00
190	1386	.88	1.00	.00	.13	-2.00	-.38
191	1391	1.00	.83	.17	.00	.50	.50
192	2009	.80	.83	.00	.00	1.00	.00
193	2013	1.00	1.00	.00	.00	.	.
194	2039	.86	.93	.00	.08	.01	-1.00
195	2087	1.00	.88	.14	.00	.43	1.14

Bladder/Bowel Incontinence (High Risk) (CNT5)

	Facility ID	facility rated CNT5	gold rated CNT5	false pos CNT5	false neg CNT5	kappa CNT5	gamma CNT5
196	2088	1.00	1.00	.00	.00	1.00	.00
197	2124	1.00	1.00	.00	.00	1.00	.00
198	2231	1.00	.86	.00	.00	1.00	.00
199	2236	.83	.83	.00	.00	1.00	.00
200	3075	.82	.82	.00	.00	1.00	.00
201	5002	.	.	.	.	.	.
202	5004	.	.	.	.	.	.
203	5019	1.00	1.00	.00	.00	.	.
204	5020	1.00	1.00	.00	.00	.	.
205	5021	.	.	.	.	.	.
206	5025	1.00	1.00	.00	.00	.	.
207	5030	.	.	.	.	.	.
208	5041	.	.	.	.	.	.
209	5048	.	.	.	.	.	.

Bladder/Bowel Incontinence (Low Risk) (CNT6)

	Facility ID	facility rated CNT6	gold rated CNT6	false pos CNT6	false neg CNT6	kappa CNT6	gamma CNT6
1	1	1.00	1.00	.00	.00	.	.
2	2	.92	.75	.09	.00	.67	.33
3	18	.53	.37	.25	.00	.51	.79
4	19	.36	.38	.00	.09	.82	-.37
5	20	.50	.44	.00	.00	1.00	.00
6	60	.17	.19	.00	.00	1.00	.00
7	89	.87	1.00	.00	.17	1.41	.31
8	92	.56	.50	.00	.00	1.00	.00
9	97	.50	.43	.00	.00	1.00	.00
10	98	.19	.22	.00	.06	.82	-.31
11	111	.50	.60	.08	.08	.71	.18
12	119	.45	.29	.00	.00	1.00	.00
13	124	.29	.21	.13	.09	.44	-.03
14	130	.70	.60	.05	.00	.87	.17
15	136	.50	.50	.00	.00	1.00	.00
16	138	.44	.44	.08	.00	.85	.31
17	147	.00	.00	.00	.00	1.00	.00
18	148	.12	.12	.00	.00	1.00	.00
19	167	.47	.47	.00	.06	.88	-.27
20	298	.33	.33	.17	.00	.66	.81
21	302	.00	.00	.00	.00	.	.
22	315	.24	.30	.00	.00	1.00	.00
23	319	.31	.13	.00	.00	1.00	.00
24	324	.50	.41	.08	.00	.86	.29
25	325	.50	.35	.19	.00	.66	.51
26	371	.32	.35	.00	.00	1.00	.00
27	490	.84	.72	.06	.00	.67	.33

Bladder/Bowel Incontinence (Low Risk) (CNT6)

	Facility ID	facility rated CNT6	gold rated CNT6	false pos CNT6	false neg CNT6	kappa CNT6	gamma CNT6
28	502	.36	.44	.00	.08	.86	-.22
29	530	.64	.67	.00	.00	1.00	.00
30	536	.46	.44	.00	.00	1.00	.00
31	541	.18	.26	.00	.06	.84	-.25
32	544	.61	.50	.11	.00	.77	.41
33	573	.55	.53	.00	.00	1.00	.00
34	607	.58	.63	.00	.00	1.00	.00
35	610	.50	.53	.00	.00	1.00	.00
36	613	.50	.65	.00	.15	.72	-.44
37	622	.10	.18	.00	.06	.80	-.28
38	632	.62	.60	.00	.00	1.00	.00
39	648	.40	.46	.00	.08	.83	-.31
40	649	.03	.10	.00	.07	.47	-.69
41	669	.63	.65	.05	.05	.79	.05
42	676	.44	.46	.04	.08	.76	-.16
43	677	.52	.61	.00	.00	1.00	.00
44	709	.25	.22	.13	.00	.67	.67
45	732	.20	.24	.04	.08	.65	-.15
46	733	.50	.50	.04	.04	.84	.00
47	739	.32	.36	.00	.05	.90	-.16
48	740	.00	.00	.00	.00	1.00	.00
49	757	.26	.37	.00	.15	.66	-.55
50	762	.31	.35	.00	.00	1.00	.00
51	763	.06	.06	.00	.00	1.00	.00
52	769	.27	.18	.14	.00	.65	.70
53	773	.25	.33	.05	.10	.65	-.07
54	774	.26	.16	.08	.00	.77	.34
55	776	.42	.25	.13	.00	.76	.35
56	784	.10	.13	.05	.00	.78	.58
57	785	.32	.39	.05	.10	.71	-.08
58	786	.19	.26	.00	.00	1.00	.00
59	799	.30	.30	.04	.04	.82	.00
60	800	.04	.07	.00	.00	1.00	.00
61	803	.33	.28	.08	.00	.81	.35
62	804	.14	.17	.00	.00	1.00	.00
63	805	.00	.00	.00	.00	1.00	.00
64	823	.27	.33	.07	.13	.57	-.04
65	824	.10	.04	.05	.00	.64	.53
66	825	.55	.54	.09	.05	.72	.24
67	831	.56	.54	.10	.10	.53	-1.30
68	833	.60	.63	.14	.07	.50	.00
69	834	.11	.33	.00	.18	.60	-.48
70	836	.29	.42	.07	.14	.60	.23
71	842	.41	.44	.00	.13	.75	-.44
72	845	.24	.33	.00	.06	.86	-.22
73	848	.24	.42	.00	.17	.64	-.53

Bladder/Bowel Incontinence (Low Risk) (CNT6)

	Facility ID	facility rated CNT6	gold rated CNT6	false pos CNT6	false neg CNT6	kappa CNT6	gamma CNT6
74	857	.33	.33	.15	.23	.22	-.57
75	858	.40	.41	.00	.00	1.00	.00
76	859	.48	.50	.10	.05	.72	.31
77	861	.38	.33	.06	.06	.74	.00
78	869	.52	.37	.11	.00	.80	.29
79	876	.22	.29	.06	.19	.38	-.44
80	878	.30	.30	.05	.14	.57	-.43
81	882	.14	.08	.10	.10	.23	-.69
82	884	.39	.41	.07	.29	.29	-.86
83	886	.40	.43	.00	.15	.72	-.78
84	887	.39	.56	.06	.31	.23	-.85
85	890	.54	.52	.04	.04	.83	-.03
86	891	.17	.24	.00	.05	.85	-.25
87	894	.53	.50	.00	.00	1.00	.00
88	906	.60	.50	.00	.00	1.00	.00
89	912	.14	.17	.00	.13	.58	-.83
90	913	.30	.53	.11	.37	.07	-.32
91	917	.05	.00	.06	.00	.01	1.00
92	924	.00	.08	.00	.00	1.00	.00
93	934	.33	.25	.18	.06	.48	.39
94	943	.21	.26	.06	.11	.56	-.17
95	945	.70	.31	.50	.00	.16	1.03
96	953	.43	.45	.00	.10	.81	-.35
97	954	.47	.08	.20	.00	.70	.32
98	959	.08	.22	.00	.00	1.00	.00
99	962	.39	.40	.00	.05	.90	-.23
100	963	.13	.18	.07	.07	.59	.39
101	968	.48	.45	.10	.15	.50	-.30
102	970	.06	.11	.00	.06	.64	-.53
103	980	.33	.40	.14	.21	.26	-.08
104	986	.17	.09	.00	.00	1.00	.00
105	991	.33	.39	.00	.09	.84	-.21
106	996	.31	.38	.00	.00	1.00	.00
107	1003	.19	.29	.06	.13	.51	-.01
108	1006	.65	.52	.10	.05	.70	.02
109	1016	.21	.11	.00	.00	1.00	.00
110	1019	.15	.14	.08	.00	.70	.59
111	1025	.12	.14	.07	.07	.52	.24
112	1026	.50	.55	.07	.07	.66	.26
113	1029	.45	.36	.11	.00	.78	.40
114	1033	.18	.25	.00	.00	1.00	.00
115	1037	.54	.53	.23	.00	.57	1.50
116	1039	.25	.37	.00	.00	1.00	.00
117	1040	.37	.43	.00	.00	1.00	.00
118	1043	.36	.45	.14	.00	.75	1.40
119	1044	.17	.15	.00	.00	1.00	.00

Bladder/Bowel Incontinence (Low Risk) (CNT6)

	Facility ID	facility rated CNT6	gold rated CNT6	false pos CNT6	false neg CNT6	kappa CNT6	gamma CNT6
120	1054	.06	.04	.00	.00	1.00	.00
121	1060	.08	.13	.00	.05	.78	-.37
122	1072	.63	.82	.00	.13	.64	-.30
123	1074	.46	.27	.20	.00	.67	.33
124	1076	.00	.00	.00	.00	1.00	.00
125	1077	.38	.67	.00	.33	.48	-.58
126	1079	.75	.70	.06	.00	.80	.67
127	1080	.33	.39	.23	.15	.24	.84
128	1084	.73	.56	.30	.10	-.02	1.66
129	1085	.67	.67	.07	.07	.67	-.25
130	1091	.77	.77	.00	.00	1.00	.00
131	1097	.61	.82	.00	.09	.71	-1.33
132	1100	.68	.58	.13	.13	.19	-.79
133	1102	.50	.50	.00	.05	.89	-.22
134	1106	.80	.73	.00	.00	1.00	.00
135	1115	.56	.53	.08	.08	.70	-.09
136	1118	.79	.58	.18	.00	.50	.50
137	1137	.83	.78	.13	.00	.53	.76
138	1141	.50	.63	.08	.23	.30	-.24
139	1142	.52	.61	.00	.15	.70	-.50
140	1144	.10	.29	.00	.20	.47	-.63
141	1148	.50	.42	.10	.00	.80	.40
142	1149	.54	.38	.23	.00	.57	.75
143	1152	.55	.43	.17	.17	.48	-2.04
144	1153	.36	.46	.00	.00	1.00	.00
145	1158	.86	.85	.00	.00	1.00	.00
146	1160	.00	.18	.00	.22	.00	-1.00
147	1162	.00	.04	.00	.04	.02	-1.00
148	1163	.85	.50	.20	.00	.60	.40
149	1165	.00	.05	.00	.00	1.00	.00
150	1166	.14	.40	.00	.14	.74	-.29
151	1174	.53	.43	.00	.00	1.00	.00
152	1176	.71	.60	.25	.08	.00	.53
153	1178	.37	.30	.11	.06	.65	.15
154	1181	.73	.70	.05	.00	.89	.23
155	1188	.58	.39	.21	.00	.60	.66
156	1209	.82	.73	.10	.05	.54	.03
157	1218	.24	.17	.12	.12	.35	.00
158	1236	.04	.07	.00	.04	.65	-.52
159	1241	.42	.43	.11	.00	.80	.50
160	1246	.35	.39	.00	.00	1.00	.00
161	1249	.45	.40	.20	.00	.60	1.00
162	1255	.45	.53	.00	.00	1.00	.00
163	1264	.50	.61	.00	.00	1.00	.00
164	1280	.22	.16	.06	.06	.65	-.13
165	1287	.04	.05	.00	.00	1.00	.00

Bladder/Bowel Incontinence (Low Risk) (CNT6)

	Facility ID	facility rated CNT6	gold rated CNT6	false pos CNT6	false neg CNT6	kappa CNT6	gamma CNT6
166	1294	.56	.59	.00	.00	1.00	.00
167	1308	.22	.17	.00	.00	1.00	.00
168	1321	.32	.39	.00	.00	1.00	.00
169	1323	.64	.67	.00	.00	1.00	.00
170	1325	.06	.10	.00	.06	.64	-.53
171	1329	.70	.67	.08	.08	.50	-.99.75
172	1330	.44	.29	.00	.00	1.00	.00
173	1337	.20	.44	.00	.27	.51	-.59
174	1345	.67	.62	.00	.00	1.00	.00
175	1349	.67	.69	.00	.08	.77	-1.44
176	1350	.55	.42	.00	.08	.86	-200.00
177	1354	.64	.65	.06	.00	.87	.23
178	1355	.58	.44	.00	.00	1.00	.00
179	1357	.27	.11	.13	.00	.59	.58
180	1366	.13	.40	.00	.08	.84	-.20
181	1368	.14	.09	.05	.00	.77	.37
182	1372	.35	.37	.00	.00	1.00	.00
183	1374	.44	.41	.00	.00	1.00	.00
184	1377	.65	.63	.00	.00	1.00	.00
185	1380	.00	.04	.00	.00	1.00	.00
186	1381	.32	.21	.00	.00	1.00	.00
187	1383	.35	.31	.00	.00	1.00	.00
188	1384	.00	.18	.00	.14	.34	-.67
189	1385	.46	.33	.08	.00	.83	.25
190	1386	.23	.08	.00	.00	1.00	.00
191	1391	.15	.15	.05	.00	.80	.40
192	2009	.54	.53	.00	.00	1.00	.00
193	2013	.26	.33	.00	.04	.90	-.17
194	2039	.64	.60	.00	.00	1.00	.00
195	2087	.56	.47	.06	.00	.88	.19
196	2088	.37	.41	.00	.12	.76	-.49
197	2124	.78	.78	.00	.00	1.00	.00
198	2231	.31	.29	.00	.00	1.00	.00
199	2236	.71	.63	.07	.07	.65	.00
200	3075	.35	.33	.00	.00	1.00	.00
201	5002	.00	.00	.00	.00	1.00	.00
202	5004	.29	.17	.06	.00	.84	.24
203	5019	.32	.30	.05	.05	.76	.00
204	5020	.00	.04	.00	.00	1.00	.00
205	5021	.11	.00	.06	.00	.50	.50
206	5025	.06	.10	.00	.00	1.00	.00
207	5030	.10	.00	.13	.00	.01	1.00
208	5041	.05	.05	.00	.00	1.00	.00
209	5048	.08	.12	.00	.00	1.00	.00

Urinary Tract Infections (CNT4)

	Facility ID	facility rated CNT4	gold rated CNT4	false pos CNT4	false neg CNT4	kappa CNT4	gamma CNT4
1	1	.05	.00	.05	.00	.02	1.00
2	2	.15	.11	.07	.04	.51	.17
3	18	.12	.04	.09	.00	.47	.70
4	19	.10	.03	.10	.03	-.05	-.08
5	20	.11	.10	.04	.00	.81	.37
6	60	.33	.20	.20	.07	.33	.25
7	89	.17	.13	.04	.00	.83	.29
8	92	.11	.22	.04	.15	.35	-.32
9	97	.07	.00	.07	.00	.01	1.00
10	98	.13	.26	.00	.13	.60	-.58
11	111	.20	.08	.12	.00	.52	.65
12	119	.03	.10	.00	.07	.47	-.69
13	124	.04	.04	.04	.04	-.04	.00
14	130	.14	.14	.03	.03	.71	.00
15	136	.32	.24	.08	.00	.80	.33
16	138	.07	.03	.03	.00	.65	.52
17	147	.23	.23	.00	.00	1.00	.00
18	148	.14	.14	.00	.00	1.00	.00
19	167	.12	.08	.08	.04	.34	.16
20	298	.26	.30	.07	.11	.54	-.10
21	302	.23	.19	.08	.04	.65	.15
22	315	.04	.07	.00	.04	.65	-.52
23	319	.07	.13	.00	.07	.63	-.54
24	324	.05	.14	.00	.09	.46	-.70
25	325	.07	.04	.04	.00	.65	.52
26	371	.24	.12	.12	.00	.60	.57
27	490	.21	.17	.07	.03	.66	.15
28	502	.11	.19	.00	.07	.71	-.45
29	530	.00	.00	.00	.00	1.00	.00
30	536	.03	.03	.03	.03	-.03	.00
31	541	.03	.03	.00	.00	1.00	.00
32	544	.21	.10	.14	.03	.36	.32
33	573	.14	.03	.10	.00	.36	.78
34	607	.13	.10	.10	.07	.19	.06
35	610	.07	.19	.04	.15	.20	-.25
36	613	.07	.11	.00	.04	.78	-.36
37	622	.23	.13	.13	.03	.45	.33
38	632	.03	.13	.00	.10	.37	-.78
39	648	.10	.13	.03	.07	.52	-.17
40	649	.03	.00	.03	.00	.03	1.00
41	669	.00	.04	.00	.04	.03	-1.00
42	676	.00	.17	.00	.17	.00	-1.00
43	677	.03	.03	.03	.03	-.04	.00
44	709	.03	.13	.00	.10	.37	-.78
45	732	.17	.00	.17	.00	.00	1.00

Urinary Tract Infections (CNT4)

	Facility ID	facility rated CNT4	gold rated CNT4	false pos CNT4	false neg CNT4	kappa CNT4	gamma CNT4
46	733	.10	.03	.10	.03	-.05	-.08
47	739	.04	.04	.00	.00	1.00	.00
48	740	.04	.07	.04	.07	-.05	.04
49	757	.07	.03	.03	.00	.65	.52
50	762	.11	.14	.04	.07	.51	-.17
51	763	.14	.24	.03	.14	.45	-.33
52	769	.07	.21	.00	.14	.44	-.72
53	773	.11	.11	.04	.04	.63	.00
54	774	.07	.07	.04	.04	.46	.00
55	776	.23	.27	.10	.13	.38	-.07
56	784	.17	.14	.07	.03	.61	.16
57	785	.14	.28	.00	.14	.59	-.58
58	786	.28	.28	.10	.10	.48	.00
59	799	.07	.03	.03	.00	.65	.52
60	800	.03	.13	.00	.10	.37	-.78
61	803	.07	.03	.07	.03	-.05	-.04
62	804	.14	.03	.10	.00	.36	.78
63	805	.28	.34	.07	.14	.52	-.17
64	823	.18	.21	.04	.07	.66	-.15
65	824	.08	.08	.00	.00	1.00	.00
66	825	.00	.14	.00	.14	.00	-1.00
67	831	.17	.13	.03	.00	.87	.23
68	833	.00	.17	.00	.17	.00	-1.00
69	834	.04	.04	.00	.00	1.00	.00
70	836	.08	.04	.04	.00	.65	.52
71	842	.12	.13	.04	.09	.42	-.38
72	845	.07	.15	.04	.11	.26	-.22
73	848	.13	.23	.03	.13	.45	-.33
74	857	.14	.21	.03	.10	.52	-.26
75	858	.10	.10	.07	.07	.26	.00
76	859	.07	.10	.03	.07	.35	-.16
77	861	.15	.19	.15	.19	-.20	.05
78	869	.12	.15	.00	.04	.84	-.28
79	876	.04	.00	.04	.00	.02	1.00
80	878	.10	.13	.03	.07	.52	-.17
81	882	.00	.05	.00	.05	.02	-1.00
82	884	.08	.12	.00	.04	.78	-.36
83	886	.17	.21	.04	.07	.66	-.15
84	887	.22	.07	.22	.07	-.13	-.21
85	890	.07	.17	.03	.14	.21	-.26
86	891	.00	.07	.00	.07	.01	-1.00
87	894	.15	.11	.04	.00	.84	.28
88	906	.12	.12	.08	.08	.25	.00
89	912	.07	.07	.03	.03	.46	.00
90	913	.03	.03	.03	.03	-.04	.00

Urinary Tract Infections (CNT4)

	Facility ID	facility rated CNT4	gold rated CNT4	false pos CNT4	false neg CNT4	kappa CNT4	gamma CNT4
91	917	.14	.24	.00	.10	.67	-.50
92	924	.33	.30	.04	.00	.91	.16
93	934	.07	.14	.03	.10	.27	-.23
94	943	.15	.15	.08	.08	.41	.00
95	945	.17	.04	.13	.00	.36	.78
96	953	.14	.00	.14	.00	.01	1.00
97	954	.19	.08	.15	.04	.20	.25
98	959	.11	.15	.00	.08	.76	-.64
99	962	.04	.00	.04	.00	.02	1.00
100	963	.21	.13	.17	.08	.11	.07
101	968	.04	.15	.00	.12	.36	-.78
102	970	.14	.18	.05	.09	.49	-.17
103	980	.00	.10	.00	.10	.01	-1.00
104	986	.08	.16	.00	.08	.63	-.54
105	991	.15	.00	.15	.00	.00	1.00
106	996	.12	.08	.08	.00	.72	.36
107	1003	.08	.04	.04	.00	.65	.52
108	1006	.07	.00	.07	.00	.01	1.00
109	1016	.16	.08	.12	.04	.25	.22
110	1019	.10	.25	.00	.15	.50	-.67
111	1025	.22	.27	.00	.08	.80	-.37
112	1026	.14	.14	.07	.07	.42	.00
113	1029	.14	.25	.04	.14	.44	-.33
114	1033	.07	.14	.04	.11	.26	-.22
115	1037	.04	.04	.00	.00	1.00	.00
116	1039	.21	.03	.17	.00	.24	.86
117	1040	.21	.19	.12	.12	.31	-.16
118	1043	.07	.04	.04	.00	.65	.52
119	1044	.13	.00	.13	.00	.01	1.00
120	1054	.07	.17	.03	.13	.21	-.26
121	1060	.10	.10	.10	.10	-.12	.00
122	1072	.27	.14	.14	.00	.59	.58
123	1074	.08	.00	.00	.00	1.00	.00
124	1076	.13	.03	.10	.00	.37	.78
125	1077	.19	.20	.05	.05	.69	.00
126	1079	.13	.25	.04	.17	.33	-.32
127	1080	.10	.10	.03	.03	.63	.00
128	1084	.12	.20	.04	.12	.41	-.27
129	1085	.11	.14	.04	.07	.51	-.17
130	1091	.11	.07	.04	.00	.78	.36
131	1097	.04	.04	.04	.04	-.04	.00
132	1100	.17	.10	.07	.00	.71	.44
133	1102	.21	.14	.07	.00	.76	.39
134	1106	.24	.10	.19	.05	.17	.23
135	1115	.04	.09	.00	.04	.65	-.52

Urinary Tract Infections (CNT4)

	Facility ID	facility rated CNT4	gold rated CNT4	false pos CNT4	false neg CNT4	kappa CNT4	gamma CNT4
136	1118	.08	.12	.04	.08	.34	-.16
137	1137	.26	.33	.04	.11	.65	-.24
138	1141	.13	.17	.07	.10	.35	-.09
139	1142	.07	.03	.07	.03	-.05	-.04
140	1144	.13	.17	.03	.07	.61	-.16
141	1148	.14	.17	.10	.14	.08	-.02
142	1149	.07	.10	.00	.03	.78	-.36
143	1152	.00	.14	.00	.14	.01	-1.00
144	1153	.21	.38	.10	.28	.12	-.11
145	1158	.15	.19	.08	.12	.33	-.09
146	1160	.07	.10	.03	.07	.35	-.16
147	1162	.00	.15	.00	.15	.00	-1.00
148	1163	.30	.17	.13	.00	.65	.52
149	1165	.22	.26	.00	.04	.88	-.21
150	1166	.08	.00	.08	.00	.01	1.00
151	1174	.03	.10	.00	.07	.47	-.69
152	1176	.11	.14	.04	.07	.51	-.17
153	1178	.13	.07	.13	.07	-.10	-.08
154	1181	.07	.15	.00	.07	.63	-.54
155	1188	.07	.03	.03	.00	.65	.52
156	1209	.03	.00	.03	.00	.03	1.00
157	1218	.07	.07	.00	.00	1.00	.00
158	1236	.17	.10	.07	.00	.71	.45
159	1241	.03	.03	.00	.00	1.00	.00
160	1246	.04	.04	.00	.00	1.00	.00
161	1249	.03	.10	.00	.07	.47	-.69
162	1255	.07	.00	.07	.00	.01	1.00
163	1264	.03	.03	.00	.00	1.00	.00
164	1280	.15	.22	.04	.11	.51	-.27
165	1287	.07	.13	.00	.07	.63	-.54
166	1294	.17	.20	.00	.03	.89	-.20
167	1308	.00	.00	.00	.00	1.00	.00
168	1321	.17	.20	.00	.03	.89	-.20
169	1323	.22	.30	.00	.07	.81	-.32
170	1325	.21	.24	.10	.14	.31	-.06
171	1329	.28	.29	.11	.11	.47	.00
172	1330	.07	.20	.03	.17	.17	-.27
173	1337	.04	.07	.04	.07	-.05	.04
174	1345	.23	.17	.07	.00	.79	.34
175	1349	.20	.23	.10	.13	.31	-.06
176	1350	.03	.03	.00	.00	1.00	.00
177	1354	.00	.03	.00	.03	.03	-1.00
178	1355	.10	.17	.00	.07	.71	-.44
179	1357	.21	.21	.07	.07	.58	.00
180	1366	.07	.24	.03	.21	.13	-.26

Urinary Tract Infections (CNT4)

	Facility ID	facility rated CNT4	gold rated CNT4	false pos CNT4	false neg CNT4	kappa CNT4	gamma CNT4
181	1368	.18	.25	.00	.07	.79	-.35
182	1372	.00	.07	.00	.07	.01	-1.00
183	1374	.04	.09	.00	.04	.65	-.52
184	1377	.07	.07	.00	.00	1.00	.00
185	1380	.31	.31	.07	.07	.68	.00
186	1381	.00	.03	.00	.03	.03	-1.00
187	1383	.07	.23	.03	.20	.13	-.27
188	1384	.11	.04	.11	.04	-.06	-.09
189	1385	.10	.14	.00	.03	.84	-.28
190	1386	.04	.19	.00	.15	.29	-.83
191	1391	.07	.20	.00	.13	.44	-.71
192	2009	.14	.14	.07	.07	.42	.00
193	2013	.00	.00	.00	.00	1.00	.00
194	2039	.17	.17	.07	.07	.52	.00
195	2087	.03	.14	.00	.10	.36	-.78
196	2088	.07	.10	.03	.07	.35	-.16
197	2124	.11	.15	.04	.07	.51	-.17
198	2231	.30	.20	.13	.03	.56	.32
199	2236	.00	.07	.00	.07	.01	-1.00
200	3075	.17	.17	.03	.03	.76	.00
201	5002	.00	.05	.00	.05	.02	-1.00
202	5004	.14	.00	.14	.00	.01	1.00
203	5019	.15	.15	.04	.04	.70	.00
204	5020	.33	.10	.23	.00	.36	.78
205	5021	.14	.07	.07	.00	.63	.54
206	5025	.15	.12	.04	.00	.84	.28
207	5030	.04	.12	.04	.12	-.06	.09
208	5041	.07	.10	.00	.03	.78	-.36
209	5048	.14	.14	.00	.00	1.00	.00

Infections (INF1)

	Facility ID	facility rated INF1	gold rated INF1	false pos INF1	false neg INF1	kappa INF1	gamma INF1
1	1	.19	.10	.10	.00	.62	.55
2	2	.30	.30	.19	.19	.11	.00
3	18	.28	.13	.13	.00	.63	.49
4	19	.24	.21	.17	.14	.11	.02
5	20	.29	.27	.07	.04	.74	.18
6	60	.43	.40	.20	.17	.25	.03
7	89	.17	.21	.04	.08	.59	-.16
8	92	.11	.33	.04	.26	.20	-.38
9	97	.11	.11	.07	.07	.25	.00
10	98	.22	.39	.00	.17	.60	-.57

Infections (INFX)

	Facility ID	facility rated INF1	gold rated INF1	false pos INF1	false neg INF1	kappa INF1	gamma INF1
11	111	.24	.16	.12	.04	.50	.27
12	119	.21	.24	.03	.07	.70	-.14
13	124	.04	.11	.04	.11	-.06	.09
14	130	.31	.28	.10	.07	.58	.10
15	136	.40	.52	.00	.12	.76	-.38
16	138	.14	.17	.03	.07	.61	-.16
17	147	.53	.50	.13	.10	.53	.07
18	148	.21	.21	.04	.04	.79	.00
19	167	.15	.15	.12	.12	.11	.00
20	298	.85	.85	.07	.07	.41	.00
21	302	.35	.54	.08	.27	.32	-.28
22	315	.26	.37	.04	.15	.58	-.31
23	319	.30	.40	.07	.17	.49	-.22
24	324	.23	.45	.00	.23	.52	-.65
25	325	.07	.04	.04	.00	.65	.52
26	371	.32	.20	.16	.04	.49	.33
27	490	.21	.17	.07	.03	.66	.15
28	502	.26	.30	.04	.07	.72	-.13
29	530	.05	.05	.05	.05	-.05	.00
30	536	.07	.10	.07	.10	-.09	.04
31	541	.03	.10	.00	.07	.47	-.69
32	544	.24	.10	.17	.03	.30	.36
33	573	.17	.10	.10	.03	.43	.27
34	607	.20	.33	.10	.23	.17	-.13
35	610	.19	.41	.00	.22	.50	-.67
36	613	.22	.22	.07	.07	.57	.00
37	622	.40	.27	.23	.10	.26	.17
38	632	.07	.23	.03	.20	.13	-.27
39	648	.17	.17	.07	.07	.52	.00
40	649	.03	.10	.03	.10	-.05	.08
41	669	.07	.21	.04	.18	.16	-.26
42	676	.03	.20	.00	.17	.24	-.86
43	677	.17	.17	.10	.10	.28	.00
44	709	.07	.17	.03	.13	.21	-.26
45	732	.17	.07	.17	.07	-.11	-.13
46	733	.23	.17	.13	.07	.38	.16
47	739	.08	.15	.00	.08	.63	-.54
48	740	.07	.15	.07	.15	-.11	.09
49	757	.07	.07	.03	.03	.46	.00
50	762	.36	.46	.07	.18	.49	-.22
51	763	.48	.59	.03	.14	.66	-.28
52	769	.43	.43	.14	.14	.42	.00
53	773	.26	.30	.11	.15	.35	-.07
54	774	.21	.21	.11	.11	.36	.00
55	776	.53	.57	.17	.20	.26	-.04

Infections (INFX)

	Facility ID	facility rated INF1	gold rated INF1	false pos INF1	false neg INF1	kappa INF1	gamma INF1
56	784	.17	.28	.03	.14	.51	-.33
57	785	.31	.45	.03	.17	.57	-.36
58	786	.79	.52	.31	.03	.30	.49
59	799	.07	.13	.03	.10	.27	-.23
60	800	.10	.30	.03	.23	.22	-.39
61	803	.14	.17	.10	.14	.08	-.02
62	804	.45	.17	.31	.03	.26	.47
63	805	.66	.72	.10	.17	.36	-.12
64	823	.36	.50	.04	.18	.57	-.36
65	824	.21	.25	.00	.04	.88	-.21
66	825	.04	.25	.00	.21	.20	-.89
67	831	.27	.40	.00	.13	.71	-.45
68	833	.08	.42	.04	.38	.03	-.12
69	834	.15	.15	.07	.07	.41	.00
70	836	.08	.12	.04	.08	.34	-.16
71	842	.28	.35	.04	.13	.61	-.32
72	845	.07	.26	.04	.22	.12	-.25
73	848	.30	.40	.07	.17	.49	-.22
74	857	.21	.31	.03	.14	.56	-.32
75	858	.23	.27	.10	.13	.38	-.07
76	859	.21	.17	.14	.10	.22	.05
77	861	.26	.41	.11	.26	.19	-.14
78	869	.19	.35	.00	.15	.62	-.55
79	876	.15	.22	.11	.19	.03	-.01
80	878	.23	.27	.13	.17	.20	-.04
81	882	.00	.15	.00	.15	.00	-1.00
82	884	.32	.40	.08	.16	.48	-.17
83	886	.21	.36	.04	.18	.49	-.38
84	887	.30	.19	.26	.15	-.10	-.06
85	890	.17	.34	.07	.24	.22	-.24
86	891	.00	.10	.00	.10	.01	-1.00
87	894	.22	.26	.04	.07	.70	-.14
88	906	.38	.62	.12	.35	.12	-.13
89	912	.13	.13	.07	.07	.42	.00
90	913	.07	.21	.07	.21	-.12	.19
91	917	.48	.55	.03	.10	.73	-.20
92	924	.48	.52	.04	.07	.78	-.12
93	934	.17	.14	.10	.07	.34	.09
94	943	.15	.19	.08	.12	.33	-.09
95	945	.17	.04	.13	.00	.36	.78
96	953	.24	.00	.24	.00	.00	1.00
97	954	.38	.35	.15	.12	.42	.07
98	959	.36	.46	.15	.15	.46	-.82
99	962	.23	.08	.15	.00	.43	.72
100	963	.38	.17	.21	.00	.50	.67

Infections (INFX)

	Facility ID	facility rated INF1	gold rated INF1	false pos INF1	false neg INF1	kappa INF1	gamma INF1
101	968	.15	.31	.04	.19	.37	-.38
102	970	.27	.32	.05	.09	.67	-.15
103	980	.14	.29	.05	.19	.31	-.31
104	986	.28	.44	.08	.24	.32	-.25
105	991	.15	.00	.15	.00	.00	1.00
106	996	.15	.08	.08	.00	.77	.27
107	1003	.38	.17	.21	.00	.50	.67
108	1006	.30	.00	.30	.00	.00	1.00
109	1016	.40	.32	.20	.12	.31	.11
110	1019	.60	.55	.10	.05	.69	.14
111	1025	.52	.54	.12	.15	.46	-.15
112	1026	.25	.21	.18	.14	.10	.02
113	1029	.18	.29	.04	.14	.51	-.33
114	1033	.46	.43	.21	.18	.21	.03
115	1037	.12	.04	.08	.00	.47	.69
116	1039	.24	.03	.21	.00	.20	.89
117	1040	.36	.38	.12	.15	.43	-.16
118	1043	.11	.04	.07	.00	.47	.69
119	1044	.20	.10	.13	.03	.36	.32
120	1054	.23	.47	.10	.33	.10	-.13
121	1060	.38	.28	.21	.10	.30	.15
122	1072	.27	.23	.09	.05	.64	.16
123	1074	.16	.18	.00	.09	.79	-.75
124	1076	.43	.07	.37	.00	.17	.91
125	1077	.19	.50	.05	.35	.20	-.37
126	1079	.29	.33	.13	.17	.32	-.06
127	1080	.31	.31	.07	.07	.68	.00
128	1084	.20	.28	.04	.12	.57	-.26
129	1085	.18	.21	.00	.04	.89	-.20
130	1091	.18	.14	.07	.04	.60	.16
131	1097	.19	.15	.15	.12	.06	.02
132	1100	.20	.17	.10	.07	.44	.10
133	1102	.34	.21	.14	.00	.66	.50
134	1106	.29	.29	.14	.14	.30	.00
135	1115	.04	.26	.00	.22	.23	-.87
136	1118	.12	.12	.08	.08	.25	.00
137	1137	.48	.59	.04	.15	.63	-.29
138	1141	.20	.40	.00	.20	.55	-.63
139	1142	.07	.27	.03	.23	.10	-.26
140	1144	.27	.33	.13	.20	.21	-.07
141	1148	.21	.41	.03	.24	.39	-.45
142	1149	.24	.28	.03	.07	.73	-.13
143	1152	.05	.27	.00	.23	.23	-.87
144	1153	.28	.48	.07	.28	.30	-.31
145	1158	.23	.35	.08	.19	.35	-.21

Infections (INFX)

	Facility ID	facility rated INF1	gold rated INF1	false pos INF1	false neg INF1	kappa INF1	gamma INF1
146	1160	.47	.57	.07	.17	.54	-.22
147	1162	.11	.37	.04	.30	.16	-.37
148	1163	.39	.26	.17	.04	.51	.33
149	1165	.35	.43	.00	.09	.82	-.31
150	1166	.27	.31	.12	.15	.35	-.07
151	1174	.13	.17	.07	.10	.35	-.09
152	1176	.11	.14	.04	.07	.51	-.17
153	1178	.23	.13	.17	.07	.23	.17
154	1181	.11	.15	.04	.07	.51	-.17
155	1188	.07	.03	.03	.00	.65	.52
156	1209	.03	.00	.03	.00	.03	1.00
157	1218	.30	.37	.00	.07	.85	-.26
158	1236	.41	.28	.17	.03	.55	.36
159	1241	.07	.07	.03	.03	.46	.00
160	1246	.31	.23	.12	.04	.61	.25
161	1249	.07	.21	.00	.14	.44	-.72
162	1255	.10	.07	.07	.03	.35	.16
163	1264	.07	.03	.03	.00	.65	.52
164	1280	.63	.85	.04	.26	.28	-.42
165	1287	.33	.43	.00	.10	.79	-.35
166	1294	.33	.30	.10	.07	.62	.10
167	1308	.04	.04	.04	.04	-.04	.00
168	1321	.20	.33	.00	.13	.67	-.50
169	1323	.30	.37	.04	.11	.67	-.23
170	1325	.41	.48	.10	.17	.44	-.13
171	1329	.34	.39	.07	.11	.62	-.09
172	1330	.13	.37	.10	.33	-.08	.14
173	1337	.15	.11	.11	.07	.18	.06
174	1345	.27	.43	.07	.23	.36	-.29
175	1349	.23	.30	.10	.17	.32	-.11
176	1350	.13	.10	.03	.00	.84	.28
177	1354	.00	.07	.00	.07	.01	-1.00
178	1355	.10	.30	.00	.20	.41	-.74
179	1357	.48	.45	.14	.10	.52	.07
180	1366	.14	.38	.03	.28	.25	-.44
181	1368	.36	.46	.00	.11	.78	-.36
182	1372	.04	.18	.00	.14	.29	-.83
183	1374	.04	.17	.00	.13	.36	-.78
184	1377	.10	.17	.03	.10	.43	-.27
185	1380	.45	.52	.07	.14	.59	-.16
186	1381	.10	.13	.03	.07	.52	-.17
187	1383	.07	.37	.03	.33	.05	-.18
188	1384	.30	.56	.15	.41	-.06	.08
189	1385	.17	.24	.03	.10	.58	-.25
190	1386	.11	.33	.00	.22	.40	-.75

Infections (INF1)

	Facility ID	facility rated INF1	gold rated INF1	false pos INF1	false neg INF1	kappa INF1	gamma INF1
191	1391	.07	.30	.00	.23	.29	-.83
192	2009	.21	.25	.07	.11	.50	-.10
193	2013	.14	.18	.04	.07	.60	-.16
194	2039	.31	.17	.17	.03	.45	.38
195	2087	.07	.14	.00	.07	.63	-.54
196	2088	.10	.14	.07	.10	.19	-.06
197	2124	.19	.30	.07	.19	.30	-.20
198	2231	.40	.30	.17	.07	.49	.22
199	2236	.00	.07	.00	.07	.01	-1.00
200	3075	.27	.37	.07	.17	.47	-.23
201	5002	.25	.30	.10	.15	.38	-.10
202	5004	.45	.41	.18	.14	.35	.07
203	5019	.54	.58	.08	.12	.61	-.10
204	5020	.63	.37	.27	.00	.50	.66
205	5021	.79	.64	.25	.11	.15	.11
206	5025	.62	.58	.08	.04	.76	.12
207	5030	.12	.36	.04	.28	.19	-.36
208	5041	.34	.41	.00	.07	.85	-.25
209	5048	.46	.64	.04	.21	.51	-.41

Nutrition (NUT1)

	Facility ID	facility rated NUT1	gold rated NUT1	false pos NUT1	false neg NUT1	kappa NUT1	gamma NUT1
1	1	.90	.90	.00	.00	1.00	.00
2	2	.22	.26	.00	.04	.90	-.18
3	18	.12	.09	.04	.00	.78	.37
4	19	.21	.17	.07	.03	.66	.15
5	20	.21	.30	.00	.11	.73	-.42
6	60	.00	.00	.00	.00	1.00	.00
7	89	.00	.00	.00	.00	1.00	.00
8	92	.07	.07	.00	.00	1.00	.00
9	97	.04	.04	.00	.00	1.00	.00
10	98	.04	.04	.00	.00	1.00	.00
11	111	.12	.08	.08	.04	.34	.16
12	119	.03	.00	.03	.00	.03	1.00
13	124	.04	.00	.04	.00	.02	1.00
14	130	.14	.14	.00	.00	1.00	.00
15	136	.12	.08	.04	.00	.78	.36
16	138	.03	.00	.03	.00	.03	1.00
17	147	.03	.03	.00	.00	1.00	.00
18	148	.00	.00	.00	.00	1.00	.00
19	167	.12	.12	.00	.00	1.00	.00
20	298	.15	.15	.00	.00	1.00	.00

Nutrition (NUT1)

	Facility ID	facility rated NUT1	gold rated NUT1	false pos NUT1	false neg NUT1	kappa NUT1	gamma NUT1
21	302	.88	.88	.04	.04	.62	.00
22	315	.07	.11	.00	.04	.78	-.36
23	319	.10	.10	.03	.03	.63	.00
24	324	.00	.00	.00	.00	1.00	.00
25	325	.11	.11	.04	.04	.63	.00
26	371	.20	.20	.00	.00	1.00	.00
27	490	.17	.17	.03	.03	.76	.00
28	502	.19	.15	.04	.00	.87	.23
29	530	.00	.00	.00	.00	1.00	.00
30	536	.00	.00	.00	.00	1.00	.00
31	541	.17	.17	.00	.00	1.00	.00
32	544	.07	.07	.00	.00	1.00	.00
33	573	.00	.00	.00	.00	1.00	.00
34	607	.23	.23	.00	.00	1.00	.00
35	610	.04	.04	.00	.00	1.00	.00
36	613	.11	.07	.04	.00	.78	.36
37	622	.07	.00	.07	.00	.01	1.00
38	632	.00	.00	.00	.00	1.00	.00
39	648	.13	.13	.00	.00	1.00	.00
40	649	.00	.00	.00	.00	1.00	.00
41	669	.00	.00	.00	.00	1.00	.00
42	676	.07	.03	.03	.00	.65	.52
43	677	.07	.07	.00	.00	1.00	.00
44	709	.03	.03	.00	.00	1.00	.00
45	732	.00	.00	.00	.00	1.00	.00
46	733	.10	.10	.00	.00	1.00	.00
47	739	.00	.00	.00	.00	1.00	.00
48	740	.00	.00	.00	.00	1.00	.00
49	757	.07	.07	.00	.00	1.00	.00
50	762	.14	.14	.00	.00	1.00	.00
51	763	.07	.07	.00	.00	1.00	.00
52	769	.04	.07	.00	.04	.65	-.52
53	773	.00	.00	.00	.00	1.00	.00
54	774	.04	.00	.04	.00	.03	1.00
55	776	.03	.07	.03	.07	-.05	.04
56	784	.10	.10	.03	.03	.63	.00
57	785	.10	.14	.00	.03	.84	-.28
58	786	.07	.10	.00	.03	.78	-.36
59	799	.03	.03	.00	.00	1.00	.00
60	800	.00	.00	.00	.00	1.00	.00
61	803	.07	.07	.00	.00	1.00	.00
62	804	.03	.03	.00	.00	1.00	.00
63	805	.07	.10	.00	.03	.78	-.36
64	823	.21	.21	.00	.00	1.00	.00
65	824	.04	.00	.04	.00	.02	1.00

Nutrition (NUT1)

	Facility ID	facility rated NUT1	gold rated NUT1	false pos NUT1	false neg NUT1	kappa NUT1	gamma NUT1
66	825	.04	.04	.00	.00	1.00	.00
67	831	.00	.00	.00	.00	1.00	.00
68	833	.00	.00	.00	.00	1.00	.00
69	834	.07	.07	.00	.00	1.00	.00
70	836	.12	.12	.00	.00	1.00	.00
71	842	.12	.13	.00	.00	1.00	.00
72	845	.00	.00	.00	.00	1.00	.00
73	848	.00	.00	.00	.00	1.00	.00
74	857	.10	.07	.03	.00	.78	.36
75	858	.07	.07	.00	.00	1.00	.00
76	859	.03	.03	.00	.00	1.00	.00
77	861	.00	.00	.00	.00	1.00	.00
78	869	.08	.08	.00	.00	1.00	.00
79	876	.00	.00	.00	.00	1.00	.00
80	878	.07	.07	.03	.03	.46	.00
81	882	.10	.00	.11	.00	.01	1.00
82	884	.04	.04	.00	.00	1.00	.00
83	886	.14	.14	.00	.00	1.00	.00
84	887	.00	.00	.00	.00	1.00	.00
85	890	.07	.07	.03	.03	.46	.00
86	891	.03	.03	.00	.00	1.00	.00
87	894	.11	.15	.00	.04	.84	-.28
88	906	.08	.08	.00	.00	1.00	.00
89	912	.07	.10	.00	.03	.78	-.36
90	913	.03	.03	.00	.00	1.00	.00
91	917	.00	.00	.00	.00	1.00	.00
92	924	.11	.19	.00	.07	.71	-.45
93	934	.03	.07	.00	.03	.65	-.52
94	943	.08	.08	.00	.00	1.00	.00
95	945	.21	.17	.08	.04	.59	.16
96	953	.14	.14	.00	.00	1.00	.00
97	954	.23	.27	.00	.04	.90	-.19
98	959	.04	.00	.00	.00	1.00	.00
99	962	.15	.08	.08	.00	.63	.54
100	963	.00	.00	.00	.00	1.00	.00
101	968	.04	.04	.00	.00	1.00	.00
102	970	.00	.05	.00	.05	.02	-1.00
103	980	.05	.05	.05	.05	-.05	.00
104	986	.00	.04	.00	.04	.02	-1.00
105	991	.11	.07	.04	.00	.78	.36
106	996	.04	.00	.00	.00	1.00	.00
107	1003	.29	.29	.04	.04	.80	.00
108	1006	.00	.00	.00	.00	1.00	.00
109	1016	.00	.00	.00	.00	1.00	.00
110	1019	.15	.15	.05	.05	.61	.00

Nutrition (NUT1)

	Facility ID	facility rated NUT1	gold rated NUT1	false pos NUT1	false neg NUT1	kappa NUT1	gamma NUT1
111	1025	.00	.04	.00	.04	.02	-1.00
112	1026	.04	.11	.00	.07	.47	-.69
113	1029	.00	.04	.00	.04	.03	-1.00
114	1033	.00	.00	.00	.00	1.00	.00
115	1037	.08	.04	.04	.00	.65	.52
116	1039	.03	.03	.00	.00	1.00	.00
117	1040	.11	.08	.04	.00	.78	.36
118	1043	.04	.04	.00	.00	1.00	.00
119	1044	.07	.03	.03	.00	.65	.52
120	1054	.10	.10	.00	.00	1.00	.00
121	1060	.00	.03	.00	.03	.03	-1.00
122	1072	.00	.00	.00	.00	1.00	.00
123	1074	.08	.09	.00	.00	1.00	.00
124	1076	.00	.00	.00	.00	1.00	.00
125	1077	.14	.10	.00	.00	1.00	.00
126	1079	.00	.00	.00	.00	1.00	.00
127	1080	.03	.00	.03	.00	.03	1.00
128	1084	.12	.16	.00	.04	.83	-.28
129	1085	.25	.25	.00	.00	1.00	.00
130	1091	.14	.18	.00	.04	.87	-.23
131	1097	.15	.12	.04	.00	.84	.28
132	1100	.13	.10	.03	.00	.84	.28
133	1102	.00	.00	.00	.00	1.00	.00
134	1106	.10	.10	.00	.00	1.00	.00
135	1115	.04	.04	.00	.00	1.00	.00
136	1118	.15	.15	.00	.00	1.00	.00
137	1137	.11	.15	.00	.04	.84	-.28
138	1141	.03	.10	.00	.07	.47	-.69
139	1142	.03	.03	.00	.00	1.00	.00
140	1144	.00	.00	.00	.00	1.00	.00
141	1148	.14	.14	.00	.00	1.00	.00
142	1149	.03	.03	.00	.00	1.00	.00
143	1152	.27	.23	.05	.00	.88	.22
144	1153	.24	.28	.00	.03	.91	-.16
145	1158	.23	.23	.00	.00	1.00	.00
146	1160	.00	.00	.00	.00	1.00	.00
147	1162	.00	.04	.00	.04	.02	-1.00
148	1163	.09	.04	.04	.00	.65	.52
149	1165	.00	.04	.00	.04	.02	-1.00
150	1166	.15	.15	.04	.04	.70	.00
151	1174	.03	.03	.00	.00	1.00	.00
152	1176	.04	.00	.04	.00	.03	1.00
153	1178	.03	.00	.03	.00	.03	1.00
154	1181	.00	.00	.00	.00	1.00	.00
155	1188	.00	.00	.00	.00	1.00	.00

Nutrition (NUT1)

	Facility ID	facility rated NUT1	gold rated NUT1	false pos NUT1	false neg NUT1	kappa NUT1	gamma NUT1
156	1209	.03	.03	.00	.00	1.00	.00
157	1218	.00	.00	.00	.00	1.00	.00
158	1236	.03	.03	.00	.00	1.00	.00
159	1241	.13	.13	.00	.00	1.00	.00
160	1246	.04	.00	.04	.00	.02	1.00
161	1249	.00	.00	.00	.00	1.00	.00
162	1255	.10	.10	.00	.00	1.00	.00
163	1264	.07	.03	.03	.00	.65	.52
164	1280	.00	.00	.00	.00	1.00	.00
165	1287	.00	.00	.00	.00	1.00	.00
166	1294	.37	.30	.07	.00	.85	.26
167	1308	.04	.04	.00	.00	1.00	.00
168	1321	.10	.10	.00	.00	1.00	.00
169	1323	.07	.07	.00	.00	1.00	.00
170	1325	.10	.07	.03	.00	.78	.36
171	1329	.00	.00	.00	.00	1.00	.00
172	1330	.20	.20	.00	.00	1.00	.00
173	1337	.07	.07	.04	.04	.46	.00
174	1345	.03	.03	.00	.00	1.00	.00
175	1349	.33	.33	.00	.00	1.00	.00
176	1350	.10	.10	.00	.00	1.00	.00
177	1354	.03	.00	.03	.00	.03	1.00
178	1355	.17	.17	.00	.00	1.00	.00
179	1357	.03	.07	.00	.03	.65	-.52
180	1366	.07	.07	.00	.00	1.00	.00
181	1368	.00	.00	.00	.00	1.00	.00
182	1372	.04	.04	.00	.00	1.00	.00
183	1374	.13	.13	.00	.00	1.00	.00
184	1377	.03	.03	.00	.00	1.00	.00
185	1380	.07	.03	.03	.00	.65	.52
186	1381	.03	.03	.00	.00	1.00	.00
187	1383	.13	.10	.03	.00	.84	.28
188	1384	.04	.04	.00	.00	1.00	.00
189	1385	.07	.07	.00	.00	1.00	.00
190	1386	.07	.07	.00	.00	1.00	.00
191	1391	.07	.07	.00	.00	1.00	.00
192	2009	.00	.00	.00	.00	1.00	.00
193	2013	.07	.07	.00	.00	1.00	.00
194	2039	.07	.07	.00	.00	1.00	.00
195	2087	.14	.14	.00	.00	1.00	.00
196	2088	.10	.10	.00	.00	1.00	.00
197	2124	.00	.00	.00	.00	1.00	.00
198	2231	.10	.10	.00	.00	1.00	.00
199	2236	.04	.04	.00	.00	1.00	.00
200	3075	.03	.03	.00	.00	1.00	.00

Nutrition (NUT1)

	Facility ID	facility rated NUT1	gold rated NUT1	false pos NUT1	false neg NUT1	kappa NUT1	gamma NUT1
201	5002	.25	.25	.00	.00	1.00	.00
202	5004	.05	.09	.00	.05	.65	-.52
203	5019	.04	.04	.00	.00	1.00	.00
204	5020	.10	.07	.03	.00	.78	.36
205	5021	.00	.00	.00	.00	1.00	.00
206	5025	.08	.08	.00	.00	1.00	.00
207	5030	.00	.00	.00	.00	1.00	.00
208	5041	.03	.03	.00	.00	1.00	.00
209	5048	.04	.04	.00	.00	1.00	.00

Body Mass Index (BMIX)

	Facility ID	facility rated BMI1	gold rated BMI1	false pos BMI1	false neg BMI1	kappa BMI1	gamma BMI1
1	1	.25	.13	1.00	.00	1.00	.00
2	2	.08	.07	1.00	.00	1.00	.00
3	18	.27	.19	1.00	.04	.52	.00
4	19	.12	.04	1.00	.00	1.00	.00
5	20	.19	.23	1.00	.03	.84	-.25
6	60	.13	.13	1.00	.00	1.00	.00
7	89	1.00	.00	1.00	.00	.	.
8	92	.15	.13	1.00	.00	1.00	.00
9	97	.31	.25	1.00	.00	1.00	.00
10	98	.10	.07	1.00	.00	1.00	.00
11	111	.25	.22	1.00	.04	.46	.82
12	119	.17	.17	1.00	.00	1.00	.00
13	124	.11	.17	1.00	.00	1.00	.00
14	130	.16	.22	1.00	.00	1.00	.00
15	136	.06	.10	1.00	.00	1.00	.00
16	138	.13	.13	1.00	.00	1.00	.00
17	147	.20	.20	1.00	.00	1.00	.00
18	148	.19	.19	1.00	.00	1.00	.00
19	167	.22	.24	1.00	.00	.80	1.00
20	298	.28	.19	1.00	.00	.78	.36
21	302	.17	.16	1.00	.00	1.00	.00
22	315	.08	.08	1.00	.04	.45	.00
23	319	.19	.19	1.00	.03	.88	-.25
24	324	.75	.45	1.00	.00	1.00	.00
25	325	.18	.18	1.00	.00	1.00	.00
26	371	.17	.13	1.00	.00	1.00	.00
27	490	.14	.19	1.00	.00	1.00	.00
28	502	.14	.12	1.00	.00	1.00	.00
29	530	.11	.06	1.00	.00	1.00	.00
30	536	.12	.11	1.00	.00	1.00	.00

Body Mass Index (BMIX)

	Facility ID	facility rated BMI1	gold rated BMI1	false pos BMI1	false neg BMI1	kappa BMI1	gamma BMI1
31	541	.11	.07	1.00	.00	.78	.36
32	544	.21	.21	1.00	.03	.79	.00
33	573	.15	.13	1.00	.00	.66	.58
34	607	.14	.15	1.00	.00	1.00	.00
35	610	.24	.23	1.00	.04	.75	.06
36	613	.19	.25	1.00	.04	.88	-.21
37	622	.17	.17	1.00	.00	1.00	.00
38	632	.11	.11	1.00	.00	1.00	.00
39	648	.18	.18	1.00	.00	1.00	.00
40	649	.00	.00	1.00	.00	1.00	.00
41	669	.19	.19	1.00	.00	1.00	.00
42	676	.20	.20	1.00	.00	1.00	.00
43	677	.25	.25	1.00	.00	1.00	.00
44	709	.17	.14	1.00	.00	.87	.23
45	732	.23	.22	1.00	.00	1.00	.00
46	733	.18	.14	1.00	.00	.87	.23
47	739	.16	.12	1.00	.00	.83	.28
48	740	.04	.00	1.00	.00	.02	1.00
49	757	.07	.10	1.00	.07	.35	-.16
50	762	.15	.11	1.00	.00	.84	.28
51	763	.08	.18	1.00	.07	.62	-.55
52	769	.28	.24	1.00	.07	.48	.10
53	773	.22	.19	1.00	.00	.89	.20
54	774	.11	.07	1.00	.00	.78	.36
55	776	.07	.07	1.00	.03	.46	.00
56	784	.11	.11	1.00	.00	1.00	.00
57	785	.15	.11	1.00	.00	.84	.28
58	786	.18	.18	1.00	.00	1.00	.00
59	799	.26	.30	1.00	.00	1.00	.00
60	800	.10	.10	1.00	.00	1.00	.00
61	803	.13	.12	1.00	.00	.81	.38
62	804	.08	.11	1.00	.03	.78	-.36
63	805	.07	.03	1.00	.00	.65	.52
64	823	.07	.15	1.00	.04	.78	-.27
65	824	.05	.09	1.00	.04	.65	-.52
66	825	.15	.15	1.00	.00	1.00	.00
67	831	.17	.11	1.00	.00	.85	.23
68	833	.23	.17	1.00	.04	.72	-.08
69	834	.29	.15	1.00	.00	.65	.51
70	836	.12	.12	1.00	.00	1.00	.00
71	842	.14	.18	1.00	.00	1.00	.00
72	845	.13	.16	1.00	.04	.83	-.29
73	848	.17	.17	1.00	.00	1.00	.00
74	857	.25	.29	1.00	.03	.91	-.17
75	858	.08	.15	1.00	.07	.63	-.55

Body Mass Index (BMIX)

	Facility ID	facility rated BMI1	gold rated BMI1	false pos BMI1	false neg BMI1	kappa BMI1	gamma BMI1
76	859	.08	.11	1.00	.03	.56	.21
77	861	.05	.00	1.00	.00	1.00	.00
78	869	.04	.04	1.00	.00	1.00	.00
79	876	.26	.23	1.00	.00	1.00	.00
80	878	.14	.19	1.00	.00	1.00	.00
81	882	.13	.06	1.00	.00	.63	.54
82	884	.09	.18	1.00	.04	.81	-.28
83	886	.23	.15	1.00	.00	.75	.40
84	887	.13	.12	1.00	.00	1.00	.00
85	890	.21	.21	1.00	.00	1.00	.00
86	891	.12	.14	1.00	.03	.67	.11
87	894	.16	.14	1.00	.00	1.00	.00
88	906	.06	.13	1.00	.00	1.00	.00
89	912	.18	.17	1.00	.00	1.00	.00
90	913	.17	.21	1.00	.07	.66	-.15
91	917	.11	.11	1.00	.00	1.00	.00
92	924	.05	.09	1.00	.00	1.00	.00
93	934	.07	.00	1.00	.00	.01	1.00
94	943	.08	.04	1.00	.00	.65	.52
95	945	.18	.20	1.00	.00	1.00	.00
96	953	.18	.18	1.00	.00	1.00	.00
97	954	.00	.04	1.00	.04	.02	-1.00
98	959	.21	.36	1.00	.00	1.00	.00
99	962	.04	.08	1.00	.04	.65	-.52
100	963	.09	.17	1.00	.04	.81	-.28
101	968	.00	.00	1.00	.00	1.00	.00
102	970	.20	.21	1.00	.05	.84	-.32
103	980	.11	.06	1.00	.00	1.00	.00
104	986	.05	.10	1.00	.04	.64	-.53
105	991	.04	.07	1.00	.04	.65	-.52
106	996	.13	.15	1.00	.00	1.00	.00
107	1003	.05	.05	1.00	.00	1.00	.00
108	1006	.12	.15	1.00	.00	1.00	.00
109	1016	.14	.08	1.00	.00	.77	.37
110	1019	.00	.00	1.00	.00	1.00	.00
111	1025	.12	.09	1.00	.07	.11	-.42
112	1026	.00	.04	1.00	.04	.02	-1.00
113	1029	.14	.21	1.00	.00	1.00	.00
114	1033	.12	.12	1.00	.00	1.00	.00
115	1037	.04	.04	1.00	.00	1.00	.00
116	1039	.15	.10	1.00	.00	.67	.57
117	1040	.04	.00	1.00	.00	1.00	.00
118	1043	.11	.11	1.00	.00	1.00	.00
119	1044	.10	.11	1.00	.00	.78	.58
120	1054	.11	.14	1.00	.03	.84	-.28

Body Mass Index (BMIX)

	Facility ID	facility rated BMI1	gold rated BMI1	false pos BMI1	false neg BMI1	kappa BMI1	gamma BMI1
121	1060	.07	.07	1.00	.00	1.00	.00
122	1072	.05	.05	1.00	.00	1.00	.00
123	1074	.22	.10	1.00	.00	.80	.22
124	1076	.04	.07	1.00	.00	1.00	.00
125	1077	.20	.17	1.00	.00	1.00	.00
126	1079	.06	.	1.00	.00	.	.
127	1080	.14	.18	1.00	.00	1.00	.00
128	1084	.32	.00	1.00	.00	1.00	.00
129	1085	.07	.10	1.00	.00	1.00	.00
130	1091	.12	.00	1.00	.00	1.00	.00
131	1097	.08	.00	1.00	.00	1.00	.00
132	1100	.13	.13	1.00	.00	1.00	.00
133	1102	.18	.00	1.00	.00	1.00	.00
134	1106	.11	.19	1.00	.05	.76	-.38
135	1115	.20	.16	1.00	.00	1.00	.00
136	1118	.05	.04	1.00	.00	1.00	.00
137	1137	.15	.17	1.00	.00	1.00	.00
138	1141	.12	.11	1.00	.00	.77	.37
139	1142	.15	.08	1.00	.00	1.00	.00
140	1144	.17	.30	1.00	.00	1.00	.00
141	1148	.14	.12	1.00	.00	1.00	.00
142	1149	.14	.29	1.00	.03	.80	-.33
143	1152	.18	.33	1.00	.09	.64	-.72
144	1153	.12	.14	1.00	.03	.62	.00
145	1158	.08	.10	1.00	.00	1.00	.00
146	1160	.15	.13	1.00	.00	.83	.29
147	1162	.08	.04	1.00	.00	.65	.52
148	1163	.10	.	1.00	.00	.	.
149	1165	.00	.00	1.00	.00	1.00	.00
150	1166	.24	.20	1.00	.00	1.00	.00
151	1174	.15	.17	1.00	.00	1.00	.00
152	1176	.07	.	1.00	.00	.	.
153	1178	.19	.09	1.00	.00	1.00	.00
154	1181	.19	.23	1.00	.00	1.00	.00
155	1188	.15	.13	1.00	.00	1.00	.00
156	1209	.20	.20	1.00	.00	1.00	.00
157	1218	.18	.19	1.00	.00	1.00	.00
158	1236	.04	.05	1.00	.00	1.00	.00
159	1241	.23	.28	1.00	.00	1.00	.00
160	1246	.29	.29	1.00	.00	.90	.21
161	1249	.28	.26	1.00	.03	.91	-.20
162	1255	.31	.40	1.00	.07	.83	-.31
163	1264	.10	.24	1.00	.10	.41	-.84
164	1280	.23	.20	1.00	.00	.88	.21
165	1287	.26	.25	1.00	.00	1.00	.00

Body Mass Index (BMIX)

	Facility ID	facility rated BMI1	gold rated BMI1	false pos BMI1	false neg BMI1	kappa BMI1	gamma BMI1
166	1294	.07	.08	1.00	.00	1.00	.00
167	1308	.18	.13	1.00	.00	1.00	.00
168	1321	.25	.28	1.00	.00	1.00	.00
169	1323	.33	.22	1.00	.04	.83	-.29
170	1325	.22	.19	1.00	.00	1.00	.00
171	1329	.35	.25	1.00	.00	.89	.23
172	1330	.12	.20	1.00	.03	.85	-.19
173	1337	.00	.08	1.00	.00	1.00	.00
174	1345	.26	.23	1.00	.07	.72	-.57
175	1349	.32	.27	1.00	.00	.91	.15
176	1350	.17	.08	1.00	.00	1.00	.00
177	1354	.25	.17	1.00	.00	.87	.27
178	1355	.12	.11	1.00	.00	1.00	.00
179	1357	.15	.15	1.00	.03	.70	.00
180	1366	.25	.07	1.00	.00	1.00	.00
181	1368	.13	.16	1.00	.04	.83	-.29
182	1372	.17	.19	1.00	.00	1.00	.00
183	1374	.08	.13	1.00	.00	1.00	.00
184	1377	.38	.34	1.00	.00	1.00	.00
185	1380	.19	.15	1.00	.00	1.00	.00
186	1381	.29	.18	1.00	.00	1.00	.00
187	1383	.11	.11	1.00	.00	.77	.61
188	1384	.08	.08	1.00	.00	1.00	.00
189	1385	.13	.23	1.00	.03	.82	-.23
190	1386	.13	.17	1.00	.04	.79	-.29
191	1391	.07	.11	1.00	.00	1.00	.00
192	2009	.41	.45	1.00	.04	.86	-.20
193	2013	.06	.16	1.00	.04	.78	-.27
194	2039	.29	.24	1.00	.00	1.00	.00
195	2087	.23	.05	1.00	.00	.43	.72
196	2088	.06	.12	1.00	.00	1.00	.00
197	2124	.12	.19	1.00	.04	.83	-.23
198	2231	.19	.28	1.00	.03	.89	-.16
199	2236	.13	.13	1.00	.00	1.00	.00
200	3075	.25	.17	1.00	.00	1.00	.00
201	5002	.08	.07	1.00	.00	1.00	.00
202	5004	.18	.18	1.00	.00	1.00	.00
203	5019	.23	.22	1.00	.00	1.00	.00
204	5020	.04	.04	1.00	.00	1.00	.00
205	5021	.15	.21	1.00	.07	.75	-.39
206	5025	.13	.12	1.00	.00	1.00	.00
207	5030	.04	.04	1.00	.00	1.00	.00
208	5041	.08	.04	1.00	.00	.65	.52
209	5048	.19	.13	1.00	.04	.85	-.43

Inadequate Pain Management (PAIX)

	Facility ID	facility rated PAI1	gold rated PAI1	false pos PAIN1	false neg PAIN1	kappa PAIN1	gamma PAIN1
1	1	.00	.05	.00	.05	.02	-1.00
2	2	.07	.07	.00	.00	1.00	.00
3	18	.04	.09	.05	.09	-.06	.05
4	19	.03	.03	.03	.03	-.04	.00
5	20	.04	.03	.00	.00	1.00	.00
6	60	.50	.47	.03	.00	.93	.13
7	89	.21	.08	.13	.00	.51	.65
8	92	.46	.11	.35	.00	.26	.85
9	97	.07	.18	.04	.14	.20	-.25
10	98	.30	.17	.17	.04	.42	.33
11	111	.13	.08	.04	.00	.78	.36
12	119	.24	.28	.07	.10	.55	-.10
13	124	.22	.07	.15	.00	.44	.72
14	130	.24	.10	.14	.00	.53	.64
15	136	.29	.20	.13	.04	.56	.26
16	138	.17	.10	.07	.00	.71	.45
17	147	.53	.30	.30	.07	.29	.33
18	148	.71	.54	.18	.00	.63	.54
19	167	.28	.15	.12	.00	.66	.51
20	298	.33	.07	.26	.00	.28	.84
21	302	.00	.00	.00	.00	1.00	.00
22	315	.52	.33	.19	.00	.63	.54
23	319	.33	.17	.20	.03	.40	.42
24	324	.05	.05	.00	.00	1.00	.00
25	325	.07	.19	.00	.11	.52	-.65
26	371	.16	.08	.08	.00	.63	.54
27	490	.10	.07	.03	.00	.78	.36
28	502	.22	.15	.07	.00	.76	.39
29	530	.00	.00	.00	.00	1.00	.00
30	536	.23	.23	.07	.07	.63	.00
31	541	.03	.00	.03	.00	.03	1.00
32	544	.00	.10	.00	.10	.01	-1.00
33	573	.24	.07	.21	.03	.13	.26
34	607	.07	.13	.00	.07	.63	-.54
35	610	.12	.15	.00	.04	.83	-.28
36	613	.08	.11	.00	.04	.78	-.36
37	622	.60	.30	.30	.00	.44	.71
38	632	.13	.10	.03	.00	.84	.28
39	648	.03	.10	.00	.07	.47	-.69
40	649	.10	.07	.03	.00	.78	.36
41	669	.61	.50	.11	.00	.79	.35
42	676	.10	.13	.03	.07	.52	-.17
43	677	.48	.38	.14	.03	.65	.28
44	709	.20	.27	.07	.13	.44	-.17
45	732	.03	.10	.00	.07	.47	-.69
46	733	.10	.07	.03	.00	.78	.36

Inadequate Pain Management (PAIX)

	Facility ID	facility rated PAII	gold rated PAII	false pos PAIN1	false neg PAIN1	kappa PAIN1	gamma PAIN1
47	739	.16	.12	.08	.04	.50	.17
48	740	.04	.00	.04	.00	.02	1.00
49	757	.07	.13	.00	.07	.63	-.54
50	762	.33	.36	.14	.19	.32	.22
51	763	.24	.31	.03	.10	.66	-.23
52	769	.19	.29	.12	.23	.09	-.06
53	773	.07	.07	.00	.00	1.00	.00
54	774	.00	.00	.00	.00	1.00	.00
55	776	.29	.27	.14	.11	.39	.18
56	784	.00	.03	.00	.03	.03	-1.00
57	785	.24	.17	.07	.00	.79	.35
58	786	.11	.17	.04	.04	.71	.18
59	799	.07	.07	.00	.00	1.00	.00
60	800	.33	.33	.03	.03	.85	.00
61	803	.07	.03	.07	.03	-.05	-.04
62	804	.41	.38	.14	.10	.50	.07
63	805	.50	.62	.11	.21	.38	-.08
64	823	.32	.36	.11	.14	.44	-.07
65	824	.42	.33	.08	.00	.82	.30
66	825	.29	.21	.14	.07	.43	.17
67	831	.52	.50	.17	.17	.31	.00
68	833	.00	.08	.00	.08	.01	-1.00
69	834	.04	.04	.00	.00	1.00	.00
70	836	.04	.04	.04	.04	-.04	.00
71	842	.12	.26	.00	.13	.60	-.58
72	845	.04	.15	.04	.15	-.06	.14
73	848	.11	.07	.11	.07	-.09	-.04
74	857	.32	.55	.00	.21	.59	-.55
75	858	.10	.07	.07	.04	.34	.16
76	859	.11	.14	.04	.07	.51	-.17
77	861	.15	.15	.08	.04	.56	.30
78	869	.24	.08	.16	.00	.43	.72
79	876	.19	.30	.04	.15	.50	-.33
80	878	.20	.13	.13	.07	.29	.14
81	882	.20	.30	.05	.15	.47	-.27
82	884	.24	.52	.12	.40	-.02	.03
83	886	.10	.25	.04	.18	.29	-.36
84	887	.00	.48	.00	.46	.08	-.92
85	890	.07	.14	.00	.07	.63	-.54
86	891	.00	.14	.00	.14	.01	-1.00
87	894	.15	.19	.07	.11	.33	-.09
88	906	.00	.27	.00	.24	.14	-.86
89	912	.07	.17	.07	.17	-.11	.13
90	913	.17	.13	.13	.10	.09	.02
91	917	.46	.34	.19	.08	.45	.31
92	924	.28	.33	.12	.16	.36	.05

Inadequate Pain Management (PAIX)

	Facility ID	facility rated PAII	gold rated PAII	false pos PAIN1	false neg PAIN1	kappa PAIN1	gamma PAIN1
93	934	.18	.21	.07	.11	.43	-.10
94	943	.40	.12	.28	.00	.34	.80
95	945	.50	.17	.33	.00	.33	.80
96	953	.41	.28	.14	.00	.70	.46
97	954	.09	.00	.09	.00	.01	1.00
98	959	.39	.77	.08	.31	.05	-1.55
99	962	.15	.12	.08	.04	.51	.17
100	963	.21	.21	.08	.08	.49	.00
101	968	.04	.08	.00	.04	.65	-.52
102	970	.32	.27	.09	.05	.67	.15
103	980	.52	.38	.33	.19	-.04	-.02
104	986	.76	.50	.42	.13	-.08	-.15
105	991	.19	.15	.04	.00	.87	.23
106	996	.12	.08	.08	.00	.72	.36
107	1003	.33	.13	.21	.00	.44	.71
108	1006	.30	.07	.22	.00	.32	.81
109	1016	.20	.24	.04	.08	.65	-.15
110	1019	.68	.65	.05	.05	.76	.00
111	1025	.15	.27	.04	.15	.43	-.33
112	1026	.11	.25	.07	.21	.06	-.07
113	1029	.32	.21	.14	.04	.55	.32
114	1033	.19	.29	.04	.15	.50	-.33
115	1037	.00	.04	.00	.04	.02	-1.00
116	1039	.21	.14	.07	.00	.76	.39
117	1040	.19	.16	.17	.13	.05	.01
118	1043	.11	.07	.04	.00	.78	.36
119	1044	.45	.17	.31	.03	.27	.48
120	1054	.28	.41	.04	.18	.54	-.36
121	1060	.33	.28	.04	.00	.91	.16
122	1072	.09	.14	.00	.05	.78	-.37
123	1074	.32	.18	.27	.09	.45	-1.05
124	1076	.90	.50	.40	.00	.20	.89
125	1077	.20	.10	.11	.00	.61	.56
126	1079	.09	.25	.00	.17	.43	-.73
127	1080	.39	.31	.11	.04	.69	.22
128	1084	.08	.08	.04	.04	.46	.00
129	1085	.14	.29	.00	.14	.59	-.58
130	1091	.00	.07	.00	.07	.01	-1.00
131	1097	.00	.08	.00	.08	.01	-1.00
132	1100	.14	.13	.03	.03	.71	.00
133	1102	.18	.24	.00	.07	.79	-.35
134	1106	.00	.10	.00	.10	.01	-1.00
135	1115	.00	.04	.00	.04	.02	-1.00
136	1118	.16	.08	.08	.00	.63	.54
137	1137	.00	.11	.00	.11	.01	-1.00
138	1141	.13	.10	.10	.07	.19	.06

Inadequate Pain Management (PAIX)

	Facility ID	facility rated PAII	gold rated PAII	false pos PAIN1	false neg PAIN1	kappa PAIN1	gamma PAIN1
139	1142	.07	.17	.00	.10	.53	-.64
140	1144	.21	.13	.14	.07	.28	.14
141	1148	.11	.07	.04	.00	.78	.36
142	1149	.28	.07	.24	.03	.10	.25
143	1152	.09	.27	.05	.23	.13	-.23
144	1153	.24	.24	.10	.10	.44	.00
145	1158	.08	.15	.04	.12	.26	-.22
146	1160	.57	.47	.17	.07	.54	.22
147	1162	.63	.48	.19	.04	.56	.36
148	1163	.05	.26	.00	.19	.38	-.70
149	1165	.26	.17	.17	.09	.24	.13
150	1166	.04	.27	.00	.23	.20	-.89
151	1174	.10	.10	.03	.03	.63	.00
152	1176	.22	.43	.00	.22	.53	-.64
153	1178	.13	.27	.03	.17	.39	-.38
154	1181	.12	.15	.00	.04	.84	-.28
155	1188	.03	.00	.03	.00	.03	1.00
156	1209	.27	.20	.07	.00	.81	.31
157	1218	.54	.53	.00	.04	.93	-.13
158	1236	.76	.45	.34	.03	.28	.51
159	1241	.07	.13	.00	.07	.63	-.54
160	1246	.35	.35	.00	.00	1.00	.00
161	1249	.07	.14	.03	.10	.27	-.23
162	1255	.03	.03	.00	.00	1.00	.00
163	1264	.03	.03	.00	.00	1.00	.00
164	1280	.27	.37	.12	.23	.23	-.12
165	1287	.10	.10	.00	.00	1.00	.00
166	1294	.13	.17	.03	.07	.61	-.16
167	1308	.04	.07	.00	.04	.65	-.52
168	1321	.27	.30	.03	.07	.75	-.12
169	1323	.33	.37	.04	.07	.76	-.12
170	1325	.28	.31	.10	.14	.42	-.07
171	1329	.31	.28	.10	.07	.58	.10
172	1330	.20	.20	.10	.10	.37	.00
173	1337	.04	.04	.04	.04	-.04	.00
174	1345	.10	.20	.00	.10	.62	-.56
175	1349	.23	.10	.20	.07	.07	.08
176	1350	.20	.13	.07	.00	.76	.38
177	1354	.07	.17	.00	.10	.53	-.64
178	1355	.13	.23	.03	.13	.45	-.33
179	1357	.52	.38	.14	.00	.73	.43
180	1366	.10	.14	.03	.07	.51	-.17
181	1368	.68	.61	.11	.04	.69	.22
182	1372	.43	.43	.04	.04	.85	.00
183	1374	.23	.22	.00	.00	1.00	.00
184	1377	.03	.07	.00	.03	.65	-.52

Inadequate Pain Management (PAIX)

	Facility ID	facility rated PAI1	gold rated PAI1	false pos PAIN1	false neg PAIN1	kappa PAIN1	gamma PAIN1
185	1380	.34	.41	.00	.07	.85	-.25
186	1381	.23	.17	.10	.03	.59	.25
187	1383	.10	.23	.03	.17	.30	-.36
188	1384	.37	.52	.04	.19	.56	-.36
189	1385	.14	.14	.03	.03	.71	.00
190	1386	.19	.22	.04	.08	.65	-.15
191	1391	.30	.23	.10	.03	.66	.23
192	2009	.29	.25	.07	.04	.73	.13
193	2013	.39	.25	.14	.00	.68	.48
194	2039	.21	.21	.00	.00	1.00	.00
195	2087	.21	.28	.00	.07	.81	-.32
196	2088	.14	.10	.03	.00	.84	.28
197	2124	.04	.07	.00	.04	.65	-.52
198	2231	.21	.20	.07	.07	.58	.00
199	2236	.18	.18	.04	.04	.76	.00
200	3075	.17	.27	.07	.17	.32	-.20
201	5002	.37	.25	.11	.00	.76	.39
202	5004	.45	.32	.14	.00	.72	.44
203	5019	.19	.23	.04	.08	.65	-.15
204	5020	.34	.33	.10	.10	.54	.00
205	5021	.39	.32	.07	.00	.85	.27
206	5025	.58	.50	.12	.04	.69	.22
207	5030	.40	.40	.08	.08	.67	.00
208	5041	.45	.45	.00	.00	1.00	.00
209	5048	.36	.46	.07	.18	.49	-.22

Pressure Ulcers (high and low risk) (PRU1)

	Facility ID	facility rated PRU1	gold rated PRU1	false pos PRU1	false neg PRU1	kappa PRU1	gamma PRU1
1	1	.29	.52	.00	.24	.53	-.64
2	2	.15	.11	.07	.04	.51	.17
3	18	.17	.13	.09	.05	.49	.17
4	19	.03	.07	.00	.03	.65	-.52
5	20	.11	.10	.00	.00	1.00	.00
6	60	.33	.47	.00	.13	.73	-.43
7	89	.00	.00	.00	.00	1.00	.00
8	92	.22	.15	.11	.04	.51	.27
9	97	.00	.07	.00	.07	.01	-1.00
10	98	.09	.09	.00	.00	1.00	.00
11	111	.28	.16	.12	.00	.66	.51
12	119	.14	.14	.04	.04	.71	.00
13	124	.00	.00	.00	.00	1.00	.00
14	130	.21	.17	.03	.00	.89	.20
15	136	.46	.48	.04	.08	.75	-.13

Pressure Ulcers (high and low risk) (PRU1)

	Facility ID	facility rated PRU1	gold rated PRU1	false pos PRU1	false neg PRU1	kappa PRU1	gamma PRU1
16	138	.18	.07	.11	.00	.52	.65
17	147	.07	.07	.03	.03	.46	.00
18	148	.14	.14	.04	.04	.71	.00
19	167	.12	.15	.00	.04	.83	-.28
20	298	.30	.33	.11	.15	.40	-.07
21	302	.68	.50	.20	.04	.51	.37
22	315	.37	.19	.19	.00	.56	.61
23	319	.37	.50	.00	.13	.73	-.42
24	324	.23	.14	.09	.00	.70	.46
25	325	.15	.11	.04	.00	.84	.28
26	371	.16	.20	.00	.04	.86	-.24
27	490	.10	.07	.03	.00	.78	.36
28	502	.30	.22	.07	.00	.81	.32
29	530	.10	.05	.05	.00	.64	.53
30	536	.03	.00	.03	.00	.03	1.00
31	541	.14	.13	.00	.00	1.00	.00
32	544	.28	.28	.00	.00	1.00	.00
33	573	.14	.21	.00	.07	.76	-.39
34	607	.07	.07	.00	.00	1.00	.00
35	610	.29	.33	.08	.17	.44	-.17
36	613	.07	.07	.04	.04	.46	.00
37	622	.11	.37	.04	.32	.14	-.37
38	632	.14	.10	.07	.03	.51	.17
39	648	.20	.17	.03	.00	.89	.20
40	649	.00	.03	.00	.03	.03	-1.00
41	669	.18	.14	.07	.04	.60	.16
42	676	.17	.03	.13	.00	.29	.83
43	677	.17	.24	.00	.07	.79	-.35
44	709	.00	.10	.00	.10	.01	-1.00
45	732	.00	.03	.00	.03	.03	-1.00
46	733	.20	.07	.13	.00	.44	.71
47	739	.12	.12	.04	.04	.62	.00
48	740	.07	.07	.00	.00	1.00	.00
49	757	.03	.10	.00	.07	.47	-.69
50	762	.50	.54	.00	.04	.93	-.13
51	763	.37	.48	.00	.11	.79	-.33
52	769	.29	.18	.14	.04	.51	.33
53	773	.11	.11	.00	.00	1.00	.00
54	774	.07	.11	.04	.07	.34	-.16
55	776	.35	.37	.04	.08	.76	-.09
56	784	.22	.10	.11	.00	.61	.56
57	785	.21	.31	.07	.17	.38	-.22
58	786	.19	.17	.04	.04	.75	.00
59	799	.08	.00	.08	.00	.01	1.00
60	800	.20	.23	.03	.07	.71	-.14

Pressure Ulcers (high and low risk) (PRU1)

	Facility ID	facility rated PRU1	gold rated PRU1	false pos PRU1	false neg PRU1	kappa PRU1	gamma PRU1
61	803	.00	.17	.00	.17	.00	-1.00
62	804	.17	.14	.07	.03	.61	.16
63	805	.59	.38	.26	.04	.45	.51
64	823	.18	.21	.04	.07	.66	-.15
65	824	.09	.13	.00	.04	.78	-.37
66	825	.04	.14	.00	.11	.36	-.78
67	831	.00	.10	.00	.07	.34	-.67
68	833	.04	.29	.00	.25	.19	-.89
69	834	.00	.11	.00	.04	.67	-.33
70	836	.16	.16	.00	.00	1.00	.00
71	842	.12	.30	.00	.17	.51	-.66
72	845	.04	.11	.00	.07	.47	-.69
73	848	.07	.23	.00	.17	.38	-.77
74	857	.00	.17	.00	.17	.00	-1.00
75	858	.03	.00	.03	.00	.03	1.00
76	859	.11	.10	.04	.04	.63	.00
77	861	.27	.41	.12	.27	.17	-.13
78	869	.23	.27	.00	.04	.90	-.19
79	876	.11	.11	.04	.04	.63	.00
80	878	.20	.20	.03	.03	.79	.00
81	882	.05	.05	.00	.00	1.00	.00
82	884	.13	.16	.00	.04	.83	-.29
83	886	.14	.21	.07	.14	.28	-.14
84	887	.04	.37	.00	.33	.12	-.93
85	890	.00	.17	.00	.17	.00	-1.00
86	891	.00	.03	.00	.03	.03	-1.00
87	894	.19	.26	.07	.15	.36	-.16
88	906	.00	.04	.00	.04	.02	-1.00
89	912	.04	.10	.00	.07	.47	-.69
90	913	.00	.00	.00	.00	1.00	.00
91	917	.21	.31	.00	.10	.73	-.42
92	924	.48	.70	.07	.30	.27	-.29
93	934	.14	.10	.03	.00	.84	.28
94	943	.00	.12	.00	.12	.01	-1.00
95	945	.08	.00	.09	.00	.01	1.00
96	953	.10	.07	.10	.07	-.09	-.04
97	954	.12	.35	.00	.23	.40	-.75
98	959	.21	.31	.08	.08	.70	-.20
99	962	.12	.15	.04	.08	.50	-.17
100	963	.33	.67	.04	.38	.25	-.47
101	968	.00	.04	.00	.04	.02	-1.00
102	970	.09	.32	.00	.23	.35	-.79
103	980	.05	.05	.05	.05	-.05	.00
104	986	.12	.16	.04	.08	.50	-.17
105	991	.12	.00	.12	.00	.01	1.00

Pressure Ulcers (high and low risk) (PRU1)

	Facility ID	facility rated PRU1	gold rated PRU1	false pos PRU1	false neg PRU1	kappa PRU1	gamma PRU1
106	996	.24	.00	.17	.00	.67	.33
107	1003	.17	.17	.08	.08	.40	.00
108	1006	.08	.11	.04	.08	.34	-.16
109	1016	.08	.20	.04	.13	.35	-.02
110	1019	.10	.20	.00	.10	.62	-.56
111	1025	.11	.27	.00	.15	.52	-.65
112	1026	.07	.25	.00	.18	.37	-.77
113	1029	.22	.25	.07	.11	.49	-.10
114	1033	.15	.21	.00	.07	.76	-.39
115	1037	.08	.08	.04	.04	.46	.00
116	1039	.31	.17	.17	.03	.45	.38
117	1040	.18	.38	.00	.19	.55	-.62
118	1043	.07	.11	.04	.07	.34	-.16
119	1044	.03	.03	.00	.00	1.00	.00
120	1054	.07	.17	.00	.10	.53	-.64
121	1060	.04	.21	.00	.14	.39	-.69
122	1072	.05	.23	.00	.18	.28	-.84
123	1074	.04	.00	.00	.00	1.00	.00
124	1076	.13	.00	.13	.00	.01	1.00
125	1077	.24	.25	.10	.10	.47	.00
126	1079	.13	.17	.04	.08	.50	-.17
127	1080	.31	.34	.10	.14	.45	-.07
128	1084	.23	.24	.00	.05	.88	-.22
129	1085	.15	.18	.04	.07	.60	-.16
130	1091	.23	.14	.12	.04	.51	.27
131	1097	.08	.19	.00	.12	.52	-.65
132	1100	.07	.20	.00	.14	.44	-.72
133	1102	.10	.14	.00	.03	.84	-.28
134	1106	.38	.48	.05	.14	.61	-.25
135	1115	.09	.22	.00	.13	.51	-.66
136	1118	.19	.19	.08	.08	.50	.00
137	1137	.11	.22	.04	.15	.35	-.32
138	1141	.10	.20	.03	.13	.36	-.32
139	1142	.07	.23	.03	.20	.13	-.27
140	1144	.13	.20	.03	.10	.52	-.26
141	1148	.17	.28	.03	.14	.51	-.33
142	1149	.14	.17	.07	.11	.34	-.09
143	1152	.05	.09	.00	.05	.64	-.53
144	1153	.29	.38	.00	.07	.84	-.25
145	1158	.27	.23	.12	.08	.49	.10
146	1160	.07	.43	.00	.38	.17	-.91
147	1162	.07	.19	.00	.11	.52	-.65
148	1163	.10	.43	.00	.40	.21	-.88
149	1165	.52	.52	.04	.04	.83	.00
150	1166	.30	.31	.13	.17	.31	-.06

Pressure Ulcers (high and low risk) (PRU1)

	Facility ID	facility rated PRU1	gold rated PRU1	false pos PRU1	false neg PRU1	kappa PRU1	gamma PRU1
151	1174	.15	.17	.00	.04	.87	-.24
152	1176	.20	.21	.04	.04	.77	.05
153	1178	.37	.33	.07	.03	.78	.11
154	1181	.07	.04	.04	.00	.65	.52
155	1188	.04	.00	.04	.00	.02	1.00
156	1209	.10	.07	.07	.03	.35	.16
157	1218	.20	.13	.07	.00	.76	.38
158	1236	.28	.31	.03	.07	.75	-.13
159	1241	.22	.13	.09	.04	.59	.16
160	1246	.04	.04	.00	.00	1.00	.00
161	1249	.14	.10	.03	.00	.84	.28
162	1255	.14	.07	.10	.03	.27	.23
163	1264	.10	.03	.07	.00	.47	.69
164	1280	.15	.37	.04	.26	.28	-.42
165	1287	.10	.23	.00	.13	.53	-.63
166	1294	.13	.13	.00	.00	1.00	.00
167	1308	.00	.00	.00	.00	1.00	.00
168	1321	.13	.23	.00	.10	.67	-.49
169	1323	.26	.41	.07	.22	.35	-.25
170	1325	.24	.31	.00	.07	.83	-.29
171	1329	.14	.24	.03	.14	.45	-.33
172	1330	.10	.30	.00	.20	.41	-.74
173	1337	.11	.00	.11	.00	.01	1.00
174	1345	.27	.30	.03	.07	.75	-.12
175	1349	.13	.33	.00	.20	.47	-.69
176	1350	.10	.17	.00	.07	.71	-.44
177	1354	.07	.20	.00	.13	.44	-.71
178	1355	.27	.33	.00	.07	.84	-.27
179	1357	.52	.55	.07	.10	.65	-.09
180	1366	.07	.10	.03	.07	.35	-.16
181	1368	.63	.54	.07	.00	.85	.26
182	1372	.25	.32	.00	.07	.83	-.30
183	1374	.18	.05	.14	.00	.35	.79
184	1377	.07	.10	.00	.03	.78	-.36
185	1380	.00	.14	.00	.14	.01	-1.00
186	1381	.13	.20	.03	.10	.52	-.26
187	1383	.07	.20	.00	.13	.44	-.71
188	1384	.11	.26	.00	.15	.53	-.64
189	1385	.21	.31	.00	.10	.73	-.42
190	1386	.08	.11	.00	.04	.78	-.36
191	1391	.20	.20	.03	.03	.79	.00
192	2009	.25	.18	.07	.00	.79	.35
193	2013	.07	.14	.00	.07	.63	-.54
194	2039	.34	.41	.00	.07	.85	-.25
195	2087	.07	.14	.00	.07	.63	-.54

Pressure Ulcers (high and low risk) (PRU1)

	Facility ID	facility rated PRU1	gold rated PRU1	false pos PRU1	false neg PRU1	kappa PRU1	gamma PRU1
196	2088	.10	.24	.00	.14	.53	-.64
197	2124	.08	.15	.00	.08	.63	-.54
198	2231	.20	.20	.03	.03	.79	.00
199	2236	.11	.21	.04	.15	.35	-.32
200	3075	.03	.23	.00	.20	.20	-.89
201	5002	.35	.45	.00	.10	.79	-.34
202	5004	.36	.27	.09	.00	.79	.34
203	5019	.19	.23	.04	.08	.65	-.15
204	5020	.17	.17	.03	.03	.76	.00
205	5021	.07	.29	.00	.21	.32	-.81
206	5025	.23	.27	.04	.08	.69	-.14
207	5030	.00	.04	.00	.04	.02	-1.00
208	5041	.25	.31	.00	.07	.83	-.30
209	5048	.14	.11	.07	.04	.51	.17

Pressure Ulcers (high risk) (PRU2)

	Facility ID	facility rated PRU2	gold rated PRU2	false pos PRU2	false neg PRU2	kappa PRU2	gamma PRU2
1	1	.30	.55	.00	.25	.52	-.65
2	2	.15	.14	.05	.05	.66	-.12
3	18	.20	.00	.29	.00	.00	1.00
4	19	.08	.14	.00	.08	.63	-.54
5	20	.13	.13	.00	.00	1.00	.00
6	60	.50	.50	.00	.00	1.00	.00
7	89	.00	.00	.00	.00	.	.
8	92	.18	.22	.00	.06	.82	-.30
9	97	.00	.06	.00	.06	.01	-1.00
10	98	.06	.11	.00	.00	1.00	.00
11	111	.38	.30	.00	.00	1.00	.00
12	119	.20	.13	.07	.00	.76	.39
13	124	.00	.00	.00	.00	1.00	.00
14	130	.25	.18	.06	.00	.84	.24
15	136	.58	.58	.11	.00	.76	.48
16	138	.30	.00	.25	.00	.67	.33
17	147	.09	.25	.00	.00	1.00	.00
18	148	.20	.20	.00	.25	.37	-1.25
19	167	.18	.21	.00	.07	.79	-.42
20	298	.35	.73	.09	.36	.17	-.50
21	302	.71	.52	.21	.04	.48	.38
22	315	.45	.43	.14	.00	.76	.32
23	319	.43	.63	.00	.13	.77	-.60
24	324	.29	.18	.09	.00	.78	.31
25	325	.33	.33	.00	.00	1.00	.00

Pressure Ulcers (high risk) (PRU2)

	Facility ID	facility rated PRU2	gold rated PRU2	false pos PRU2	false neg PRU2	kappa PRU2	gamma PRU2
26	371	.27	.22	.00	.11	.74	-.71
27	490	.08	.04	.00	.00	1.00	.00
28	502	.41	.43	.07	.00	.86	.25
29	530	.10	.10	.00	.00	1.00	.00
30	536	.20	.00	.33	.00	.	.
31	541	.29	.31	.00	.00	1.00	.00
32	544	.36	.33	.00	.00	1.00	.00
33	573	.25	.33	.00	.08	.82	-.26
34	607	.15	.13	.00	.00	1.00	.00
35	610	.33	.55	.00	.33	.48	-.58
36	613	.12	.06	.06	.06	.27	-.61
37	622	.11	.43	.00	.40	.33	-.80
38	632	.25	.19	.13	.06	.46	.17
39	648	.36	.36	.09	.00	.83	.34
40	649	.00	.50	.00	.50	.	.
41	669	.28	.17	.11	.00	.68	.48
42	676	.14	.06	.12	.00	.45	.71
43	677	.21	.24	.00	.06	.84	-.33
44	709	.00	.25	.00	.25	.00	-1.00
45	732	.00	.14	.00	.14	.01	-1.00
46	733	.35	.13	.20	.00	.53	.58
47	739	.17	.13	.13	.13	.22	-.72
48	740	.50	.50	.00	.00	1.00	.00
49	757	.13	.30	.00	.29	.36	-.78
50	762	.67	.69	.00	.00	1.00	.00
51	763	.67	.83	.00	.10	.71	-.37
52	769	.50	.30	.13	.00	.79	.30
53	773	.11	.11	.00	.00	1.00	.00
54	774	.22	.20	.00	.00	1.00	.00
55	776	.54	.50	.00	.09	.80	-.39
56	784	.55	.30	.11	.00	.80	.25
57	785	.38	.75	.00	.29	.48	-.58
58	786	.30	.20	.11	.00	.74	.42
59	799	.25	.00	.29	.00	.00	1.00
60	800	.50	.00	.00	.00	.	.
61	803	.00	.30	.00	.30	.00	-1.00
62	804	.25	.22	.11	.00	.74	.42
63	805	.89	.88	.00	.00	1.00	.00
64	823	.20	.31	.08	.08	.66	-.12
65	824	.17	.50	.00	.00	.	.
66	825	.11	.43	.00	.33	.36	-.78
67	831	.00	.19	.00	.15	.33	-.67
68	833	.13	.71	.00	.57	.16	-.91
69	834	.00	.13	.00	.20	.00	-1.00
70	836	.11	.10	.00	.00	1.00	.00

Pressure Ulcers (high risk) (PRU2)

	Facility ID	facility rated PRU2	gold rated PRU2	false pos PRU2	false neg PRU2	kappa PRU2	gamma PRU2
71	842	.17	.40	.00	.22	.55	-.63
72	845	.08	.18	.00	.09	.62	-.55
73	848	.20	.17	.00	.00	1.00	.00
74	857	.00	.38	.00	.38	.00	-1.00
75	858	.00	.00	.00	.00	1.00	.00
76	859	.13	.14	.08	.08	.41	.00
77	861	.24	.63	.07	.47	.08	-.20
78	869	.38	.55	.00	.09	.83	-.29
79	876	.30	.27	.00	.11	.76	-.48
80	878	.40	.35	.07	.07	.73	.00
81	882	.00	.00	.00	.00	.	.
82	884	.23	.20	.00	.00	1.00	.00
83	886	.20	.33	.08	.17	.45	.04
84	887	.08	.75	.00	.71	.09	-.95
85	890	.00	.15	.00	.18	.00	-1.00
86	891	.00	.00	.00	.00	.	.
87	894	.33	.33	.17	.17	.33	-.50
88	906	.00	.00	.00	.00	1.00	.00
89	912	.08	.25	.00	.20	.42	-.73
90	913	.00	.00	.00	.00	1.00	.00
91	917	.50	.56	.00	.00	1.00	.00
92	924	.61	.75	.18	.09	-.49	-110.11
93	934	.36	.30	.11	.00	.78	.36
94	943	.00	.17	.00	.17	.00	-1.00
95	945	.14	.00	.09	.00	.50	.50
96	953	.18	.07	.13	.07	.17	-.54
97	954	.17	.55	.00	.30	.48	-.69
98	959	.29	.00	.00	.00	.	.
99	962	.14	.21	.08	.17	.26	-.14
100	963	.35	.86	.00	.43	.05	-1.17
101	968	.00	.00	.00	.00	1.00	.00
102	970	.11	.40	.00	.20	.56	-.61
103	980	.00	.11	.00	.11	.01	-1.00
104	986	.14	.33	.00	.00	.	.
105	991	.11	.00	.12	.00	.01	1.00
106	996	.29	.00	.17	.00	.80	.20
107	1003	.25	.25	.18	.09	.33	.44
108	1006	.05	.13	.00	.07	.63	-.54
109	1016	.22	.57	.00	.43	.25	-1.00
110	1019	.20	.50	.00	.17	.70	-.47
111	1025	.43	1.00	.00	.00	.	.
112	1026	.09	.31	.00	.15	.58	-.59
113	1029	.40	.50	.00	.22	.60	-1.00
114	1033	.10	.25	.00	.25	.55	-1.67
115	1037	.13	.07	.07	.00	.63	.54

Pressure Ulcers (high risk) (PRU2)

	Facility ID	facility rated PRU2	gold rated PRU2	false pos PRU2	false neg PRU2	kappa PRU2	gamma PRU2
116	1039	.38	.24	.24	.06	.39	.18
117	1040	.25	.50	.00	.15	.71	-.44
118	1043	.10	.07	.07	.00	.64	.53
119	1044	.06	.10	.00	.00	1.00	.00
120	1054	.00	.29	.00	.17	.50	-.50
121	1060	.00	.20	.00	.00	1.00	.00
122	1072	.06	.17	.00	.17	.26	-1.08
123	1074	.09	.00	.00	.00	1.00	.00
124	1076	.21	.00	.18	.00	.50	.50
125	1077	.25	.20	.10	.10	.47	-.30
126	1079	.12	.24	.00	.13	.60	-.57
127	1080	.30	.56	.00	.22	.58	-.63
128	1084	.28	.33	.00	.07	.84	-.31
129	1085	.17	.21	.05	.09	.59	-.16
130	1091	.25	.17	.13	.04	.49	.27
131	1097	.14	.33	.00	.23	.46	-.70
132	1100	.08	.25	.00	.17	.43	-.73
133	1102	.12	.13	.00	.00	1.00	.00
134	1106	.42	.53	.06	.18	.53	-.36
135	1115	.13	.22	.00	.00	1.00	.00
136	1118	.19	.29	.06	.13	.55	-.17
137	1137	.11	.23	.00	.17	.49	-.68
138	1141	.14	.22	.06	.11	.48	-.17
139	1142	.10	.36	.07	.29	.10	-.16
140	1144	.27	.33	.00	.25	.50	-1.00
141	1148	.17	.26	.05	.14	.49	-.27
142	1149	.14	.23	.05	.14	.39	-.26
143	1152	.05	.05	.00	.06	.47	-1.06
144	1153	.30	.41	.00	.08	.83	-.27
145	1158	.27	.20	.12	.08	.46	-.02
146	1160	.20	.67	.00	.50	.41	-.63
147	1162	.13	.50	.00	.67	.	.
148	1163	.06	.54	.00	.64	-.02	-1.09
149	1165	.60	.50	.00	.00	1.00	.00
150	1166	.35	.32	.20	.13	.31	.28
151	1174	.20	.22	.00	.06	.83	-.33
152	1176	.28	.33	.07	.07	.70	.00
153	1178	.56	.50	.07	.00	.86	.20
154	1181	.20	.09	.10	.00	.62	.55
155	1188	.00	.00	.00	.00	1.00	.00
156	1209	.17	.13	.13	.07	.29	.15
157	1218	.25	.00	.50	.00	.	.
158	1236	.50	1.00	.00	.00	.	.
159	1241	.25	.25	.09	.09	.54	.00
160	1246	.07	.08	.00	.00	1.00	.00

Pressure Ulcers (high risk) (PRU2)

	Facility ID	facility rated PRU2	gold rated PRU2	false pos PRU2	false neg PRU2	kappa PRU2	gamma PRU2
161	1249	.20	.18	.00	.00	1.00	.00
162	1255	.20	.13	.13	.07	.29	.15
163	1264	.09	.05	.05	.00	.64	.53
164	1280	.33	.50	.00	.14	.71	-.58
165	1287	.30	.63	.00	.38	.36	-.90
166	1294	.16	.17	.00	.00	1.00	.00
167	1308	.00	.00	.00	.00	1.00	.00
168	1321	.18	.33	.00	.15	.63	-.54
169	1323	.29	.35	.09	.14	.50	-.10
170	1325	.33	.63	.00	.25	.56	-.72
171	1329	.16	.20	.05	.11	.48	-.17
172	1330	.16	.47	.00	.33	.33	-.80
173	1337	.25	.00	.33	.00	.00	1.00
174	1345	.36	.38	.05	.05	.79	.00
175	1349	.16	.42	.00	.26	.42	-.74
176	1350	.16	.21	.00	.11	.65	-.59
177	1354	.11	.25	.00	.18	.48	-.68
178	1355	.47	.43	.00	.06	.88	-.21
179	1357	.89	.67	.17	.00	.65	.29
180	1366	.07	.19	.00	.13	.45	-.71
181	1368	.90	1.00	.00	.00	1.00	.00
182	1372	.25	.35	.00	.10	.76	-.38
183	1374	.17	.07	.07	.00	.72	.36
184	1377	.13	.18	.00	.00	1.00	.00
185	1380	.00	.50	.00	.50	.00	-1.00
186	1381	.17	.19	.07	.13	.38	-.41
187	1383	.17	.45	.00	.30	.42	-.73
188	1384	.18	.27	.00	.13	.73	-.43
189	1385	.29	.47	.00	.18	.65	-.56
190	1386	.13	.13	.00	.00	1.00	.00
191	1391	.19	.29	.00	.08	.81	-.32
192	2009	.32	.26	.11	.00	.76	.39
193	2013	.18	.27	.00	.13	.73	-.43
194	2039	.30	.39	.00	.09	.81	-.31
195	2087	.09	.18	.00	.06	.77	-.38
196	2088	.06	.38	.00	.31	.24	-.87
197	2124	.07	.14	.00	.08	.63	-.54
198	2231	.31	.27	.07	.00	.85	.27
199	2236	.06	.24	.00	.19	.33	-.80
200	3075	.08	.55	.00	.45	.17	-.91
201	5002	.44	.55	.00	.09	.83	-.40
202	5004	.67	.50	.17	.00	.74	.29
203	5019	.33	.30	.11	.11	.52	.00
204	5020	.36	.29	.00	.00	1.00	.00
205	5021	.07	.33	.00	.00		

Pressure Ulcers (high risk) (PRU2)

	Facility ID	facility rated PRU2	gold rated PRU2	false pos PRU2	false neg PRU2	kappa PRU2	gamma PRU2
206	5025	.20	.00	.00	.00	.	.
207	5030	.	.	.	.	.	.
208	5041	.67	.57	.00	.17	.68	-1.75
209	5048	.08	.00	.20	.00	.00	1.00

Pressure Ulcers (low risk) (PRU3)

	Facility ID	facility rated PRU3	gold rated PRU3	false pos PRU3	false neg PRU3	kappa PRU3	gamma PRU3
1	1	.00	.00	.00	.00	.	.
2	2	.00	.00	.00	.00	.	.
3	18	.15	.19	.00	.09	.75	-.40
4	19	.00	.00	.00	.00	1.00	.00
5	20	.00	.00	.00	.00	1.00	.00
6	60	.22	.44	.00	.22	.54	-.63
7	89	.00	.00	.00	.00	1.00	.00
8	92	.30	.00	.38	.00	.00	1.00
9	97	.00	.09	.00	.10	.01	-1.00
10	98	.14	.07	.00	.00	1.00	.00
11	111	.17	.07	.17	.00	.26	1.08
12	119	.08	.15	.00	.00	1.00	.00
13	124	.00	.00	.00	.00	1.00	.00
14	130	.11	.17	.00	.00	1.00	.00
15	136	.33	.38	.00	.00	1.00	.00
16	138	.11	.08	.11	.00	.44	1.13
17	147	.05	.04	.05	.05	-.05	.00
18	148	.13	.13	.05	.00	.81	.39
19	167	.00	.08	.00	.00	1.00	.00
20	298	.20	.06	.20	.00	.23	1.11
21	302	.00	.00	.00	.00	.	.
22	315	.31	.10	.25	.00	.30	.91
23	319	.31	.45	.00	.13	.78	-.28
24	324	.13	.09	.00	.00	1.00	.00
25	325	.00	.00	.00	.00	1.00	.00
26	371	.07	.19	.00	.00	1.00	.00
27	490	.20	.17	.00	.00	.	.
28	502	.10	.00	.10	.00	.01	1.00
29	530	.10	.00	.11	.00	.01	1.00
30	536	.00	.00	.00	.00	1.00	.00
31	541	.00	.00	.00	.00	1.00	.00
32	544	.22	.24	.00	.00	1.00	.00
33	573	.06	.07	.00	.07	.46	-1.08
34	607	.00	.00	.00	.00	1.00	.00
35	610	.27	.19	.09	.09	.58	-.18

Pressure Ulcers (low risk) (PRU3)

	Facility ID	facility rated PRU3	gold rated PRU3	false pos PRU3	false neg PRU3	kappa PRU3	gamma PRU3
36	613	.00	.09	.00	.00	1.00	.00
37	622	.11	.35	.05	.26	.28	.17
38	632	.00	.00	.00	.00	1.00	.00
39	648	.06	.00	.00	.00	1.00	.00
40	649	.00	.00	.00	.00	1.00	.00
41	669	.00	.10	.00	.10	.01	-1.00
42	676	.25	.00	.25	.00	.00	1.00
43	677	.10	.25	.00	.10	.71	-.37
44	709	.00	.05	.00	.06	.02	-1.00
45	732	.00	.00	.00	.00	1.00	.00
46	733	.00	.00	.00	.00	1.00	.00
47	739	.07	.11	.00	.00	1.00	.00
48	740	.00	.00	.00	.00	1.00	.00
49	757	.00	.00	.00	.00	1.00	.00
50	762	.38	.40	.00	.00	1.00	.00
51	763	.13	.24	.00	.14	.59	-.58
52	769	.17	.11	.19	.06	.06	.53
53	773	.11	.11	.00	.00	1.00	.00
54	774	.00	.09	.00	.11	.01	-1.00
55	776	.15	.25	.08	.08	.58	.43
56	784	.00	.00	.00	.00	1.00	.00
57	785	.14	.14	.10	.15	.03	-.39
58	786	.12	.16	.00	.06	.77	-.38
59	799	.00	.00	.00	.00	1.00	.00
60	800	.15	.24	.00	.08	.77	-.34
61	803	.00	.11	.00	.13	.01	-1.00
62	804	.12	.10	.06	.06	.43	.00
63	805	.44	.19	.29	.06	.29	.35
64	823	.00	.13	.00	.00	.	.
65	824	.06	.09	.00	.00	1.00	.00
66	825	.00	.05	.00	.00	1.00	.00
67	831	.00	.00	.00	.00	1.00	.00
68	833	.00	.12	.00	.13	.01	-1.00
69	834	.00	.11	.00	.00	1.00	.00
70	836	.19	.20	.00	.00	1.00	.00
71	842	.08	.23	.00	.08	.72	-.36
72	845	.00	.06	.00	.07	.01	-1.00
73	848	.00	.28	.00	.28	.00	-1.00
74	857	.00	.00	.00	.00	1.00	.00
75	858	.06	.00	.06	.00	.01	1.00
76	859	.08	.07	.00	.00	1.00	.00
77	861	.33	.09	.22	.00	.41	.74
78	869	.08	.07	.00	.00	1.00	.00
79	876	.00	.00	.00	.00	1.00	.00
80	878	.00	.00	.00	.00	1.00	.00

Pressure Ulcers (low risk) (PRU3)

	Facility ID	facility rated PRU3	gold rated PRU3	false pos PRU3	false neg PRU3	kappa PRU3	gamma PRU3
81	882	.06	.07	.00	.00	1.00	.00
82	884	.00	.13	.00	.11	.50	-.50
83	886	.07	.08	.09	.09	-.09	.00
84	887	.00	.21	.00	.21	.25	-.75
85	890	.00	.19	.00	.08	.67	-.33
86	891	.00	.04	.00	.04	.02	-1.00
87	894	.11	.24	.06	.11	.50	.23
88	906	.00	.11	.00	.11	.01	-1.00
89	912	.00	.00	.00	.00	1.00	.00
90	913	.00	.00	.00	.00	1.00	.00
91	917	.10	.20	.00	.15	.42	-.83
92	924	.22	.67	.00	.25	.74	-.26
93	934	.00	.00	.00	.00	1.00	.00
94	943	.00	.10	.00	.13	.01	-1.00
95	945	.00	.00	.00	.00	1.00	.00
96	953	.00	.07	.00	.08	.01	-1.00
97	954	.00	.20	.00	.29	.33	-.67
98	959	.19	.36	.09	.09	.63	.00
99	962	.09	.08	.00	.00	1.00	.00
100	963	.00	.40	.00	1.00	.	.
101	968	.00	.06	.00	.00	1.00	.00
102	970	.00	.25	.00	.33	.	.
103	980	.20	.00	.20	.00	.00	1.00
104	986	.11	.14	.06	.06	.54	.22
105	991	.14	.00	.00	.00	1.00	.00
106	996	.13	.00	.00	.00	.	.
107	1003	.08	.08	.00	.09	.45	-1.10
108	1006	.14	.08	.17	.17	-.17	.00
109	1016	.00	.06	.00	.00	1.00	.00
110	1019	.00	.07	.00	.10	.01	-1.00
111	1025	.00	.21	.00	.16	.40	-.60
112	1026	.00	.20	.00	.00	1.00	.00
113	1029	.00	.11	.00	.00	1.00	.00
114	1033	.29	.21	.00	.00	1.00	.00
115	1037	.00	.09	.00	.11	.01	-1.00
116	1039	.13	.08	.13	.00	.44	1.13
117	1040	.00	.25	.00	.29	.33	-.67
118	1043	.00	.15	.00	.00	1.00	.00
119	1044	.00	.00	.00	.00	1.00	.00
120	1054	.11	.13	.00	.06	.77	-.37
121	1060	.04	.21	.00	.17	.28	-.84
122	1072	.00	.30	.00	.17	.67	-.33
123	1074	.00	.00	.00	.00	1.00	.00
124	1076	.00	.00	.00	.00	1.00	.00
125	1077	.22	.30	.13	.00	.73	.75

Pressure Ulcers (low risk) (PRU3)

	Facility ID	facility rated PRU3	gold rated PRU3	false pos PRU3	false neg PRU3	kappa PRU3	gamma PRU3
126	1079	.14	.00	.00	.00	1.00	.00
127	1080	.33	.00	.33	.00	.00	1.00
128	1084	.00	.10	.00	.00	1.00	.00
129	1085	.00	.00	.00	.00	.	.
130	1091	.00	.00	.00	.00	.	.
131	1097	.00	.00	.00	.00	1.00	.00
132	1100	.00	.00	.00	.00	.	.
133	1102	.08	.14	.00	.08	.63	-.55
134	1106	.00	.25	.00	.00	.	.
135	1115	.00	.21	.00	.00	1.00	.00
136	1118	.20	.00	.00	.00	1.00	.00
137	1137	.13	.20	.00	.25	.37	-1.25
138	1141	.00	.17	.00	.13	.50	-.50
139	1142	.00	.13	.00	.11	.50	-.50
140	1144	.05	.14	.00	.06	.73	-.35
141	1148	.20	.33	.00	.25	.55	-.63
142	1149	.17	.00	.17	.00	.00	1.00
143	1152	.00	.33	.	.	.	.
144	1153	.00	.00	.	.	.	.
145	1158	.	1.00	.	.	.	.
146	1160	.04	.38	.00	.32	.24	-.81
147	1162	.05	.13	.00	.00	1.00	.00
148	1163	.33	.30	.00	.00	.	.
149	1165	.38	.53	.00	.13	.84	-.15
150	1166	.17	.29	.00	.33	.	.
151	1174	.00	.08	.00	.00	1.00	.00
152	1176	.00	.08	.00	.00	1.00	.00
153	1178	.08	.19	.00	.08	.72	-.36
154	1181	.00	.00	.00	.00	1.00	.00
155	1188	.08	.00	.08	.00	.01	1.00
156	1209	.00	.00	.00	.00	1.00	.00
157	1218	.19	.15	.04	.00	.87	.24
158	1236	.24	.29	.04	.08	.70	-.08
159	1241	.18	.06	.10	.00	.62	.55
160	1246	.00	.00	.00	.00	1.00	.00
161	1249	.07	.00	.08	.00	.01	1.00
162	1255	.07	.00	.07	.00	.01	1.00
163	1264	.14	.00	.14	.00	.01	1.00
164	1280	.00	.32	.00	.29	.33	-.67
165	1287	.00	.09	.00	.00	1.00	.00
166	1294	.00	.00	.00	.00	1.00	.00
167	1308	.00	.00	.00	.00	1.00	.00
168	1321	.00	.00	.00	.00	1.00	.00
169	1323	.00	.75	.00	.50	.	.
170	1325	.18	.19	.00	.00	1.00	.00

Pressure Ulcers (low risk) (PRU3)

	Facility ID	facility rated PRU3	gold rated PRU3	false pos PRU3	false neg PRU3	kappa PRU3	gamma PRU3
171	1329	.10	.33	.00	.22	.41	-.74
172	1330	.00	.00	.00	.00	1.00	.00
173	1337	.00	.00	.00	.00	1.00	.00
174	1345	.00	.11	.00	.00	1.00	.00
175	1349	.09	.18	.00	.09	.62	-.55
176	1350	.00	.09	.00	.00	1.00	.00
177	1354	.00	.10	.00	.13	.01	-1.00
178	1355	.00	.11	.00	.11	.01	-1.00
179	1357	.35	.52	.00	.15	.72	-.38
180	1366	.07	.00	.08	.00	.01	1.00
181	1368	.47	.46	.12	.00	.77	.71
182	1372	.25	.25	.00	.00	1.00	.00
183	1374	.25	.00	.25	.00	.00	1.00
184	1377	.00	.00	.00	.00	1.00	.00
185	1380	.00	.04	.00	.05	.02	-1.00
186	1381	.08	.21	.00	.09	.71	-.37
187	1383	.00	.05	.00	.06	.01	-1.00
188	1384	.06	.25	.00	.15	.54	-.54
189	1385	.00	.08	.00	.00	1.00	.00
190	1386	.00	.08	.00	.10	.01	-1.00
191	1391	.21	.13	.08	.00	.76	.39
192	2009	.00	.00	.00	.00	1.00	.00
193	2013	.00	.06	.00	.00	1.00	.00
194	2039	.50	.50	.00	.00	1.00	.00
195	2087	.00	.08	.00	.00	1.00	.00
196	2088	.15	.13	.00	.00	1.00	.00
197	2124	.08	.15	.00	.09	.62	-.55
198	2231	.07	.13	.00	.07	.63	-.54
199	2236	.22	.18	.11	.11	.37	.00
200	3075	.00	.05	.00	.06	.02	-1.00
201	5002	.00	.33	.00	.25	.	.
202	5004	.15	.19	.08	.00	.75	.65
203	5019	.12	.19	.00	.06	.76	-.38
204	5020	.05	.13	.05	.05	.46	.84
205	5021	.07	.28	.00	.29	.43	-.61
206	5025	.24	.28	.05	.05	.77	.11
207	5030	.00	.04	.00	.04	.02	-1.00
208	5041	.05	.23	.00	.06	.82	-.21
209	5048	.19	.13	.06	.06	.59	.00

Burns, skin tears or cuts (BURX)

	Facility ID	facility rated BUR1	gold rated BUR1	false pos BUR1	false neg BUR1	kappa BUR1	gamma BUR1
1	1	.10	.19	.00	.10	.62	-.55
2	2	.07	.07	.07	.07	-.08	.00
3	18	.04	.00	.04	.00	.02	1.00
4	19	.10	.10	.03	.03	.63	.00
5	20	.00	.03	.00	.00	1.00	.00
6	60	.10	.03	.10	.03	-.05	-.08
7	89	.08	.33	.04	.29	.08	-.20
8	92	.15	.19	.07	.11	.33	-.09
9	97	.04	.07	.04	.07	-.05	.04
10	98	.00	.04	.00	.04	.02	-1.00
11	111	.04	.08	.00	.04	.65	-.52
12	119	.10	.07	.07	.03	.35	.16
13	124	.00	.00	.00	.00	1.00	.00
14	130	.17	.14	.07	.03	.61	.16
15	136	.08	.08	.08	.08	-.09	.00
16	138	.10	.14	.10	.14	-.13	.04
17	147	.03	.00	.03	.00	.03	1.00
18	148	.11	.07	.07	.04	.34	.16
19	167	.08	.12	.04	.08	.34	-.16
20	298	.11	.07	.07	.04	.34	.16
21	302	.04	.08	.00	.04	.65	-.52
22	315	.15	.11	.11	.07	.18	.06
23	319	.03	.03	.00	.00	1.00	.00
24	324	.05	.14	.00	.09	.46	-.70
25	325	.07	.00	.07	.00	.01	1.00
26	371	.04	.08	.00	.04	.65	-.52
27	490	.07	.00	.07	.00	.01	1.00
28	502	.00	.00	.00	.00	1.00	.00
29	530	.00	.05	.00	.05	.02	-1.00
30	536	.00	.00	.00	.00	1.00	.00
31	541	.00	.03	.00	.03	.03	-1.00
32	544	.00	.00	.00	.00	1.00	.00
33	573	.00	.00	.00	.00	1.00	.00
34	607	.10	.03	.07	.00	.47	.69
35	610	.15	.19	.07	.11	.33	-.09
36	613	.00	.04	.00	.04	.02	-1.00
37	622	.10	.03	.07	.00	.47	.69
38	632	.03	.00	.03	.00	.03	1.00
39	648	.07	.03	.03	.00	.65	.52
40	649	.00	.00	.00	.00	1.00	.00
41	669	.07	.04	.07	.04	-.05	-.04
42	676	.03	.03	.03	.03	-.03	.00
43	677	.07	.07	.00	.00	1.00	.00
44	709	.00	.03	.00	.03	.03	-1.00
45	732	.07	.00	.07	.00	.01	1.00

Burns, skin tears or cuts (BURX)

	Facility ID	facility rated BUR1	gold rated BUR1	false pos BUR1	false neg BUR1	kappa BUR1	gamma BUR1
46	733	.03	.00	.03	.00	.03	1.00
47	739	.00	.00	.00	.00	1.00	.00
48	740	.00	.00	.00	.00	1.00	.00
49	757	.00	.00	.00	.00	1.00	.00
50	762	.00	.00	.00	.00	1.00	.00
51	763	.03	.00	.03	.00	.03	1.00
52	769	.11	.04	.07	.00	.47	.69
53	773	.04	.04	.04	.04	-.04	.00
54	774	.00	.04	.00	.04	.03	-1.00
55	776	.03	.10	.03	.10	-.05	.08
56	784	.21	.21	.14	.14	.16	.00
57	785	.07	.10	.00	.03	.78	-.36
58	786	.00	.03	.00	.03	.03	-1.00
59	799	.00	.00	.00	.00	1.00	.00
60	800	.03	.00	.03	.00	.03	1.00
61	803	.21	.10	.17	.07	.10	.09
62	804	.07	.00	.07	.00	.01	1.00
63	805	.07	.00	.07	.00	.01	1.00
64	823	.00	.00	.00	.00	1.00	.00
65	824	.04	.04	.04	.04	-.04	.00
66	825	.11	.18	.04	.11	.42	-.27
67	831	.07	.17	.03	.13	.21	-.26
68	833	.04	.21	.04	.21	-.07	.22
69	834	.00	.00	.00	.00	1.00	.00
70	836	.08	.04	.04	.00	.65	.52
71	842	.08	.17	.04	.13	.25	-.22
72	845	.00	.00	.00	.00	1.00	.00
73	848	.07	.27	.00	.20	.33	-.80
74	857	.00	.07	.00	.07	.01	-1.00
75	858	.03	.07	.00	.03	.65	-.52
76	859	.10	.03	.10	.03	-.05	-.08
77	861	.15	.59	.04	.48	.08	-.34
78	869	.08	.31	.04	.27	.09	-.23
79	876	.04	.19	.04	.19	-.07	.19
80	878	.03	.20	.03	.20	-.06	.22
81	882	.00	.05	.00	.05	.02	-1.00
82	884	.00	.12	.00	.12	.01	-1.00
83	886	.10	.24	.03	.17	.30	-.36
84	887	.07	.15	.07	.15	-.11	.09
85	890	.10	.07	.07	.03	.35	.16
86	891	.00	.07	.00	.07	.01	-1.00
87	894	.04	.07	.04	.07	-.05	.04
88	906	.04	.15	.00	.12	.36	-.78
89	912	.03	.07	.00	.03	.65	-.52
90	913	.00	.07	.00	.07	.01	-1.00

Burns, skin tears or cuts (BURX)

	Facility ID	facility rated BUR1	gold rated BUR1	false pos BUR1	false neg BUR1	kappa BUR1	gamma BUR1
91	917	.07	.21	.00	.14	.44	-.72
92	924	.04	.07	.00	.04	.65	-.52
93	934	.03	.03	.03	.03	-.04	.00
94	943	.00	.04	.00	.04	.02	-1.00
95	945	.00	.04	.00	.04	.02	-1.00
96	953	.00	.00	.00	.00	1.00	.00
97	954	.08	.12	.04	.08	.34	-.16
98	959	.04	.08	.00	.00	1.00	.00
99	962	.00	.12	.00	.12	.01	-1.00
100	963	.08	.17	.04	.13	.25	-.22
101	968	.00	.00	.00	.00	1.00	.00
102	970	.05	.05	.05	.05	-.05	.00
103	980	.00	.00	.00	.00	1.00	.00
104	986	.00	.08	.00	.08	.01	-1.00
105	991	.00	.04	.00	.04	.02	-1.00
106	996	.00	.31	.00	.31	.00	-1.00
107	1003	.17	.17	.08	.08	.40	.00
108	1006	.00	.07	.00	.07	.01	-1.00
109	1016	.00	.04	.00	.04	.02	-1.00
110	1019	.15	.05	.10	.00	.46	.70
111	1025	.04	.08	.04	.08	-.05	.04
112	1026	.18	.18	.14	.14	.03	.00
113	1029	.07	.07	.04	.04	.46	.00
114	1033	.00	.04	.00	.04	.03	-1.00
115	1037	.00	.04	.00	.04	.02	-1.00
116	1039	.07	.07	.03	.03	.46	.00
117	1040	.00	.08	.00	.08	.01	-1.00
118	1043	.07	.21	.07	.21	-.12	.20
119	1044	.17	.10	.13	.07	.14	.09
120	1054	.00	.10	.00	.10	.01	-1.00
121	1060	.03	.10	.03	.10	-.05	.08
122	1072	.00	.05	.00	.05	.02	-1.00
123	1074	.00	.00	.00	.00	1.00	.00
124	1076	.10	.00	.10	.00	.01	1.00
125	1077	.05	.25	.00	.20	.27	-.84
126	1079	.08	.13	.04	.08	.33	-.16
127	1080	.03	.07	.03	.07	-.05	.04
128	1084	.04	.00	.04	.00	.02	1.00
129	1085	.11	.00	.11	.00	.01	1.00
130	1091	.14	.25	.11	.21	.00	.00
131	1097	.04	.08	.04	.08	-.05	.04
132	1100	.00	.13	.00	.13	.01	-1.00
133	1102	.10	.10	.10	.10	-.12	.00
134	1106	.05	.14	.00	.10	.46	-.70
135	1115	.00	.00	.00	.00	1.00	.00

Burns, skin tears or cuts (BURX)

	Facility ID	facility rated BUR1	gold rated BUR1	false pos BUR1	false neg BUR1	kappa BUR1	gamma BUR1
136	1118	.00	.00	.00	.00	1.00	.00
137	1137	.11	.07	.11	.07	-.10	-.04
138	1141	.03	.00	.03	.00	.03	1.00
139	1142	.10	.07	.03	.00	.78	.36
140	1144	.13	.10	.10	.07	.19	.06
141	1148	.14	.10	.10	.07	.19	.06
142	1149	.00	.10	.00	.10	.01	-1.00
143	1152	.05	.05	.00	.00	1.00	.00
144	1153	.03	.14	.03	.14	-.06	.12
145	1158	.19	.23	.08	.12	.42	-.10
146	1160	.07	.07	.03	.03	.46	.00
147	1162	.04	.04	.04	.04	-.04	.00
148	1163	.09	.09	.04	.04	.45	.00
149	1165	.00	.09	.00	.09	.01	-1.00
150	1166	.08	.23	.04	.19	.15	-.25
151	1174	.10	.20	.10	.20	-.15	.14
152	1176	.11	.11	.04	.04	.63	.00
153	1178	.03	.07	.00	.03	.65	-.52
154	1181	.04	.00	.04	.00	.02	1.00
155	1188	.10	.00	.10	.00	.01	1.00
156	1209	.03	.03	.00	.00	1.00	.00
157	1218	.23	.17	.07	.00	.79	.34
158	1236	.07	.21	.07	.21	-.12	.19
159	1241	.03	.03	.03	.03	-.03	.00
160	1246	.04	.00	.04	.00	.02	1.00
161	1249	.00	.07	.00	.07	.01	-1.00
162	1255	.10	.07	.10	.07	-.09	-.04
163	1264	.07	.00	.07	.00	.01	1.00
164	1280	.04	.04	.04	.04	-.04	.00
165	1287	.07	.07	.00	.00	1.00	.00
166	1294	.13	.17	.00	.03	.87	-.23
167	1308	.07	.00	.07	.00	.01	1.00
168	1321	.00	.13	.00	.13	.01	-1.00
169	1323	.00	.19	.00	.19	.00	-1.00
170	1325	.10	.14	.00	.03	.84	-.28
171	1329	.03	.29	.04	.29	-.07	.36
172	1330	.00	.20	.00	.20	.00	-1.00
173	1337	.04	.07	.04	.07	-.05	.04
174	1345	.00	.00	.00	.00	1.00	.00
175	1349	.03	.17	.03	.17	-.06	.17
176	1350	.00	.03	.00	.03	.03	-1.00
177	1354	.00	.03	.00	.03	.03	-1.00
178	1355	.00	.17	.00	.17	.00	-1.00
179	1357	.10	.07	.07	.03	.35	.16
180	1366	.03	.17	.03	.17	-.06	.17

Burns, skin tears or cuts (BURX)

	Facility ID	facility rated BUR1	gold rated BUR1	false pos BUR1	false neg BUR1	kappa BUR1	gamma BUR1
181	1368	.14	.14	.04	.04	.71	.00
182	1372	.11	.18	.07	.14	.13	-.08
183	1374	.04	.17	.00	.13	.36	-.78
184	1377	.10	.14	.03	.07	.51	-.17
185	1380	.03	.00	.03	.00	.03	1.00
186	1381	.07	.10	.03	.07	.35	-.16
187	1383	.03	.10	.03	.10	-.05	.08
188	1384	.11	.11	.00	.00	1.00	.00
189	1385	.10	.14	.03	.07	.51	-.17
190	1386	.07	.15	.04	.11	.26	-.22
191	1391	.00	.13	.00	.13	.01	-1.00
192	2009	.07	.04	.04	.00	.65	.52
193	2013	.04	.07	.00	.04	.65	-.52
194	2039	.03	.03	.03	.03	-.04	.00
195	2087	.10	.07	.07	.03	.35	.16
196	2088	.03	.14	.03	.14	-.06	.12
197	2124	.00	.07	.00	.07	.01	-1.00
198	2231	.03	.07	.03	.07	-.05	.04
199	2236	.04	.14	.04	.14	-.06	.13
200	3075	.13	.20	.03	.10	.52	-.26
201	5002	.05	.00	.05	.00	.02	1.00
202	5004	.05	.09	.00	.05	.65	-.52
203	5019	.12	.08	.08	.04	.34	.16
204	5020	.10	.07	.07	.03	.35	.16
205	5021	.04	.04	.00	.00	1.00	.00
206	5025	.15	.08	.08	.00	.63	.54
207	5030	.00	.12	.00	.12	.01	-1.00
208	5041	.00	.14	.00	.14	.01	-1.00
209	5048	.00	.00	.00	.00	1.00	.00

Restraints used daily (RES1)

	Facility ID	facility rated RES1	gold rated RES1	false pos RES1	false neg RES1	kappa RES1	gamma RES1
1	1	.10	.86	.00	.76	.03	-.98
2	2	.41	.44	.04	.07	.77	-.12
3	18	.24	.39	.04	.22	.42	-.48
4	19	.41	.34	.07	.00	.85	.25
5	20	.32	.23	.11	.04	.65	.23
6	60	.00	.00	.00	.00	1.00	.00
7	89	.42	.54	.08	.21	.42	-.22
8	92	.37	.44	.00	.07	.85	-.26
9	97	.00	.11	.00	.11	.01	-1.00
10	98	.05	.09	.00	.05	.65	-.52

Restraints used daily (RES1)

	Facility ID	facility rated RES1	gold rated RES1	false pos RES1	false neg RES1	kappa RES1	gamma RES1
11	111	.00	.08	.00	.08	.01	-1.00
12	119	.11	.10	.04	.00	.81	.38
13	124	.00	.00	.00	.00	1.00	.00
14	130	.00	.00	.00	.00	1.00	.00
15	136	.00	.12	.00	.13	.01	-1.00
16	138	.00	.07	.00	.07	.01	-1.00
17	147	.00	.00	.00	.00	1.00	.00
18	148	.00	.00	.00	.00	1.00	.00
19	167	.31	.35	.00	.04	.91	-.16
20	298	.04	.04	.00	.00	1.00	.00
21	302	.20	.23	.00	.04	.88	-.21
22	315	.11	.00	.11	.00	.01	1.00
23	319	.00	.03	.00	.03	.03	-1.00
24	324	.24	.18	.10	.05	.58	.17
25	325	.15	.11	.04	.00	.84	.28
26	371	.36	.32	.04	.00	.91	.16
27	490	.17	.17	.03	.03	.76	.00
28	502	.26	.30	.00	.04	.91	-.17
29	530	.20	.20	.00	.00	1.00	.00
30	536	.00	.00	.00	.00	1.00	.00
31	541	.00	.03	.00	.03	.03	-1.00
32	544	.10	.03	.07	.00	.47	.69
33	573	.00	.03	.00	.03	.03	-1.00
34	607	.07	.03	.03	.00	.65	.52
35	610	.00	.22	.00	.24	.00	-1.00
36	613	.15	.26	.00	.11	.66	-.50
37	622	.00	.07	.00	.07	.01	-1.00
38	632	.03	.03	.00	.00	1.00	.00
39	648	.00	.07	.00	.07	.01	-1.00
40	649	.00	.03	.00	.03	.03	-1.00
41	669	.07	.11	.00	.04	.78	-.36
42	676	.00	.03	.00	.03	.03	-1.00
43	677	.10	.07	.03	.00	.78	.36
44	709	.00	.03	.00	.03	.03	-1.00
45	732	.00	.00	.00	.00	1.00	.00
46	733	.07	.07	.00	.00	1.00	.00
47	739	.00	.00	.00	.00	1.00	.00
48	740	.00	.00	.00	.00	1.00	.00
49	757	.00	.07	.00	.07	.01	-1.00
50	762	.04	.04	.04	.04	-.04	.00
51	763	.00	.03	.00	.03	.03	-1.00
52	769	.00	.00	.00	.00	1.00	.00
53	773	.00	.00	.00	.00	1.00	.00
54	774	.00	.00	.00	.00	1.00	.00
55	776	.00	.07	.00	.07	.01	-1.00

Restraints used daily (RES1)

	Facility ID	facility rated RES1	gold rated RES1	false pos RES1	false neg RES1	kappa RES1	gamma RES1
56	784	.03	.07	.00	.03	.65	-.52
57	785	.00	.07	.00	.07	.01	-1.00
58	786	.00	.03	.00	.00	1.00	.00
59	799	.00	.00	.00	.00	1.00	.00
60	800	.00	.00	.00	.00	1.00	.00
61	803	.07	.07	.04	.04	.46	.00
62	804	.00	.00	.00	.00	1.00	.00
63	805	.00	.	.	.	.	.
64	823	.11	.18	.04	.11	.42	-.27
65	824	.00	.00	.00	.00	1.00	.00
66	825	.00	.04	.00	.04	.03	-1.00
67	831	.10	.13	.03	.07	.51	-.17
68	833	.08	.25	.04	.21	.14	-.24
69	834	.12	.15	.04	.08	.51	-.17
70	836	.04	.08	.00	.04	.65	-.52
71	842	.12	.13	.00	.00	1.00	.00
72	845	.00	.19	.00	.19	.00	-1.00
73	848	.00	.07	.00	.07	.01	-1.00
74	857	.00	.00	.00	.00	1.00	.00
75	858	.23	.17	.10	.03	.59	.25
76	859	.07	.07	.07	.07	-.07	.00
77	861	.16	.11	.08	.04	.51	.17
78	869	.04	.27	.00	.23	.20	-.89
79	876	.12	.19	.04	.12	.42	-.27
80	878	.03	.13	.00	.10	.37	-.78
81	882	.05	.17	.00	.08	.63	-.54
82	884	.05	.00	.05	.00	.02	1.00
83	886	.07	.00	.07	.00	.01	1.00
84	887	.00	.07	.00	.07	.01	-1.00
85	890	.17	.21	.03	.07	.66	-.15
86	891	.03	.03	.00	.00	1.00	.00
87	894	.11	.15	.04	.07	.51	-.17
88	906	.08	.15	.00	.08	.63	-.54
89	912	.10	.03	.07	.00	.47	.69
90	913	.00	.00	.00	.00	1.00	.00
91	917	.00	.00	.00	.00	1.00	.00
92	924	.00	.00	.00	.00	1.00	.00
93	934	.14	.03	.10	.00	.36	.78
94	943	.04	.04	.00	.00	1.00	.00
95	945	.00	.04	.00	.04	.02	-1.00
96	953	.00	.00	.00	.00	1.00	.00
97	954	.08	.15	.00	.08	.63	-.54
98	959	.00	.00	.00	.00	1.00	.00
99	962	.08	.00	.08	.00	.01	1.00
100	963	.00	.00	.00	.00	1.00	.00

Restraints used daily (RES1)

	Facility ID	facility rated RES1	gold rated RES1	false pos RES1	false neg RES1	kappa RES1	gamma RES1
101	968	.08	.12	.00	.04	.78	-.36
102	970	.00	.09	.00	.09	.01	-1.00
103	980	.29	.10	.24	.05	.13	.22
104	986	.00	.00	.00	.00	1.00	.00
105	991	.00	.04	.00	.04	.02	-1.00
106	996	.04	.00	.00	.00	1.00	.00
107	1003	.00	.00	.00	.00	1.00	.00
108	1006	.00	.00	.00	.00	1.00	.00
109	1016	.00	.04	.00	.04	.02	-1.00
110	1019	.00	.00	.00	.00	1.00	.00
111	1025	.00	.00	.00	.00	1.00	.00
112	1026	.11	.14	.00	.04	.84	-.28
113	1029	.04	.04	.00	.00	1.00	.00
114	1033	.04	.07	.00	.04	.65	-.52
115	1037	.08	.04	.04	.00	.65	.52
116	1039	.21	.03	.21	.03	-.06	-.23
117	1040	.14	.00	.12	.00	.25	.75
118	1043	.04	.00	.04	.00	.03	1.00
119	1044	.03	.00	.03	.00	.03	1.00
120	1054	.00	.00	.00	.00	1.00	.00
121	1060	.00	.00	.00	.00	1.00	.00
122	1072	.00	.05	.00	.05	.02	-1.00
123	1074	.08	.09	.00	.00	1.00	.00
124	1076	.00	.00	.00	.00	1.00	.00
125	1077	.00	.00	.00	.00	1.00	.00
126	1079	.00	.00	.00	.00	1.00	.00
127	1080	.03	.31	.03	.31	-.07	.41
128	1084	.08	.32	.04	.28	.08	-.22
129	1085	.14	.36	.00	.21	.46	-.70
130	1091	.18	.32	.11	.25	.07	-.06
131	1097	.00	.46	.00	.46	.00	-1.00
132	1100	.07	.23	.00	.17	.38	-.77
133	1102	.17	.14	.03	.00	.87	.23
134	1106	.05	.10	.05	.05	.29	.58
135	1115	.22	.26	.09	.13	.40	-.10
136	1118	.12	.46	.00	.35	.26	-.85
137	1137	.23	.33	.04	.12	.63	-.18
138	1141	.07	.33	.00	.27	.25	-.86
139	1142	.07	.27	.00	.20	.33	-.80
140	1144	.03	.13	.00	.10	.37	-.78
141	1148	.14	.62	.00	.48	.18	-.90
142	1149	.00	.14	.00	.14	.01	-1.00
143	1152	.00	.14	.00	.14	.01	-1.00
144	1153	.00	.17	.00	.17	.00	-1.00
145	1158	.08	.54	.00	.46	.13	-.93

Restraints used daily (RES1)

	Facility ID	facility rated RES1	gold rated RES1	false pos RES1	false neg RES1	kappa RES1	gamma RES1
146	1160	.00	.10	.00	.10	.01	-1.00
147	1162	.00	.04	.00	.04	.02	-1.00
148	1163	.23	.17	.14	.09	.30	.09
149	1165	.00	.00	.00	.00	1.00	.00
150	1166	.00	.50	.00	.50	.00	-1.00
151	1174	.03	.00	.03	.00	.03	1.00
152	1176	.04	.04	.00	.00	1.00	.00
153	1178	.00	.03	.00	.03	.03	-1.00
154	1181	.11	.00	.11	.00	.01	1.00
155	1188	.07	.03	.07	.03	-.05	-.04
156	1209	.00	.00	.00	.00	1.00	.00
157	1218	.00	.00	.00	.00	1.00	.00
158	1236	.00	.00	.00	.00	1.00	.00
159	1241	.10	.17	.00	.07	.71	-.44
160	1246	.00	.04	.00	.04	.02	-1.00
161	1249	.03	.10	.00	.07	.47	-.69
162	1255	.07	.14	.03	.10	.27	-.23
163	1264	.03	.00	.03	.00	.03	1.00
164	1280	.00	.00	.00	.00	1.00	.00
165	1287	.00	.00	.00	.00	1.00	.00
166	1294	.03	.17	.00	.13	.29	-.83
167	1308	.00	.00	.00	.00	1.00	.00
168	1321	.23	.30	.00	.07	.83	-.29
169	1323	.15	.15	.00	.00	1.00	.00
170	1325	.00	.00	.00	.00	1.00	.00
171	1329	.07	.03	.03	.00	.65	.52
172	1330	.14	.23	.00	.10	.67	-.50
173	1337	.07	.04	.07	.04	-.05	-.04
174	1345	.00	.03	.00	.03	.03	-1.00
175	1349	.03	.13	.00	.10	.36	-.78
176	1350	.07	.00	.07	.00	.01	1.00
177	1354	.03	.03	.00	.00	1.00	.00
178	1355	.10	.13	.03	.07	.52	-.17
179	1357	.00	.03	.00	.03	.03	-1.00
180	1366	.21	.31	.00	.10	.73	-.42
181	1368	.00	.04	.00	.04	.03	-1.00
182	1372	.00	.07	.00	.07	.01	-1.00
183	1374	.05	.13	.00	.09	.46	-.70
184	1377	.07	.10	.00	.03	.78	-.36
185	1380	.04	.03	.00	.00	1.00	.00
186	1381	.00	.00	.00	.00	1.00	.00
187	1383	.07	.10	.03	.07	.35	-.16
188	1384	.00	.00	.00	.00	1.00	.00
189	1385	.14	.24	.03	.14	.45	-.33
190	1386	.07	.07	.00	.00	1.00	.00

Restraints used daily (RES1)

	Facility ID	facility rated RES1	gold rated RES1	false pos RES1	false neg RES1	kappa RES1	gamma RES1
191	1391	.07	.03	.03	.00	.65	.52
192	2009	.07	.11	.04	.07	.34	-.16
193	2013	.00	.04	.00	.04	.03	-1.00
194	2039	.31	.31	.00	.00	1.00	.00
195	2087	.07	.10	.00	.03	.78	-.36
196	2088	.28	.41	.00	.14	.70	-.46
197	2124	.07	.19	.00	.11	.52	-.65
198	2231	.30	.30	.03	.03	.84	.00
199	2236	.14	.29	.04	.18	.38	-.38
200	3075	.07	.23	.00	.17	.38	-.77
201	5002	.15	.10	.10	.05	.32	.15
202	5004	.00	.05	.00	.05	.02	-1.00
203	5019	.00	.00	.00	.00	1.00	.00
204	5020	.00	.00	.00	.00	1.00	.00
205	5021	.00	.14	.00	.14	.00	-1.00
206	5025	.04	.00	.04	.00	.02	1.00
207	5030	.00	.04	.00	.04	.02	-1.00
208	5041	.00	.00	.00	.00	1.00	.00
209	5048	.00	.00	.00	.00	1.00	.00

Antipsychotic Use (high and low risk) (DRG1)

	Facility ID	facility rated DRG1	gold rated DRG1	false pos DRG1	false neg DRG1	kappa DRG1	gamma DRG1
1	1	.00	.05	.00	.05	.02	-1.00
2	2	.07	.15	.00	.07	.63	-.54
3	18	.08	.08	.00	.05	.45	.00
4	19	.36	.42	.00	.09	.74	-.09
5	20	.07	.07	.00	.00	.73	.54
6	60	.03	.24	.00	.21	.20	-.89
7	89	.38	.54	.00	.17	.67	-.49
8	92	.33	.23	.00	.00	.72	.43
9	97	.25	.19	.00	.00	.89	.18
10	98	.04	.00	.00	.00	.02	1.00
11	111	.24	.29	.00	.08	.79	-.38
12	119	.00	.00	.00	.00	1.00	.00
13	124	.65	.47	.00	.00	.90	.12
14	130	.07	.07	.00	.00	1.00	.00
15	136	.17	.16	.00	.00	1.00	.00
16	138	.28	.24	.00	.04	.73	.13
17	147	.00	.03	.00	.03	.03	-1.00
18	148	.04	.04	.00	.00	1.00	.00
19	167	.19	.19	.00	.04	.75	.00
20	298	.11	.11	.00	.04	.63	.00

Antipsychotic Use (high and low risk) (DRG1)

	Facility ID	facility rated DRG1	gold rated DRG1	false pos DRG1	false neg DRG1	kappa DRG1	gamma DRG1
21	302	.04	.00	.00	.00	.02	1.00
22	315	.07	.07	.00	.00	1.00	.00
23	319	.10	.07	.00	.04	.35	.16
24	324	.14	.09	.00	.00	.77	.37
25	325	.12	.15	.00	.00	1.00	.00
26	371	.21	.18	.00	.05	.86	-.32
27	490	.11	.04	.00	.04	-.06	-.09
28	502	.40	.33	.00	.00	1.00	.00
29	530	.27	.39	.00	.14	.72	-.39
30	536	.46	.48	.00	.08	.84	-.35
31	541	.26	.36	.00	.04	.91	-.14
32	544	.10	.07	.00	.00	.78	.36
33	573	.36	.36	.00	.04	.84	.00
34	607	.28	.28	.00	.07	.74	-.17
35	610	.13	.22	.00	.08	.73	-.38
36	613	.04	.00	.00	.00	.02	1.00
37	622	.03	.07	.00	.03	.65	-.52
38	632	.23	.20	.00	.00	.90	.18
39	648	.28	.20	.00	.00	.81	.32
40	649	.76	.63	.00	.00	1.00	.00
41	669	.14	.11	.00	.00	.84	.28
42	676	.17	.23	.00	.03	.90	-.17
43	677	.07	.11	.00	.04	.78	-.36
44	709	.17	.14	.00	.00	1.00	.00
45	732	.21	.21	.00	.00	1.00	.00
46	733	.07	.07	.00	.00	1.00	.00
47	739	.29	.25	.00	.00	.89	.19
48	740	.25	.80	.00	.50	.41	-.63
49	757	.26	.21	.00	.00	1.00	.00
50	762	.04	.04	.00	.00	1.00	.00
51	763	.04	.17	.00	.14	.29	-.83
52	769	.14	.04	.00	.00	.36	.78
53	773	.12	.12	.00	.00	1.00	.00
54	774	.14	.14	.00	.00	1.00	.00
55	776	.07	.10	.00	.03	.78	-.36
56	784	.13	.14	.00	.00	.83	.40
57	785	.32	.34	.00	.04	.84	.03
58	786	.15	.15	.00	.04	.85	-.30
59	799	.38	.38	.00	.00	1.00	.00
60	800	.07	.07	.00	.00	1.00	.00
61	803	.18	.17	.00	.00	.88	.24
62	804	.11	.11	.00	.00	1.00	.00
63	805	.00	.03	.00	.00	1.00	.00
64	823	.00	.04	.00	.04	.03	-1.00
65	824	.00	.00	.00	.00	1.00	.00

Antipsychotic Use (high and low risk) (DRG1)

	Facility ID	facility rated DRG1	gold rated DRG1	false pos DRG1	false neg DRG1	kappa DRG1	gamma DRG1
66	825	.18	.19	.00	.00	1.00	.00
67	831	.33	.48	.00	.00	1.00	.00
68	833	.33	.27	.00	.05	.69	.08
69	834	.63	.50	.00	.06	.78	-.53
70	836	.10	.10	.00	.05	.44	.00
71	842	.13	.09	.00	.00	.78	.37
72	845	.11	.11	.00	.00	1.00	.00
73	848	.17	.30	.00	.14	.63	-.54
74	857	.24	.23	.00	.04	.78	.00
75	858	.31	.34	.00	.03	.92	-.14
76	859	.03	.07	.00	.03	.65	-.52
77	861	.17	.22	.00	.09	.63	-.07
78	869	.16	.22	.00	.09	.73	-.48
79	876	.15	.20	.00	.04	.86	-.24
80	878	.27	.21	.00	.08	.62	-.15
81	882	.37	.42	.00	.06	.89	-.20
82	884	.26	.17	.00	.00	.87	.20
83	886	.31	.25	.00	.00	.91	.15
84	887	.15	.20	.00	.04	.86	-.24
85	890	.21	.21	.00	.00	1.00	.00
86	891	.23	.26	.00	.09	.77	-.46
87	894	.26	.18	.00	.00	.74	.41
88	906	.08	.31	.00	.20	.43	-.68
89	912	.03	.07	.00	.03	.65	-.52
90	913	.21	.23	.00	.04	.80	.04
91	917	.04	.04	.00	.00	1.00	.00
92	924	.15	.07	.00	.04	.26	.22
93	934	.15	.16	.00	.06	.80	-.40
94	943	.25	.32	.00	.04	.90	-.17
95	945	.17	.09	.00	.00	.81	.27
96	953	.14	.11	.00	.04	.51	.17
97	954	.24	.24	.00	.00	1.00	.00
98	959	.00	.00	.00	.00	1.00	.00
99	962	.38	.38	.00	.04	.84	.00
100	963	.00	.00	.00	.00	1.00	.00
101	968	.12	.12	.00	.04	.62	.00
102	970	.09	.14	.00	.05	.78	-.37
103	980	.05	.10	.00	.05	.64	-.53
104	986	.12	.08	.00	.00	.78	.36
105	991	.15	.15	.00	.04	.70	.00
106	996	.20	.23	.00	.08	.82	-.54
107	1003	.11	.14	.00	.00	1.00	.00
108	1006	.22	.30	.00	.07	.81	-.32
109	1016	.14	.04	.00	.00	.46	.70
110	1019	.06	.05	.00	.00	1.00	.00

Antipsychotic Use (high and low risk) (DRG1)

	Facility ID	facility rated DRG1	gold rated DRG1	false pos DRG1	false neg DRG1	kappa DRG1	gamma DRG1
111	1025	.15	.16	.00	.04	.85	-.30
112	1026	.25	.30	.00	.12	.63	-.30
113	1029	.28	.26	.00	.04	.80	.00
114	1033	.04	.04	.00	.00	1.00	.00
115	1037	.48	.36	.00	.00	.76	.39
116	1039	.28	.38	.00	.08	.83	-.25
117	1040	.21	.26	.00	.04	.89	-.23
118	1043	.22	.21	.00	.00	.89	.21
119	1044	.20	.23	.00	.03	.90	-.18
120	1054	.07	.04	.00	.00	1.00	.00
121	1060	.03	.03	.00	.00	1.00	.00
122	1072	.29	.42	.00	.06	.88	-.18
123	1074	.21	.36	.00	.00	1.00	.00
124	1076	.04	.00	.00	.00	.02	1.00
125	1077	.14	.21	.00	.05	.83	-.30
126	1079	.29	.17	.00	.05	.53	.16
127	1080	.14	.11	.00	.00	1.00	.00
128	1084	.04	.09	.00	.05	.65	-.52
129	1085	.20	.29	.00	.04	.90	-.16
130	1091	.29	.26	.00	.00	1.00	.00
131	1097	.08	.05	.00	.00	1.00	.00
132	1100	.14	.17	.00	.04	.74	.07
133	1102	.18	.18	.00	.00	1.00	.00
134	1106	.20	.24	.00	.00	1.00	.00
135	1115	.24	.32	.00	.00	1.00	.00
136	1118	.16	.09	.00	.05	.62	-.34
137	1137	.08	.19	.00	.08	.68	-.43
138	1141	.21	.25	.00	.00	1.00	.00
139	1142	.32	.30	.00	.04	.83	-.03
140	1144	.13	.07	.00	.04	.45	-.04
141	1148	.41	.32	.00	.00	.85	.25
142	1149	.21	.24	.00	.03	.90	-.18
143	1152	.14	.18	.00	.05	.83	-.29
144	1153	.24	.19	.00	.04	.79	-.10
145	1158	.19	.27	.00	.08	.79	-.35
146	1160	.00	.00	.00	.00	1.00	.00
147	1162	.15	.12	.00	.00	.84	.28
148	1163	.14	.17	.00	.10	.49	-.17
149	1165	.09	.04	.00	.00	.65	.52
150	1166	.35	.32	.00	.00	.91	.16
151	1174	.45	.47	.00	.00	1.00	.00
152	1176	.29	.19	.00	.00	.80	.31
153	1178	.24	.17	.00	.04	.58	.25
154	1181	.50	.41	.00	.00	.85	.27
155	1188	.14	.14	.00	.00	1.00	.00

Antipsychotic Use (high and low risk) (DRG1)

	Facility ID	facility rated DRG1	gold rated DRG1	false pos DRG1	false neg DRG1	kappa DRG1	gamma DRG1
156	1209	.20	.23	.00	.03	.90	-.18
157	1218	.14	.17	.00	.03	.87	-.23
158	1236	.03	.03	.00	.00	1.00	.00
159	1241	.14	.17	.00	.04	.74	.07
160	1246	.25	.24	.00	.00	1.00	.00
161	1249	.14	.14	.00	.00	1.00	.00
162	1255	.18	.30	.00	.15	.50	-.33
163	1264	.07	.07	.00	.03	.46	.00
164	1280	.04	.00	.00	.00	.02	1.00
165	1287	.00	.00	.00	.00	1.00	.00
166	1294	.07	.10	.00	.03	.78	-.36
167	1308	.29	.29	.00	.00	1.00	.00
168	1321	.24	.24	.00	.00	1.00	.00
169	1323	.17	.17	.00	.00	.85	.31
170	1325	.07	.14	.00	.04	.82	-.27
171	1329	.17	.25	.00	.07	.79	-.35
172	1330	.50	.52	.00	.13	.68	-.38
173	1337	.17	.13	.00	.05	.66	-.12
174	1345	.18	.07	.00	.00	.84	.22
175	1349	.14	.28	.00	.14	.59	-.58
176	1350	.13	.14	.00	.07	.56	-.29
177	1354	.26	.26	.00	.04	.80	.00
178	1355	.27	.24	.00	.04	.79	-.04
179	1357	.04	.07	.00	.00	1.00	.00
180	1366	.29	.22	.00	.00	.90	.16
181	1368	.04	.07	.00	.04	.65	-.52
182	1372	.11	.11	.00	.04	.63	.00
183	1374	.27	.22	.00	.00	.76	.43
184	1377	.11	.14	.00	.00	1.00	.00
185	1380	.07	.10	.00	.03	.78	-.36
186	1381	.14	.24	.00	.14	.45	-.33
187	1383	.41	.57	.00	.05	.92	-.11
188	1384	.15	.08	.00	.00	.63	.54
189	1385	.30	.33	.00	.04	.92	-.16
190	1386	.29	.35	.00	.04	.81	.07
191	1391	.20	.23	.00	.07	.71	-.14
192	2009	.19	.18	.00	.00	1.00	.00
193	2013	.35	.33	.00	.05	.89	-.24
194	2039	.25	.29	.00	.04	.91	-.17
195	2087	.11	.14	.00	.00	1.00	.00
196	2088	.21	.25	.00	.04	.90	-.18
197	2124	.30	.27	.00	.00	1.00	.00
198	2231	.29	.28	.00	.00	.91	.18
199	2236	.20	.20	.00	.00	1.00	.00
200	3075	.27	.30	.00	.03	.92	-.15

Antipsychotic Use (high and low risk) (DRG1)

	Facility ID	facility rated DRG1	gold rated DRG1	false pos DRG1	false neg DRG1	kappa DRG1	gamma DRG1
201	5002	.05	.05	.00	.00	1.00	.00
202	5004	.14	.18	.00	.10	.49	-.17
203	5019	.04	.04	.00	.00	.48	1.04
204	5020	.03	.07	.00	.03	.65	-.52
205	5021	.11	.11	.00	.04	.62	.00
206	5025	.04	.04	.00	.00	1.00	.00
207	5030	.00	.00	.00	.00	1.00	.00
208	5041	.07	.11	.00	.04	.78	-.36
209	5048	.04	.07	.00	.04	.65	-.52

Antipsychotic Use (high risk) (DRG2)

	Facility ID	facility rated DRG2	gold rated DRG2	false pos DRG2	false neg DRG2	kappa DRG2	gamma DRG2
1	1	.	.	.00	.	.	.
2	2	.33	.50	.00	.00	.	.
3	18	1.00	1.00	.00	.00	.	.
4	19	1.00	.60	.00	.00	.	.
5	20	1.00	1.00	.00	.00	.	.
6	60	.00	.	.00	.	.	.
7	89	.38	.59	.00	.20	.62	-.51
8	92	.57	.14	.00	.00	.71	.31
9	97	.57	.33	.00	.00	.	.
10	98	.25	.00	.00	.00	.	.
11	111	.67	.00	.00	.00	.	.
12	119	.00	.00	.00	.00	.	.
13	124	1.00	1.00	.00	.00	.	.
14	130	.	.	.00	.	.	.
15	136	1.00	1.00	.00	.00	.	.
16	138	.67	.50	.00	.00	.	.
17	147	.	.	.00	.	.	.
18	148	.	.	.00	.	.	.
19	167	.00	.00	.00	.00	.	.
20	298	1.00	1.00	.00	.00	.	.
21	302	.	.	.00	.	.	.
22	315	.00	.00	.00	.00	.	.
23	319	.	.	.00	.	.	.
24	324	.67	.50	.00	.00	.	.
25	325	.00	.00	.00	.	.	.
26	371	.50	1.00	.00	.50	.	.
27	490	.00	.00	.00	.00	.	.
28	502	.67	.00	.00	.00	.	.
29	530	.33	1.00	.00	1.00	.	.
30	536	.25	.40	.00	.00	.	.

Antipsychotic Use (high risk) (DRG2)

	Facility ID	facility rated DRG2	gold rated DRG2	false pos DRG2	false neg DRG2	kappa DRG2	gamma DRG2
31	541	.56	.73	.00	.00	1.00	.00
32	544	.50	.00	.00	.00	.	.
33	573	.50	.00	.00	.00	.	.
34	607	.33	.50	.00	.00	.	.
35	610	.00	1.00	.00	1.00	.	.
36	613	.00	.00	.00	.00	.	.
37	622	.	.00	.00	.	.	.
38	632	.22	.22	.00	.00	1.00	.00
39	648	.00	.50	.00	.00	.	.
40	649	1.00	1.00	.00	.	.	.
41	669	.67	.40	.00	.00	.	.
42	676	.44	.75	.00	.14	.75	-.33
43	677	.00	.00	.00	.00	.	.
44	709	.33	.00	.00	.00	.	.
45	732	.00	.00	.00	.00	1.00	.00
46	733	.00	.00	.00	.00	.	.
47	739	.67	.67	.00	.00	.	.
48	740	.	1.00	.00	.	.	.
49	757	1.00	.60	.00	.00	.	.
50	762	.	.	.00	.	.	.
51	763	.	.	.00	.	.	.
52	769	1.00	.50	.00	.00	.	.
53	773	.67	.67	.00	.00	.	.
54	774	.33	.33	.00	.00	.	.
55	776	.	.67	.00	.	.	.
56	784	.50	.50	.00	.	.	.
57	785	.71	.57	.00	.00	1.00	.00
58	786	1.00	.33	.00	.00	.	.
59	799	.57	.67	.00	.00	1.00	.00
60	800	.	.00	.00	.	.	.
61	803	.50	.40	.00	.00	.	.
62	804	.	.	.00	.	.	.
63	805	.	.	.00	.	.	.
64	823	.00	1.00	.00	1.00	.	.
65	824	.	.	.00	.	.	.
66	825	.50	.25	.00	.00	.	.
67	831	.64	.62	.00	.00	1.00	.00
68	833	.40	.00	.00	.00	.	.
69	834	1.00	1.00	.00	.00	.	.
70	836	.33	.25	.00	.00	.	.
71	842	.00	.00	.00	.00	1.00	.00
72	845	.50	.33	.00	.00	.	.
73	848	.67	.50	.00	.33	.	.
74	857	.	.33	.00	.	.	.
75	858	.50	.44	.00	.00	1.00	.00

Antipsychotic Use (high risk) (DRG2)

	Facility ID	facility rated DRG2	gold rated DRG2	false pos DRG2	false neg DRG2	kappa DRG2	gamma DRG2
76	859	.	.25	.00	.	.	.
77	861	.67	.33	.00	.00	.64	.42
78	869	.00	.40	.00	1.00	.	.
79	876	.50	.20	.00	.00	.	.
80	878	.67	1.00	.00	.00	.	.
81	882	1.00	.60	.00	.00	.	.
82	884	.50	1.00	.00	.00	.	.
83	886	.50	.40	.00	.00	.	.
84	887	.00	.29	.00	.00	.	.
85	890	.40	.50	.00	.00	.	.
86	891	.17	.17	.00	.00	1.00	.00
87	894	.40	.20	.00	.00	.	.
88	906	.00	.63	.00	.00	.	.
89	912	.00	.00	.00	.00	.	.
90	913	.33	.29	.00	.00	.	.
91	917	.	.	.00	.	.	.
92	924	.00	.00	.00	.00	.	.
93	934	.18	.00	.00	.00	.	.
94	943	.33	.50	.00	.00	.	.
95	945	.40	.00	.00	.00	.	.
96	953	.00	.00	.00	.	.	.
97	954	.40	.50	.00	.00	.	.
98	959	.	.00	.00	.	.	.
99	962	.69	.57	.00	.00	.63	.26
100	963	.	.	.00	.	.	.
101	968	.00	.20	.00	.00	.	.
102	970	1.00	1.00	.00	.00	.	.
103	980	.17	.00	.00	.	.	.
104	986	.	.	.00	.	.	.
105	991	.17	.33	.00	.25	.55	-.63
106	996	.50	.	.00	.	.	.
107	1003	1.00	.	.00	.	.	.
108	1006	.50	.80	.00	.00	1.00	.00
109	1016	.	.00	.00	.	.	.
110	1019	.	.	.00	.	.	.
111	1025	.	.00	.00	.	.	.
112	1026	.50	.75	.00	.00	.	.
113	1029	.00	.00	.00	.00	.	.
114	1033	1.00	1.00	.00	.00	.	.
115	1037	.67	.60	.00	.00	.	.
116	1039	.20	.67	.00	.50	.	.
117	1040	.33	.57	.00	.20	.70	-.37
118	1043	.67	.00	.00	.	.	.
119	1044	.20	.38	.00	.00	1.00	.00
120	1054	.00	.00	.00	.00	.	.

Antipsychotic Use (high risk) (DRG2)

	Facility ID	facility rated DRG2	gold rated DRG2	false pos DRG2	false neg DRG2	kappa DRG2	gamma DRG2
121	1060	.	.	.00	.	.	.
122	1072	.25	.75	.00	.00	.	.
123	1074	.00	.00	.00	.	.	.
124	1076	.	.	.00	.	.	.
125	1077	.00	.50	.00	.00	.	.
126	1079	.33	.00	.00	.00	.00	1.00
127	1080	.00	.00	.00	.00	.	.
128	1084	.00	.00	.00	.00	.	.
129	1085	.50	.67	.00	.00	1.00	.00
130	1091	.33	.29	.00	.00	.	.
131	1097	.00	.14	.00	.00	1.00	.00
132	1100	.00	.75	.00	1.00	.	.
133	1102	.17	.40	.00	.00	1.00	.00
134	1106	.50	1.00	.00	.00	.	.
135	1115	1.00	.50	.00	.00	.	.
136	1118	.50	.00	.00	.00	.	.
137	1137	1.00	1.00	.00	.00	.	.
138	1141	.20	.40	.00	.00	1.00	.00
139	1142	.57	.67	.00	.20	.50	-.50
140	1144	.80	.20	.00	.00	.	.
141	1148	.71	.27	.00	.00	.73	.35
142	1149	1.00	.67	.00	.00	.	.
143	1152	.33	.33	.00	.33	.	.
144	1153	.	.25	.00	.	.	.
145	1158	.50	.50	.00	.00	.	.
146	1160	.	.00	.00	.	.	.
147	1162	.	.00	.00	.	.	.
148	1163	.33	.57	.00	.40	.40	-.75
149	1165	.	.	.00	.	.	.
150	1166	.63	.60	.00	.00	.	.
151	1174	.70	.71	.00	.00	1.00	.00
152	1176	.00	1.00	.00	.	.	.
153	1178	.33	.00	.00	.00	.	.
154	1181	.60	.60	.00	.00	1.00	.00
155	1188	.33	.00	.00	.00	.	.
156	1209	.	.00	.00	.	.	.
157	1218	.	.	.00	.	.	.
158	1236	.	.	.00	.	.	.
159	1241	.29	.17	.00	.00	1.00	.00
160	1246	.50	.67	.00	.00	.	.
161	1249	.43	.33	.00	.00	1.00	.00
162	1255	.40	.75	.00	.25	.62	-.56
163	1264	.11	.29	.00	.14	.60	-.57
164	1280	.	.	.00	.	.	.
165	1287	.	.	.00	.	.	.

Antipsychotic Use (high risk) (DRG2)

	Facility ID	facility rated DRG2	gold rated DRG2	false pos DRG2	false neg DRG2	kappa DRG2	gamma DRG2
166	1294	.00	.33	.00	.00	.	.
167	1308	.67	.50	.00	.00	1.00	.00
168	1321	.80	.44	.00	.00	1.00	.00
169	1323	.50	.50	.00	.00	.	.
170	1325	.00	.	.00	.	.	.
171	1329	.80	.43	.00	.00	.	.
172	1330	.71	.89	.00	.29	-12.50	3.15
173	1337	.50	.25	.00	.00	.	.
174	1345	.00	.00	.00	.00	.	.
175	1349	.33	.50	.00	.00	.	.
176	1350	.00	.67	.00	.00	.	.
177	1354	.75	.33	.00	.50	.	.
178	1355	.43	.43	.00	.00	.	.
179	1357	.	.	.00	.	.	.
180	1366	.57	.25	.00	.00	.70	.38
181	1368	.	.	.00	.	.	.
182	1372	.67	1.00	.00	.00	.	.
183	1374	.00	.67	.00	.00	.	.
184	1377	.25	.33	.00	.00	1.00	.00
185	1380	.	.	.00	.	.	.
186	1381	.67	1.00	.00	.00	.	.
187	1383	.50	.80	.00	.20	.67	-.25
188	1384	.	.00	.00	.	.	.
189	1385	1.00	1.00	.00	.00	.	.
190	1386	.25	.50	.00	.00	1.00	.00
191	1391	.	.75	.00	.	.	.
192	2009	.36	.33	.00	.00	1.00	.00
193	2013	.67	1.00	.00	.50	.	.
194	2039	.50	.63	.00	.17	.73	-.35
195	2087	.50	.33	.00	.00	.	.
196	2088	.00	.40	.00	.00	.	.
197	2124	.40	.33	.00	.00	1.00	.00
198	2231	1.00	.67	.00	.00	.	.
199	2236	.33	.40	.00	.00	1.00	.00
200	3075	.33	.46	.00	.10	.82	-.26
201	5002	.00	.00	.00	.00	.	.
202	5004	.	.	.00	.	.	.
203	5019	1.00	.00	.00	.	.	.
204	5020	.00	.50	.00	.50	.	.
205	5021	.75	.50	.00	1.00	.	.
206	5025	.00	.00	.00	.00	.	.
207	5030	.	.	.00	.	.	.
208	5041	.	1.00	.00	.	.	.
209	5048	.	.	.00	.	.	.

Antipsychotic Use (low risk) (DRG3)

	Facility ID	facility rated DRG3	gold rated DRG3	false pos DRG3	false neg DRG3	kappa DRG3	gamma DRG3
1	1	.00	.05	.00	.05	.02	-1.00
2	2	.04	.12	.00	.08	.47	-.70
3	18	.04	.00	.05	.00	.02	1.00
4	19	.30	.38	.05	.10	.69	-.14
5	20	.04	.03	.04	.00	.48	1.04
6	60	.04	.24	.00	.21	.20	-.89
7	89	.33	.00	.00	.00	.	.
8	92	.25	.26	.00	.00	1.00	.00
9	97	.14	.17	.05	.00	.83	.41
10	98	.00	.00	.00	.00	1.00	.00
11	111	.18	.30	.00	.10	.76	-.35
12	119	.00	.00	.00	.00	1.00	.00
13	124	.62	.44	.06	.00	.89	.13
14	130	.07	.07	.00	.00	1.00	.00
15	136	.13	.13	.00	.00	1.00	.00
16	138	.17	.22	.04	.00	.87	.34
17	147	.00	.03	.00	.03	.03	-1.00
18	148	.04	.04	.00	.00	1.00	.00
19	167	.21	.21	.04	.04	.75	.00
20	298	.04	.08	.04	.04	.30	.56
21	302	.04	.00	.04	.00	.02	1.00
22	315	.08	.08	.00	.00	1.00	.00
23	319	.10	.07	.07	.03	.35	.16
24	324	.06	.05	.00	.00	1.00	.00
25	325	.13	.15	.00	.00	1.00	.00
26	371	.15	.10	.00	.00	1.00	.00
27	490	.15	.04	.16	.00	.19	1.06
28	502	.36	.35	.00	.00	1.00	.00
29	530	.25	.35	.00	.09	.83	-.22
30	536	.50	.50	.00	.00	1.00	.00
31	541	.11	.12	.00	.00	1.00	.00
32	544	.07	.08	.04	.00	.73	.54
33	573	.33	.37	.04	.04	.82	.06
34	607	.27	.24	.04	.08	.68	-.28
35	610	.13	.13	.00	.05	.81	-.39
36	613	.04	.00	.04	.00	.02	1.00
37	622	.03	.07	.00	.04	.65	-.52
38	632	.24	.19	.05	.00	.86	.25
39	648	.29	.15	.08	.00	.79	.30
40	649	.73	.57	.00	.00	1.00	.00
41	669	.08	.04	.00	.00	1.00	.00
42	676	.05	.05	.00	.00	1.00	.00
43	677	.07	.12	.00	.04	.78	-.36
44	709	.13	.17	.00	.00	1.00	.00
45	732	.25	.25	.00	.00	1.00	.00
46	733	.08	.07	.00	.00	1.00	.00

Antipsychotic Use (low risk) (DRG3)

	Facility ID	facility rated DRG3	gold rated DRG3	false pos DRG3	false neg DRG3	kappa DRG3	gamma DRG3
47	739	.24	.19	.05	.00	.86	.25
48	740	.25	.67	.00	.00	.	.
49	757	.17	.13	.00	.00	1.00	.00
50	762	.04	.04	.00	.00	1.00	.00
51	763	.04	.17	.00	.14	.29	-.83
52	769	.08	.00	.08	.00	.01	1.00
53	773	.04	.04	.00	.00	1.00	.00
54	774	.12	.12	.00	.00	1.00	.00
55	776	.07	.04	.00	.04	.65	-1.08
56	784	.09	.12	.00	.00	1.00	.00
57	785	.19	.27	.00	.05	.87	-.21
58	786	.12	.13	.00	.05	.81	-.39
59	799	.32	.30	.00	.00	1.00	.00
60	800	.07	.07	.00	.00	1.00	.00
61	803	.13	.13	.00	.00	1.00	.00
62	804	.11	.11	.00	.00	1.00	.00
63	805	.00	.03	.00	.00	1.00	.00
64	823	.00	.00	.00	.00	1.00	.00
65	824	.00	.00	.00	.00	1.00	.00
66	825	.13	.17	.00	.00	1.00	.00
67	831	.00	.38	.00	.00	1.00	.00
68	833	.32	.32	.06	.06	.76	.00
69	834	.59	.25	.08	.00	.89	.10
70	836	.06	.06	.06	.06	-.06	.00
71	842	.17	.13	.07	.00	.76	.38
72	845	.08	.08	.00	.00	1.00	.00
73	848	.04	.27	.00	.14	.59	-.45
74	857	.24	.20	.05	.00	.87	.21
75	858	.24	.30	.00	.05	.87	-.22
76	859	.03	.04	.00	.00	1.00	.00
77	861	.00	.19	.00	.13	.50	-.50
78	869	.17	.17	.00	.06	.82	-.43
79	876	.09	.20	.00	.05	.81	-.28
80	878	.17	.12	.09	.00	.66	.58
81	882	.25	.36	.00	.08	.82	-.30
82	884	.21	.13	.00	.00	1.00	.00
83	886	.28	.22	.00	.00	1.00	.00
84	887	.17	.17	.00	.00	1.00	.00
85	890	.17	.14	.00	.00	1.00	.00
86	891	.25	.29	.00	.13	.70	-.60
87	894	.22	.18	.07	.00	.82	.31
88	906	.08	.17	.00	.11	.54	-.75
89	912	.04	.08	.00	.04	.65	-.52
90	913	.20	.22	.05	.05	.74	.00
91	917	.04	.04	.00	.00	1.00	.00
92	924	.15	.08	.13	.04	.25	.22

Antipsychotic Use (low risk) (DRG3)

	Facility ID	facility rated DRG3	gold rated DRG3	false pos DRG3	false neg DRG3	kappa DRG3	gamma DRG3
93	934	.11	.18	.00	.00	1.00	.00
94	943	.24	.30	.00	.05	.88	-.19
95	945	.11	.11	.00	.00	1.00	.00
96	953	.15	.12	.04	.04	.67	-.11
97	954	.20	.19	.00	.00	1.00	.00
98	959	.00	.00	.00	.00	1.00	.00
99	962	.08	.32	.00	.08	.84	-.18
100	963	.00	.00	.00	.00	1.00	.00
101	968	.14	.10	.06	.00	.77	.38
102	970	.00	.10	.00	.05	.50	-.50
103	980	.00	.10	.00	.07	.50	-.50
104	986	.12	.08	.04	.00	.78	.36
105	991	.14	.10	.00	.00	1.00	.00
106	996	.14	.23	.00	.00	1.00	.00
107	1003	.06	.14	.00	.00	1.00	.00
108	1006	.11	.18	.00	.11	.61	-.56
109	1016	.14	.04	.10	.00	.46	.70
110	1019	.06	.05	.00	.00	1.00	.00
111	1025	.15	.17	.00	.04	.85	-.30
112	1026	.23	.22	.05	.14	.52	-.61
113	1029	.30	.29	.05	.00	.89	.22
114	1033	.00	.00	.00	.00	1.00	.00
115	1037	.38	.30	.14	.00	.72	.56
116	1039	.30	.35	.00	.05	.90	-.16
117	1040	.18	.13	.00	.00	1.00	.00
118	1043	.10	.24	.00	.00	1.00	.00
119	1044	.20	.18	.00	.05	.86	-.33
120	1054	.07	.04	.00	.00	1.00	.00
121	1060	.03	.03	.00	.00	1.00	.00
122	1072	.31	.33	.00	.08	.82	-.30
123	1074	.22	.40	.00	.00	1.00	.00
124	1076	.04	.00	.04	.00	.02	1.00
125	1077	.15	.18	.00	.06	.80	-.40
126	1079	.28	.21	.06	.00	.85	.26
127	1080	.16	.13	.00	.00	1.00	.00
128	1084	.05	.11	.00	.06	.64	-.53
129	1085	.06	.18	.00	.06	.78	-.27
130	1091	.27	.25	.00	.00	1.00	.00
131	1097	.11	.00	.00	.00	1.00	.00
132	1100	.15	.08	.04	.00	.81	.27
133	1102	.18	.13	.00	.00	1.00	.00
134	1106	.17	.16	.00	.00	1.00	.00
135	1115	.20	.25	.00	.00	1.00	.00
136	1118	.10	.10	.06	.06	.44	.00
137	1137	.04	.08	.00	.04	.65	-.52
138	1141	.22	.17	.00	.00	1.00	.00

Antipsychotic Use (low risk) (DRG3)

	Facility ID	facility rated DRG3	gold rated DRG3	false pos DRG3	false neg DRG3	kappa DRG3	gamma DRG3
139	1142	.24	.11	.06	.00	.83	.23
140	1144	.00	.04	.00	.05	.02	-1.00
141	1148	.32	.35	.06	.00	.88	.22
142	1149	.15	.13	.00	.04	.83	-.40
143	1152	.11	.13	.00	.00	1.00	.00
144	1153	.24	.18	.00	.05	.88	-.37
145	1158	.17	.20	.00	.05	.85	-.31
146	1160	.00	.00	.00	.00	1.00	.00
147	1162	.15	.13	.04	.00	.83	.29
148	1163	.06	.00	.07	.00	.01	1.00
149	1165	.09	.04	.05	.00	.65	.52
150	1166	.22	.25	.07	.00	.84	.37
151	1174	.32	.39	.00	.00	1.00	.00
152	1176	.30	.15	.08	.00	.79	.30
153	1178	.22	.20	.05	.00	.87	.26
154	1181	.48	.36	.10	.00	.80	.33
155	1188	.12	.15	.00	.00	1.00	.00
156	1209	.20	.24	.00	.03	.90	-.18
157	1218	.14	.17	.00	.03	.87	-.23
158	1236	.03	.03	.00	.00	1.00	.00
159	1241	.10	.17	.05	.00	.81	.63
160	1246	.23	.18	.00	.00	1.00	.00
161	1249	.05	.09	.00	.00	1.00	.00
162	1255	.13	.22	.05	.14	.40	-.26
163	1264	.05	.00	.05	.00	.02	1.00
164	1280	.04	.00	.04	.00	.02	1.00
165	1287	.00	.00	.00	.00	1.00	.00
166	1294	.07	.07	.00	.00	1.00	.00
167	1308	.18	.25	.00	.00	1.00	.00
168	1321	.13	.15	.00	.00	1.00	.00
169	1323	.14	.10	.05	.00	.77	.37
170	1325	.07	.14	.00	.04	.82	-.27
171	1329	.04	.19	.00	.05	.78	-.26
172	1330	.29	.31	.00	.08	.84	-.28
173	1337	.14	.10	.05	.05	.55	-.22
174	1345	.19	.08	.04	.00	.84	.22
175	1349	.12	.22	.00	.18	.40	-.93
176	1350	.14	.08	.04	.04	.63	-.32
177	1354	.17	.24	.05	.00	.85	.34
178	1355	.21	.17	.00	.00	1.00	.00
179	1357	.04	.07	.00	.00	1.00	.00
180	1366	.19	.21	.00	.00	1.00	.00
181	1368	.04	.07	.00	.04	.65	-.52
182	1372	.04	.07	.04	.04	.30	.57
183	1374	.29	.15	.10	.00	.72	.39
184	1377	.08	.09	.00	.00	1.00	.00

Antipsychotic Use (low risk) (DRG3)

	Facility ID	facility rated DRG3	gold rated DRG3	false pos DRG3	false neg DRG3	kappa DRG3	gamma DRG3
185	1380	.07	.10	.00	.03	.78	-.36
186	1381	.08	.19	.04	.08	.52	.19
187	1383	.38	.44	.00	.00	1.00	.00
188	1384	.15	.08	.08	.00	.63	.54
189	1385	.24	.25	.00	.04	.89	-.22
190	1386	.30	.28	.06	.06	.74	-.07
191	1391	.20	.15	.04	.08	.63	-.45
192	2009	.06	.11	.00	.00	1.00	.00
193	2013	.30	.26	.00	.00	1.00	.00
194	2039	.18	.15	.00	.00	1.00	.00
195	2087	.08	.12	.00	.00	1.00	.00
196	2088	.23	.22	.00	.00	1.00	.00
197	2124	.24	.24	.00	.00	1.00	.00
198	2231	.23	.23	.00	.00	1.00	.00
199	2236	.16	.15	.00	.00	1.00	.00
200	3075	.22	.18	.00	.00	1.00	.00
201	5002	.06	.06	.00	.00	1.00	.00
202	5004	.14	.18	.05	.09	.49	-.17
203	5019	.00	.04	.00	.00	1.00	.00
204	5020	.04	.04	.00	.00	1.00	.00
205	5021	.00	.08	.00	.00	1.00	.00
206	5025	.04	.04	.00	.00	1.00	.00
207	5030	.00	.00	.00	.00	1.00	.00
208	5041	.07	.08	.00	.04	.73	-.54
209	5048	.04	.07	.00	.04	.65	-.52

Average Gammas by State

	1	2	3	4	5	6
STATE	CA	IL	MO	OH	PA	TN
BEH01G_1	.25	-.03	-.21	-.08	-.18	-.11
BEH02G_1	.18	-.02	-.09	-.23	-.13	-.09
BEH03G_1	.08	-.06	-.25	.02	.01	-.04
SOC02G_1	-.56	-.63	-.62	-.62	-.45	-.60
CAT02G_1	.18	.10	.07	.30	.26	.14
CNT01G_1	.10	.01	-.14	.13	.08	-.02
CNT05G_1	-.05	-.14	-.05	-.13	9.50	-6.48
CNT06G_1	.11	.04	-.27	.11	.02	-9.43
INF0XG_1	-.02	-.11	-.23	.20	-.10	-.28
NUT01G_1	.09	.07	.01	-.12	.05	.05
BMI0XG_1	.06	.06	.02	-.05	-.03	-.02
PAI0XG_1	.25	.02	-.18	.08	-.19	-.06
PRU01G_1	.04	-.09	-.41	-.19	-.15	-.28
PRU02G_1	-.08	-.13	-4.80	-.28	-.24	-.32
PRU03G_1	.23	-.12	-.26	-.18	-.01	-.18
BUR0XG_1	.00	.12	-.34	-.37	.03	-.23
RES01G_1	-.21	-.33	-.19	-.05	-.33	-.27
DRG01G_1	-.05	-.02	-.13	-.03	-.03	-.07
DRG02G_1	-.10	-.06	.03	-.15	-.07	.29
DRG03G_1	.04	-.02	-.08	-.03	.03	-.04

Appendix H

Reliability and Measurement Bias Discussion and Findings

Reliability and Measurement Bias Discussion and Findings

The Effect of Elapsed Time on Reliability

We examined whether the gap in time between the facility and gold rater assessments of nursing home residents had any effect on the reliability of measurement. The average gap between the facility rater assessment and the gold rater assessment was 25 days (SD=27). We examined whether facility and gold raters in agreement on each quality measure differed from those that disagreed in terms of the length of time elapsed between their assessments. We found no significant differences for any of the 21 quality measures. In cases where there were modest trends in terms of differences in elapsed time, the direction of difference was counter-intuitive (i.e., those in agreement tended to have a larger gap between the two assessments). However, the absolute number of disagreements for those quality measures was low, suggesting the disagreement was concentrated in a few facilities in which gold rater assessments were uniformly done nearer in time to the facility assessments. Thus, all assessments of both the facility and the research nurse assessors were included in all reliability and directional bias analyses.

Inter- and Intra-State Variation in Reliability

In Table 1 we present the distribution within each state of the 21 quality measures. There is considerable variability of reliability coefficients (kappas) within and across states. Figures 1a, 1b, and 1c illustrate the variability in graphical form for several of the quality measures.

Table 1
Inter- and Intra-State Variation in Kappas

	Illinois					Tennessee					Ohio				
	N	Mean	Med	25th	75th	N	Mean	Med	25th	75th	N	Mean	Med	25th	75th
Behavior high & low risk (chsra; beh01)	37	0.70	0.78	0.47	1.00	31	0.62	0.68	0.46	0.89	15	0.49	0.51	0.14	1.00
Behavior high risk (chsra; beh02)	37	0.75	0.84	0.44	1.00	31	0.65	0.72	0.44	0.88	15	0.59	0.71	0.29	1.00
Behavior low risk (chsra; beh03)	37	0.73	1.00	0.00	1.00	31	0.66	1.00	0.00	1.00	15	0.79	1.00	1.00	1.00
Little or no activities (chsra; soc02)	37	0.19	0.12	0.00	0.31	31	0.33	0.27	0.08	0.60	15	0.18	0.11	0.00	0.30
Catheter (chsra; cat02)	37	0.71	0.87	0.51	1.00	31	0.78	0.84	0.63	1.00	15	0.47	0.41	0.15	0.71
Incontinence hi & lo risk (chsra; cnt01)	37	0.84	0.81	0.75	1.00	31	0.84	0.88	0.78	0.92	15	0.74	0.73	0.55	1.00
UTI (chsra; cnt04)	37	0.37	0.42	0.00	0.60	31	0.45	0.42	0.13	0.79	15	0.34	0.29	0.26	0.44
Incontinence high risk (chsra; cnt05)	37	0.65	1.00	0.00	1.00	31	0.69	1.00	0.00	1.00	15	0.53	1.00	0.00	1.00
Incontinence low risk (chsra; cnt06)	37	0.81	0.80	0.66	1.00	31	0.85	0.89	0.77	1.00	15	0.65	0.71	0.37	1.00
Tube feeding (ramsey; nut01)	37	0.84	1.00	0.78	1.00	31	0.92	1.00	1.00	1.00	15	0.60	0.66	0.00	1.00
Low BMI (megaqi; bmi0x)	37	0.82	0.87	0.75	1.00	31	0.87	0.91	0.77	1.00	15	0.67	0.84	0.00	1.00
Infection flare-up (megaqi; inf0x)	37	0.31	0.35	0.18	0.46	31	0.39	0.43	0.24	0.59	15	0.36	0.37	0.28	0.48
Pain poorly managed (megaqi; pai0x)	37	0.52	0.54	0.35	0.78	31	0.64	0.66	0.53	0.77	15	0.34	0.36	0.05	0.55
PU high & low risk (chsra; pru01)	37	0.54	0.52	0.35	0.78	31	0.60	0.63	0.44	0.79	15	0.40	0.45	0.20	0.55
PU high risk (chsra; pru02)	37	0.58	0.69	0.35	1.00	31	0.59	0.60	0.41	0.78	15	0.48	0.53	0.00	1.00
PU low risk (chsra; pru03)	37	0.77	1.00	0.53	1.00	31	0.85	1.00	0.72	1.00	15	0.84	1.00	0.77	1.00
Burns abrasions bruises (megaqi; bur0x)	37	0.72	1.00	0.45	1.00	31	0.50	0.51	-0.05	1.00	15	0.64	1.00	0.03	1.00
Restraints (chsra; res01)	37	0.51	0.59	0.00	1.00	31	0.57	0.65	0.35	1.00	15	0.63	0.78	0.14	1.00
Antipsych hi & low risk (chsra; drg01)	37	0.79	0.87	0.72	1.00	31	0.81	0.81	0.71	0.92	15	0.80	0.78	0.65	0.90
Antipsychotic high risk (chsra; drg02)	37	0.58	1.00	0.00	1.00	31	0.61	1.00	0.00	1.00	15	0.61	1.00	0.00	1.00
Antipsychotic low risk (chsra; drg03)	37	0.82	1.00	0.70	1.00	31	0.79	0.83	0.63	1.00	15	0.78	0.87	0.64	1.00

Table 1
Inter- and Intra-State Variation in Kappas (continued)

	Missouri					Pennsylvania					California				
	N	Mean	Med	25th	75th	N	Mean	Med	25th	75th	N	Mean	Med	25th	75th
Behavior high & low risk (chsra; beh01)	19	0.50	0.53	0.42	0.60	30	0.60	0.62	0.52	0.74	18	0.58	0.62	0.44	0.78
Behavior high risk (chsra; beh02)	19	0.53	0.58	0.38	0.72	30	0.57	0.58	0.45	0.75	18	0.63	0.65	0.46	1.00
Behavior low risk (chsra; beh03)	19	0.63	1.00	0.00	1.00	30	0.86	1.00	1.00	1.00	18	0.83	1.00	1.00	1.00
Little or no activities (chsra; soc02)	19	0.08	0.08	0.00	0.10	30	0.23	0.15	0.00	0.36	18	0.15	0.02	0.00	0.36
Catheter (chsra; cat02)	19	0.84	1.00	0.68	1.00	30	0.56	0.54	0.33	0.91	18	0.63	0.67	0.44	1.00
Incontinence hi & lo risk (chsra; cnt01)	19	0.74	0.75	0.64	0.90	30	0.73	0.74	0.58	0.88	18	0.84	0.90	0.74	1.00
UTI (chsra; cnt04)	19	0.44	0.46	0.21	0.76	30	0.46	0.51	0.06	0.71	18	0.47	0.51	0.34	0.65
Incontinence high risk (chsra; cnt05)	19	0.82	1.00	1.00	1.00	30	0.85	1.00	1.00	1.00	18	0.94	1.00	1.00	1.00
Incontinence low risk (chsra; cnt06)	19	0.70	0.71	0.54	0.85	30	0.68	0.69	0.55	0.89	18	0.78	0.86	0.61	1.00
Tube feeding (ramsey; nut01)	19	0.91	1.00	0.84	1.00	30	0.81	1.00	0.80	1.00	18	0.74	0.95	0.65	1.00
Low BMI (megaqi; bmi0x)	19	0.85	1.00	0.66	1.00	30	0.88	1.00	0.88	1.00	18	0.83	1.00	0.74	1.00
Infection flare-up (megaqi; inf0x)	19	0.35	0.38	0.22	0.50	30	0.45	0.45	0.35	0.59	18	0.37	0.40	0.11	0.61
Pain poorly managed (megaqi; pai0x)	19	0.28	0.29	0.00	0.51	30	0.48	0.53	0.26	0.71	18	0.62	0.64	0.41	0.95
PU high & low risk (chsra; pru01)	19	0.42	0.38	0.11	0.65	30	0.53	0.51	0.36	0.75	18	0.67	0.65	0.56	0.84
PU high risk (chsra; pru02)	19	0.50	0.40	0.15	1.00	30	0.57	0.52	0.41	0.85	18	0.74	0.79	0.57	1.00
PU low risk (chsra; pru03)	19	0.76	1.00	0.31	1.00	30	0.85	1.00	0.68	1.00	18	0.78	1.00	0.47	1.00
Burns abrasions bruises (megaqi; bur0x)	19	0.43	0.35	0.09	0.65	30	0.54	0.68	-0.04	1.00	18	0.49	0.41	0.16	1.00
Restraints (chsra; res01)	19	0.47	0.47	0.15	0.66	30	0.30	0.25	0.00	0.46	18	0.68	0.81	0.55	0.93
Antipsych hi & low risk (chsra; drg01)	19	0.71	0.70	0.62	0.91	30	0.82	0.85	0.71	1.00	18	0.71	0.74	0.66	0.88
Antipsychotic high risk (chsra; drg02)	19	0.77	1.00	0.50	1.00	30	0.75	1.00	0.48	1.00	18	0.73	1.00	0.38	1.00
Antipsychotic low risk (chsra; drg03)	19	0.67	0.76	0.47	1.00	30	0.77	0.85	0.65	1.00	18	0.70	0.76	0.46	1.00

Figure 1a
Distribution of KAPPAs for PRESSURE ULCER #1

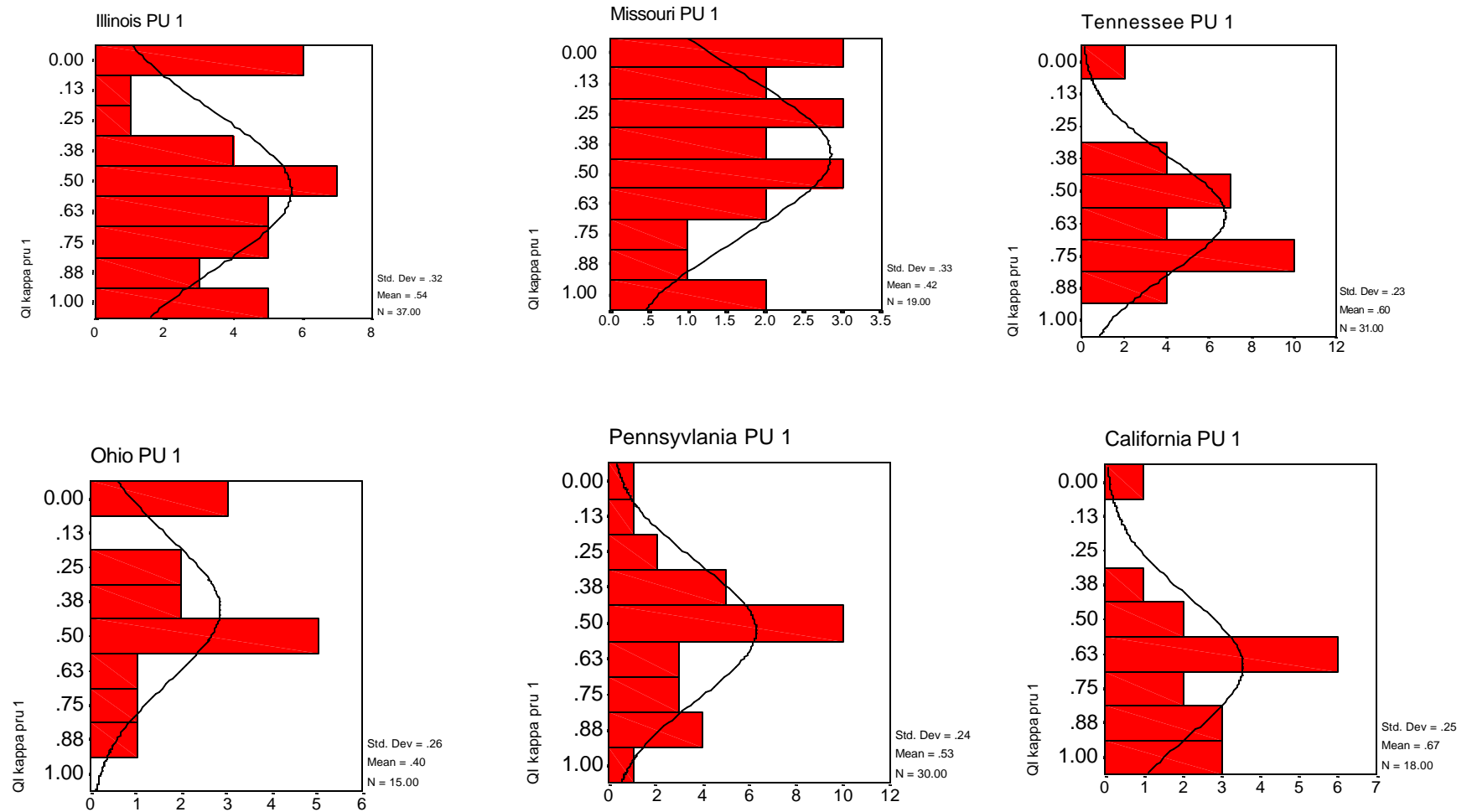


Figure 1b
Distribution of KAPPAs for DRUG #1

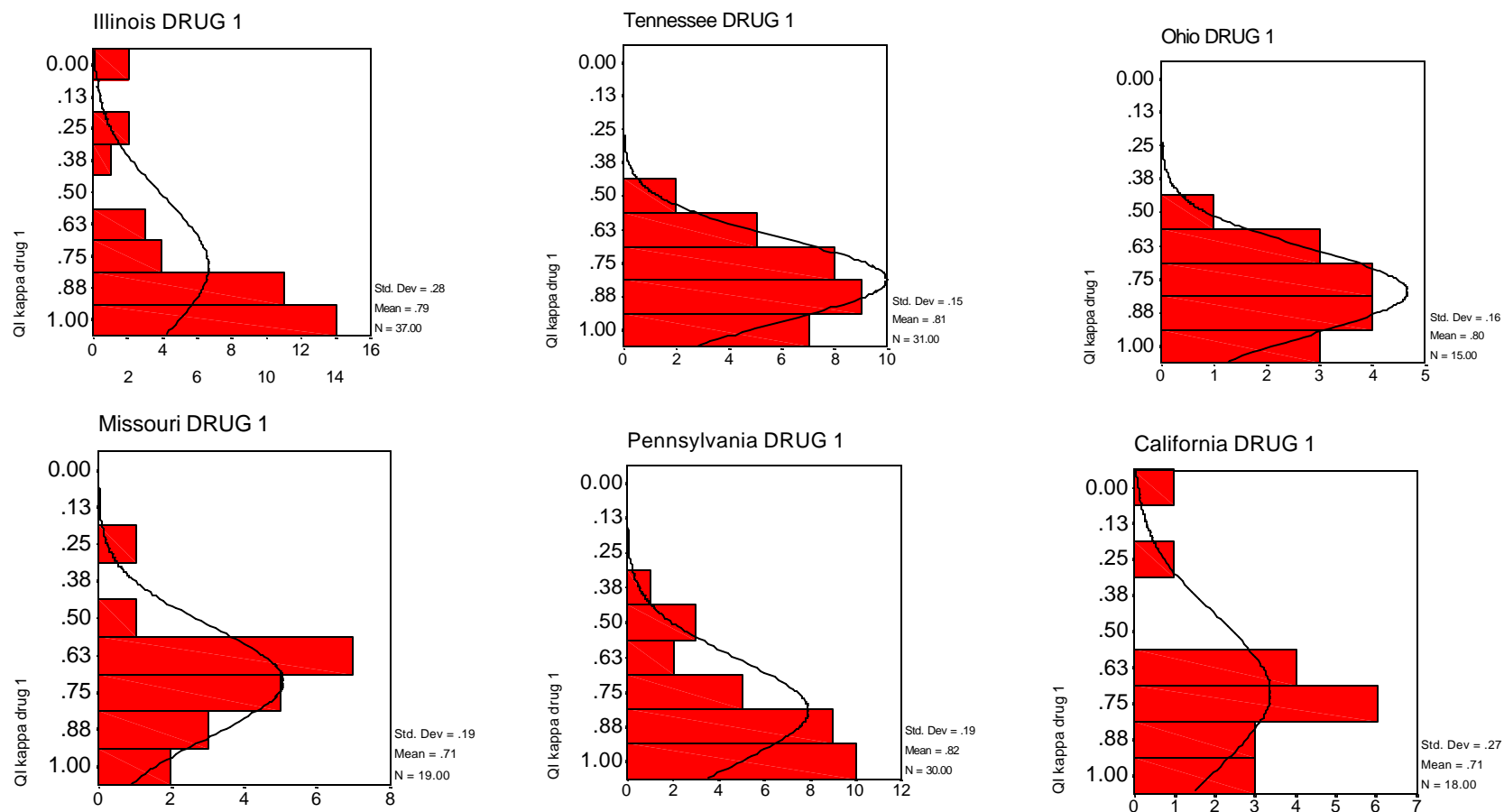
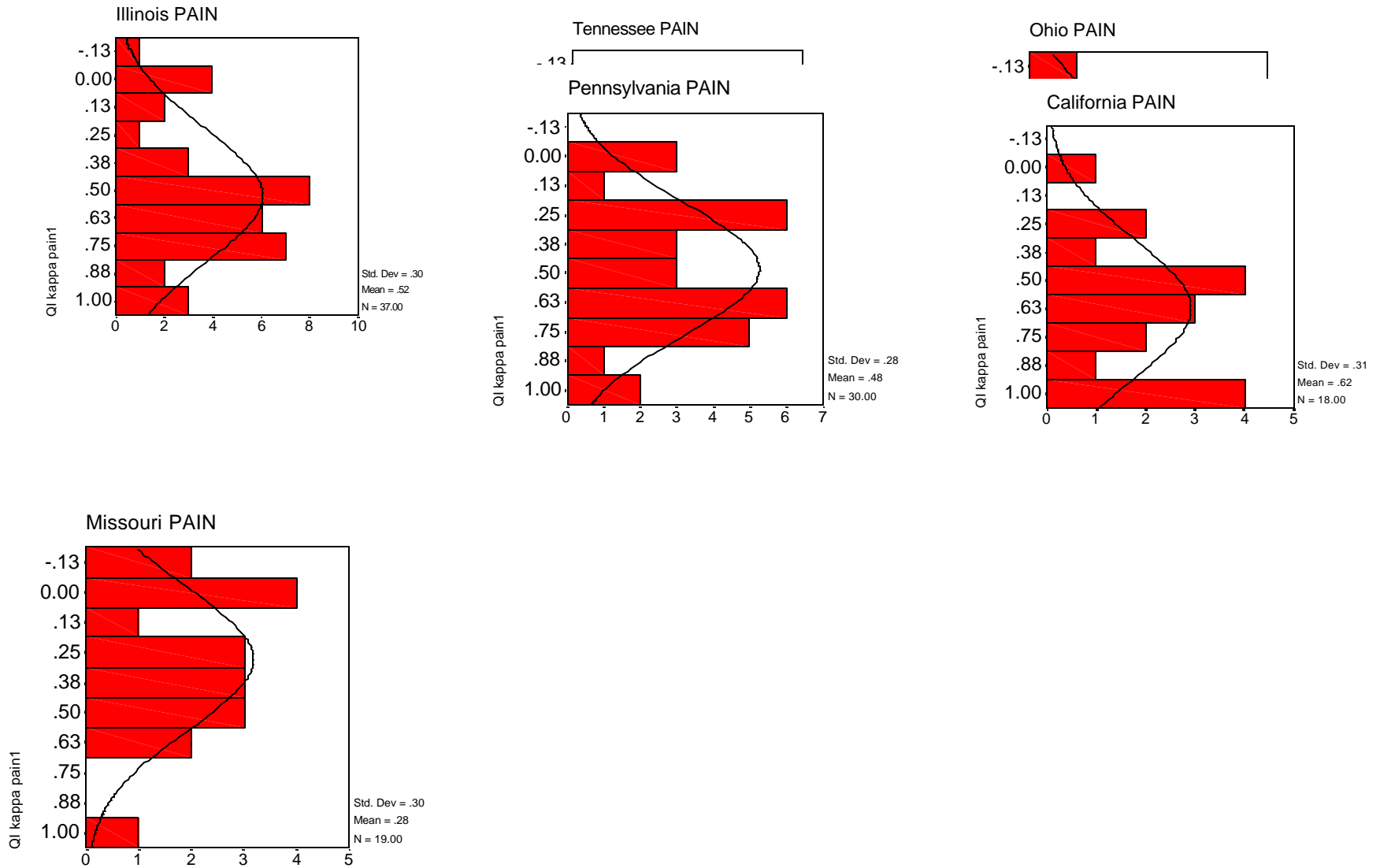


Figure 1c
Distribution of KAPPAs for PAIN



Case Summaries

As is apparent, the level of detailed information that is relevant in understanding how and why some QIs end up with a poor reliability coefficient and others have an acceptable measure is considerable. We've seen that there is inter-state variation and within state variation on selected QIs. Since the Kappa statistic is very sensitive to the prevalence of the condition under study (if the event is rare, any disagreement is weighted heavily because the expected is for the condition to be absent), and that may be relevant to both the facility as well as the number of dual assessments done in the facility, we created a number of "case summaries" to provide the reader with the complete detailed information on all facilities for a selected QI. This entailed examining the kappa of the underlying items used to calculate the QI as well as the resulting QI itself.

The table below lists a detailed summary of the pain-related items analyzed as part of the reliability analysis. Each row represents an individual facility. The average agreement between the gold and facility-raters are presented for each item of the pain score (pain frequency and pain intensity). The kappas for each item are then presented, with (.) indicating insufficient information present to compute a kappa for the item. The actual prevalence of pain is then presented (as measured by the gold and facility-raters), followed by the average facility-level percent agreement on the pain QI. The kappa for the pain QI is shown in the final column.

Table 2
Detailed Case Summaries

Facility Number	Facility level agree J2a Pain freq.	Facility level agree J2b Pain Intensity	Kappa J2a pain freq.	Kappa J2b pain intensity	Facility-scored Pain QI	Gold-standard Pain QI	Average facility-level % agree on Pain QI	Kappa Pain QI
1	0.88	0.85	0.69	0.63	0.08	0.08	1.00	1.00
2	0.90	0.90	.	.	0.03	0.03	0.93	-0.04
3	0.89	0.89	.	0.64	0.04	0.04	1.00	1.00
4	0.97	0.87	0.95	.	0.50	0.47	0.97	0.93
5	0.75	0.75	0.55	.	0.21	0.08	0.88	0.51
6	0.61	0.54	0.41	0.33	0.48	0.14	0.67	0.32
7	0.74	0.85	0.35	.	0.07	0.19	0.81	0.20
8	0.79	0.83	0.37	.	0.13	0.08	0.96	0.78
9	0.79	0.62	0.68	.	0.24	0.28	0.83	0.55
10	0.57	0.50	0.30	0.25	0.21	0.07	0.86	0.44
11	0.85	0.73	0.79	.	0.28	0.15	0.88	0.66
12	0.68	0.61	0.35	0.20	0.32	0.07	0.75	0.28
13	0.83	0.70	0.73	0.55	0.53	0.37	0.83	0.67
14	0.71	0.67	0.53	0.48	0.13	0.13	1.00	1.00
15	0.70	0.63	0.43	0.30	0.07	0.19	0.89	0.52
16	0.68	0.64	0.34	.	0.16	0.08	0.92	0.63
17	0.89	0.89	.	.	0.11	0.07	0.96	0.78
18	0.95	0.90	0.64	.	0.00	0.00	1.00	1.00
19	0.83	0.97	0.67	0.93	0.23	0.23	0.87	0.63
20	0.80	0.83	0.54	0.63	0.03	0.00	0.97	0.00
21	0.68	0.68	.	0.34	0.00	0.11	0.89	0.00

Table 2
Detailed Case Summaries

Facility Number	Facility level agree J2a Pain freq.	Facility level agree J2b Pain Intensity	Kappa J2a pain freq.	Kappa J2b pain intensity	Facility-scored Pain QI	Gold-standard Pain QI	Average facility-level % agree on Pain QI	Kappa Pain QI
22	0.77	0.73	0.59	0.54	0.23	0.07	0.77	0.13
23	0.90	0.83	0.83	.	0.07	0.13	0.93	0.63
24	0.62	0.59	0.53	.	0.12	0.17	0.92	0.71
25	0.71	0.71	0.51	0.48	0.07	0.11	0.96	0.78
26	0.67	0.70	0.50	0.53	0.60	0.30	0.70	0.44
27	1.00	0.97	1.00	0.93	0.13	0.10	0.97	0.84
28	0.70	0.73	0.40	.	0.03	0.10	0.93	0.47
29	0.90	0.83	0.77	.	0.10	0.07	0.97	0.78
30	0.86	0.86	0.64	0.73	0.61	0.50	0.89	0.79
31	0.80	0.70	0.55	.	0.10	0.13	0.90	0.52
32	0.73	0.67	0.60	0.55	0.47	0.37	0.83	0.66
33	0.73	0.73	0.55	0.53	0.20	0.27	0.80	0.44
34	0.79	0.86	0.53	0.68	0.03	0.10	0.93	0.47
35	0.83	0.83	0.51	0.52	0.10	0.07	0.97	0.78
36	0.77	0.73	0.43	.	0.14	0.13	0.86	0.42
37	0.90	0.90	-0.04	-0.04	0.04	0.00	0.96	0.00
38	0.73	0.73	0.46	0.45	0.07	0.13	0.93	0.63
39	0.73	0.47	0.60	0.42	0.30	0.33	0.70	0.31
40	0.62	0.59	0.43	0.42	0.24	0.31	0.86	0.66
41	0.46	0.25	0.24	0.01	0.19	0.29	0.65	0.09
42	1.00	0.96	1.00	0.94	0.07	0.07	1.00	1.00
43	0.89	0.82	0.60	.	0.00	0.00	1.00	1.00
44	0.59	0.36	0.46	.	0.33	0.26	0.81	0.54
45	0.83	0.80	.	0.53	0.00	0.03	0.97	0.00
46	0.79	0.69	0.60	.	0.24	0.17	0.93	0.79
47	0.52	0.48	0.33	0.33	0.11	0.17	0.93	0.63
48	0.83	0.76	0.64	0.51	0.07	0.07	1.00	1.00
49	0.83	0.87	0.72	0.79	0.33	0.33	0.93	0.85
50	0.67	0.70	0.29	0.36	0.07	0.07	0.87	-0.07
51	0.60	0.60	0.37	0.42	0.43	0.40	0.77	0.52
52	0.45	0.45	0.13	0.21	0.50	0.62	0.68	0.36
53	0.57	0.63	0.36	0.48	0.30	0.40	0.70	0.35
54	0.90	0.87	0.85	0.77	0.50	0.40	0.90	0.80
55	0.55	0.59	0.30	0.34	0.28	0.21	0.79	0.44
56	0.62	0.62	.	.	0.04	0.08	0.92	0.00
57	0.75	0.64	0.34	.	0.04	0.04	1.00	1.00
58	0.80	0.80	0.51	.	0.04	0.04	0.92	-0.04
59	0.61	0.61	0.40	.	0.11	0.23	0.88	0.61
60	0.43	0.43	.	.	0.04	0.14	0.82	-0.06
61	0.67	0.53	0.43	0.14	0.11	0.07	0.82	-0.09
62	0.73	0.64	0.42	.	0.10	0.07	0.89	0.34
63	0.66	0.59	0.41	.	0.11	0.14	0.89	0.51

Table 2
Detailed Case Summaries

Facility Number	Facility level agree J2a Pain freq.	Facility level agree J2b Pain Intensity	Kappa J2a pain freq.	Kappa J2b pain intensity	Facility-scored Pain QI	Gold-standard Pain QI	Average facility-level % agree on Pain QI	Kappa Pain QI
64	0.53	0.43	0.21	.	0.14	0.13	0.89	0.51
65	0.64	0.57	0.42	.	0.22	0.07	0.85	0.44
66	0.62	0.59	0.37	0.31	0.21	0.14	0.79	0.28
67	0.62	0.62	0.45	0.46	0.10	0.25	0.79	0.29
68	0.69	0.59	0.32	.	0.07	0.14	0.93	0.63
69	0.72	0.72	0.18	.	0.00	0.14	0.86	0.00
70	0.63	0.56	.	.	0.15	0.19	0.81	0.33
71	0.63	0.67	0.26	0.32	0.07	0.17	0.76	-0.11
72	0.63	0.53	0.38	.	0.17	0.13	0.77	0.09
73	0.34	0.28	0.03	-0.04	0.33	0.31	0.67	0.23
74	0.63	0.53	0.47	.	0.21	0.21	0.79	0.36
75	0.54	0.50	0.34	.	0.38	0.11	0.73	0.35
76	0.52	0.45	0.33	0.24	0.55	0.17	0.62	0.29
77	0.39	0.39	0.03	.	0.08	0.00	0.92	0.00
78	0.69	0.65	0.57	0.52	0.04	0.08	0.96	0.65
79	0.65	0.61	0.43	0.32	0.52	0.39	0.52	0.05
80	0.62	0.50	.	0.17	0.73	0.52	0.44	-0.14
81	0.90	0.79	0.85	.	0.21	0.24	0.90	0.70
82	0.61	0.54	0.42	0.31	0.14	0.29	0.79	0.38
83	0.36	0.46	-0.03	0.16	0.11	0.25	0.71	0.06
84	0.64	0.61	0.46	.	0.32	0.21	0.82	0.55
85	0.70	0.60	0.52	0.42	0.17	0.27	0.83	0.51
86	0.59	0.59	0.41	.	0.19	0.16	0.71	0.05
87	0.57	0.50	0.31	0.35	0.28	0.41	0.79	0.52
88	0.77	0.70	0.73	0.65	0.32	0.30	0.93	0.84
89	0.67	0.47	0.49	0.28	0.41	0.33	0.86	0.71
90	0.67	0.63	0.17	0.12	0.07	0.10	0.90	0.35
91	0.71	0.68	0.36	.	0.14	0.29	0.86	0.59
92	0.79	0.82	.	0.23	0.00	0.07	0.93	0.00
93	0.74	0.70	.	.	0.00	0.07	0.92	0.00
94	0.80	0.83	0.64	.	0.14	0.13	0.93	0.71
95	0.76	0.72	0.59	0.53	0.18	0.24	0.93	0.79
96	0.83	0.71	.	.	0.00	0.04	0.96	0.00
97	0.64	0.64	0.36	.	0.15	0.07	0.93	0.63
98	0.70	0.77	0.42	0.56	0.07	0.17	0.90	0.53
99	0.63	0.67	0.40	0.46	0.13	0.10	0.83	0.19
100	0.63	0.63	0.37	.	0.07	0.17	0.90	0.53
101	0.72	0.62	0.50	0.31	0.11	0.07	0.96	0.78
102	0.62	0.52	0.36	0.14	0.28	0.07	0.72	0.10
103	0.77	0.67	0.61	0.43	0.13	0.23	0.77	0.23
104	0.77	0.65	0.54	0.34	0.08	0.15	0.85	0.26
105	0.62	0.54	0.43	.	0.04	0.23	0.83	0.28

Table 2
Detailed Case Summaries

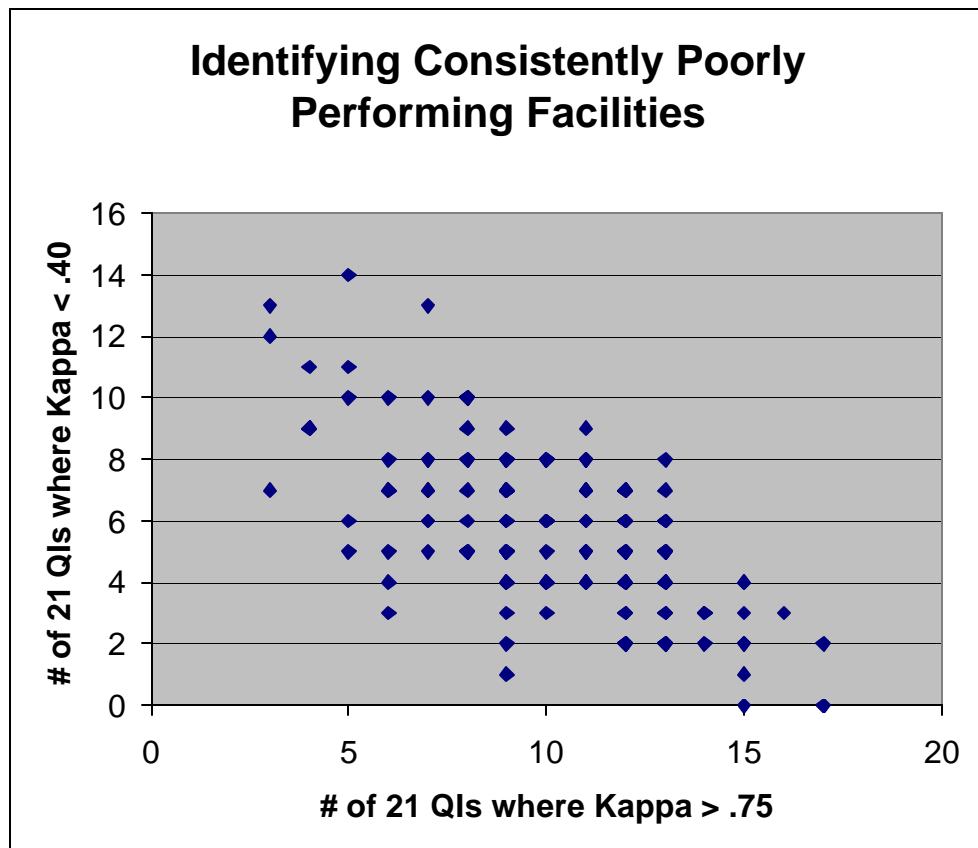
Facility Number	Facility level agree J2a Pain freq.	Facility level agree J2b Pain Intensity	Kappa J2a pain freq.	Kappa J2b pain intensity	Facility-scored Pain QI	Gold-standard Pain QI	Average facility-level % agree on Pain QI	Kappa Pain QI
106	0.52	0.59	0.23	0.23	0.07	0.30	0.78	0.32
107	0.83	0.83	0.59	.	0.10	0.10	0.93	0.63
108	0.70	0.70	0.58	0.55	0.24	0.47	0.76	0.51
109	0.67	0.67	0.45	.	0.13	0.27	0.80	0.39
110	0.79	0.69	0.69	.	0.11	0.17	0.93	0.71
111	0.90	0.87	0.81	0.80	0.07	0.03	0.97	0.65
112	0.80	0.80	0.61	.	0.27	0.20	0.93	0.81
113	0.57	0.73	0.25	.	0.77	0.43	0.60	0.25
114	0.73	0.73	0.43	0.43	0.07	0.13	0.93	0.63
115	0.62	0.59	0.27	.	0.07	0.14	0.86	0.27
116	0.79	0.79	0.19	.	0.03	0.03	1.00	1.00
117	0.90	0.80	0.70	.	0.03	0.03	1.00	1.00
118	0.87	0.80	0.77	0.68	0.13	0.17	0.90	0.61
119	0.73	0.73	0.59	0.60	0.27	0.30	0.90	0.75
120	0.82	0.79	0.72	0.70	0.32	0.36	0.89	0.76
121	0.67	0.77	0.48	0.60	0.27	0.30	0.77	0.43
122	0.70	0.70	0.54	0.54	0.30	0.27	0.83	0.59
123	0.61	0.52	0.37	.	0.20	0.20	0.80	0.38
124	0.80	0.73	0.31	.	0.07	0.07	0.93	0.46
125	0.67	0.67	.	.	0.10	0.20	0.90	0.62
126	0.60	0.67	0.31	0.39	0.23	0.10	0.73	0.07
127	0.73	0.67	0.57	.	0.20	0.13	0.93	0.76
128	0.57	0.53	0.20	.	0.07	0.17	0.90	0.53
129	0.67	0.53	0.38	.	0.13	0.23	0.83	0.45
130	0.69	0.76	0.54	.	0.54	0.38	0.86	0.72
131	0.66	0.62	0.36	0.27	0.10	0.14	0.90	0.51
132	0.86	0.86	0.72	0.05	0.69	0.59	0.83	0.63
133	0.90	0.87	0.85	0.79	0.40	0.40	0.93	0.86
134	0.97	0.90	0.94	0.83	0.03	0.07	0.97	0.65
135	0.80	0.80	0.69	0.69	0.33	0.43	0.90	0.79
136	0.83	0.90	0.72	0.83	0.23	0.17	0.87	0.59
137	0.67	0.73	0.37	.	0.10	0.23	0.80	0.30
138	0.68	0.57	0.50	0.39	0.36	0.50	0.79	0.57
139	0.80	0.73	0.68	0.57	0.13	0.13	0.93	0.71
140	0.71	0.75	0.61	0.67	0.19	0.21	0.89	0.66
141	0.67	0.67	0.49	0.51	0.30	0.23	0.87	0.66
142	0.83	0.87	0.74	.	0.33	0.30	0.90	0.77
143	0.75	0.86	0.64	0.78	0.39	0.25	0.86	0.68
144	0.77	0.77	0.60	.	0.20	0.20	1.00	1.00
145	0.83	0.79	0.74	0.70	0.21	0.28	0.93	0.81
146	0.79	0.76	0.52	.	0.14	0.10	0.97	0.84
147	0.71	0.71	0.48	0.48	0.07	0.11	0.96	0.78

Table 2
Detailed Case Summaries

Facility Number	Facility level agree J2a Pain freq.	Facility level agree J2b Pain Intensity	Kappa J2a pain freq.	Kappa J2b pain intensity	Facility-scored Pain QI	Gold-standard Pain QI	Average facility-level % agree on Pain QI	Kappa Pain QI
148	0.73	0.80	0.57	0.74	0.21	0.20	0.86	0.58
149	0.83	0.83	0.74	0.74	0.21	0.21	0.93	0.79
150	0.77	0.60	0.63	0.39	0.17	0.27	0.77	0.32

Careful scrutiny of the data suggests that by and large the percent agreement for most facilities on the actual pain QI is quite high, although the kappa statistic varies dramatically, largely due to the prevalence of the pain QI. When the prevalence is reasonably high, the kappa tends to be better. Furthermore, there is a fairly close correspondence between the weighted kappa statistic for the MDS item on the frequency of pain and the kappa for the overall QI.

Figure 2
Scatterplot of Facility Counts of Kappa Performance



Facilities were classified in terms of the absolute count of the 21 QIs for which they had a kappa exceeding .75 versus the absolute number of QIs for which the kappa fell below .40. This basically contrasts the likelihood that a facility has QIs with unacceptable kappas and the likelihood that they have exceptionally good reliability on some QIs. These two values were then plotted against each other to visually identify facilities that had relatively few HIGH kappa values while having an exceptionally large number of LOW kappas. As can be seen, there are 5 facilities with greater than 10 QIs with kappas under .4 and 5 or fewer QIs on which they had excellent kappa levels, exceeding .75. There was an additional facility with 13 QIs with poor kappa and only 7 QIs with excellent reliability. Overall, however, the correlation between these two measures was good – the more excellent QI kappas the fewer the poor kappas with the average facility having nearly 10 kappas in the excellent range and around 6 in the “poor” range.

Assessing Ascertainment or the Direction of Measurement Bias

A gamma statistic was computed to characterize the direction of agreement between the gold and facility-raters in each facility. High positive values are indicative of the facility-raters in the nursing home reporting more instances of a given problem, whereas large negative values are indicative of facility-raters underreporting problems relative to the gold-raters.

Five of the six facilities in Figure 2 with at least 11 or more QIs with kappas below .40 had at least five extreme gammas ($>.6$ or $<-.6$), and in nearly every case negative bias was more prevalent.

Figure 3 is a histogram of the gamma statistic for all facilities across all the QIs. Gamma was classified into one of five categories, ranging from large negative bias to large positive bias. For the majority of cases, gamma was estimated between -0.2 and 0.2 -- indicating little to no measurement bias. However, there were a substantial number of instances with moderate to large measurement bias; there were more cases of negative bias than positive bias, meaning facilities were more likely to under-report an indicator than over-report it.

Figure 3

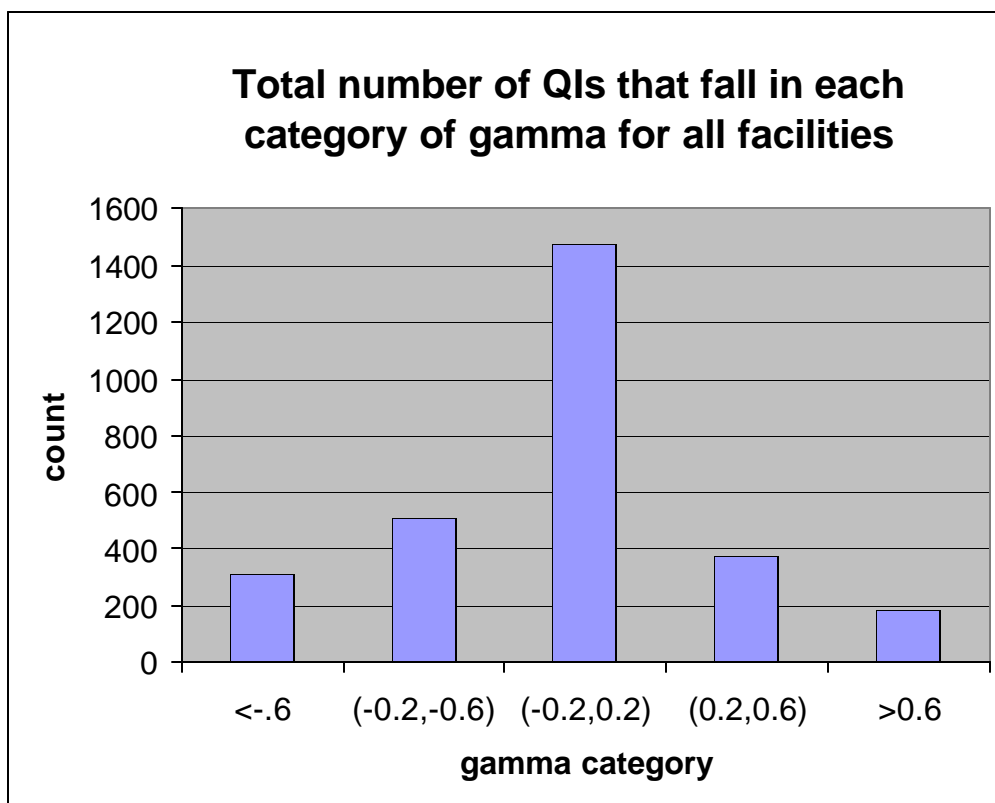


Table 3 displays the distribution of extreme values of gamma by facility. The rows are counts of the number of QIs in a facility that had a gamma greater than 0.6 (large positive bias). The columns are counts of the number of QIs in each facility that had gamma less than -0.6 (large

negative bias). From the margins it is clear that facilities were more likely to under-report indicators. For example, 52 facilities did not have a gamma greater than 0.6 for any of the indicators, whereas only 28 did not have any gamma less than -0.6. On the other hand, 38 of 150 facilities had none or only one QI that had an extreme Gamma score and an additional 36 facilities had two or fewer extreme indicators, reflecting a common perspective between the two assessors on the vast majority of QIs in the plurality of facilities.

Table 3
Extreme Values of Gamma

		Number of 21 QIs for which facility has gamma less than -0.6								
Number of 21 QIs for which facility has gamma greater than 0.6		0	1	2	3	4	5	6	7	Total
	0	7	12	9	11	4	7	2	0	52
	1	7	12	11	10	6	3	0	0	49
	2	6	8	2	5	1	0	1	1	24
	3	5	5	1	2	3	1	0	0	17
	4	2	0	0	1	0	0	0	0	3
	5	0	2	0	0	0	0	0	0	2
	6	1	1	0	1	0	0	0	0	3
Total		28	40	23	30	14	11	3	1	150

Table 4 reports the median and inter-quartile range (IQR) for each indicator, stratified by state. The majority of the medians are zero, indicating that the ‘typical’ facility in each state does not tend to systematically under- or over- report the QIs. There are some exceptions, though. For example, facilities in every state severely under-report social activities; facilities in CA tend to over-report pain whereas facilities in PA tend to under-report pain.

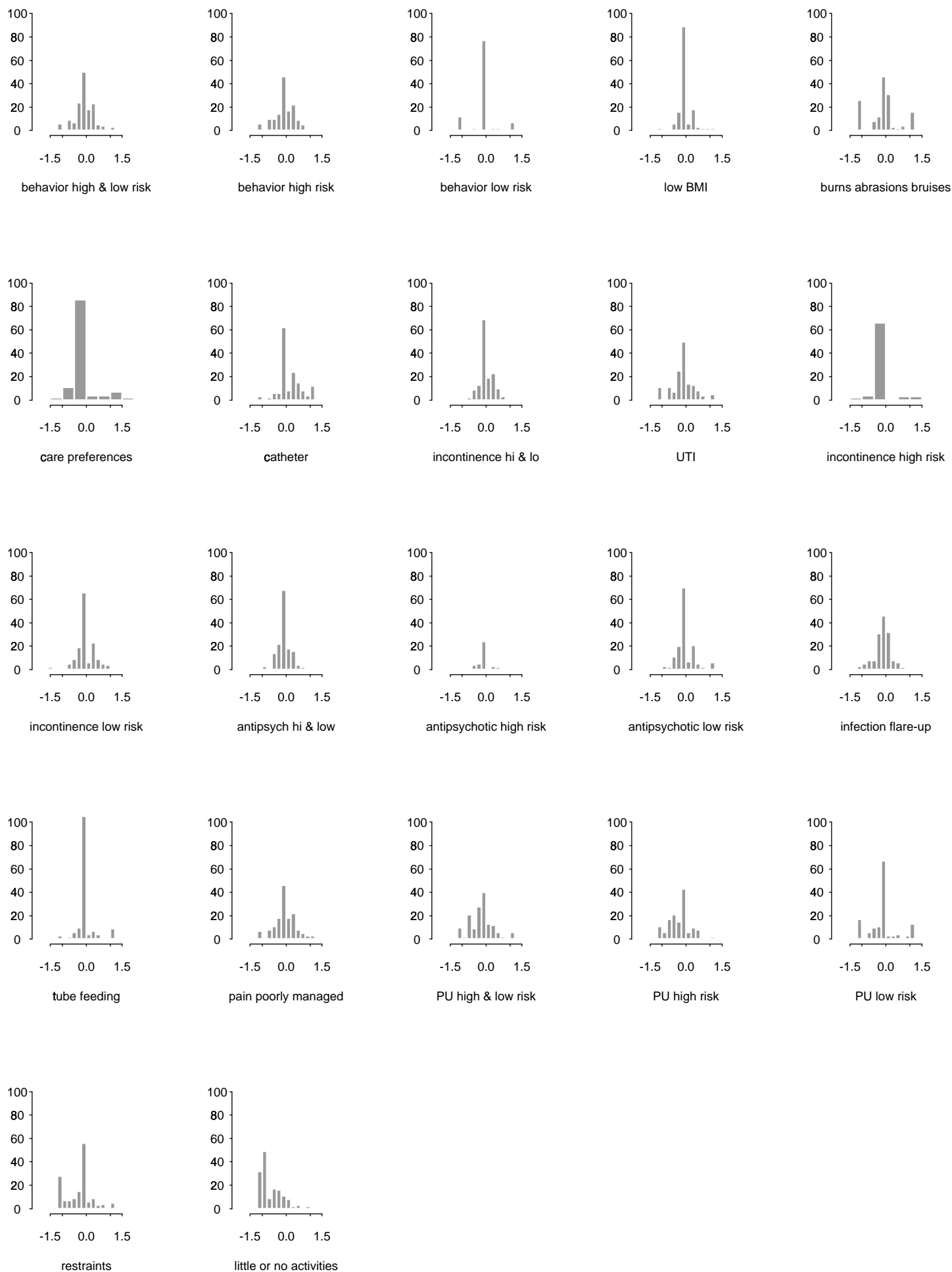
Table 4
Median and Inter-quartile Range (IQR) for Each Indicator

	Gamma statistics by state					
	Median (IQR)					
	CA	IL	MO	OH	PA	TN
behavior hi & lo	0.37 (0.59)	0.00 (0.39)	-0.11 (0.32)	0.00 (0.42)	-0.08 (0.56)	0.00 (0.41)
behavior high	0.37 (0.53)	0.00 (0.38)	-0.04 (0.38)	0.00 (0.53)	0.00 (0.59)	-0.05 (0.51)
behavior low	0.00 (0.00)	0.00 (0.00)	0.00 (1.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
low BMI	0.00 (0.00)	0.00 (0.23)	0.00 (0.00)	0.00 (0.37)	0.00 (0.00)	0.00 (0.19)
burns abrasions	-0.02 (0.27)	0.00 (0.69)	-0.24 (0.56)	-0.16 (1.00)	0.00 (0.28)	0.00 (1.13)
catheter	0.00 (0.63)	0.00 (0.24)	0.00 (0.00)	0.32 (0.78)	0.22 (0.70)	0.00 (0.36)
incont high & low	0.00 (0.32)	0.00 (0.18)	-0.13 (0.27)	0.00 (0.34)	0.14 (0.39)	0.00 (0.23)
UTI	0.15 (0.45)	0.00 (0.49)	-0.16 (0.30)	-0.23 (0.33)	-0.06 (0.63)	-0.17 (0.44)
incontinence hi	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
incontinence low	0.00 (0.31)	0.00 (0.17)	-0.22 (0.43)	0.00 (0.33)	0.00 (0.69)	0.00 (0.20)
antipsych hi & lo	0.00 (0.52)	0.00 (0.20)	0.00 (0.51)	0.00 (0.23)	0.00 (0.18)	-0.04 (0.27)
antipsych high	-0.10 (0.83)	0.00 (0.00)	0.00 (0.00)	0.02 (0.79)	0.00 (0.50)	0.00 (0.00)
antipsych low	0.00 (0.29)	0.00 (0.00)	0.00 (0.50)	0.00 (0.55)	0.00 (0.26)	0.00 (0.22)

Table 4
Median and Inter-quartile Range (IQR) for Each Indicator

	Gamma statistics by state					
	Median (IQR)					
	CA	IL	MO	OH	PA	TN
infection flare-up	0.00 (0.22)	-0.02 (0.31)	-0.18 (0.17)	-0.10 (0.36)	-0.03 (0.42)	-0.18 (0.44)
tube feeding	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.69)	0.00 (0.26)	0.00 (0.00)
pain poorly man.	0.24 (0.54)	0.00 (0.45)	0.00 (0.50)	0.00 (0.65)	-0.20 (0.71)	0.00 (0.45)
PU high & low	0.00 (0.60)	-0.08 (0.40)	-0.24 (0.65)	-0.62 (0.67)	-0.08 (0.44)	-0.33 (0.42)
PU high risk	0.00 (0.42)	0.00 (0.83)	-0.48 (0.73)	-0.59 (1.00)	-0.02 (0.30)	-0.41 (0.68)
PU low risk	0.00 (0.87)	0.00 (0.36)	0.00 (1.00)	0.00 (0.67)	0.00 (1.36)	0.00 (0.55)
restraints	0.00 (0.32)	0.00 (1.00)	0.00 (0.69)	0.00 (0.52)	-0.35 (0.86)	-0.17 (0.46)
little, no activities	-0.92 (0.74)	-0.83 (0.55)	-0.95 (0.53)	-0.84 (0.67)	-0.47 (0.94)	-0.70 (0.54)

Figure 4 presents histograms of gamma for each indicator. In the majority of cases the distribution is centered around 0 with relatively symmetric tails. There are exceptions. For example, the pressure ulcer and restraint QIs tend to have a number of facilities with a large, negative estimated gamma (large negative bias).



Appendix I

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis		Standardized	
Level	QI & Validation Scale	Regression Coefficient	p-value
	ADL decline (CHSRA; ADL01)		
1	Monitor Change in Function/Cognitive Care VAL2+		
1	Incontinence Management VAL32+		
1	Cont Ed Fx Decline VAL34+		
1	Focus on Incontinence VAL36+		
1	CDCPI-Functional VAL37+	-0.271	0.001 †
1	CDCPI3-Cross Domain Quality Response VAL42+		
1	Observation of Movement Scale VAL72+		
1	OT+OT Asst FTE/100 Beds VAL85+		
1	Total involvement in Care Planning VAL147+		
1	ADL Decline Change (based on VAL46) VAL154+		
2	General Management Instability VAL10-	0.144	0.091 †
2	Facility Management Contract Change VAL11-		
2	Effort at Mobility Enhancement VAL35+		
2	Ownership Change VAL49-		
2	CMI-Adjusted (RN+LPN FTE)/BED VAL52+		
2	PT Asst FTE/100 Beds VAL83+		
2	Level of OT PT Staffing VAL87+	0.166	0.065
2	ADLdec Improvement Scale VAL109+	-0.169	0.046 †
2	PT FTE/100 Beds VAL146+		

† responsive element

‡ preventive element

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis Level	QI & Validation Scale	Standardized Regression Coefficient	p-value
	ADL decline following improvement (MEGAQI; ADL02)		
1	Monitor Change in Function/Cognitive Care VAL2+		
1	Incontinence Management VAL32+	-0.158	0.064 ‡
1	Cont Ed Fx Decline VAL34+		
1	Focus on Incontinence VAL36+	-0.209	0.014 ‡
1	CDCPI-Functional VAL37+	-0.294	0.000 ‡
1	CDCPI3-Cross Domain Quality Response VAL42+	-0.191	0.026 ‡
1	Observation of Movement Scale VAL72+	-0.250	0.003 ‡
1	OT+OT Aasst FTE/100 Beds VAL85+		
1	Total involvement in Care Planning VAL147+		
1	ADL Decline Change (based on VAL46) VAL154+		
2	Level of OT PT Staffing VAL87+		
2	ADLdec Improvement Scale VAL109+		
2	PT FTE/100 Beds VAL146+		
	ADL imp. in residents with capacity (MEGAQI; ADL03)		
1	CDCPI-Functional VAL37+		
1	CDCPI3-Cross Domain Quality Response VAL42+		
1	Observation of Movement Scale VAL72+		
1	OT+OT Aasst FTE/100 Beds VAL85+		
1	Total involvement in Care Planning VAL147+		
1	ADL Improvement Change (based on VAL46) VAL153+		
1	Match of Chart & Care Plan (ADL Improvement) VAL171+		
2	General Management Instability VAL10-		
2	Effort at Mobility Enhancement VAL35+		
2	Ownership Change VAL49-		
2	CMI-Adjusted (RN+LPN FTE)/BED VAL52+		
2	PT Asst FTE/100 Beds VAL83+		

† responsive element

‡ preventive element

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis Level	QI & Validation Scale	Standardized Regression	
		Coefficient	p-value
2	Level of OT PT Staffing VAL87+		
2	ADLimp Improvement Scale VAL108+		
2	PT FTE/100 Beds VAL146+		
	Behavior problem prevalence, high & low risk (CHSRA; BEH01)		
1	Complex Mental Health Care on Site VAL1+		
1	Behavioral Items VAL18+		
1	Cognitive Behavioral Care Practices VAL88+		
1	BEH Change (based on VAL46) VAL152+2		
2	Licensed Nurse Involved in Care Planning VAL6+	-0.152	0.075 ‡
2	Facility Management Contract Change VAL11-		
2	Formal Communication VAL17+		
2	CQI for pain VAL26+		
2	CDCPI-Ambiance VAL41+		
2	CDCPI3-Cross Domain Quality Response VAL42+		
2	Percent Single Bedded Rooms, Deciles VAL44+		
2	CNA Involved in Care Planning VAL57+		
2	Record of MH Prof VAL65+	0.174	0.070 †
2	Presence of MH prof VAL66+		
2	Number of Policies Reviewed with New Hires VAL101+		
2	Behavior Improvement Scale VAL107+	0.309	0.000
2	Total involvement in Care Planning VAL147+		

† responsive element

‡ preventive element

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis		Standardized	
Level	QI & Validation Scale	Regression Coefficient	p-value
	Behavior problem prevalence, high risk (CHSRA; BEH02)		
1	Complex Mental Health Care on Site VAL1+		
1	Behavioral Items VAL18+		
1	Cognitive Behavioral Care Practices VAL88+		
1	BEH Change (based on VAL46) VAL152+		
2	Licensed Nurse Involved in Care Planning VAL6+		
2	Facility Management Contract Change VAL11-		
2	Formal Communication VAL17+		
2	CQI for pain VAL26+		
2	CDCPI-Ambiance VAL41+		
2	CDCPI3-Cross Domain Quality Response VAL42+		
2	Percent Single Bedded Rooms, Deciles VAL44+		
2	CNA Involved in Care Planning VAL57+		
2	Record of MH Prof VAL65+		
2	Presence of MH prof VAL66+		
2	Number of Policies Reviewed with New Hires VAL101+		
2	Behavior Improvement Scale VAL107+	0.277	0.001
2	Total involvement in Care Planning VAL147+		

† responsive element

‡ preventive element

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis		Standardized	
Level	QI & Validation Scale	Regression Coefficient	p-value
	Behavior problem prevalence, low risk (CHSRA; BEH03)		
1	Complex Mental Health Care on Site VAL1+		
1	Behavioral Items VAL18+		
1	Cognitive Behavioral Care Practices VAL88+		
1	BEH Change (based on VAL46) VAL152+		
2	Licensed Nurse Involved in Care Planning VAL6+		
2	Facility Management Contract Change VAL11-		
2	Formal Communication VAL17+		
2	CQI for pain VAL26+		
2	CDCPI-Ambiance VAL41+		
2	CDCPI3-Cross Domain Quality Response VAL42+		
2	Percent Single Bedded Rooms, Deciles VAL44+		
2	CNA Involved in Care Planning VAL57+		
2	Record of MH Prof VAL65+		
2	Presence of MH prof VAL66+		
2	Number of Policies Reviewed with New Hires VAL101+		
2	Behavior Improvement Scale VAL107+	0.351	0.004
2	Total involvement in Care Planning VAL147+		

† responsive element

‡ preventive element

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis		Standardized	
Level	QI & Validation Scale	Regression Coefficient	p-value
	Behavior problem change (LTCQ; BEH04)		
1	Complex Mental Health Care on Site VAL1+		
1	Behavioral Items VAL18+		
1	Presence of MH prof VAL66+		
1	Cognitive Behavioral Care Practices VAL88+		
1	BEH Change (based on VAL46) VAL152+		
2	General Management Instability VAL10-		
2	Facility Management Contract Change VAL11-		
2	Formal Communication VAL17+		
2	Percent Single Bedded Rooms, Deciles VAL44+		
2	Ownership Change VAL49-		
2	Record of MH Prof VAL65+		
2	Behavior Improvement Scale VAL107+		
	Low BMI prevalence (MEGAQI; BMI0X)		
1	Formal Communication VAL17+		
1	Nutrition CQI VAL79+		
1	% Res w/Tx Plans for Weight Loss VAL81+	0.189	0.026
1	WGT Change (based on VAL46) VAL160+	0.199	0.020 †
2	Cont Ed Fx Decline VAL34+		
2	5%+ RN, LPN Float, Contract VAL53-		
2	Lic Staff turnover last 6mo (% ,Deciles) VAL55-		
2	Number of Policies Reviewed with New Hires VAL101+		
2	LowBMI Improvement Scale VAL116+		

† responsive element

‡ preventive element

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis Level	QI & Validation Scale	Standardized Regression Coefficient	p-value
Prevalence of burns, abrasions, bruises (MEGAQI; BUR0X)			
1	Use of QA nurse VAL16+		
1	Skin Care Preventive Stratgz VAL29+		
1	Skin Care Prev Stratgz walk-through VAL31+		
1	Observed PU, Burns Tx & Prevention VAL77+		
1	Training & Policy for Suspicious Skin VAL99+	-0.159	0.061 ‡
1	BUR Change (based on VAL46) VAL166+	0.260	0.002 †
1	Match of Chart & Care Plan VAL174+		
2	Complex Mental Health Care on Site VAL1+		
2	Formal Communication VAL17+		
2	BurnTear Improvement Scale VAL122+		
Indwelling urinary catheter change (LTCQ; CAT01)			
1	Facility Management Contract Change VAL11-	0.196	0.020 ‡
1	Incontinence Management VAL32+		
1	Focus on Incontinence VAL36+		
1	30%+ Six Mo CNA Turnover VAL56-		
1	Focus on Catheter VAL74+		
1	CAT Change (based on VAL46) VAL161+		
2	General Management Instability VAL10-	0.150	0.075 ‡
2	Screening tools for infections VAL14+		
2	Use of QA nurse VAL16+		
2	Ownership Change VAL49-	0.159	0.060 ‡
2	DON employed <12M VAL51-		
2	IUCath Improvement Scale VAL117+		

† responsive element

‡ preventive element

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis Level	QI & Validation Scale	Standardized Regression Coefficient	p-value
Catheter prevalence (CHSRA; CAT02)			
1	Facility Management Contract Change VAL11-	0.315	0.000 †
1	30%+ Six Mo CNA Turnover VAL56-		
1	Focus on Catheter VAL74+	0.179	0.034
2	Screening tools for infections VAL14+		
2	Use of QA nurse VAL16+		
2	DON employed <12M VAL51-		
Bowel & bladder incontinence prevalence, high & low risk (CHSRA; CNT01)			
1	Incontinence Management VAL32+		
1	Focus on Incontinence VAL36+		
1	BLA Change (based on VAL46) VAL162+		
1	BOW Change (based on VAL46) VAL163+		
2	General Management Instability VAL10-		
2	Effort at Mobility Enhancement VAL35+		
2	Ownership Change VAL49-		
2	Num CQI Approaches in Use VAL64+		
2	Focus on Catheter VAL74+		
2	Direct Care Staff Involved for Residents who Fall VAL98+		
2	BladCont Improvement Scale VAL118+		
2	BowlCont Improvement Scale VAL119+		
Bowel incontinence change (LTCQ; CNT02)			
1	Incontinence Management VAL32+		
1	Focus on Incontinence VAL36+	-0.197	0.024 †
1	BOW Change (based on VAL46) VAL163+		
2	Skin Care Preventive Stratgz VAL29+		
2	Skin Care Prev Stratgz walk-through VAL31+		

† responsive element

‡ preventive element

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis Level	QI & Validation Scale	Standardized Regression	
		Coefficient	p-value
2	Effort at Mobility Enhancement VAL35+		
2	Num CQI Approaches in Use VAL64+		
2	BowlCont Improvement Scale VAL119+		
	Bowel & bladder incont. prev, high risk (CHSRA; CNT05)		
1	Incontinence Management VAL32+		
1	Focus on Incontinence VAL36+	-0.287	0.014 ‡
1	BLA Change (based on VAL46) VAL162+		
1	BOW Change (based on VAL46) VAL163+		
2	General Management Instability VAL10-		
2	Effort at Mobility Enhancement VAL35+		
2	Ownership Change VAL49-		
2	Num CQI Approaches in Use VAL64+		
2	Focus on Catheter VAL74+	-0.339	0.003 ‡
2	Direct Care Staff Involved for Residents who Fall VAL98+		
2	BladCont Improvement Scale VAL118+	-0.226	0.054 ‡
2	BowlCont Improvement Scale VAL119+		

† responsive element

‡ preventive element

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis		Standardized	
Level	QI & Validation Scale	Regression Coefficient	p-value
	Bowel & bladder incont. prev, low risk (CHSRA; CNT06)		
1	Incontinence Management VAL32+		
1	Focus on Incontinence VAL36+		
1	BLA Change (based on VAL46) VAL162+		
1	BOW Change (based on VAL46) VAL163+		
2	General Management Instability VAL10-		
2	Effort at Mobility Enhancement VAL35+		
2	Ownership Change VAL49-		
2	Num CQI Approaches in Use VAL64+		
2	Focus on Catheter VAL74+		
2	Direct Care Staff Involved for Residents who Fall VAL98+		
2	BladCont Improvement Scale VAL118+		
2	BowlCont Improvement Scale VAL119+		
	Bladder incontinence change (LTCQ; CNT03)		
1	Focus on Incontinence VAL36+		
1	Focus on Catheter VAL74+	-0.151	0.081 ‡
1	BLA Change (based on VAL46) VAL162+		
2	Skin Care Preventive Stratgz VAL29+		
2	Skin Care Prev Stratgz walk-through VAL31+		
2	Cont Ed Fx Decline VAL34+		
2	Effort at Mobility Enhancement VAL35+		
2	Num CQI Approaches in Use VAL64+		
2	Frequency of Comprehensive Assessments VAL80+		
2	BladCont Improvement Scale VAL118+		

† responsive element

‡ preventive element

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis Level	QI & Validation Scale	Standardized Regression Coefficient	p-value
	Urinary tract infection prevalence (CHSRA; CNT04)		
1	Facility Management Contract Change VAL11-	0.190	0.025 ‡
1	Screening tools for infections VAL14+		
1	Use of QA nurse VAL16+		
1	INF Change (based on VAL46) VAL164+	0.159	0.061 †
2	NP on staff VAL19+		
2	Cont Ed Fx Decline VAL34+		
2	DON employed <12M VAL51-		
2	CMI-Adjusted (RN+LPN FTE)/BED VAL52+		
2	5%+ RN, LPN Float, Contract VAL53-		
2	Lic Staff turnover last 6mo (%Deciles) VAL55-	0.229	0.009 ‡
2	Num CQI Approaches in Use VAL64+		
2	Long Stay Staff deciles VAL90+		
2	Number of Policies Reviewed with New Hires VAL101+		

† responsive element

‡ preventive element

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis Level	QI & Validation Scale	Standardized Regression Coefficient	p-value
	Cognition change (LTCQ; COG01)		
1	Complex Mental Health Care on Site VAL1+		
1	Monitor Change in Function/Cognitive Care VAL2+	-0.155	0.069 ‡
1	Preventative Activities VAL7+		
1	Polypharmacy Monitoring VAL8+		
1	CDCPI-Psychosocial VAL39+		
1	CDCPI3-Cross Domain Quality Response VAL42+		
1	Formal Delirium/Depression Approach VAL67+		
1	Cognitive Behavioral Care Practices VAL88+	-0.145	0.089 ‡
1	COG Change (based on VAL46) VAL148+	0.179	0.037 †
1	Match of Chart & Care Plan VAL169+		
2	Licensed Nurse Involved in Care Planning VAL6+		
2	Aggressive Cog/Com Care Strategy VAL9+		
2	Behavioral Items VAL18+	-0.185	0.029 ‡
2	CDCPI-Ambiance VAL41+		
2	CDCPI3-Cross Domain Quality Response VAL42+		
2	CNA Involved in Care Planning VAL57+		
2	Frequency of Comprehensive Assessments VAL80+		
2	OT+OT Aasst FTE/100 Beds VAL85+	0.169	0.059
2	COGimp Improvement Scale VAL103+	-0.223	0.008 ‡
2	Total involvement in Care Planning VAL147+		

† responsive element

‡ preventive element

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis Level	QI & Validation Scale	Standardized Regression Coefficient	p-value
	Communication change (LTCQ; COM01)		
1	Complex Mental Health Care on Site VAL1+		
1	Monitor Change in Function/Cognitive Care VAL2+		
1	Preventative Activities VAL7+		
1	Polypharmacy Monitoring VAL8+	-0.144	0.091 ‡
1	Informal Pathways Communication VAL97+		
1	COM Change (based on VAL46) VAL149+		
2	Licensed Nurse Involved in Care Planning VAL6+		
2	Aggressive Cog/Com Care Strategy VAL9+		
2	Comm Improvement Scale VAL104+		
2	Total involvement in Care Planning VAL147+		
	New or persistent delirium change (MEGAQI; DEL0X)		
1	Aggressive Cog/Com Care Strategy VAL9+		
1	CDCPI-Clinical Complications VAL40+		
1	CDCPI3-Cross Domain Quality Response VAL42+		
1	Presence of MH prof VAL66+		
1	Formal Delirium/Depression Approach VAL67+		
1	DEL Change (based on VAL46) VAL150+		
2	Complex Mental Health Care on Site VAL1+		
2	Polypharmacy Monitoring VAL8+	-0.140	0.098 ‡
2	Record of MH Prof VAL65+		
2	Personalized Rooms VAL70+		
2	Frequency of Comprehensive Assessments VAL80+		
2	Cognitive Behavioral Care Practices VAL88+	-0.227	0.007 ‡
2	Vigilance in Monitoring Psyc Status VAL100+		
2	Delirium Improvement Scale VAL105+		

† responsive element

‡ preventive element

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis Level	QI & Validation Scale	Standardized Regression Coefficient	p-value
Antipsychotic prevalence, high & low risk (CHSRA; DRG01)			
1	Med Dir reviews Drugs last 30 days VAL20+		
1	Num CQI Approaches in Use VAL64+		
1	DRG Change (based on VAL46) VAL157+		
2	Polypharmacy Monitoring VAL8+		
2	Medications Committee VAL25+		
2	Antipsyc Improvement Scale VAL112+	0.198	0.020
Antipsychotic prevalence high risk (CHSRA; DRG02)			
1	Med Dir reviews Drugs last 30 days VAL20+		
1	Num CQI Approaches in Use VAL64+	0.332	0.036
1	DRG Change (based on VAL46) VAL157+		
2	Polypharmacy Monitoring VAL8+		
2	Medications Committee VAL25+		
2	Antipsyc Improvement Scale VAL112+		
Antipsychotic prevalence low risk (CHSRA; DRG03)			
1	Med Dir reviews Drugs last 30 days VAL20+		
1	Num CQI Approaches in Use VAL64+		
1	DRG Change (based on VAL46) VAL157+		
2	Polypharmacy Monitoring VAL8+	-0.173	0.043 †
2	Medications Committee VAL25+		
2	Antipsyc Improvement Scale VAL112+		

† responsive element

‡ preventive element

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis Level	QI & Validation Scale	Standardized Regression Coefficient	p-value
	Falls change (LTCQ; FAL01)		
1	Communication of Falls VAL5+	0.182	0.032 ‡
1	Use of QA nurse VAL16+		
1	Formal Communication VAL17+	0.168	0.048 ‡
1	Direct Care Staff Involved for Residents who Fall VAL98+		
1	Total involvement in Care Planning VAL147+		
1	FAL Change (based on VAL46) VAL156+	0.255	0.003 †
2	Education on Restraints VAL4+		
2	Aggressive Cog/Com Care Strategy VAL9+		
2	Falls Improvement Scale VAL111+		
	Flare up of infections (MEGAQI; INFOX)		
1	Facility Management Contract Change VAL11-	0.159	0.062 ‡
1	Use of QA nurse VAL16+		
1	INF Change (based on VAL46) VAL164+	0.206	0.014 †
1	Match of Chart & Care Plan VAL173+	0.172	0.065 †
2	NP on staff VAL19+		
2	DON employed <12M VAL51-		
2	CMI-Adjusted (RN+LPN FTE)/BED VAL52+		
2	5%+ RN, LPN Float, Contract VAL53-		
2	Lic Staff turnover last 6mo (%Deciles) VAL55-	0.184	0.036 ‡
2	Num CQI Approaches in Use VAL64+		
2	Number of CNA Training Topics VAL78+	0.151	0.074
2	Long Stay Staff deciles VAL90+		
2	Infectns Improvement Scale VAL120+		

† responsive element

‡ preventive element

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis		Standardized	
Level	QI & Validation Scale	Regression Coefficient	p-value
	Mobility change (LTCQ; MOB01)		
1	Facility Management Contract Change VAL11-		
1	Cont Ed Fx Decline VAL34+		
1	Effort at Mobility Enhancement VAL35+		
1	CDCPI-Functional VAL37+	-0.199	0.020 †
1	CDCPI3-Cross Domain Quality Response VAL42+		
1	Observation of Movement Scale VAL72+		
1	Total involvement in Care Planning VAL147+		
1	MOB Change (based on VAL46) VAL155+		
1	Match of Chart & Care Plan VAL172+		
2	General Management Instability VAL10-		
2	Incontinence Management VAL32+		
2	Focus on Incontinence VAL36+		
2	Ownership Change VAL49-		
2	CMI-Adjusted (RN+LPN FTE)/BED VAL52+		
2	PT Asst FTE/100 Beds VAL83+		
2	Level of OT PT Staffing VAL87+		
2	MobWalk Improvement Scale VAL110+		
2	PT FTE/100 Beds VAL146+		

† responsive element

‡ preventive element

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis		Standardized Regression	
Level	QI & Validation Scale	Coefficient	p-value
	Depressed mood change (LTCQ; MOD03)		
1	Complex Mental Health Care on Site VAL1+		
1	Licensed Nurse Involved in Care Planning VAL6+		
1	Screen, assess, manage pain depression VAL23+		
1	Formal Delirium/Depression Approach VAL67+		
1	Frequency of Comprehensive Assessments VAL80+		
1	Activities in NH VAL93+	-0.143	0.095 †
1	MOD Change (based on VAL46) VAL151+	-0.179	0.037 ‡
1	Match of Chart & Care Plan VAL170+		
2	General Management Instability VAL10-		
2	Facility Management Contract Change VAL11-		
2	Behavioral Items VAL18+		
2	NP on staff VAL19+		
2	Med Dir reviews Drugs last 30 days VAL20+		
2	Daily Screening of mood VAL24+		
2	Medications Committee VAL25+		
2	CQI for pain VAL26+		
2	CDCPI-Ambiance VAL41+		
2	CDCPI3-Cross Domain Quality Response VAL42+		
2	Percent Single Bedded Rooms, Deciles VAL44+		
2	Ownership Change VAL49-		
2	5%+ RN, LPN Float, Contract VAL53-		
2	Lic Staff turnover last 6mo (% ,Deciles) VAL55-		
2	CNA Involved in Care Planning VAL57+		
2	Record of MH Prof VAL65+		
2	Presence of MH prof VAL66+		
2	Personalized Rooms VAL70+		
2	Long Stay Staff deciles VAL90+		

† responsive element

‡ preventive element

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis Level	QI & Validation Scale	Standardized Regression Coefficient	p-value
2	Informal Pathways Communication VAL97+		
2	Vigilance in Monitoring Psyc Status VAL100+		
2	Mood Improvement Scale VAL106+		
2	Total involvement in Care Planning VAL147+		
Tube feeding prevalence (RAMSEY; NUT01)			
1	NUT Change (based on VAL46) VAL159+	0.165	0.054 †
2	DON employed <12M VAL51-		
2	Nutrition CQI VAL79+		
2	Long Stay Staff deciles VAL90+		
2	Feedtube Improvement Scale VAL115+	0.396	0.000
Inadequate management of pain (MEGAQI; PA10X)			
1	Formal Communication VAL17+		
1	NP on staff VAL19+		
1	Screen, assess, manage pain depression VAL23+		
1	CQI for pain VAL26+		
1	CDCPI-Clinical Complications VAL40+	0.176	0.037 †
1	CDCPI3-Cross Domain Quality Response VAL42+		
1	Pain Assessment VAL45+		
1	Pain Change VAL46+		
1	Pain Care Planning Specificity VAL47+		
1	Match of MDS & Care Plan VAL48+		
1	Poor Pain Assessment Policies as25h VAL58-		
1	Poor Pain Education VAL59-		
1	No Stand Pain Asmt Admin and (Wkly or Qrtly) VAL61-		
1	Num CQI Approaches in Use VAL64+		

† responsive element

‡ preventive element

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis		Standardized	
Level	QI & Validation Scale	Regression Coefficient	p-value
1	Frequency of Comprehensive Assessments VAL80+	-0.160	0.059 ‡
1	Match of Chart & Care Plan VAL168+	0.263	0.002 †
2	General Management Instability VAL10-		
2	Use of QA nurse VAL16+		
2	Med Dir reviews Drugs last 30 days VAL20+		
2	Medications Committee VAL25+		
2	Ownership Change VAL49-		
2	DON employed <12M VAL51-		
2	CMI-Adjusted (RN+LPN FTE)/BED VAL52+		
2	5%+ RN, LPN Float, Contract VAL53-		
2	Lic Staff turnover last 6mo (%Deciles) VAL55-	0.155	0.077 ‡
2	30%+ Six Mo CNA Turnover VAL56-		
2	CNA Involved in Care Planning VAL57+		
2	Number of CNA Training Topics VAL78+		
2	Long Stay Staff deciles VAL90+		
2	Activities in NH VAL93+		
2	Pain Improvement Scale VAL113+		

† responsive element

‡ preventive element

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis Level	QI & Validation Scale	Standardized Regression Coefficient	p-value
	Pain change (LTCQ; PAN01)		
1	Formal Communication VAL17+		
1	NP on staff VAL19+		
1	Screen, assess, manage pain depression VAL23+		
1	CQI for pain VAL26+	-0.147	0.084 ‡
1	CDCPI-Clinical Complications VAL40+		
1	CDCPI3-Cross Domain Quality Response VAL42+		
1	Pain Assessment VAL45+	0.169	0.047 †
1	Pain Change VAL46+	0.148	0.082 †
1	Pain Care Planning Specificity VAL47+	-0.204	0.016 ‡
1	Match of MDS & Care Plan VAL48+		
1	Poor Pain Assessment Policies as25h VAL58-		
1	Poor Pain Education VAL59-		
1	No Stand Pain Asmt Admin and (Wkly or Qrtly) VAL61-		
1	Num CQI Approaches in Use VAL64+		
1	Frequency of Comprehensive Assessments VAL80+	0.158	0.061
1	Match of Chart & Care Plan VAL168+		
2	General Management Instability VAL10-		
2	Use of QA nurse VAL16+		
2	Med Dir reviews Drugs last 30 days VAL20+		
2	Medications Committee VAL25+		
2	Ownership Change VAL49-		
2	DON employed <12M VAL51-		
2	CMI-Adjusted (RN+LPN FTE)/BED VAL52+		
2	5%+ RN, LPN Float, Contract VAL53-	0.223	0.010 ‡
2	Lic Staff turnover last 6mo (%Deciles) VAL55-		

† responsive element

‡ preventive element

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis		Standardized Regression Coefficient	p-value
Level	QI & Validation Scale		
2	30%+ Six Mo CNA Turnover VAL56-		
2	CNA Involved in Care Planning VAL57+	0.153	0.072
2	Number of CNA Training Topics VAL78+		
2	Long Stay Staff deciles VAL90+		
2	Activities in NH VAL93+		
2	Pain Improvement Scale VAL113+		
Pressure ulcer prevalence, high & low risk (CHSRA; PRU01)			
1	Facility Management Contract Change VAL11-	0.148	0.082 ‡
1	Use of QA nurse VAL16+		
1	Formal Communication VAL17+		
1	Skin Care Preventive Stratgz VAL29+		
1	Skin Care Prev Stratgz walk-through VAL31+		
1	CDCPI-Clinical Complications VAL40+		
1	CDCPI3-Cross Domain Quality Response VAL42+	-0.142	0.094 ‡
1	Num CQI Approaches in Use VAL64+	0.142	0.094 ‡
1	Observed PU, Burns Tx & Prevention VAL77+		
1	Training & Policy for Suspicious Skin VAL99+		
1	PRU Change (based on VAL46) VAL165+	0.243	0.004 †
1	Match of Chart & Care Plan VAL174+	0.216	0.011 †
2	Licensed Nurse Involved in Care Planning VAL6+		
2	Incontinence Management VAL32+		
2	Focus on Incontinence VAL36+		
2	CMI-Adjusted (RN+LPN FTE)/BED VAL52+		
2	5%+ RN, LPN Float, Contract VAL53-	0.267	0.002 ‡
2	Lic Staff turnover last 6mo (%Deciles) VAL55-		
2	30%+ Six Mo CNA Turnover VAL56-		

† responsive element

‡ preventive element

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis Level	QI & Validation Scale	Standardized Regression Coefficient	p-value
2	CNA Involved in Care Planning VAL57+		
2	Number of CNA Training Topics VAL78+		
2	% Res w/Tx Plans for Weight Loss VAL81+	0.157	0.064 †
2	Emphasis on Mission VAL89+		
2	Long Stay Staff deciles VAL90+		
2	PressUlc Improvement Scale VAL121+	0.144	0.091 ‡
2	Total involvement in Care Planning VAL147+		
	Pressure ulcer change (LTCQ; PRU04)		
1	Facility Management Contract Change VAL11-		
1	Use of QA nurse VAL16+		
1	Formal Communication VAL17+		
1	Skin Care Preventive Stratgz VAL29+		
1	Skin Care Prev Stratgz walk-through VAL31+		
1	CDCPI-Clinical Complications VAL40+	-0.194	0.021 ‡
1	CDCPI3-Cross Domain Quality Response VAL42+		
1	Observed PU, Burns Tx & Prevention VAL77+		
1	Training & Policy for Suspicious Skin VAL99+		
1	PRU Change (based on VAL46) VAL165+		
1	Match of Chart & Care Plan VAL174+	0.144	0.090 †
2	Licensed Nurse Involved in Care Planning VAL6+		
2	CMI-Adjusted (RN+LPN FTE)/BED VAL52+	-0.153	0.074 ‡
2	5%+ RN, LPN Float, Contract VAL53-		
2	Lic Staff turnover last 6mo (%Deciles) VAL55-		
2	30%+ Six Mo CNA Turnover VAL56-		
2	Number of CNA Training Topics VAL78+		
2	% Res w/Tx Plans for Weight Loss VAL81+		

† responsive element

‡ preventive element

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis Level	QI & Validation Scale	Standardized Regression	
		Coefficient	p-value
2	Emphasis on Mission VAL89+		
2	Long Stay Staff deciles VAL90+		
2	Total involvement in Care Planning VAL147+		
	Restraint prevalence (CHSRA; RES01)		
1	Education on Restraints VAL4+	0.215	0.010
1	CDCPI-Ambiance VAL41+		
1	CDCPI3-Cross Domain Quality Response VAL42+		
1	Physical Restraints VAL75+	0.344	0.000 †
1	RES Change (based on VAL46) VAL158+	0.211	0.012
2	Complex Mental Health Care on Site VAL1+		
2	Facility Management Contract Change VAL11-		
2	Use of QA nurse VAL16+	-0.146	0.082 ‡
2	CDCPI-Functional VAL37+		
2	CDCPI3-Cross Domain Quality Response VAL42+		
2	Num CQI Approaches in Use VAL64+		
2	Observed PU, Burns Tx & Prevention VAL77+	0.221	0.008
2	Emphasis on Mission VAL89+		
2	Restrnt Improvement Scale VAL114+	0.389	0.000
	Little or no activities prevalence (CHSRA; SOC02)		
1	CDCPI-Psychosocial VAL39+	-0.211	0.012 ‡
1	CDCPI-Ambiance VAL41+	0.158	0.062
1	CDCPI3-Cross Domain Quality Response VAL42+		
1	Activities in NH VAL93+		
1	SOC Change (based on VAL46) VAL167+		
2	Preventative Activities VAL7+		
2	Screen, assess, manage pain depression VAL23+		

† responsive element

‡ preventive element

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis		Standardized	
Level	QI & Validation Scale	Regression Coefficient	p-value
2	Percent Single Bedded Rooms, Deciles VAL44+		
2	30%+ Six Mo CNA Turnover VAL56-		
2	Personalized Rooms VAL70+		
2	Long Stay Staff deciles VAL90+		
2	NoActivt Improvement Scale VAL123+		
Walking performance (MEGAQI; WAL0X)			
1	Preventative Activities VAL7+		
1	Cont Ed Fx Decline VAL34+		
1	Effort at Mobility Enhancement VAL35+		
1	CDCPI-Functional VAL37+		
1	CDCPI3-Cross Domain Quality Response VAL42+		
1	Observation of Movement Scale VAL72+		
1	PT Asst FTE/100 Beds VAL83+		
1	PT FTE/100 Beds VAL146+		
1	Total involvement in Care Planning VAL147+		
1	MOB Change (based on VAL46) VAL155+		
1	Match of Chart & Care Plan VAL172+		
2	Incontinence Management VAL32+		
2	Focus on Incontinence VAL36+		
2	CDCPI-Ambiance VAL41+		
2	CDCPI3-Cross Domain Quality Response VAL42+		
2	CMI-Adjusted (RN+LPN FTE)/BED VAL52+		
2	Level of OT PT Staffing VAL87+		
2	MobWalk Improvement Scale VAL110+		

† responsive element

‡ preventive element

Relationship Between Chronic Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis Level	QI & Validation Scale	Standardized Regression Coefficient	p-value
	Weight loss (LTCQ; WGT01)		
1	CNA Involved in Care Planning VAL57+	-0.167	0.051 ‡
1	Nutrition CQI VAL79+		
1	% Res w/Tx Plans for Weight Loss VAL81+		
1	Restorative Eating Care Provided VAL92+		
1	Total involvement in Care Planning VAL147+	-0.153	0.075 ‡
1	WGT Change (based on VAL46) VAL160+		
2	5%+ RN, LPN Float, Contract VAL53-		
2	Lic Staff turnover last 6mo (%Deciles) VAL55-		
2	30%+ Six Mo CNA Turnover VAL56-		
2	Frequency of Comprehensive Assessments VAL80+		
2	LowBMI Improvement Scale VAL116+		

† responsive element

‡ preventive element

Appendix J

Relationship Between Post Acute Quality Indicators and Hypothesized Validation Scales

Relationship Between Post Acute Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis Level	QI & Validation Scale	All Facilities		TCUs type=40)	
		Standardized Regression Coefficient	p-value	Standardized Regression Coefficient	p-value
	Failure to Improve in Early Post-Acute Period (MEGAQI; ADL0X)				
1	Cont Ed Fx Decline VAL32+	0.215	0.007		
1	Focus on Incontinence VAL36+	0.214	0.007		
1	CDCPI-Functional VAL37+				
1	Total involvement in Care Planning VAL147+				
1	Monitor Change in Function/Cognitive Care VAL2+				
1	Observation of Movement Scale VAL72+	0.142	0.076		
1	CDCPI3-Cross Domain Quality Response VAL42+				
1	ADL Decline Change (based on VAL46) VAL154+				
1	Incontinence Management VAL32+	0.174	0.029		
1	OT+OT Aasst FTE/100 Beds VAL85+	-0.257	0.002		
2	Facility Management Contract Change VAL11-				
2	PT FTE/100 Beds VAL146+	-0.273	0.001		
2	Effort at Mobility Enhancement VAL35+				
2	CMI-Adjusted VAL52+	-0.355	0.000	-0.366	0.011
2	Ownership Change VAL49-				
2	PT Asst FTE/100 Beds VAL83+	-0.163	0.050		
2	ADLdec Improvement Scale VAL109+				
2	General Management Instability VAL10-				

Relationship Between Post Acute Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis Level	Hypothesis	QI & Validation Scale	All Facilities		TCUs type=40)	
			Standardized Regression Coefficient	p-value	Standardized Regression Coefficient	p-value
		Failure to Improve Bladder Incontinence POST-ACUTE (MEGAQI; CNT0X)				
		1 Incontinence Management VAL32+				
		1 Focus on Incontinence VAL36+	-0.163	0.044		
		1 BLA Change (based on VAL46) VAL162+				
		1 BOW Change (based on VAL46) VAL163+				
		2 Focus on Catheter VAL74+				
		2 Direct Care Staff Involved for Residents who Fall VAL98+				
		2 BowlCont Improvement Scale VAL119+	-0.181	0.025		
		2 Ownership Change VAL49-				
		2 BladCont Improvement Scale VAL118+				
		2 General Management Instability VAL10-				
		2 Effort at Mobility Enhancement VAL35+				
		2 Num CQI Approaches in Use VAL64+				
		New or persistent delirium change POST-ACUTE (MEGAQI; DEL0X)				
		1 Aggressive Cog/Com Care Strategy VAL9+				
		1 Formal Delirium/Depression Approach VAL67+	-0.199	0.011	-0.249	0.078
		1 CDCPI3-Cross Domain Quality Response VAL42+				
		1 DEL Change (based on VAL46) VAL150+				
		1 Presence of MH prof VAL66+	0.160	0.042		
		1 CDCPI-Clinical Complications VAL40+				
		2 Frequency of Comprehensive Assessments VAL80+				
		2 Delirium Improvement Scale VAL105+			0.301	0.032
		2 Complex Mental Health Care on Site VAL1+	0.212	0.007		
		2 Vigilance in Monitoring Psyc Status VAL100+	-0.144	0.068		
		2 Record of MH Prof VAL65+	0.210	0.016	0.343	0.026
		2 Personalized Rooms VAL70+				
		2 Polypharmacy Monitoring VAL8+				
		2 Cognitive Behavioral Care Practices VAL88+				

Relationship Between Post Acute Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis Level	QI & Validation Scale	All Facilities		TCUs type=40)	
		Standardized Regression Coefficient	p-value	Standardized Regression Coefficient	p-value
	Inadequate management of pain POST-ACUTE (MEGAQI; PAIOX)				
1	CQI for pain VAL26+	-0.162	0.040		
1	NP on staff VAL19+	-0.155	0.048	-0.305	0.029
1	No Stand Pain Asmt Admin and (Wkly or Qrtly) VAL61-			0.247	0.080
1	Pain Care Planning Specificity VAL47+				
1	Num CQI Approaches in Use VAL64+				
1	Frequency of Comprehensive Assessments VAL80+	-0.164	0.037		
1	Poor Pain Education VAL59-				
1	Poor Pain Assessment Policies VAL58-	-0.132	0.095		
1	Pain Change VAL46+	0.155	0.050		
1	Screen, assess, manage pain depression VAL23+				
1	Match of Chart & Care Plan (Pain) VAL168+			-0.276	0.050
1	Match of MDS & Care Plan VAL48+	0.150	0.057		
1	CDCPI-Clinical Complications VAL40+			-0.312	0.026
1	CDCPI3-Cross Domain Quality Response VAL42+	-0.134	0.089		
1	Pain Assessment VAL45+				
1	Formal Communication VAL17+				
2	DON employed <12M VAL51-				
2	CMI-Adjusted /BED VAL52+				
2	Med Dir reviews Drugs last 30 days 7 VAL20+				
2	Long Stay Staff deciles VAL90+				
2	General Management Instability VAL10-	0.146	0.063		
2	Use of QA nurse VAL16+	0.135	0.086		
2	Medications Committee VAL25+				
2	Lic Staff turnover last 6mo (% ,Deciles) VAL55-				
2	30%+ Six Mo CNA Turnover VAL56-				
2	Pain Improvement Scale VAL113+				
2	Ownership Change VAL49-	0.183	0.019		

Relationship Between Post Acute Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis Level	QI & Validation Scale	All Facilities		TCUs type=40)	
		Standardized Regression Coefficient	p-value	Standardized Regression Coefficient	p-value
	Inadequate management of pain POST-ACUTE (MEGAQI; PAI0X) (cont'd)				
	2 Number of CNA Training Topics VAL78+				
	2 5%+ RN, LPN Float, Contract VAL53-				
	2 CNA Involved in Care Planning VAL57+	-0.176	0.025		
	2 Activities in NH VAL93+				
	Failure to prevent/improve PU POST-ACUTE (MEGAQI; PRU0X)				
	1 Num CQI Approaches in Use VAL64+				
	1 Skin Care Prev Stratgz walk-through VAL31+				
	1 Formal Communication VAL17+				
	1 Match of Chart & Care Plan VAL174+				
	1 Use of QA nurse VAL16+				
	1 Skin Care Preventive Stratgz v1 VAL29+				
	1 Observed PU, Burns Tx & Prevention (JA) VAL77+				
	1 CDCPI3-Cross Domain Quality Response VAL42+				
	1 PRU Change (based on VAL46) VAL165+				
	1 Facility Management Contract Change VAL11-				
	1 CDCPI-Clinical Complications VAL40+				
	1 Training & Policy for Suspicious Skin VAL99+	-0.170	0.033		
	2 5%+ RN, LPN Float, Contract VAL53-				
	2 CNA Involved in Care Planning VAL57+	-0.285	0.000		
	2 CMI-Adjusted /BED VAL52+	0.388	0.000		
	2 30%+ Six Mo CNA Turnover VAL56-	-0.252	0.005		
	2 % Res w/Tx Plans for Weight Loss VAL81+				
	2 Incontinence Management VAL32+	-0.270	0.001		
	2 Licensed Nurse Involved in Care Planning VAL6+				
	2 PressUlc Improvement Scale VAL121+	-0.186	0.019		
	2 Long Stay Staff deciles VAL90+				

Relationship Between Post Acute Quality Indicators and Hypothesized Validation Scales (Note: Shaded Items are Counter to the Hypothesis)

Hypothesis Level	QI & Validation Scale	All Facilities		TCUs type=40)	
		Standardized Regression Coefficient	p-value	Standardized Regression Coefficient	p-value
	Failure to prevent/improve PU POST-ACUTE (MEGAQI; PRU0X) (cont'd)				
	2 Lic Staff turnover last 6mo (% ,Deciles) VAL55-	-0.189	0.022		
	2 Focus on Incontinence VAL36+	-0.265	0.001		
	2 Emphasis on Mission VAL89+				
	2 Total involvement in Care Planning VAL147+	-0.222	0.005		
	2 Number of CNA Training Topics VAL78+	-0.162	0.041		
	Improvement in Walking POST-ACUTE (MEGAQI; WAL0X)				
	1 Observation of Movement Scale VAL72+				
	1 Cont Ed Fx Decline VAL34+				
	1 MOB Change (based on VAL46) VAL155+				
	1 CDCPI3-Cross Domain Quality Response VAL42+				
	1 Match of Chart & Care Plan VAL172+				
	1 PT Asst FTE/100 Beds VAL83+			-0.312	0.033
	1 PT FTE/100 Beds VAL146+				
	1 Total involvement in Care Planning VAL147+	0.153	0.060		
	1 Preventive Activities VAL7+				
	1 Effort at Mobility Enhancement VAL35+				
	1 CDCPI-Functional VAL37+				
	2 CDCPI3-Cross Domain Quality Response VAL42+				
	2 Focus on Incontinence VAL36+				
	2 Incontinence Management VAL32+				
	2 MobWalk Improvement Scale VAL110+				
	2 CMI-Adjusted /BED VAL52+				
	2 Level of OT PT Staffing VAL87+			-0.388	0.007
	2 CDCPI-Ambiance VAL41+				

Appendix K

Item-Specific Preventive and Responsive Analyses

Appendix Table Ka: Relationship Between Chronic Quality Indicators and Preventive Measures
(Note: Shading Indicates Items that are Counter to the Hypothesis)

		NUMBER OF LICENSED NURSING STAFF STOPPED WORKING IN LAST 6 MONTHS	CQI PROTOCOL- BEHAVIORAL FUNCTIONS	CQI PROTOCOL- COMMUNICATION CHANGES	CQI PROTOCOL - BLADDER INCONTINENCE
		AS8A1	AS39E	AS39F	AS39G
BEH1	Behavior symptoms – high & low risk (CHSRA)				
BEH2	Behavior symptoms – high risk (CHSRA)				
BEH3	Behavior symptoms – low risk (CHSRA)				
SOC2	Little or no activity – prevalence (CHSRA)		(.057) -.15	(.062) -.15	(.008) -.21
CAT2	Prevalence of indwelling catheter (CHSRA)				
CNT1	Bladder/bowel incontinence prevalence –high & low risk (CHSRA)		(.048) -.16	(.042) -.16	
CNT5	Bladder or bowel incontinence prevalence – high risk (CHSRA)		(.021) -.33		
CNT6	Bladder or bowel continence prevalence – low risk (CHSRA)		(.023) -.20		
CNT4	UTI -- Prevalence (CHSRA)	(.072) .14	(.089) -.13		
FAL1	Falls -- prevalence (LTCQ)				
INFX	Infections -- prevalence (MegaQI)	(.035) .17			
NUT1	Feeding tubes- - prevalence (Ramsey)				
BMIX	Low BMI -- prevalence (MegaQI)				
WGT1	Weight loss -- prevalence (LTCQ)				
PAIX	Inadequate pain management (MegaQI)	(.056) .15			
PRU1	Pressure ulcers -- prevalence – high & low (CHSRA)				
BURX	Burns, skin tears or cuts --- prevalence (MegaQI)	(.056) .15			
RES1	Physical restraints used daily (CHSRA)				(.028) .16
DRG1	Prevalence of antipsychotic use – high & low risk (CHSRA)				
DRG2	Prevalence of antipsychotic use – high risk (CHSRA)				
DRG3	Prevalence of antipsychotic use – low risk (CHSRA)				
ADL1	Late loss ADL worsening – incidence (CHSRA)		(.042) -.16	(.027) -.18	(.070) -.15
ADL2	ADL worsening -- incidence (MegaQI)		(.017) -.20	(.000) -.29	(.028) -.18
ADL3	ADL improvement -- incidence (MegaQI)		(.039) -.24	(.089) -.20	
MOB1	Locomotion worsening – incidence (LTCQ)		(.075) -.15		(.056) -.16
WALX	Improvement in walking – incidence (MegaQI)		(.089) .15	(.068) .17	(.034) .19
COG1	Cognition worsening – incidence (LTCQ)		(.064) -.15	(.020) -.19	
COM1	Worsening communication – incidence (LTCQ)				
DELX	Delirium – incidence (MegaQI)				(.003) -.24
BEH4	Worsening behavior – incidence (LTCQ)				
MOD3	Depressed/Anxious mood worsening – incidence (LTCQ)				
CAT1	New insertion of indwelling catheter –				

Appendix Table Ka: Relationship Between Chronic Quality Indicators and Preventive Measures
(Note: Shading Indicates Items that are Counter to the Hypothesis)

		NUMBER OF LICENSED NURSING STAFF STOPPED WORKING IN LAST 6 MONTHS	CQI PROTOCOL- BEHAVIORAL FUNCTIONS	CQI PROTOCOL- COMMUNICATION CHANGES	CQI PROTOCOL - BLADDER INCONTINENCE
		AS8A1	AS39E	AS39F	AS39G
	incidence (LTCQ)				
CNT2	Worsening bowel continence -- incidence (LTCQ)				
CNT3	Worsening bladder continence -- incidence (LTCQ)		(.044) -.18	(.044) -.18	
PAN1	Pain worsening – incidence (LTCQ)		(.066) -.15	(.040) -.16	(.078) -.14
PRU4	Worsening pressure ulcers – incidence (LTCQ)				
ADLX	Restraints (physical) used daily – prevalence (CHSRA)				

Appendix Table Ka: Relationship Between Chronic Quality Indicators and Preventive Measures
(Note: Shading Indicates Items that are Counter to the Hypothesis)

		STANDARD ASSESSMENT TOOLS TO ROUTINELY ASSESS DEPRESSION, MOODS AND ANXIETY	STANDARD ASSESSMENT TOOLS TO ROUTINELY ASSESS DELIRIUM	STANDARD ASSESSMENT TOOLS TO ROUTINELY ASSESS BLADDER CONTINENCE	CONTINUING EDUCATION FOR LICENSED NURSING STAFF IN BEHAVIORAL FUNCTION
		AS28BB3	AS28CB3	AS28DB3	AS28EB3
BEH1	Behavior symptoms – high & low risk (CHSRA)				(.088) -.16
BEH2	Behavior symptoms – high risk (CHSRA)				
BEH3	Behavior symptoms – low risk (CHSRA)				
SOC2	Little or no activity – prevalence (CHSRA)				
CAT2	Prevalence of indwelling catheter (CHSRA)				
CNT1	Bladder/bowel incontinence prevalence –high & low risk (CHSRA)				
CNT5	Bladder or bowel incontinence prevalence – high risk (CHSRA)				
CNT6	Bladder or bowel continence prevalence – low risk (CHSRA)				
CNT4	UTI -- Prevalence (CHSRA)				
FAL1	Falls -- prevalence (LTCQ)		(.079) -.20	(.011) -.22	
INFX	Infections -- prevalence (MegaQI)				
NUT1	Feeding tubes- - prevalence (Ramsey)			(.054) -.17	
BMIX	Low BMI -- prevalence (MegaQI)			(.069) .16	
WGT1	Weight loss -- prevalence (LTCQ)				
PAIX	Inadequate pain management (MegaQI)				
PRU1	Pressure ulcers -- prevalence – high & low (CHSRA)		(.093) -.18		
BURX	Burns, skin tears or cuts --- prevalence (MegaQI)				
RES1	Physical restraints used daily (CHSRA)	(.023) .19	(.019) .23	(.000) .33	
DRG1	Prevalence of antipsychotic use – high & low risk (CHSRA)				
DRG2	Prevalence of antipsychotic use – high risk (CHSRA)				
DRG3	Prevalence of antipsychotic use – low risk (CHSRA)				
ADL1	Late loss ADL worsening – incidence (CHSRA)	(.022) -.21	(.067) -.21		
ADL2	ADL worsening -- incidence (MegaQI)				
ADL3	ADL improvement -- incidence (MegaQI)				
MOB1	Locomotion worsening – incidence (LTCQ)	(.005) -.27	(.013) -.29		(.003) -.29
WALX	Improvement in walking – incidence (MegaQI)	(.005) .29	(.012) .32		(.008) .28
COG1	Cognition worsening – incidence (LTCQ)				
COM1	Worsening communication – incidence (LTCQ)				
DELX	Delirium – incidence (MegaQI)				
BEH4	Worsening behavior – incidence (LTCQ)				
MOD3	Depressed/Anxious mood worsening – incidence (LTCQ)				
CAT1	New insertion of indwelling catheter – incidence (LTCQ)	(.076) .16			(.025) .21
CNT2	Worsening bowel continence -- incidence (LTCQ)				
CNT3	Worsening bladder continence -- incidence (LTCQ)	(.066) -.19			

Appendix Table Ka: Relationship Between Chronic Quality Indicators and Preventive Measures
(Note: Shading Indicates Items that are Counter to the Hypothesis)

		STANDARD ASSESSMENT TOOLS TO ROUTINELY ASSESS DEPRESSION, MOODS AND ANXIETY	STANDARD ASSESSMENT TOOLS TO ROUTINELY ASSESS DELIRIUM	STANDARD ASSESSMENT TOOLS TO ROUTINELY ASSESS BLADDER CONTINENCE	CONTINUING EDUCATION FOR LICENSED NURSING STAFF IN BEHAVIORAL FUNCTION
		AS28BB3	AS28CB3	AS28DB3	AS28EB3
PAN1	Pain worsening – incidence (LTCQ)				
PRU4	Worsening pressure ulcers – incidence (LTCQ)				
ADLX	Restraints (physical) used daily – prevalence (CHSRA)				

Appendix Table Ka: Relationship Between Chronic Quality Indicators and Preventive Measures
(Note: Shading Indicates Items that are Counter to the Hypothesis)

		STANDARD ASSESSMENT TOOLS TO ROUTINELY ASSESS COMMUNICATION CHANGE	STANDARD ASSESSMENT TOOLS TO ROUTINELY ASSESS PAIN	RESTRAINT FREE MANAGEMENT DIRECTIVE IN FACILITY	CONTINUING EDUCATION FOR CNAS IN DELIRIUM, DEPRESSION, MOOD, ANXIETY
		AS28FB3	AS28HB3	AS34	AS26AA
BEH1	Behavior symptoms – high & low risk (CHSRA)				
BEH2	Behavior symptoms – high risk (CHSRA)				
BEH3	Behavior symptoms – low risk (CHSRA)				
SOC2	Little or no activity – prevalence (CHSRA)				
CAT2	Prevalence of indwelling catheter (CHSRA)		(.087) .15		
CNT1	Bladder/bowel incontinence prevalence –high & low risk (CHSRA)			(.000) -.30	(.059) .15
CNT5	Bladder or bowel incontinence prevalence – high risk (CHSRA)				
CNT6	Bladder or bowel continence prevalence – low risk (CHSRA)			(.002) -.26	(.013) .21
CNT4	UTI -- Prevalence (CHSRA)				(.055) .15
FAL1	Falls -- prevalence (LTCQ)		(.058) -.16		
INFX	Infections -- prevalence (MegaQI)				
NUT1	Feeding tubes- - prevalence (Ramsey)				
BMIX	Low BMI -- prevalence (MegaQI)			(.046) -.16	
WGT1	Weight loss -- prevalence (LTCQ)				
PAIX	Inadequate pain management (MegaQI)	(.089) .18			
PRU1	Pressure ulcers -- prevalence – high & low (CHSRA)				
BURX	Burns, skin tears or cuts --- prevalence (MegaQI)				
RES1	Physical restraints used daily (CHSRA)	(.020) .22	(.002) .23	(.000) -.28	
DRG1	Prevalence of antipsychotic use – high & low risk (CHSRA)			(.014) -.20	(.073) -.14
DRG2	Prevalence of antipsychotic use – high risk (CHSRA)				
DRG3	Prevalence of antipsychotic use – low risk (CHSRA)				
ADL1	Late loss ADL worsening – incidence (CHSRA)	(.003) -.31	(.020) -.20		
ADL2	ADL worsening -- incidence (MegaQI)	(.044) -.22	(.068) -.16		
ADL3	ADL improvement -- incidence (MegaQI)				(.088) -.20
MOB1	Locomotion worsening – incidence (LTCQ)	(.007) -.30	(.002) -.28		
WALX	Improvement in walking – incidence (MegaQI)	(.090) .20	(.009) .26	(.009) .23	
COG1	Cognition worsening – incidence (LTCQ)	(.046) -.21			(.043) -.16
COM1	Worsening communication – incidence (LTCQ)				(.054) -.15
DELX	Delirium – incidence (MegaQI)				(.066) -.15
BEH4	Worsening behavior – incidence (LTCQ)				
MOD3	Depressed/Anxious mood worsening – incidence (LTCQ)				
CAT1	New insertion of indwelling catheter – incidence (LTCQ)				
CNT2	Worsening bowel continence — incidence				(.072) -.17

Appendix Table Ka: Relationship Between Chronic Quality Indicators and Preventive Measures
(Note: Shading Indicates Items that are Counter to the Hypothesis)

		STANDARD ASSESSMENT TOOLS TO ROUTINELY ASSESS COMMUNICATION CHANGE	STANDARD ASSESSMENT TOOLS TO ROUTINELY ASSESS PAIN	RESTRAINT FREE MANAGEMENT DIRECTIVE IN FACILITY	CONTINUING EDUCATION FOR CNAS IN DELIRIUM, DEPRESSION, MOOD, ANXIETY
		AS28FB3	AS28HB3	AS34	AS26AA
	(LTCQ)				
CNT3	Worsening bladder continence -- incidence (LTCQ)				(.013) -.22
PAN1	Pain worsening – incidence (LTCQ)				
PRU4	Worsening pressure ulcers – incidence (LTCQ)			(.063) .16	
ADLX	Restraints (physical) used daily – prevalence (CHSRA)				

Appendix Table Ka: Relationship Between Chronic Quality Indicators and Preventive Measures
(Note: Shading Indicates Items that are Counter to the Hypothesis)

		CONTINUING EDUCATION FOR CNAS IN BEHAVIOR FUNCTION	CONTINUING EDUCATION CLASSES FOR LICENSED NURSING STAFF IN BEHAVIORAL FUNCTION	CARE PLAN MEETINGS SCHEDULED INTO CNAS WORKDAY	WEEKLY VERBAL REPORTS FROM CNAS ON COMMUNICATION CHANGES
		AS26GA	AS26GB	AS11A	AS27D2
BEH1	Behavior symptoms – high & low risk (CHSRA)				
BEH2	Behavior symptoms – high risk (CHSRA)				
BEH3	Behavior symptoms – low risk (CHSRA)				
SOC2	Little or no activity – prevalence (CHSRA)		(.035) -.17		
CAT2	Prevalence of indwelling catheter (CHSRA)				
CNT1	Bladder/bowel incontinence prevalence –high & low risk (CHSRA)				
CNT5	Bladder or bowel incontinence prevalence – high risk (CHSRA)				
CNT6	Bladder or bowel continence prevalence – low risk (CHSRA)	(.080) .15			
CNT4	UTI -- Prevalence (CHSRA)	(.064) .15			
FAL1	Falls -- prevalence (LTCQ)				(.047) -.16
INFX	Infections -- prevalence (MegaQI)				
NUT1	Feeding tubes- - prevalence (Ramsey)	(.060) .15		(.088) .14	
BMIX	Low BMI -- prevalence (MegaQI)	(.059) -.15	(.042) -.17		
WGT1	Weight loss -- prevalence (LTCQ)				
PAIX	Inadequate pain management (MegaQI)	(.098) -.13		(.048) .16	
PRU1	Pressure ulcers -- prevalence – high & low (CHSRA)				
BURX	Burns, skin tears or cuts --- prevalence (MegaQI)				
RES1	Physical restraints used daily (CHSRA)		(.065) .13		(.000) .25
DRG1	Prevalence of antipsychotic use – high & low risk (CHSRA)			(.086) -.14	
DRG2	Prevalence of antipsychotic use – high risk (CHSRA)				
DRG3	Prevalence of antipsychotic use – low risk (CHSRA)				
ADL1	Late loss ADL worsening – incidence (CHSRA)				
ADL2	ADL worsening -- incidence (MegaQI)				
ADL3	ADL improvement -- incidence (MegaQI)			(.030) .25	(.060) -.22
MOB1	Locomotion worsening – incidence (LTCQ)				
WALX	Improvement in walking – incidence (MegaQI)				
COG1	Cognition worsening – incidence (LTCQ)			(.094) .14	
COM1	Worsening communication – incidence (LTCQ)			(.052) .16	
DELX	Delirium – incidence (MegaQI)	(.018) -.19	(.039) -.17		(.040) -.16
BEH4	Worsening behavior – incidence (LTCQ)			(.036) .17	
MOD3	Depressed/Anxious mood worsening – incidence (LTCQ)				
CAT1	New insertion of indwelling catheter – incidence (LTCQ)	(.604) -.04			(.041) -.16
CNT2	Worsening bowel continence -- incidence				

Appendix Table Ka: Relationship Between Chronic Quality Indicators and Preventive Measures
(Note: Shading Indicates Items that are Counter to the Hypothesis)

		CONTINUING EDUCATION FOR CNAS IN BEHAVIOR FUNCTION	CONTINUING EDUCATION CLASSES FOR LICENSED NURSING STAFF IN BEHAVIORAL FUNCTION	CARE PLAN MEETINGS SCHEDULED INTO CNAS WORKDAY	WEEKLY VERBAL REPORTS FROM CNAS ON COMMUNICATION CHANGES
		AS26GA	AS26GB	AS11A	AS27D2
	(LTCQ)				
CNT3	Worsening bladder continence -- incidence (LTCQ)			(.081) .16	(.099) -.15
PAN1	Pain worsening – incidence (LTCQ)			(.002) .24	
PRU4	Worsening pressure ulcers – incidence (LTCQ)			(.059) .16	
ADLX	Restraints (physical) used daily – prevalence (CHSRA)				

Appendix Table Ka: Relationship Between Chronic Quality Indicators and Preventive Measures
(Note: Shading Indicates Items that are Counter to the Hypothesis)

		RATIO OF CNAS TO LICENSED NURSES	USES CQI TO CONDUCT AN OVERALL REVIEW AND EVALUATION TO IMPROVE CARE	WHEN SUSPICIOUS AREA OF SKIN – SCHEDULE MORE FREQUENT SKIN EVALUATION	WHEN SUSPICIOUS AREA OF SKIN – SCHEDULE IN DEPTH RISK ASSESSMENT
		cnarat2	AS43D	AS30A	AS30B
BEH1	Behavior symptoms – high & low risk (CHSRA)				
BEH2	Behavior symptoms – high risk (CHSRA)				
BEH3	Behavior symptoms – low risk (CHSRA)				
SOC2	Little or no activity – prevalence (CHSRA)			(.000) -.29	
CAT2	Prevalence of indwelling catheter (CHSRA)	(.000) -.29			
CNT1	Bladder/bowel incontinence prevalence –high & low risk (CHSRA)		(.007) -.21	(.005) -.22	
CNT5	Bladder or bowel incontinence prevalence – high risk (CHSRA)				
CNT6	Bladder or bowel continence prevalence – low risk (CHSRA)		(.024) -.19	(.029) -.19	
CNT4	UTI -- Prevalence (CHSRA)				(.060) -.15
FAL1	Falls -- prevalence (LTCQ)				
INFX	Infections -- prevalence (MegaQI)	(.038) -.17			
NUT1	Feeding tubes- - prevalence (Ramsey)			(.004) -.23	
BMIX	Low BMI -- prevalence (MegaQI)		(.006) -.22	(.082) -.14	
WGT1	Weight loss -- prevalence (LTCQ)				
PAIX	Inadequate pain management (MegaQI)				
PRU1	Pressure ulcers -- prevalence – high & low (CHSRA)			(.006) -.21	
BURX	Burns, skin tears or cuts --- prevalence (MegaQI)				(.008) -.21
RES1	Physical restraints used daily (CHSRA)				
DRG1	Prevalence of antipsychotic use – high & low risk (CHSRA)				
DRG2	Prevalence of antipsychotic use – high risk (CHSRA)				
DRG3	Prevalence of antipsychotic use – low risk (CHSRA)				
ADL1	Late loss ADL worsening – incidence (CHSRA)		(.077) -.14		
ADL2	ADL worsening -- incidence (MegaQI)				
ADL3	ADL improvement -- incidence (MegaQI)				
MOB1	Locomotion worsening – incidence (LTCQ)				
WALX	Improvement in walking – incidence (MegaQI)				
COG1	Cognition worsening – incidence (LTCQ)		(.094) -.13		
COM1	Worsening communication – incidence (LTCQ)				
DELX	Delirium – incidence (MegaQI)				
BEH4	Worsening behavior – incidence (LTCQ)				(.074) -.14
MOD3	Depressed/Anxious mood worsening – incidence (LTCQ)				
CAT1	New insertion of indwelling catheter – incidence				

Appendix Table Ka: Relationship Between Chronic Quality Indicators and Preventive Measures
(Note: Shading Indicates Items that are Counter to the Hypothesis)

		RATIO OF CNAs TO LICENSED NURSES	USES CQI TO CONDUCT AN OVERALL REVIEW AND EVALUATION TO IMPROVE CARE	WHEN SUSPICIOUS AREA OF SKIN – SCHEDULE MORE FREQUENT SKIN EVALUATION	WHEN SUSPICIOUS AREA OF SKIN – SCHEDULE IN DEPTH RISK ASSESSMENT
		cnarat2	AS43D	AS30A	AS30B
	(LTCQ)				
CNT2	Worsening bowel continence — incidence (LTCQ)				
CNT3	Worsening bladder continence -- incidence (LTCQ)				
PAN1	Pain worsening – incidence (LTCQ)				
PRU4	Worsening pressure ulcers – incidence (LTCQ)				
ADLX	Restraints (physical) used daily – prevalence (CHSRA)				

Appendix Table Ka: Relationship Between Chronic Quality Indicators and Preventive Measures
(Note: Shading Indicates Items that are Counter to the Hypothesis)

		PERCENT OF FAMILIES ATTENDING CARE PLAN MEETINGS	INQUIRES OF RESIDENT FAMILIES OR STAFF REASONS FOR COGNITIVE CHANGES	INQUIRIES OF RESIDENT FAMILY OR STAFF FOR CHANGE IN BEHAVIOR	OBSERVES AND IDENTIFIES CHANGES IN EATING, SLEEPING, BOWELS, MOOD, BEHAVIOR, ACTIVITIES
		AS12A	AS18A	AS18C	AS18E
BEH1	Behavior symptoms – high & low risk (CHSRA)	(.000) -.27			
BEH2	Behavior symptoms – high risk (CHSRA)	(.002) -.25			
BEH3	Behavior symptoms – low risk (CHSRA)				
SOC2	Little or no activity – prevalence (CHSRA)		(.028) -.17		
CAT2	Prevalence of indwelling catheter (CHSRA)				
CNT1	Bladder/bowel incontinence prevalence –high & low risk (CHSRA)				
CNT5	Bladder or bowel incontinence prevalence – high risk (CHSRA)			(.039) -.30	
CNT6	Bladder or bowel continence prevalence – low risk (CHSRA)				
CNT4	UTI -- Prevalence (CHSRA)		(.043) -.16	(.075) -.14	
FAL1	Falls -- prevalence (LTCQ)				
INFX	Infections -- prevalence (MegaQI)		(.059) -.15		
NUT1	Feeding tubes- - prevalence (Ramsey)	(.071) -.14			
BMIX	Low BMI -- prevalence (MegaQI)			(.006) -.22	
WGT1	Weight loss -- prevalence (LTCQ)				
PAIX	Inadequate pain management (MegaQI)		(.034) -.17		
PRU1	Pressure ulcers -- prevalence – high & low (CHSRA)				
BURX	Burns, skin tears or cuts --- prevalence (MegaQI)				(.087) -.14
RES1	Physical restraints used daily (CHSRA)	(.002) .22		(.093) -.12	
DRG1	Prevalence of antipsychotic use – high & low risk (CHSRA)		(.093) -.13	(.092) -.13	(.051) -.16
DRG2	Prevalence of antipsychotic use – high risk (CHSRA)				
DRG3	Prevalence of antipsychotic use – low risk (CHSRA)				
ADL1	Late loss ADL worsening – incidence (CHSRA)				
ADL2	ADL worsening -- incidence (MegaQI)			(.003) -.24	
ADL3	ADL improvement -- incidence (MegaQI)			(.019) -.27	
MOB1	Locomotion worsening – incidence (LTCQ)				
WALX	Improvement in walking – incidence (MegaQI)				
COG1	Cognition worsening – incidence (LTCQ)		(.098) -.13	(.043) -.16	
COM1	Worsening communication – incidence (LTCQ)			(.017) -.19	
DELX	Delirium – incidence (MegaQI)		(.008) -.21	(.006) -.22	(.004) -.23
BEH4	Worsening behavior – incidence (LTCQ)				
MOD3	Depressed/Anxious mood worsening – incidence (LTCQ)				
CAT1	New insertion of indwelling catheter – incidence				

Appendix Table Ka: Relationship Between Chronic Quality Indicators and Preventive Measures
(Note: Shading Indicates Items that are Counter to the Hypothesis)

		PERCENT OF FAMILIES ATTENDING CARE PLAN MEETINGS	INQUIRES OF RESIDENT FAMILIES OR STAFF REASONS FOR COGNITIVE CHANGES	INQUIRIES OF RESIDENT FAMILY OR STAFF FOR CHANGE IN BEHAVIOR	OBSERVES AND IDENTIFIES CHANGES IN EATING, SLEEPING, BOWELS, MOOD, BEHAVIOR, ACTIVITIES
		AS12A	AS18A	AS18C	AS18E
	(LTCQ)				
CNT2	Worsening bowel continence -- incidence (LTCQ)				
CNT3	Worsening bladder continence -- incidence (LTCQ)				
PAN1	Pain worsening – incidence (LTCQ)		(.046) -.16		
PRU4	Worsening pressure ulcers – incidence (LTCQ)				
ADLX	Restraints (physical) used daily – prevalence (CHSRA)				

Appendix Table Ka: Relationship Between Chronic Quality Indicators and Preventive Measures
(Note: Shading Indicates Items that are Counter to the Hypothesis)

		RESIDENT ROOMS PERSONALIZED WITH FURNITURE, PICTURES AND OTHER THINGS	WELL- LIGHTED COMMON AREAS	VARIETY OF ACTIVITIES FOR RESIDENTS WITH DIFFERENT CAPABILITIES	RESIDENTS UP AND OUT OF BED
		WAM1	WAM6	WAM11	WAM12
BEH1	Behavior symptoms – high & low risk (CHSRA)				
BEH2	Behavior symptoms – high risk (CHSRA)				
BEH3	Behavior symptoms – low risk (CHSRA)				
SOC2	Little or no activity – prevalence (CHSRA)				
CAT2	Prevalence of indwelling catheter (CHSRA)	(.065) -.15			(.000) -.31
CNT1	Bladder/bowel incontinence prevalence –high & low risk (CHSRA)				(.011) -.20
CNT5	Bladder or bowel incontinence prevalence – high risk (CHSRA)			(.062) -.27	
CNT6	Bladder or bowel continence prevalence – low risk (CHSRA)				
CNT4	UTI -- Prevalence (CHSRA)				(.000) -.37
FAL1	Falls -- prevalence (LTCQ)			(.072) .14	
INFX	Infections -- prevalence (MegaQI)				(.000) -.28
NUT1	Feeding tubes- - prevalence (Ramsey)	(.020) -.19	(.001) -.25		(.002) -.25
BMIX	Low BMI -- prevalence (MegaQI)				
WGT1	Weight loss -- prevalence (LTCQ)			(.004) -.23	
PAIX	Inadequate pain management (MegaQI)				
PRU1	Pressure ulcers -- prevalence – high & low (CHSRA)	(.020) -.18		(.038) -.16	(.000) -.29
BURX	Burns, skin tears or cuts --- prevalence (MegaQI)	(.000) .28			
RES1	Physical restraints used daily (CHSRA)	(.000) .24			
DRG1	Prevalence of antipsychotic use – high & low risk (CHSRA)				
DRG2	Prevalence of antipsychotic use – high risk (CHSRA)				
DRG3	Prevalence of antipsychotic use – low risk (CHSRA)				
ADL1	Late loss ADL worsening – incidence (CHSRA)				(.095) -.13
ADL2	ADL worsening -- incidence (MegaQI)	(.049) -.16	(.071) -.15	(.031) -.18	(.003) -.24
ADL3	ADL improvement -- incidence (MegaQI)				
MOB1	Locomotion worsening – incidence (LTCQ)				
WALX	Improvement in walking – incidence (MegaQI)				
COG1	Cognition worsening – incidence (LTCQ)	(.060) -.15			
COM1	Worsening communication – incidence (LTCQ)				
DELX	Delirium – incidence (MegaQI)				
BEH4	Worsening behavior – incidence (LTCQ)				
MOD3	Depressed/Anxious mood worsening – incidence (LTCQ)	(.039) -.16	(.059) -.15		(.012) -.20
CAT1	New insertion of indwelling catheter – incidence (LTCQ)				(.000) -.28
CNT2	Worsening bowel continence -- incidence (LTCQ)				

Appendix Table Ka: Relationship Between Chronic Quality Indicators and Preventive Measures
(Note: Shading Indicates Items that are Counter to the Hypothesis)

		RESIDENT ROOMS PERSONALIZED WITH FURNITURE, PICTURES AND OTHER THINGS	WELL- LIGHTED COMMON AREAS	VARIETY OF ACTIVITIES FOR RESIDENTS WITH DIFFERENT CAPABILITIES	RESIDENTS UP AND OUT OF BED
		WAM1	WAM6	WAM11	WAM12
CNT3	Worsening bladder continence -- incidence (LTCQ)				
PAN1	Pain worsening – incidence (LTCQ)				(.006) -.22
PRU4	Worsening pressure ulcers – incidence (LTCQ)				
ADLX	Restraints (physical) used daily – prevalence (CHSRA)				

Appendix Table Ka: Relationship Between Chronic Quality Indicators and Preventive Measures
(Note: Shading Indicates Items that are Counter to the Hypothesis)

		RESIDENTS WALKING OR INDEPENDENTLY MOVING ABOUT THE FACILITY	STAFF HELP RESIDENT WITH FOOD AND LIQUIDS	CONTINUING EDUCATION FOR CNAS IN COMMUNICATION CHANGE	
		WAM17	WAM19	AS26FA	
BEH1	Behavior symptoms – high & low risk (CHSRA)				
BEH2	Behavior symptoms – high risk (CHSRA)				
BEH3	Behavior symptoms – low risk (CHSRA)				
SOC2	Little or no activity – prevalence (CHSRA)				
CAT2	Prevalence of indwelling catheter (CHSRA)	(.006) -.22			
CNT1	Bladder/bowel incontinence prevalence –high & low risk (CHSRA)	(.000) -.27			
CNT5	Bladder or bowel incontinence prevalence – high risk (CHSRA)		(.000) -.53		
CNT6	Bladder or bowel continence prevalence – low risk (CHSRA)	(.003) -.25			
CNT4	UTI -- Prevalence (CHSRA)	(.007) -.21			
FAL1	Falls -- prevalence (LTCQ)				
INFX	Infections -- prevalence (MegaQI)				
NUT1	Feeding tubes- - prevalence (Ramsey)	(.000) -.28			
BMIX	Low BMI -- prevalence (MegaQI)		(.000) .28		
WGT1	Weight loss -- prevalence (LTCQ)				
PAIX	Inadequate pain management (MegaQI)	(.081) .14			
PRU1	Pressure ulcers -- prevalence – high & low (CHSRA)	(.000) -.28	(.022) -.18		
BURX	Burns, skin tears or cuts --- prevalence (MegaQI)		(.095) .13		
RES1	Physical restraints used daily (CHSRA)				
DRG1	Prevalence of antipsychotic use – high & low risk (CHSRA)				
DRG2	Prevalence of antipsychotic use – high risk (CHSRA)				
DRG3	Prevalence of antipsychotic use – low risk (CHSRA)	(.021) .20			
ADL1	Late loss ADL worsening – incidence (CHSRA)			(.077) -.14	
ADL2	ADL worsening -- incidence (MegaQI)	(.041) -.17	(.024) -.19		
ADL3	ADL improvement -- incidence (MegaQI)				
MOB1	Locomotion worsening – incidence (LTCQ)				
WALX	Improvement in walking – incidence (MegaQI)				
COG1	Cognition worsening – incidence (LTCQ)				
COM1	Worsening communication – incidence (LTCQ)				
DELX	Delirium – incidence (MegaQI)				
BEH4	Worsening behavior – incidence (LTCQ)				
MOD3	Depressed/Anxious mood worsening – incidence (LTCQ)	(.004) -.23	(.037) -.17		
CAT1	New insertion of indwelling catheter – incidence (LTCQ)	(.025) -.18	(.026) -.18		
CNT2	Worsening bowel continence -- incidence (LTCQ)	(.085) -.16			

Appendix Table Ka: Relationship Between Chronic Quality Indicators and Preventive Measures
(Note: Shading Indicates Items that are Counter to the Hypothesis)

		RESIDENTS WALKING OR INDEPENDENTLY MOVING ABOUT THE FACILITY	STAFF HELP RESIDENT WITH FOOD AND LIQUIDS	CONTINUING EDUCATION FOR CNAs IN COMMUNICATION CHANGE	
		WAM17	WAM19	AS26FA	
CNT3	Worsening bladder continence -- incidence (LTCQ)				
PAN1	Pain worsening – incidence (LTCQ)	(.016) -19	(.076) -14		
PRU4	Worsening pressure ulcers – incidence (LTCQ)			(.020) -20	
ADLX	Restraints (physical) used daily – prevalence (CHSRA)				

Appendix Table Kb: Relationship Between Post Acute Indicators and Preventive Measures
(Note: Shading Indicates Items that are Counter to the Hypothesis)

		RESTORATIVE/REHABILITATIVE AIDE ROUTINELY CONTRIBUTED TO CARE PLAN		RESTORATIVE PROGRAMS IN PLACE- PASSIVE RANGE OF MOTION	
		AS9D		AS21B	
		ALL	TCU	ALL	TCU
DELX	Failure to prevent delirium or reoccurrence of delirium (MegaQI)	(.061) -.14		(.078) -.13	
ADLX	Failure to improve in ADLs (MegaQI)			(.000) .31	
CNTX	Failure to improve bladder continence (MegaQI)				
PAIX	Inadequate pain management (MegaQI)			(.014) -.18	
PRUX	Failure to prevent/improve pressure ulcers (MegaQI)	(.000) -.30		(.000) -.27	
PRSPX	Failure to improve/prevent respiratory problems (MegaQI)				
WALX	Maintenance or improvement in walking (MegaQI) **				

** Reverse Coded

		RESTORATIVE PROGRAMS IN PLACE- ACTIVE RANGE OF MOTION		RESTORATIVE PROGRAMS IN PLACE- AMBULATION/GAIT TRAINING	
		AS21C		AS21D	
		ALL	TCU	ALL	TCU
DELX	Failure to prevent delirium or reoccurrence of delirium (MegaQI)				
ADLX	Failure to improve in ADLs (MegaQI)	(.000) .28		(.001) .25	
CNTX	Failure to improve bladder continence (MegaQI)				
PAIX	Inadequate pain management (MegaQI)	(.048) -.15		(.024) -.17	
PRUX	Failure to prevent/improve pressure ulcers (MegaQI)	(.000) -.27		(.000) -.30	
PRSPX	Failure to improve/prevent respiratory problems (MegaQI)				
WALX	Maintenance or improvement in walking (MegaQI) **				

		CQI PROTOCOL – DEHYDRATION		CQI PROTOCOL – BEHAVIORAL FUNCTION	
		AS39A		AS39E	
		ALL	TCU	ALL	TCU
DELX	Failure to prevent delirium or reoccurrence of delirium (MegaQI)				
ADLX	Failure to improve in ADLs (MegaQI)	(.022) .18			
CNTX	Failure to improve bladder continence (MegaQI)				
PAIX	Inadequate pain management (MegaQI)			(.041) -.15	
PRUX	Failure to prevent/improve pressure ulcers (MegaQI)	(.000) -.31		(.000) -.27	
PRSPX	Failure to improve/prevent respiratory problems (MegaQI)		(.066) -.26		
WALX	Maintenance or improvement in walking (MegaQI) **				

Appendix Table Kb: Relationship Between Post Acute Indicators and Preventive Measures
(Note: Shading Indicates Items that are Counter to the Hypothesis)

		CQI PROTOCOL – COMMUNICATION CHANGE		INQUIRIES OF RESIDENT FAMILY OR STAFF FOR CHANGE IN BEHAVIOR	
		AS39F		AS18C	
		ALL	TCU	ALL	TCU
DELX	Failure to prevent delirium or reoccurrence of delirium (MegaQI)				
ADLX	Failure to improve in ADLs (MegaQI)	(.037) .16		(.098) -.13	
CNTX	Failure to improve bladder continence (MegaQI)	(.019) -.18			
PAIX	Inadequate pain management (MegaQI)				
PRUX	Failure to prevent/improve pressure ulcers (MegaQI)	(.006) -.22			
PRSPX	Failure to improve/prevent respiratory problems (MegaQI)				
WALX	Maintenance or improvement in walking (MegaQI) **				(.053) -.27

		PROPORTION OF RESIDENTS RECEIVING EATING SWALLOWING, MEAL TRAINING		STANDARD ASSESSMENT TOOLS TO ROUTINELY ASSESS DEPRESSION, MOOD, AND ANXIETY	
		AS14CB		AS28BB3	
		ALL	TCU	ALL	TCU
DELX	Failure to prevent delirium or reoccurrence of delirium (MegaQI)	(.066) -.14			
ADLX	Failure to improve in ADLs (MegaQI)				(.043) -.34
CNTX	Failure to improve bladder continence (MegaQI)				
PAIX	Inadequate pain management (MegaQI)	(.096) -.13		(.067) .16	
PRUX	Failure to prevent/improve pressure ulcers (MegaQI)				
PRSPX	Failure to improve/prevent respiratory problems (MegaQI)				
WALX	Maintenance or improvement in walking (MegaQI) **				

		STANDARD ASSESSMENT TOOLS TO ROUTINELY ASSESS DELIRIUM		STANDARD ASSESSMENT TOOLS TO ROUTINELY ASSESS BLADDER INCONTINENCE	
		AS28CB3		AS28DB3	
		ALL	TCU	ALL	TCU
DELX	Failure to prevent delirium or reoccurrence of delirium (MegaQI)				
ADLX	Failure to improve in ADLs (MegaQI)		(.024) -.45	(.099) -.14	(.076) -.28
CNTX	Failure to improve bladder continence (MegaQI)				
PAIX	Inadequate pain management (MegaQI)	(.060) .20			
PRUX	Failure to prevent/improve pressure ulcers (MegaQI)				
PRSPX	Failure to improve/prevent respiratory problems (MegaQI)				
WALX	Maintenance or improvement in walking (MegaQI) **				

Appendix Table Kb: Relationship Between Post Acute Indicators and Preventive Measures
(Note: Shading Indicates Items that are Counter to the Hypothesis)

		STANDARD ASSESSMENT TOOLS TO ROUTINELY ASSESS BEHAVIORAL FUNCTION		STANDARD ASSESSMENT TOOLS TO ROUTINELY ASSESS COMMUNICATIVE CHANGE	
		AS28EB3		AS28FB3	
		ALL	TCU	ALL	TCU
DELX	Failure to prevent delirium or reoccurrence of delirium (MegaQI)				
ADLX	Failure to improve in ADLs (MegaQI)		(.035) - .35	(.095) - .16	(.009) - .43
CNTX	Failure to improve bladder continence (MegaQI)				
PAIX	Inadequate pain management (MegaQI)				
PRUX	Failure to prevent/improve pressure ulcers (MegaQI)				
PRSPX	Failure to improve/prevent respiratory problems (MegaQI)				
WALX	Maintenance or improvement in walking (MegaQI) **				

		STANDARD ASSESSMENT TOOLS TO ROUTINELY ASSESS PAIN		RESTRAINT MANAGEMENT DIRECTIVE IN FACILITY	
		AS28HB3		AS34	
		ALL	TCU	ALL	TCU
DELX	Failure to prevent delirium or reoccurrence of delirium (MegaQI)				
ADLX	Failure to improve in ADLs (MegaQI)		(.047) - .28		(.093) -.23
CNTX	Failure to improve bladder continence (MegaQI)				
PAIX	Inadequate pain management (MegaQI)			(.094) .13	
PRUX	Failure to prevent/improve pressure ulcers (MegaQI)			(.001) .25	
PRSPX	Failure to improve/prevent respiratory problems (MegaQI)				(.031) -.30
WALX	Maintenance or improvement in walking (MegaQI) **				

		HOURS WORKED BY CNAS		CONTINUING EDUCATION FOR CNAS IN DELIRIUM, DEPRESSION, MOOD, ANXIETY	
		AS5CA		AS26AA	
		ALL	TCU	ALL	TCU
DELX	Failure to prevent delirium or reoccurrence of delirium (MegaQI)	(.021) - .17		(.013) -.19	(.032) -.29
ADLX	Failure to improve in ADLs (MegaQI)				
CNTX	Failure to improve bladder continence (MegaQI)			(.068) -.14	
PAIX	Inadequate pain management (MegaQI)	(.020) - .17			
PRUX	Failure to prevent/improve pressure ulcers (MegaQI)	(.000) - .42		(.014) -.19	
PRSPX	Failure to improve/prevent respiratory problems (MegaQI)	(.023) - .17		(.091) -.13	
WALX	Maintenance or improvement in walking (MegaQI) **				

Appendix Table Kb: Relationship Between Post Acute Indicators and Preventive Measures
(Note: Shading Indicates Items that are Counter to the Hypothesis)

		CONTINUING EDUCATION FOR CNAs IN BEHAVIOR FUNCTION		CNA ATTENDS CARE PLAN MEETING	
		AS26GA		AS10	
		ALL	TCU	ALL	TCU
DELX	Failure to prevent delirium or reoccurrence of delirium (MegaQI)	(.007) -.20	(.018) -.32	(.073) -.13	(.075) -.24
ADLX	Failure to improve in ADLs (MegaQI)	(.035) .16			
CNTX	Failure to improve bladder continence (MegaQI)				
PAIX	Inadequate pain management (MegaQI)			(.006) -.20	(.076) -.24
PRUX	Failure to prevent/improve pressure ulcers (MegaQI)	(.006) -.21		(.013) -.19	
PRSPX	Failure to improve/prevent respiratory problems (MegaQI)	(.012) -.19			
WALX	Maintenance or improvement in walking (MegaQI) **			(.086) .13	(.096) .23

		DAILY VERBAL REPORTS FROM CNA ON BEHAVIORAL FUNCTION		DAILY VERBAL REPORTS FROM CNA ON COMMUNICATION CHANGES	
		AS27B		AS27D	
		ALL	TCU	ALL	TCU
DELX	Failure to prevent delirium or reoccurrence of delirium (MegaQI)	(.001) -.24	(.005) -.37		(.007) -.36
ADLX	Failure to improve in ADLs (MegaQI)				
CNTX	Failure to improve bladder continence (MegaQI)	(.075) -.14	(.072) -.25	(.011) -.20	(.041) -.28
PAIX	Inadequate pain management (MegaQI)				
PRUX	Failure to prevent/improve pressure ulcers (MegaQI)				
PRSPX	Failure to improve/prevent respiratory problems (MegaQI)				
WALX	Maintenance or improvement in walking (MegaQI) **				

		EDUCATION FOR LICENSED NURSING STAFF ON BEHAVIORAL FUNCTION		INQUIRE OF RESIDENT, FAMILY, OR STAFF REASONS FOR COGNITIVE CHANGE	
		AS26GB		AS18A	
		ALL	TCU	ALL	TCU
DELX	Failure to prevent delirium or reoccurrence of delirium (MegaQI)	(.049) -.15			
ADLX	Failure to improve in ADLs (MegaQI)				(.059) -.26
CNTX	Failure to improve bladder continence (MegaQI)				(.093) -.23
PAIX	Inadequate pain management (MegaQI)				
PRUX	Failure to prevent/improve pressure ulcers (MegaQI)	(.001) -.25			
PRSPX	Failure to improve/prevent respiratory problems (MegaQI)				
WALX	Maintenance or improvement in walking (MegaQI) **	(.058) .15	(.090) .24		

Appendix Table Kb: Relationship Between Post Acute Indicators and Preventive Measures
(Note: Shading Indicates Items that are Counter to the Hypothesis)

		OBSERVES FOR AND IDENTIFIES CHANGES IN EATING, SLEEPING, BOWELS, MOOD, BEHAVIOR, ACTIVITIES		RESIDENT'S ROOM PERSONALIZED WITH FURNITURE, PICTURES AND OTHER THINGS	
		AS18E		WAM1	
		ALL	TCU	ALL	TCU
DELX	Failure to prevent delirium or reoccurrence of delirium (MegaQI)				
ADLX	Failure to improve in ADLs (MegaQI)			(.000) .31	(.024) .31
CNTX	Failure to improve bladder continence (MegaQI)				
PAIX	Inadequate pain management (MegaQI)			(.002) -.23	
PRUX	Failure to prevent/improve pressure ulcers (MegaQI)			(.000) -.36	
PRSPX	Failure to improve/prevent respiratory problems (MegaQI)	(.021) -.18			
WALX	Maintenance or improvement in walking (MegaQI) **				

		HOMELIKE APPEARANCE OR FEELING			
		WAM9		WAM11	
		ALL	TCU	ALL	TCU
DELX	Failure to prevent delirium or reoccurrence of delirium (MegaQI)				
ADLX	Failure to improve in ADLs (MegaQI)	(.009) .20			
CNTX	Failure to improve bladder continence (MegaQI)				
PAIX	Inadequate pain management (MegaQI)	(.044) -.15		(.006) -.21	(.051) -.27
PRUX	Failure to prevent/improve pressure ulcers (MegaQI)	(.000) -.29			
PRSPX	Failure to improve/prevent respiratory problems (MegaQI)				
WALX	Maintenance or improvement in walking (MegaQI) **				

		RESIDENTS UP AND OUT OF BED		STAFF HELPS RESIDENT WITH FOOD AND FLUIDS	
		WAM12		WAM19	
		ALL	TCU	ALL	TCU
DELX	Failure to prevent delirium or reoccurrence of delirium (MegaQI)		(.053) .26		
ADLX	Failure to improve in ADLs (MegaQI)	(.060) .14		(.029) -.17	
CNTX	Failure to improve bladder continence (MegaQI)				
PAIX	Inadequate pain management (MegaQI)	(.086) -.13			
PRUX	Failure to prevent/improve pressure ulcers (MegaQI)	(.001) -.26			
PRSPX	Failure to improve/prevent respiratory problems (MegaQI)		(.089) .24		
WALX	Maintenance or improvement in walking (MegaQI) **				

Appendix Table Kc. Summary of Relationship Between Chronic Quality Indicators and Responsive Validation Elements

		DOCUMENTATION OF COMPREHENSIVE ASSESSMENTS	ASSESSMENT BY PHYSICIAN	EVIDENCE OF PROBLEM/ISSUE (OTHER THAN CARE PLAN OR MDS)	DOCUMENTATION OF CHANGE IN RESIDENT STATUS
ADL1	ADL Decline (CHSRA)				
ADL2	ADL decline following improvement (MegaQI)				
ADL3	ADL improvement in residents with capacity (MegaQI)				
MOB1	Locomotion worsening (LTCQ)		(.092) .14		
WALX	Maintenance or improvement in walking (MegaQI)				
FAL1	Fall prevalence (LTCQ)				(.000) .28
COG1	Cognition worsening (LTCQ)	(.065) .15			(.003) .23
COM1	Worsening communication (LTCQ)			(.026) .18	(.007) .21
DELX	Failure to prevent delirium or reoccurrence of delirium (MegaQI)				
BEH1	Behavioral symptoms – high & low risk (CHSRA)	(.007) .22	(.002) .24		(.000) .29
BEH2	Behavioral symptoms – high risk (CHSRA)	(.053) .15	(.007) .21	(.001) .27	
BEH3	Behavioral symptoms – low risk (CHSRA)				
BEH4	Worsening behavioral Symptoms (LTCQ)				
MOD3	Depressed/Anxious mood worsening (LTCQ)				
SOC2	Little or no activity – prevalence (CHSRA)			(.080) .14	
CAT1	New insertion of indwelling catheter (LTCQ)	(.033) .17	(.040) .16	(.038) .16	(.044) .16
CAT2	Prevalence of indwelling catheter (CHSRA)	(.000) .56	(.000) .42	(.000) .59	(.034) .17
CNT1	Bladder incontinence (CHSRA)			(.000) .29	
CNT1	Bowel incontinence (CHSRA)			(.000) .43	
CNT2	Worsening bowel continence (LTCQ)			(.002) .26	
CNT3	Worsening bladder Continence (LTCQ)			(.000) .34	(.044) .16
CNT4	Prevalence of urinary tract infections (CHSRA)	(.006) .22	(.003) .23	(.000) .28	(.004) .23
CNT5	Bladder incontinence – High risk (CHSRA)				
CNT5	Bowel incontinence – High risk (CHSRA)				(.055) -.21
CNT6	Bladder incontinence – Low risk (CHSRA)			(.000) .29	
CNT6	Bowel incontinence – Low risk (CHSRA)			(.000) .32	
INFX	Infections prevalence (MegaQI)	(.037) .16	(.059) .15	(.007) .21	(.004) .23
NUT1	Prevalence of feeding tubes (Ramsey)	(.000) .29	(.035) .17	(.000) .34	(.016) .19
BM1X	Low body mass index (BMI+) prevalence (MegaQI)	(.061) -.15			
WGT1	Weight loss prevalence (LTCQ)				
PAIX	Inadequate pain management (MegaQI)	(.013) -.20	(.024) .18	(.038) .16	
PAN1	Pain worsening (LTCQ)	(.012) .20			
PRU1	Severe ulcer prevalence – high & low (CHSRA)	(.094) .13	(.004) .23	(.004) .22	(.003) .24
PRU4	Worsening pressure ulcers (LTCQ)				
BURX	Burns, skin tears or cuts prevalence (MegaQI)			(.091) .13	(.003) .23
RES1	Physical restraints used daily (CHSRA)	(.000) .27		(.000) .30	(.002) .22
DRG1	Prevalence of antipsychotic use – high & low risk (CHSRA)	(.003) .24	(.005) .22	(.000) .32	
DRG2	Prevalence of antipsychotic use – high			(.057) .28	

**Appendix Table Kc. Summary of Relationship Between Chronic Quality Indicators
and Responsive Validation Elements**

	risk (CHSRA)				
DRG3	Prevalence of antipsychotic use – low risk (CHSRA)	(.020) .19	(.016) .19	(.000) .28	

Appendix Table Kc. Summary of Relationship Between Chronic Quality Indicators and Responsive Validation Elements

		DOCUMENTATION CHANGE EVALUATED WITHIN 72 HOURS	PHYSICIAN NOTIFIED OF DECLINE IN STATUS	THERAPIES NOTIFIED OF CHANGE IN STATUS	REFERRAL ORDER/CONSULT WITH SPECIALIST
ADL1	ADL Decline (CHSRA)				(.002) .24
ADL2	ADL decline following improvement (MegaQI)				(.000) .28
ADL3	ADL improvement in residents with capacity (MegaQI)				
MOB1	Locomotion worsening (LTCQ)			(.046) -.16	
WALX	Maintenance or improvement in walking (MegaQI)				
FAL1	Fall prevalence (LTCQ)	(.002) .24	(.000) .28		
COG1	Cognition worsening (LTCQ)	(.062) .15		(.044) .16	(.044) .16
COM1	Worsening communication (LTCQ)			(.077) .14	(.020) .18
DELX	Failure to prevent delirium or reoccurrence of delirium (MegaQI)				
BEH1	Behavioral symptoms – high & low risk (CHSRA)				
BEH2	Behavioral symptoms – high risk (CHSRA)				
BEH3	Behavioral symptoms – low risk (CHSRA)				
BEH4	Worsening behavioral Symptoms (LTCQ)				
MOD3	Depressed/Anxious mood worsening (LTCQ)		(.008) -.21		
SOC2	Little or no activity – prevalence (CHSRA)				
CAT1	New insertion of indwelling catheter (LTCQ)	(.034) .17	(.040) .16		
CAT2	Prevalence of indwelling catheter (CHSRA)	(.064) .15			
CNT1	Bladder incontinence (CHSRA)			(.000) .29	
CNT1	Bowel incontinence (CHSRA)				
CNT2	Worsening bowel continence (LTCQ)				
CNT3	Worsening bladder Continence (LTCQ)			(.059) .15	
CNT4	Prevalence of urinary tract infections (CHSRA)	(.060) .15	(.028) .17		
CNT5	Bladder incontinence – High risk (CHSRA)				
CNT5	Bowel incontinence – High risk (CHSRA)				(.047) -.22
CNT6	Bladder incontinence – Low risk (CHSRA)			(.092) .13	
CNT6	Bowel incontinence – Low risk (CHSRA)				
INFX	Infections prevalence (MegaQI)	(.017) .19	(.016) .19		
NUT1	Prevalence of feeding tubes (Ramsey)	(.058) .15			
BM1X	Low body mass index (BMI+) prevalence (MegaQI)				
WGT1	Weight loss prevalence (LTCQ)				
PAIX	Inadequate pain management (MegaQI)				
PAN1	Pain worsening (LTCQ)				(.002) .24
PRU1	Severe ulcer prevalence – high & low (CHSRA)	(.011) .20	(.059) .15	(.034) .17	(.000) .28
PRU4	Worsening pressure ulcers (LTCQ)				

**Appendix Table Kc. Summary of Relationship Between Chronic Quality Indicators
and Responsive Validation Elements**

BURX	Burns, skin tears or cuts prevalence (MegaQI)	(.006) .22	(.000) .29	(.033) .17	
RES1	Physical restraints used daily (CHSRA)	(.004) .20	(.000) .28		
DRG1	Prevalence of antipsychotic use – high & low risk (CHSRA)			(.080) - .14	
DRG2	Prevalence of antipsychotic use – high risk (CHSRA)				
DRG3	Prevalence of antipsychotic use – low risk (CHSRA)				

Appendix Table Kc. Summary of Relationship Between Chronic Quality Indicators and Responsive Validation Elements

		TREATMENT IN PLACE
ADL1	ADL Decline (CHSRA)	
ADL2	ADL decline following improvement (MegaQI)	
ADL3	ADL improvement in residents with capacity (MegaQI)	
MOB1	Locomotion worsening (LTCQ)	
WALX	Maintenance or improvement in walking (MegaQI)	
FAL1	Fall prevalence (LTCQ)	(.002) .24
COG1	Cognition worsening (LTCQ)	(.047) .16
COM1	Worsening communication (LTCQ)	
DELX	Failure to prevent delirium or reoccurrence of delirium (MegaQI)	
BEH1	Behavioral symptoms – high & low risk (CHSRA)	
BEH2	Behavioral symptoms – high risk (CHSRA)	
BEH3	Behavioral symptoms – low risk (CHSRA)	
BEH4	Worsening behavioral Symptoms (LTCQ)	
MOD3	Depressed/Anxious mood worsening (LTCQ)	
SOC2	Little or no activity – prevalence (CHSRA)	
CAT1	New insertion of indwelling catheter (LTCQ)	
CAT2	Prevalence of indwelling catheter (CHSRA)	(.033) .17
CNT1	Bladder incontinence (CHSRA)	
CNT1	Bowel incontinence (CHSRA)	
CNT2	Worsening bowel continence (LTCQ)	
CNT3	Worsening bladder Continence (LTCQ)	(.068) .15
CNT4	Prevalence of urinary tract infections (CHSRA)	(.011) .20
CNT5	Bladder incontinence – High risk (CHSRA)	
CNT5	Bowel incontinence – High risk (CHSRA)	
CNT6	Bladder incontinence – Low risk (CHSRA)	
CNT6	Bowel incontinence – Low risk (CHSRA)	
INFX	Infections prevalence (MegaQI)	(.014) .19
NUT1	Prevalence of feeding tubes (Ramsey)	(.008) .21
BM1X	Low body mass index (BMI+) prevalence (MegaQI)	
WGT1	Weight loss prevalence (LTCQ)	
PAIX	Inadequate pain management (MegaQI)	
PAN1	Pain worsening (LTCQ)	
PRU1	Severe ulcer prevalence – high & low (CHSRA)	(.001) .25
PRU4	Worsening pressure ulcers (LTCQ)	
BURX	Burns, skin tears or cuts prevalence (MegaQI)	(.003) .24
RES1	Physical restraints used daily (CHSRA)	(.002) .22
DRG1	Prevalence of antipsychotic use – high & low risk (CHSRA)	
DRG2	Prevalence of antipsychotic use – high risk (CHSRA)	
DRG3	Prevalence of antipsychotic use – low risk (CHSRA)	

Appendix Table Kd. Relationship Between Post Acute Quality Indicators and Responsive Validation Elements

		DOCUMENTATION OF COMPREHENSIVE ASSESSMENTS		ASSESSMENT BY PHYSICIAN	
ADL1-PAC	Failure to improve during early post-acute period	(.027) - .17	(.023) - .32	(.005) - .22	
DELX-PAC	Failure to improve and manage delirium (pilot)		(.040) .28		

		EVIDENCE OF PROBLEM/ISSUE (OTHER THAN CARE PLAN OR MDS)		DOCUMENTATION OF CHANGE IN RESIDENT STATUS	
DELX-PAC	Failure to improve and manage delirium (pilot)		(.070) .25		
PAIX-PAC	Inadequate pain management (pilot)			(.093) .13	

		DOCUMENTATION CHANGE EVALUATED WITHIN 72 HOURS		PHYSICIAN NOTIFIED OF DECLINE IN STATUS	
PAIX-PAC	Inadequate pain management (pilot)			(.042) .15	

		THERAPIES NOTIFIED OF CHANGE IN STATUS		REFERRAL ORDER/CONSULT WITH SPECIALIST	
		(.029) - .17			
DELX-PAC	Failure to improve and manage delirium (pilot)			(.093) - .13	
CNTX-PAC	Improve bladder continence	(.061) - .15			
PAIX-PAC	Inadequate pain management (pilot)	(.000) .28	(.046) .27	(.000) .28	(.012) .34

Appendix L

List of Validation Elements Included in Final Multivariate Models, by QI

Appendix L reports the individual data elements (categorized as preventive and responsive) found to be related to each quality indicator. These data elements reflect specific items collected while on-site at sampled nursing facilities, such as Director of Nursing responses to questions regarding staff education or quality improvement activities, items completed by research nurses during medical record review (e.g., evidence in the medical record of assessment for a given clinical condition, other than MDS assessment), or items gathered during the facility environmental walk-through. In addition, some data elements reported in this appendix reflect composites of multiple data collection items that were found to be related to a given quality indicator (e.g., validation scale 57 is the sum of four indicators of CNA participation in care planning – see Appendix F for a detailed description of all of these scales). It is important to note that the relationships reviewed in this validation study and reported here reflect care processes that, in the aggregate, if present, appear to lead to “better” quality indicator scores among sampled facilities. Caution should therefore be used in interpreting these findings, as this study was not designed to validate care processes in facilities, but rather the relationship between quality indicator scores and care processes.

Chronic Prevalence

Residents with inappropriate behavior, high & low risk (CHSRA; BEH01)

Preventive

1. [as28eb3]: Continuing education for licensed nursing staff in behavioral decline
2. [as12a]: Percent of families attending care plan meetings
3. [val6]: Licensed Nurse Involved in Care Planning (JNM) VAL6+

Responsive

1. [val65]: Record of MH Prof (RNJ) val65+
2. [eallx7]: Evidence that resident's status changed (all facilities) - behavioral decline
3. [eallx2]: Was the resident seen by a physician (or psychiatrist)? (all facilities)
4. [eallx1]: Documentation in the medical record of a comprehensive assessment (all facilities)

Residents with inappropriate behavior, high risk (CHSRA; BEH02)

Preventive

1. [as12a]: Percent of families attending care plan meetings

Responsive

1. [eallx1]: Documentation in the medical record of a comprehensive assessment (all facilities)
2. [eallx4]: Clear evidence in the record (other than MDS and Care Plan) that the problem was noted as a problem on the chart (all facilities)
3. [eallx2]: Was the resident seen by a physician (or psychiatrist)? (all facilities)

Residents with inappropriate behavior, low risk (CHSRA; BEH03)

Preventive

none

Responsive

none

Residents engaging in little or no activity (CHSRA; SOC02)

Preventive

1. [val39]: CDCPI-Psychosocial (JNM) VAL39+

2. [as18a]: Inquires of resident families or staff reasons for cognitive CHANGES
3. [as26gb]: Continuing Education classes for licensed nursing staff in behavioral
4. [as39f]: CQI Protocol- Communication Changes
5. [as39e]: CQI Protocol – Behavioral Function
6. [as39g]: CQI Protocol -Bladder Incontinence
7. [as30a]: When suspicious area of skin – schedule more frequent skin evaluation
8. [val123]: No Activities Improvement Scale (JNM) val123+

Responsive

1. [uallx4]: Clear evidence in the record (other than MDS and Care Plan) that the area was noted as problem in the chart (all facilities) little or no activities

Residents with indwelling catheters (CHSRA; CAT02)

Preventive

1. [wam12]: Residents up and out of bed
2. [wam17]: Residents walking or independently moving about the facility
3. [val11]: Facility Management Contract Change (YH) VAL11-
4. [wam1]: Resident Rooms personalized with furniture, pictures and other things
5. [cnarat2]: Ratio of CNAs to licensed nurses

Responsive

1. [oallx2]: Was the resident seen by a physician (or psychiatrist)? (all facilities)
2. [oallx7]: Evidence that resident's status changed (all facilities) - indwelling
3. [oallx1]: Documentation in the medical record of a comprehensive assessment (all facilities)
4. [oallx8]: Change was evaluated within 72 hours (all facilities) - indwelling urinary catheter
5. [oallx4]: Clear evidence in the record (other than MDS and Care Plan) that the area was noted as problem in the chart (all facilities) indwelling urinary catheter
6. [oallx12]: Treatment plan is in place to address this issue (all facilities)

Residents who are bowel or bladder incontinent, high & low risk (CHSRA; CNT01)

Preventive

1. [as43d]: Uses CQI to conduct an overall review and evaluation to improve care
2. [wam12]: Residents up and out of bed
3. [as34]: Restraint free management directive in facility
4. [as30a]: When suspicious area of skin – schedule more frequent skin evaluation
5. [as39e]: CQI Protocol – Behavioral Function
6. [as39f]: CQI Protocol- Communication Changes
7. [wam17]: Residents walking or independently moving about the facility

Responsive

1. [pallx4]: Clear evidence in the record (other than MDS and Care Plan) that the area was noted as problem in the chart (all facilities) bladder incontinence
2. [qallx4]: Clear evidence in the record (other than MDS and Care Plan) that the area was noted as problem in the chart (all facilities) bowel incontinence
3. [pallx10]: Therapies were ordered in response to change (all facilities) - bladder incontinence

Residents who are bowel & bladder incontinent, high risk (CHSRA; CNT05)

Preventive

1. [val118]: Bladder Continence Improvement Scale (JNM) val118+
2. [val74]: Focus on Catheter (JNM) VAL74+

3. [val36]: Focus on Incontinence (JNM) VAL36+
4. [wam12]: Residents up and out of bed
5. [as39e]: CQI Protocol – Behavioral Function
6. [wam17]: Residents walking or independently moving about the facility
7. [as18c]: Inquiries of resident family or staff for change in behavior
8. [as30b]: When suspicious area of skin – schedule in depth risk assessment

Responsive

1. [qallx11]: Referral or consult ordered in response to change (all facilities)
2. [qallx7]: Evidence that resident's status changed (all facilities) - bowel inc

Residents who are bowel & bladder incontinent, low risk (CHSRA; CNT06)

Preventive

1. [wam17]: Residents walking or independently moving about the facility
2. [as34]: Restraint free management directive in facility
3. [as39e]: CQI Protocol – Behavioral Function
4. [as30a]: When suspicious area of skin – schedule more frequent skin evaluation
5. [as43d]: Uses CQI to conduct an overall review and evaluation to improve care

Responsive

1. [pallx10]: Therapies were ordered in response to change (all facilities) - bladder incontinence
2. [qallx4]: Clear evidence in the record (other than MDS and Care Plan) that the area was noted as problem in the chart (all facilities) bladder incontinence
3. [pallx4]: Clear evidence in the record (other than MDS and Care Plan) that the area was noted as problem in the chart (all facilities) bowel incontinence

Residents with a urinary tract infection (CHSRA; CNT04)

Preventive

1. [as30b]: When suspicious area of skin – schedule in depth risk assessment
2. [as39e]: CQI Protocol – Behavioral Function
3. [wam17]: Residents walking or independently moving about the facility
4. [as18c]: Inquiries of resident family or staff for change in behavior
5. [wam12]: Residents up and out of bed
6. [val11]: Facility Management Contract Change (YH) VAL11-
7. [val55]: Licensed Staff turnover last 6mo (%,Deciles)(VM) VAL55-

Responsive

1. [rallx9]: Physician was notified of change (all facilities) - infections
2. [rallx12]: Treatment plan is in place to address this issue (all facilities)
3. [rallx4]: Clear evidence in the record (other than MDS and Care Plan) that the area is noted as problem in the chart (all facilities) - Infections
4. [rallx2]: Was the resident seen by a physician (or psychiatrist)? (all facilities)
5. [val164]: INF Change (based on val46) (VM) val164+
6. [rallx7]: Evidence that resident's status changed (all facilities) - infection
7. [rallx1]: Documentation in the medical record of a comprehensive assessment (all facilities)
8. [rallx8]: Change was evaluated within 72 hours (all facilities) - infections

Residents who have fallen (LTCQ; FAL01)

Preventive

1. [as27d2]: Weekly verbal reports from CNAs on communication changes

2. [as28cb3]: Standard assessment tools to routinely assess delirium
3. [as28hb3]: Standard assessment tools to routinely assess pain
4. [as28db3]: Standard assessment tools to routinely assess bladder continence

Responsive

1. [val17]: Formal Communication (BERG) VAL17+
2. [iallx7]: Evidence that resident's status changed (all facilities) - falls
3. [val156]: FAL Change (based on val46) (VM) val156+
4. [val5]: Communication of Falls (BERG) VAL5+

Residents with infections (MEGAQI; INF0X)

Preventive

1. [as8a1]: Number of Licensed Nursing Staff stopped working in last 6 months
2. [as18a]: Inquires of resident families or staff reasons for cognitive CHANGES
3. [cnarat2]: Ratio of CNAs to licensed nurses
4. [val11]: Facility Management Contract Change (YH) VAL11-
5. [wam12]: Residents up and out of bed
6. [val55]: Licensed Staff turnover last 6mo (%,Deciles)(VM) VAL55-

Responsive

1. [val164]: INF Change (based on val46) (VM) val164+
2. [rallx12]: Treatment plan is in place to address this issue (all facilities) infections
3. [rallx1]: Documentation in the medical record of a comprehensive assessment (all facilities) infections
4. [rallx4]: Clear evidence in the record (other than MDS and Care Plan) that the area was noted as problem in the chart (all facilities) infections
5. [rallx7]: Evidence that resident's status changed (all facilities) - infections
6. [rallx8]: Change was evaluated within 72 hours (all facilities) - infections
7. [val173]: Match of Chart & Care Plan (INF) VAL173+
8. [rallx9]: Physician was notified of change (all facilities) - infections
9. [rallx2]: Was the resident seen by a physician (or psychiatrist)? (all facilities) - infections

Residents with a feeding tube (RAMSEY; NUT01)

Preventive

1. [as28db3]: Standard assessment tools to routinely assess bladder continence
2. [wam6]: Well-lighted common areas
3. [as30a]: When suspicious area of skin – schedule more frequent skin evaluation
4. [wam12]: Residents up and out of bed
5. [wam1]: Resident Rooms personalized with furniture, pictures and other things
6. [wam17]: Residents walking or independently moving about the facility
7. [as12a]: Percent of families attending care plan meetings

Responsive

1. [val159]: NUT Change (based on val46) (VM) val159+
2. [mallx2]: Was the resident seen by a physician (or psychiatrist)? (all facilities)
3. [mallx8]: Change was evaluated within 72 hours (all facilities) - feeding tube
4. [mallx4]: Clear evidence in the record (other than MDS and Care Plan) that the area was noted as problem in the chart (all facilities) feeding tube
5. [mallx7]: Evidence that resident's status changed (all facilities) - feeding tube
6. [mallx12]: Treatment plan is in place to address this issue (all facilities)

7. [mallx1]: Documentation in the medical record of a comprehensive assessment (all facilities) - Feeding tube

Residents with a low BMI (MEGAQI; BMI0X)

Preventive

1. [as43d]: Uses CQI to conduct an overall review and evaluation to improve care
2. [as30a]: When suspicious area of skin – schedule more frequent skin evaluation
3. [as26gb]: Continuing Education classes for licensed nursing staff in behavioral
4. [as34]: Restraint free management directive in facility
5. [as18c]: Inquiries of resident family or staff for change in behavior
6. [as26ga]: Continuing education for CNAs in Behavior Function

Responsive

1. [val160]: WGT Change (based on val46) (VM) val160+

Residents who have unexplained weight loss (LTCQ; WGT01)

Preventive

1. [wam11]: Variety of activities for residents with different capabilities
2. [val147]: Total involvement in Care Planning (SC) VAL147+
3. [val57]: CNA Involved in Care Planning (VM, JT) VAL57+

Responsive

none

Residents with pain (MEGAQI; PAI0X)

Preventive

1. [as18a]: Inquires of resident families or staff reasons for cognitive CHANGES
2. [val55]: Licensed Staff turnover last 6mo (%,Deciles)(VM) VAL55-
3. [val80]: Frequency of Comprehensive Assessments (JT) VAL80+
4. [as26ga]: Continuing education for CNAs in Behavior Function
5. [as8a1]: Number of Licensed Nursing Staff stopped working in last 6 months

Responsive

1. [kallx2]: Was the resident seen by a physician (or psychiatrist)? (all facilities)
2. [as11a]: Care plan meetings scheduled into CNAs workday
3. [kallx4]: Clear evidence in the record (other than MDS and Care Plan) that the area was noted as problem in the chart (all facilities) pain
4. [val48]: Match of MDS & Care Plan (MATCHPLAN) (VM) VAL48+

Residents with pressure sores, high & low risk (CHSRA; PRU01)

Preventive

1. [val53]: 5%+ RN, LPN Float, Contract (VM) VAL53-
2. [val42]: CDCPI3-Cross Domain Quality Response (JNM) VAL42+
3. [wam12]: Residents up and out of bed
4. [wam17]: Residents walking or independently moving about the facility
5. [as30a]: When suspicious area of skin – schedule more frequent skin evaluation
6. [wam1]: Resident Rooms personalized with furniture, pictures and other things
7. [wam11]: Variety of activities for residents with different capabilities
8. [val11]: Facility Management Contract Change (YH) VAL11-
9. [wam19]: Staff help resident with food and liquids

10. [as28cb3]: Standard assessment tools to routinely assess delirium

Responsive

1. [val81]: % Residents w/Treatment Plans for Weight Loss (JT) VAL81+
2. [val165]: PRU Change (based on val46) (VM) val165+
3. [sallx1]: Documentation in the medical record of a comprehensive assessment (all facilities) - pressure ulcers
4. [sallx8]: Change was evaluated within 72 hours (all facilities) - pressure ulcers
5. [sallx10]: Therapies were ordered in response to change (all facilities) - pressure ulcers
6. [sallx2]: Was the resident seen by a physician (or psychiatrist)? (all facilities)
7. [sallx7]: Evidence that resident's status changed (all facilities) - pressure ulcers
8. [val174]: Match of Chart & Care Plan (PRU) VAL174+
9. [sallx9]: Physician was notified of change (all facilities) - pressure ulcers
10. [sallx12]: Treatment plan is in place to address this issue (all facilities)
11. [sallx4]: Clear evidence in the record (other than MDS and Care Plan) that the area was noted as problem in the chart (all facilities) pressure ulcers
12. [sallx11]: Referral or consult ordered in response to change (all facilities) - pressure ulcers

Residents with burns, skin tears or cuts (MEGAQI; BUR0X)

Preventive

1. [as30b]: When suspicious area of skin – schedule in depth risk assessment
2. [as8a1]: Number of Licensed Nursing Staff stopped working in last 6 months
3. [val99]: Training & Policy for Suspicious Skin (PILOT) VAL99+
4. [as18e]: Observes and identifies changes in eating, sleeping, bowels, mood, behavior

Responsive

1. [tallx4]: Clear evidence in the record (other than MDS and Care Plan) that the area was noted as problem in the chart (all facilities) burns, abrasions
2. [tallx12]: Treatment plan is in place to address this issue (all facilities) - burns, abrasions
3. [tallx8]: Change was evaluated within 72 hours (all facilities) - burns, abrasions
4. [tallx9]: Physician was notified of change (all facilities) - burns, abrasions
5. [val166]: BUR Change (based on val46) (VM) val166+
6. [tallx7]: Evidence that resident's status changed (all facilities) - burns, abrasions
7. [tallx10]: Therapies were ordered in response to change (all facilities) - burns, abrasions

Residents in physical restraints (CHSRA; RES01)

Preventive

1. [as34]: Restraint free management directive in facility
2. [as18c]: Inquiries of resident family or staff for change in behavior
3. [val16]: Use of QA nurse as38 (YH,VM) VAL16+

Responsive

1. [lallx8]: Change was evaluated within 72 hours (all facilities) - physical restraints
2. [lallx7]: Evidence that resident's status changed (all facilities) - physical restraints
3. [lallx1]: Documentation in the medical record of a comprehensive assessment (all facilities) physical restraints
4. [val75]: Physical Restraints (JA) VAL75+
5. [lallx4]: Clear evidence in the record (other than MDS and Care Plan) that the area was noted as problem in the chart (all facilities) physical restraints
6. [lallx12]: Treatment plan is in place to address this issue (all facilities) physical restraints

7. [lallx9]: Physician was notified of change (all facilities) - physical restraints

Residents on antipsychotics without a diagnosis of psychosis, high & low risk (CHSRA; DRG01)

Preventive

1. [as18a]: Inquires of resident families or staff reasons for cognitive CHANGES
2. [as18c]: Inquiries of resident family or staff for change in behavior
3. [as18e]: Observes and identifies changes in eating, sleeping, bowels, mood, behavior
4. [as34]: Restraint free management directive in facility
5. [as26aa]: Continuing education for CNAs in Delirium, Depression, Mood, Anxiety

Responsive

1. [jallx1]: Documentation in the medical record of a comprehensive assessment (all facilities) anti-psychotic drugs
2. [jallx4]: Clear evidence in the record (other than MDS and Care Plan) that the area was noted as problem in the chart (all facilities) antipsychotic drugs
3. [jallx2]: Was the resident seen by a physician (or psychiatrist)? (all facilities) antipsychotic drugs

Residents on antipsychotics without a diagnosis of psychosis, high risk (CHSRA; DRG02)

Preventive

none

Responsive

1. [jallx4]: Clear evidence in the record (other than MDS and Care Plan) that the area was noted as problem in the chart (all facilities) antipsychotic drugs

Residents on antipsychotics without a diagnosis of psychosis, low risk (CHSRA; DRG03)

Preventive

1. [val8]: Polypharmacy Monitoring (JNM) VAL8+

Responsive

1. [jallx4]: Clear evidence in the record (other than MDS and Care Plan) that the area was noted as problem in the chart (all facilities) antipsychotic drugs
2. [jallx2]: Was the resident seen by a physician (or psychiatrist)? (all facilities) - antipsychotic drugs
3. [jallx1]: Documentation in the medical record of a comprehensive assessment (all facilities) - antipsychotic drugs

CHRONIC INCIDENCE

Residents who had an unexpected loss of function in some basic daily activities (CHSRA; ADL01)

Preventive

1. [val37]: CDCPI-Functional (JNM) VAL37+
2. [as28hb3]: Standard assessment tools to routinely assess pain
3. [as39g]: CQI Protocol -Bladder Incontinence
4. [as28fb3]: Standard assessment tools to routinely assess communication change
5. [as26fa]: Continuing education for CNAs in communication change
6. [val109]: ADL Decline Improvement Scale (JNM) val109+
7. [val10]: General Management Instability JNM) VAL10-
8. [as39e]: CQI Protocol – Behavioral Function
9. [as28cb3]: Standard assessment tools to routinely assess delirium
10. [wam12]: Residents up and out of bed
11. [as39f]: CQI Protocol- Communication Changes
12. [as43d]: Uses CQI to conduct an overall review and evaluation to improve care
13. [as28bb3]: Standard assessment tools to routinely assess depression, moods and

Responsive

1. [gallx11]: Referral or consult ordered in response to change (all facilities)

Residents with worsening function in some basic daily activities (MEGAQI; ADL02)

Preventive

1. [as39e]: CQI Protocol – Behavioral Function
2. [wam17]: Residents walking or independently moving about the facility
3. [val36]: Focus on Incontinence (JNM) VAL36+
4. [as39g]: CQI Protocol -Bladder Incontinence
5. [wam1]: Resident Rooms personalized with furniture, pictures and other things
6. [val72]: Observation of Movement Scale (JS) val72+
7. [wam12]: Residents up and out of bed
8. [as18c]: Inquiries of resident family or staff for change in behavior
9. [val32]: Incontinence Management (JNM) VAL32+
10. [val42]: CDCPI3-Cross Domain Quality Response (JNM) VAL42+
11. [wam11]: Variety of activities for residents with different capabilities
12. [wam6]: Well-lighted common areas
13. [val37]: CDCPI-Functional (JNM) VAL37+
14. [as39f]: CQI Protocol- Communication Changes
15. [as28fb3]: Standard assessment tools to routinely assess communication change
16. [wam19]: Staff help resident with food and liquids
17. [as28hb3]: Standard assessment tools to routinely assess pain

Responsive

1. [fallx11]: Referral or consult ordered in response to change (all facilities)

Residents who have improved in their ability to function (MEGAQI; ADL03)

Preventive

1. [as27d2]: Weekly verbal reports from CNAs on communication changes
2. [as26aa]: Continuing education for CNAs in Delirium, Depression, Mood, Anxiety
3. [as39f]: CQI Protocol- Communication Changes
4. [as18a]: Inquires of resident families or staff reasons for cognitive CHANGES
5. [as39e]: CQI Protocol – Behavioral Function

Responsive

none

Residents who have declined in their ability to locomote (LTCQ; MOB01)

Preventive

1. [as28fb3]: Standard assessment tools to routinely assess communication change
2. [as28bb3]: Standard assessment tools to routinely assess depression, moods and behavior
3. [as39g]: CQI Protocol -Bladder Incontinence
4. [val37]: CDCPI-Functional (JNM) VAL37+
5. [as28eb3]: Continuing education for licensed nursing staff in behavioral functioning
6. [as28hb3]: Standard assessment tools to routinely assess pain
7. [as28cb3]: Standard assessment tools to routinely assess delirium
8. [as39e]: CQI Protocol – Behavioral Function

Responsive

1. [hallx2]: Was the resident seen by a physician (or psychiatrist)? (all facilities)

Residents who walk as well or better than the previous assessment (MEGAQI; WAL0X)

Preventive

1. [as39f]: CQI Protocol- Communication Changes
2. [as34]: Restraint free management directive in facility
3. [as28fb3]: Standard assessment tools to routinely assess communication change
4. [as39e]: CQI Protocol – Behavioral Function
5. [as28cb3]: Standard assessment tools to routinely assess delirium
6. [as39g]: CQI Protocol -Bladder Incontinence
7. [as28hb3]: Standard assessment tools to routinely assess pain
8. [as28eb3]: Continuing education for licensed nursing staff in behavioral functioning
9. [as28bb3]: Standard assessment tools to routinely assess depression, moods

Responsive

none

Residents whose cognitive ability has worsened (LTCQ; COG01)

Preventive

1. [as43d]: Uses CQI to conduct an overall review and evaluation to improve care
2. [val18]: Behavioral Items (YH) VAL18+
3. [as39f]: CQI Protocol- Communication Changes
4. [as26aa]: Continuing education for CNAs in Delirium, Depression, Mood, Anxiety
5. [as18a]: Inquires of resident families or staff reasons for cognitive CHANGES
6. [wam1]: Resident Rooms personalized with furniture, pictures and other things
7. [val103]: Cognitive Improvement Scale (JNM) val103+
8. [as39e]: CQI Protocol – Behavioral Function

9. [as28fb3]: Standard assessment tools to routinely assess communication change
10. [as18c]: Inquiries of resident family or staff for change in behavior
11. [val2]: Monitor Change in Function/Cognitive Care (JNM) VAL2+
12. [val88]: Cognitive Behavioral Care Practices (PILOT) VAL88+

Responsive

1. [aallx1]: Documentation in the medical record of a comprehensive assessment (all facilities) - cognitive impairment
2. [val148]: COG Change (based on val46) (VM) val148+
3. [as11a]: Care plan meetings scheduled into CNAs workday
4. [aallx10]: Therapies were ordered in response to change (all facilities) - cognitive impairment
5. [aallx12]: Treatment plan is in place to address this issue (all facilities) - cognitive impairment
6. [aallx8]: Change was evaluated within 72 hours (all facilities) - cognitive impairment
7. [aallx11]: Referral or consult ordered in response to change (all facilities) cognitive impairment
8. [aallx7]: Evidence that resident's status changed (all facilities) - cognitive impairment

Residents whose ability to communicate has worsened (LTCQ; COM01)

Preventive

1. [as18c]: Inquiries of resident family or staff for change in behavior
2. [val8]: Polypharmacy Monitoring (JNM) VAL8+
3. [as26aa]: Continuing education for CNAs in Delirium, Depression, Mood, Anxiety

Responsive

1. [ballx7]: Evidence that resident's status changed (all facilities) - communication
2. [as11a]: Care plan meetings scheduled into CNAs workday
3. [ballx10]: Therapies were ordered in response to change (all facilities) - com
4. [ballx11]: Referral or consult ordered in response to change (all facilities)
5. [ballx4]: Clear evidence in the record (other than MDS and Care Plan) that the area was noted as problem in the chart (all facilities) Communication

Residents with symptoms of delirium (MEGAQI; DEL0X)

Preventive

1. [as26gb]: Continuing Education classes for licensed nursing staff in behavioral
2. [val88]: Cognitive Behavioral Care Practices (PILOT) VAL88+
3. [val8]: Polypharmacy Monitoring (JNM) VAL8+
4. [as27d2]: Weekly verbal reports from CNAs on communication changes
5. [as26ga]: Continuing education for CNAs in Behavior Function
6. [as18c]: Inquiries of resident family or staff for change in behavior
7. [as18a]: Inquires of resident families or staff reasons for cognitive CHANGES
8. [as39g]: CQI Protocol -Bladder Incontinence
9. [as18e]: Observes and identifies changes in eating, sleeping, bowels, mood, behavior
10. [as26aa]: Continuing education for CNAs in Delirium, Depression, Mood, Anxiety

Responsive

none

Residents whose behavior has worsened (LTCQ; BEH04)

Preventive

1. [as30b]: When suspicious area of skin – schedule in depth risk assessment

Responsive

1. [as11a]: Care plan meetings scheduled into CNAs workday

Residents who have become more depressed or anxious (LTCQ; MOD03)

Preventive

1. [wam1]: Resident Rooms personalized with furniture, pictures and other things
2. [wam6]: Well-lighted common areas
3. [wam19]: Staff help resident with food and liquids
4. [wam12]: Residents up and out of bed
5. [val93]: Activities in NH (PILOT) VAL93+
6. [val151]: MOD Change (based on val46) (VM) val151+
7. [wam17]: Residents walking or independently moving about the facility

Responsive

none

Residents with a new indwelling catheter (LTCQ; CAT01)

Preventive

1. [as26ga]: Continuing education for CNAs in Behavior Function
2. [val49]: Ownership Change as1 (VM) VAL49-
3. [val10]: General Management Instability JNM) VAL10-
4. [as27d2]: Weekly verbal reports from CNAs on communication changes
5. [wam19]: Staff help resident with food and liquids
6. [val11]: Facility Management Contract Change (YH) VAL11-
7. [wam12]: Residents up and out of bed
8. [wam17]: Residents walking or independently moving about the facility

Responsive

1. [oallx1]: Documentation in the medical record of a comprehensive assessment (a
2. [oallx4]: Clear evidence in the record (other than MDS and Care Plan) that the area was noted as problem in the chart (all facilities) indwelling urinary catheter
3. [oallx2]: Was the resident seen by a physician (or psychiatrist)? (all facilities)
4. [oallx9]: Physician was notified of change (all facilities) - indwelling urinary catheter
5. [oallx7]: Evidence that resident's status changed (all facilities) - indwelling
6. [oallx8]: Change was evaluated within 72 hours (all facilities) - indwelling u

Residents with worsening bowel continence (LTCQ; CNT02)

Preventive

1. [wam17]: Residents walking or independently moving about the facility
2. [as26aa]: Continuing education for CNAs in Delirium, Depression, Mood, Anxiety and Behavior
3. [val36]: Focus on Incontinence (JNM) VAL36+

Responsive

1. [qallx4]: Clear evidence in the record (other than MDS and Care Plan) that the area was noted as problem in the chart (all facilities) bowel continence

Residents with worsening bladder continence (LTCQ; CNT03)

Preventive

1. [val74]: Focus on Catheter (JNM) VAL74+
2. [as39e]: CQI Protocol – Behavioral Function
3. [as28bb3]: Standard assessment tools to routinely assess depression, mood
4. [as27d2]: Weekly verbal reports from CNAs on communication changes
5. [as26aa]: Continuing education for CNAs in Delirium, Depression, Mood, Anxiety
6. [as39f]: CQI Protocol- Communication Changes

Responsive

1. [pallx12]: Treatment plan is in place to address this issue (all facilities)
2. [pallx10]: Therapies were ordered in response to change (all facilities) - bladder incontinence
3. [pallx4]: Clear evidence in the record (other than MDS and Care Plan) that the area was noted as problem in the chart (all facilities) bladder continence
4. [pallx7]: Evidence that resident's status changed (all facilities) - bladder incontinence
5. [as11a]: Care plan meetings scheduled into CNAs workday

Residents with worsening pain (LTCQ; PAN01)

Preventive

1. [val47]: Pain Care Planning Specificity (PAINPLAN) (VM) VAL47+
2. [wam17]: Residents walking or independently moving about the facility
3. [as39g]: CQI Protocol -Bladder Incontinence
4. [wam12]: Residents up and out of bed
5. [as39f]: CQI Protocol- Communication Changes
6. [wam19]: Staff help resident with food and liquids
7. [as39e]: CQI Protocol – Behavioral Function
8. [as18a]: Inquires of resident families or staff reasons for cognitive CHANGES
9. [val53]: 5%+ RN, LPN Float, Contract (VM) VAL53-

Responsive

1. [kallx11]: Referral or consult ordered in response to change (all facilities) - pain
2. [kallx1]: Documentation in the medical record of a comprehensive assessment (all facilities) - pain
3. [val45]: Pain Assessment (ASSESS) (VM) VAL45+
4. [val46]: Pain Change (CHNGRESP) (VM) VAL46+
5. [as11a]: Care plan meetings scheduled into CNAs workday

Residents with worsening pressure sores (LTCQ; PRU04)

Preventive

1. [val52]: CMI-Adjusted (RN+LPN FTE)/BED (VM) VAL52+
2. [val40]: CDCPI-Clinical Complications (JNM) VAL40+
3. [as26fa]: Continuing education for CNAs in communication change

Responsive

1. [as11a]: Care plan meetings scheduled into CNAs workday
2. [val174]: Match of Chart & Care Plan (PRU) VAL174+

POST-ACUTE PREVALENCE

Short-stay residents with delirium (MEGAQI; DEL0X)

Preventive

1. [as10]: CNA attends care plan meeting
2. [as26aa]: Continuing education for CNAs in Delirium, Depression, Mood, Anxiety
3. [as26gb]: Continuing Education classes for licensed nursing staff in behavioral
4. [as5ca]: Hours worked by CNAs
5. [val106]: Mood Improvement Scale (JNM) val106+
6. [as26ga]: Continuing education for CNAs in Behavior Function
7. [val67]: Formal Delirium/Depression Approach (RNJ) val67+
8. [as21b]: Restorative programs in place– Passive range of motion
9. [as27b]: Daily verbal reports from CNA on behavioral function
10. [as14cb]: Proportion of residents receiving eating swallowing, meal training

Responsive

1. [val1]: Complex Mental Health Care on Site (JNM) VAL1+
2. [val65]: Record of MH Prof (RNJ) val65+

Short-stay residents with pain (MEGAQI; PAI0X)

Preventive

1. [as5ca]: Hours worked by CNAs
2. [as21b]: Restorative programs in place– Passive range of motion
3. [val58]: Poor Pain Assessment Policies as25h (VM) VAL58-
4. [val80]: Frequency of Comprehensive Assessments (JT) VAL80+
5. [wam9]: Homelike appearance or feeling
6. [val57]: CNA Involved in Care Planning (VM, JT) VAL57+
7. [as21c]: Restorative programs in place- Active range of motion
8. [as21d]: Restorative programs in place- ambulation/gait training
9. [val19]: NP on staff as4 (YH, VM) VAL19+
10. [as14cb]: Proportion of residents receiving eating swallowing, meal training
11. [wam12]: Residents up and out of bed
12. [val49]: Ownership Change as1 (VM) VAL49-
13. [as10]: CNA attends care plan meeting
14. [val10]: General Management Instability JNM) VAL10-
15. [wam11]: Variety of activities for residents with different capabilities
16. [as39e]: CQI Protocol – Behavioral Function
17. [wam1]: Resident Rooms personalized with furniture, pictures and other things

Responsive

1. [val48]: Match of MDS & Care Plan (MATCHPLAN) (VM) VAL48+
2. [kallx11]: Referral or consult ordered in response to change (all facilities) - pain
3. [kallx7]: Evidence that resident's status changed (all facilities) - pain
4. [kallx9]: Physician was notified of change (all facilities) - pain
5. [val46]: Pain Change (CHNGRESP) (VM) VAL46+
6. [kallx10]: Therapies were ordered in response to change (all facilities) - pain

POST-ACUTE INCIDENCE

Short-stay residents who have not improved since admission (MEGAQI; ADL0X)

Preventive

1. [val52]: CMI-Adjusted (RN+LPN FTE)/BED (VM) VAL52+
2. [val83]: PT Asst FTE/100 Beds (BERG) VAL83+
3. [val146]: PT FTE/100 Beds (BERG) VAL146+
4. [as9d]: Restorative/Rehabilitative aide routinely contributed to care plan
5. [as28fb3]: Standard assessment tools to routinely assess communication change
6. [as28db3]: Standard assessment tools to routinely assess bladder continence
7. [wam19]: Staff help resident with food and liquids
8. [as18c]: Inquiries of resident family or staff for change in behavior

Responsive

none

Short-stay residents whose ability to control their bowel or bladder has not improved since admission (MEGAQI; CNT0X)

Preventive

1. [as39f]: CQI Protocol- Communication Changes
2. [as27d]: Daily verbal reports from CNA on communication changes
3. [val119]: Bowel Incontinence Improvement Scale (JNM) val119+
4. [as27b]: Daily verbal reports from CNA on behavioral function
5. [val36]: Focus on Incontinence (JNM) VAL36+
6. [as26aa]: Continuing education for CNAs in Delirium, Depression, Mood, Anxiety

Responsive

none

Short-stay residents whose pressure sores have not gotten better (MEGAQI; PRU0X)

Preventive

1. [val32]: Incontinence Management (JNM) VAL32+
2. [as21c]: Restorative programs in place- Active range of motion
3. [as9d]: Restorative/Rehabilitative aide routinely contributed to care plan
4. [wam1]: Resident Rooms personalized with furniture, pictures and other things
5. [as39a]: CQI Protocol – Dehydration
6. [wam12]: Residents up and out of bed
7. [as39f]: CQI Protocol- Communication Changes
8. [val57]: CNA Involved in Care Planning (VM, JT) VAL57+
9. [as26ga]: Continuing education for CNAs in Behavior Function
10. [as10]: CNA attends care plan meeting
11. [as5ca]: Hours worked by CNAs
12. [val36]: Focus on Incontinence (JNM) VAL36+
13. [as21b]: Restorative programs in place– Passive range of motion
14. [wam9]: Homelike appearance or feeling
15. [as39e]: CQI Protocol – Behavioral Function
16. [as21d]: Restorative programs in place- ambulation/gait training
17. [val121]: Pressure Ulcer Improvement Scale (JNM) val121+
18. [as26aa]: Continuing education for CNAs in Delirium, Depression, Mood, Anxiety
19. [val99]: Training & Policy for Suspicious Skin (PILOT) VAL99+

Responsive
none

Short-stay residents who have developed a respiratory infection or have not gotten better (MEGAQI; RSP0X)

Preventive

1. [as18e]: Observes and identifies changes in eating, sleeping, bowels, mood, behavior
2. [as26ga]: Continuing education for CNAs in Behavior Function
3. [as5ca]: Hours worked by CNAs
4. [as26aa]: Continuing education for CNAs in Delirium, Depression, Mood, Anxiety

Responsive
none

Short-stay residents who walk as well or better on day 14 as on day 5 of their stay (MEGAQI; WAL0X)

Preventive

1. [as26gb]: Continuing Education classes for licensed nursing staff in behavioral symptoms
2. [as10]: CNA attends care plan meeting

Responsive
none

Appendix M

Comparison of PAC QI Validation Results for all Facilities versus TCU Sample Only

Appendix M: Comparison of PAC QI Validation Results for all Facilities versus TCU Sample Only

Quality Indicators with FAP Adjustment ¹	Multiple R, Preventive Elements	Multiple R, Responsive Elements	Multiple R, All Elements	Degree of Validation
Post-Acute FAP Adjusted Quality Indicators ²				
Prevalence				
Percent of short-stay residents with delirium (megaqi; del0x)				
FAP (all facilities)	0.40	0.29	0.53	I
FAP (TCUs)	0.58	0.36	0.62	I
without FAP (all facilities) [†]	0.39	0.18	0.45	I
without FAP (TCUs) [†]	0.53	0.38	0.59	I
Percent of short-stay residents with pain (megaqi; pai0x)				
FAP (all facilities)	0.50	0.39	0.61	I
FAP (TCUs)	0.52	0.36	0.64	I
without FAP (all facilities)	0.55	0.70	0.77	I
without FAP (TCUs)	--	--	--	III
Incidence				
Percent of short-stay residents whose ability to control their bowel or bladder has not improved since admission (megaqi; cnt0x)				
FAP (all facilities)	0.32	--	0.32	II
FAP (TCUs)	0.37	--	0.37	II
without FAP (all facilities)	0.27	--	0.27	III
without FAP (TCUs)	0.29	--	0.29	III
Percent of short-stay residents whose pressure sores have not gotten better (megaqi; pruo0x)				
FAP (all facilities)	0.61	--	0.61	I
FAP (TCUs)	0.12	--	0.12	III
without FAP (all facilities) [†]	0.50	--	0.50	I
without FAP (TCUs) [†]	0.24	--	0.24	III
Percent of short-stay residents who have developed a respiratory infection or have not gotten better (megaqi; rsp0x)				
FAP (all facilities)	0.26	--	0.26	II
FAP (TCUs)	0.42	--	0.42	II
without FAP (all facilities) [†]	0.24	--	0.24	II
without FAP (TCUs) [†]	0.38	--	0.38	II
Percent of short-stay residents who walk as well or better on day 14 as on day 5 of their stay (megaqi; wal0x)				
FAP (all facilities)	0.19	--	0.19	I
FAP (TCUs)	0.48	--	0.48	I
without FAP (all facilities)	--	--	--	III
without FAP (TCUs)	--	--	--	III

1 - This table does not include QIs that do not have a FAP adjustment.

2 - Note – There are TWO sets of values in EACH cell for the POST-ACUTE Quality Indicators. The upper number references ALL facilities for which there was a sufficient sample of post-acute patients on which to calculate the Quality Indicators [maximum N = 166 facilities]. The lower set of numbers reflect estimates for the sub-set of hospital-based TCUs [maximum N = 52 facilities].

† - The non-FAP adjusted form of this QI does include adjustment for resident-level covariates.