Chapter 9

Potential QOL Indicators from On-Site Data Collection

The next chapter described how extant data available from the MDS and from OSCAR were associated with QOL. Utilizing such data to target nursing homes for regulatory attention and to help inform inspection surveys could be an efficient strategy for CMS. As part of the project, we also collected other detailed data about the programs, policies, and staff deployment at each NF with the intent of exploring the possibility of other indicators related to QOL. We refer to these elements as "on-site indicators." An "on-site indicator" could potentially be converted to an off site indicator if CMS were to request that additional data be reported by facilities, either as part of the Census related to the survey and certification inspections or in some other manner.

Because no established methods were available to collect most of the information that we explored as possibly related to QOL, this chapter describes the challenges of the data collection effort in some detail with an emphasis on those variables potentially related to QOL that proved difficult to specify and record. CMS may glean useful information from failures as well as successes in the data collection effort. The chapter also describes relationships between descriptors of the facilities and QOL in those facilities.

Methods

Data Collection

Wave 1. At Wave 1, data were collected through personal visits of the project director to the 40 NFs in the study. During those visits, when possible, she interviewed administrators, directors of nursing (DONs), directors of social services (DSSs), and Activity Directors or their designees, as well as other key figures in a particular facility (e.g., staff developers, chaplains, MDS coordinators). The focus was on the conditions in effect during the time period when the

QOL data were collected from residents. She also gathered archival information about nurse staffing patterns by unit for two week windows contemporaneous with our QOL data collection and three and six months prior to data collection. This information allowed us to extrapolate staffing ratios by shift and by day of the week.

Semi-structured interview guides were used for the interviews with key personnel, supplemented by open-ended questions and extensive note-taking. Part of the objective in this phase was to learn how meaningfully to pose questions about phenomena thought to be relevant to one or more QOL domain. The labor intensive personal interview format was used. Senior personnel (largely the project director) did the data collection because of uncertainty about how best to collect the data, and our goal of reaching some conclusions about the wording of the questions. Telephone follow-up was done to interview individuals who were not available during the site visits or to clarify or round out the information collected on site. We collected archival information when possible, such as activity calendars, mission statements, continuing education schedules, resident and family council records, and care planning conference records.

As the study evolved, we became more aware of sources of possible information and began to ask routinely for materials related to care planning and staff development. We tried to collect such materials retroactively for the facilities visited earlier, but with limited success due to personnel and ownership changes. The semi-structured interview guides are found in Volume 2, Appendices J-M. The strategy involved gathering information from whoever could provide it. In some facilities, DONs provided information that was provided by administrators in other facilities. Similarly, social workers or activities personnel were often interchangeable in the information they could provide. For example, we sought information on topics such as resident participation in facility governance, or quality assurance related to QOL and identified primary

informants (in those examples the social worker and DON, respectively), but ended up receiving the information from a variety of different informants. Appendix N contains a summary sheet on which we entered indicator information related to facility policies and procedures regardless of the identity of the initial informant.

Wave 2. Having conducted the procedures described above in Wave 1, we developed a more streamlined facility-self-report data collection approach for Wave 2, through which we attempted to gather information that Wave 1 suggested could be collected accurately. For this purpose, we used a four-page questionnaire in the 60 Wave 2 facilities. The on-site data collector presented it to the administrator at the beginning of data collection, and was available to answer any questions about it. The form was completed by the administrators or their designees and, for the most part, personally collected by a research interviewer when the team completed the 3 to 5 days of data collection entailed at Wave 2. The form for collection of administrative data is in Volume 2, Appendix R.

Data Elements

Wave 1. The research team undertook a cognitive process of identifying elements of program, policy, and staff deployment that might be relevant to one or more of the QOL domains. We also considered the most likely source(s) for the information and ways the information could be collected. Some of the items deal with the resources that might be available to enhance QOL, whereas others deal with actual practices. For example, we looked at dollars spent on activity budgets per resident, volunteer-to-resident ratios, training of activity personnel, and ownership of a van as resources for activities, but we also looked at the actual scheduling and variety in the activities program. Similarly, we explored the various committee structures for resident participation (a resource), but we also tried to ascertain how well meetings

of resident councils were attended and whether elected officers controlled the agenda (actual practice). We asked about policies related to respecting resident preferences on matters such as bed time, waking times, bathing and showering circumstances, and the like. But recognizing the likelihood of a socially desirable answer to those kinds of questions, we also asked the informants about whether in the last 3 months one or more residents, to their knowledge, went to bed after 10 p.m. or got up after 10 a.m., or had baths or showers more than twice a week.

The facility-level information that we collected fell into broad categories, such as: *organizational information*, including program scale, ownership; vertical and horizontal integration of the organization, and specialization within the organization; *tenure of key leadership personnel* (administrator, DON, DSS, activities director) in their leadership roles and general tenure of employment at any capacity at the facility; *educational qualifications of key personnel*; *quality assurance efforts* (especially as they regarded QOL); *educational programs*, including staff orientation and training (again especially on content related to QOL); *turnover and stability of nursing personnel,* including RNs, LPNs, and CNAs; *organization of nursing services* wages, including working conditions, and incentives for nursing staff, type of nursing leadership positions and specialized aide positions, structure of shifts, use of registries, unit management, and permanent assignment of nursing staff to units and to residents. We also tried to characterize care planning practices, end-of-life planning, and discussions of advance directives; and resident autonomy and resident control in care routines. The questions asked to identify policies for resident control were put to the DON respondents because they largely related to nursing functions.

We tried to identify nurse staff levels (ratio to residents) by shift and day of week and by payroll versus registry or agency for various time windows: 2 weeks during the time of our visit;

3 months earlier, and 6 months earlier. This was designed to allow us to examine patterns on weekends and evening and night shift. To gather this information in real time we used actual staffing sheets on each of the units, which showed whether individuals assigned to the unit did not come to work and were replaced by others, or were reassigned because they were needed elsewhere. We also calculated the ratio of psychosocial personnel to resident s allocation (separately for social work personnel, activities personnel, and spiritual director or pastor).

Other areas covered included dining provisions, activities programs (scope, scale, emphasis, degree of individualization, budgetary and other resources (including van) for activities); religious programming; governance and resident participation; complaint policies; practices around resident personal possessions and their security; resources and practices related to medical care; and resources and practices for rehabilitation or restoration.

We also used the opportunity of these site visits to explore the viability of using a variety of archival sources as unobtrusive indicator information related to QOL. For example, we explored using the visitor sign-in register for information about visits, and the care plan records for information about resident and family attendance at care plan sessions. For the most part, we determined that such logs would not be sources of accurate or reliable information on the phenomenon we were attempting to observe. We also attempted to develop a rate of involuntary intra-facility room transfer (i.e., room changes other than those requested by the resident to secure a single room, a more desired room, or a different roommate). Social workers tend to keep a record of those transfers, but the information proved somewhat difficult to interpret.

We asked about the planned staffing patterns for each unit, but also, as indicated above, we collected detailed information about staffing levels on the individual units, using payroll or actual scheduling sheets. Often the reality of how many people worked a unit differed from the

ideal staffing pattern because of absences without replacements.[1] We attempted to examine continuity of staff on a particular nursing unit by determining what fraction of persons named as serving on the unit at Time 0 were also there at Time 0-3 months and Time 0-6 months.

Wave 2. At Wave 2, we chose data elements that our experience at Wave 1 suggested could be collected accurately by report of administrative staff. Some of our data elements were informed by our observations at Wave 1; for example, we learned about a plethora of different specialized ways of handling food and dining, which we incorporated into the Wave 2 data set. We removed the more subjective data elements (e.g., the items pertaining to resident autonomy on daily routines). Some elements were removed because they had no variation. The Wave 1 experience helped us define other variables we wished to retain, for example, permanent assignment of CNA is one such example.

Analyses

Besides compiling descriptive statistics, the analysis sought to examine the relationship between various indicators and the QOL domains. For this latter purpose, we combined Wave 1 and 2 for those items that were available in both Waves, thereby having a potential of 97 facilities for many variables. We also looked separately at the performance of those items available for Wave 1 only and those available for Wave 2 only. We did univariate analyses of these indicators with and without adjusting the QOL scores by resident characteristics. These procedures yielded a huge number of ANOVAs. In this report, we, therefore, counted how many domains were predicted by each of the potential predictor variables and used the count as a

---

[1]We also had available staffing information as reported in OSCAR on the 2-week window provided at the time of the survey. (We used these OSCAR data as off-site indicators in Chapter 10.) The OSCAR data had several disadvantages: they tend to be based on an idealized estimate of staff rather than actual staff worked as reconciled by payroll and contract information; they are not available at the unit level; they do not permit detail about weekend and evening and night shift staffing ratios; and they were not matched exactly to the time of our data collection.

dependent variable. In the future, we plan to conduct cluster analyses to reduce the on-site

indicator data into a smaller number of topical categories.

Data Collection and Sample

Most, but not all, Wave 1 facilities cooperated with the on-site data collection. In a few

exceptions, a facility refused to have its personnel interviewed, refused or failed to follow

through with providing the detailed staffing data, or both. Two facilities that were very

cooperative simply lacked detailed staffing records going back 3 or 6 months; one was a facility

close to decertification and under new management, and the other was simply disorganized in its

personnel records. (It is possible, of course, that inability to produce contemporaneous or

historical data on staffing should, itself, be a negative indicator.) In Wave 1, the N varied per

item, fluctuating around 35 of the 40 NFs where we had data for each item.

Detailed staffing data by unit for one or more of the 3 desired time periods were collected

from 94 units, representing 35 facilities. One small facility of 49 beds comprised just one unit.

Another facility was unable to separate staff according to its 2 units and was, therefore, treated as

a unit in the analyses. The facility that was close to decertification was divided into units for the

purpose of nurse assignments but these units had little logical physical integrity and the

management was planning to redesign the unit structure to have more functional relationship to

the floor plan and the kinds of residents in each unit.

Three administrators of the 60 Wave 2 administrators failed to complete their questionnaire.

Thus the maximum number of responses available per item if no data were missing for Wave 2

was 57.

Descriptive Findings

Table 9.1 and 9.2 shows the distribution on items gathered at Wave 1 and at Wave 2, and

comments on issues involved in collecting the data to use as indicators.[2] At Wave 1, we collected much more extensive data to determine how feasible various kinds of data collection would be in nursing homes. As the comments indicate, we noted many problems in our efforts to collect consistent, reliable data, even on items that we had expected to be more straightforward. We learned a great deal about the 40 nursing homes in Wave 1, and the more we learned the less confident we felt about the ability to easily collect indicator data tapping QOL. This was particularly a concern because we could not envisage an operational data collection system that would use visits and multiple informants such as we used at Wave 1. We realized that self-reported data would be necessary.

For Wave 2, we consolidated items that had proved amenable to collection at Wave 1 into a self-completed instrument to be filled out by the administrator or his or her designee. Table 9.2 shows the data collected with that form. Although administrators were largely cooperative, later inspection of the data suggests that many of the items were poorly understood without a data collector to provide additional information. We believe some errors are present in the information provided by Wave 2 facilities about tenure of the occupants of key positions (both in the position and in the nursing home) and experience in that particular leadership role in any nursing home. Some respondents also could not calculate CNA retention rates and left them blank, a problem we attribute to their not understanding the item. Because we noted enormous variation in dining practices not formally captured in Wave 1, we surveyed the administrators for those practices, but are unsatisfied that they provided accurate data. A self-completed tool will need more detailed instructions than we provided.

Table 9.3 displays the variables we had available at both Waves 1 and 2 in their consolidated form. Commentaries on data collection relate to the experience collecting these data elements at

---

[2] In this chapter, tables are very long and, therefore, are placed at the end of the chapter.

Wave 1 when we were on site.

We present pairs of identically prepared tables for Wave 1 potential indicators, Wave 2 potential indicators, and the common indicators for both waves. Table 9.4, for example, displays information about statistically significant relationships between QOL domain scores and each indicator variable. The potential N for Wave 1 was 40; the actual N on the table suggests those variables that could not be completely collected. Our N is poor for items concerning staff development because we decided to give it attention after some of the site visits were complete, and, despite attempts, we had difficulty getting the missing data when we were not on site. No marks appear in the columns for the counts of significant relationships when none were identified. Considerable blank space appears in Table 9.4. Ordinarily, more significant relationships appear when we do not adjust the QOL results for gender, age, cognition, and ADL. Table 9.5 presents the data with the actual domains listed and pluses for positive and minuses for negative relationships between the potential indicator and the domains. Looking down the columns, one can see that we found few associations with Meaningful Activity, Enjoyment, or Autonomy,   but found more with Comfort, Privacy, and Spiritual Well-being, which includes items that are rather general. Room changes were associated with several negative QOL domains; unfortunately, room changes were a hard item to complete.

Tables 9.6 and 9.7 present the same information for data unique to the 57 facilities that reported process and structure data at Wave 2. Some of the relationships found significant make little sense, especially those that run in the opposite direction than expected. A facility having restorative nurses' aide, for example, was negatively associated with a number of QOL domains.

Table 9.8 and 9.9 present these data for the indicators we have in common across 97

facilities in Wave 1 and Wave 2. A higher percent of Medicaid residents was associated with

poorer QOL, and the percent of the sample in private rooms was associated with better QOL.

Having 50 or more volunteers was associated with positive QOL. Private non profit ownership

status was also associated with good QOL in 6 domains without adjustment and 7 with

adjustment. Having assisted living and housing programs on campus, tenure of the administrator,

and tenure of the social work director appeared to be promising indicators.

CMS was interested in whether any of the indicator data collected on site would be

correlated with overall excellent or poor QOL on multiple domains. To examine the relationship

between individual putative indicators and an overall QOL score, we created three tiers of

summary QOL scores at the facility level. Using the results previously shown for the 40 Wave 1

facilities in Tables 6.3 and for the 60 Wave 2 facilities in Table 6.8 , we counted the numbers of

standard deviations across all domains for each facility. We, thus, created an arithmetic sum

with positive and negative values. We then arrayed this distribution and created three tiers of

approximately equal size. "High" facilities are those with the best overall QOL scores; "low"

facilities have the poorest overall QOL scores.

Group means were compared using ANOVA. Because of the exploratory nature of this

analysis, we chose a very generous level of statistical significance. Any differences at 0.1 or less

are shown; all those left blank were not significant at even this level.

In sum, there were few significant differences, certainly no more than might be expected by

chance alone. Some observers will be tempted to see some trends that support their hunches, but

overall great caution should be used in interpreting these results. They do not point to

administrative variables that might be used with any confidence in identifying good or bad QOL.

Table 9.1. Frequencies for On-Site Indicators and Comments, Wave 1

Wave 1 Item (Maximum N = 40)	Prevalence	Comments
Field/discipline of activity director ✔ Therapeutic recreation/recreation ✔ Music-related ✔ Art-related ✔ LPN/CNA ✔ Certified Occupational Therapy Aide ✔ Education/Teaching ✔ None—high school only ✔ Other	 21.1% 18.4% 7.9% 15.8% 5.3% 5.3% 23.7% 2.6%	Hard to interpret. Discussions with activities directors show they tailor their programs according to their backgrounds and interests. One of the most vigorous and well-organized activity programs was run by a former teacher. Those approaching the job from an art or music background tend to use those skills. All activities directors had become certified as expected to be an activities director.
Education of other activities personnel ✔ 2 or more have college degrees ✔ 1 other has a college degree ✔ all others have high school only or less	 15% 20% 55%	10% had 1-person departments, so % adds to less than 100%. Some departments tried to complement the director's interests with other staff. Some used part-time high school and college students heavily. Overall, 30% of all activities staff had education relevant to activities (i.e. therapeutic recreation, music, art, OT, adult education.)
Activity director sent for outside training in past year	57%	We had 35% missing on this variable.
Activity department has no dedicated budget	5%	This item referred to budget excluding salary of personnel (e.g., equipment, refreshments, instructors/entertainers).
Activity department has budget but director is not aware of the total sum	17.5%	
Activity department annual budget	Median $4800	27 of the 40 have missing data on this variable. Range among those who replied went from $600 a year to $16,080.
Trips/outings at least monthly	80.2%	87.5% had trips at least quarterly. It was difficult to ascertain what proportion of the residents availed themselves of such opportunities.
Activity department enables resident to pursue own interest beyond the regular programs.	55%	We required an example of this before counting it as a yes.
Activity department is aware of which residents have no visitors and develops compensatory efforts.	35%	Activity department records vary enormously. It would be hard to get consistent data on attendance at activities, enjoyment of activities, efforts to target people without outside stimulation, or records of one-to-one activities. Some activity programs did keep extremely detailed records, beginning with individualized activity assessments, but record formats varied greatly.
Beauty shop opened 3 days or more.	65%	
Beauty shop opened on Thurs, Fri, or Sat	62.5%	
Evidence of house pets (not fish)	52.5%	
Formal Eden alternative participant	17.5%	
Regular animal visitation	70%	Includes places where staff brings their dogs.
At least one resident has brought their <u>own</u> pet (bird, cat, dog)	10%	4 of the 40 NFs permitted this. Many are concerned about behavior problems and territoriality of animals that are owned by a resident rather than trained for group.
A separate admission director is social worker or part of social work department.	5%	
Social worker has access to psychiatrist or psychologist for mental health consultation.	55%	
Therapeutic or support groups for family		Could be led by social worker or leader comes in from community, e.g. Alzheimer's Association. .
Residents actively discouraged from bringing valuables to NF.	77.5%	We saw this as a negative indicator related to QOL.

Table 9.1, cont'd, Item	Prevalence	Comments
Facility policy is to replace lost items after reasonable search.	40%	The social worker is most often in charge of lost property. Another 25% NFs replace items if NF is clearly at fault.
Complaint policy includes visible forms and places to make anonymous complaints.	65%	
# of residents changing room or bed in last two weeks. ✔ none ✔ 1 resident. ✔ 2 to 4 residents ✔ 5 or more ✔ no record maintained/missing	 35.0% 10.0% 7.5% 12.5% 35.0%	The largest # of changes in the 2 week period was 12. Social workers typically dealt with room changes as they relate to roommate disputes, though nurses typically make original roommate assignment. Some social workers kept careful records of all room changes and reasons (involuntary versus requested), but we were missing this information in more than 1/3 of the NFs.
# room changes due to resident request in last 2 weeks. ✔ 0 ✔ 1 ✔ 2-4 ✔ Missing	 30.0% 10.0% 7.5% 52.5%	We saw room changes in general as negative for QOL but room changes because of a resident request as positive responsiveness. The missing data is higher here than for the room changes in general because not all NFs tracked the reason.
Rate of room changes per resident in 2 week period.		We made an effort to introduce a denominator to room changes. We could calculate this for only 20 of the 40 homes. The range was from 0 to 3.
GNP or Physician Assistant in NF 8 hours per week.	50%	This includes GNPs or PAs employed by medical director, an arrangement more frequent than employed by NF.
Highest DON education in nursing: ✔ Hospital based diploma. ✔ AA degree. ✔ BSN ✔ MSN	 20.6% 41.2% 35.3% 2.9%	
ADON employed	55%	
CNA training occurs on-site	41.9%	
25+% of care conferences attended by at least 1resident.	48.1%	48.1% is from an N of 27 homes that had this information. 32.5% of the homes could not provide the record. We calculated this by looking at care conference records for the year and noting whether 1 of the residents on the agenda attended. More than 1 could have attended.
50%+ of care conferences attended by at least 1 family member.	46.4%	The 46.4% is from an N of 28 homes that had the information; 30% could not provide it. We calculated it as for the resident attendance. Some informants pointed out that their family members were so involved with the NF and so well informed about care changes that it was artificial for them to attend the conference. We counted attendance by telephone. Some facilities make great efforts to schedule care conferences so family can attend.
At least 50% time staff developer designated with no other role	52.9%	Other arrangements included administrators or clinical nurses in role. During site visits we heard arguments that the staff developer should not be in a direct authority line with personnel
Staff developer hours per resident per week	Median is .5	The range is 0 to 4 staff developer hours per resident per week.
Orientation for new staff of at least a week before counting on shifts	53.8%	
Staff development deals explicitly with QOL and goes beyond mandatory topics	36%	This may be too subjective an indicator to apply widely. We looked at curriculum to make judgments.
High frequency staff development—at least every 2 weeks	36%	

Table 9.1, cont'd, Item	Prevalence	Comments
Highly individualized staff development	25%	Evidence included example of how the staff developer observed staff on all shifts to identify their needs, developed education tailored to particular residents in the census, and helped staff achieve outside educational goals.
MDS nursing component completed by charge nurses or unit supervisors.	32.5%	We saw this as positive as opposed to having the MDS nurse complete the assessments.
Care planning meetings attended by line nurses.	5%	
Baths or showers routinely offered 2 times a week or more.	65.7%	Homes divided into once a week or twice a week bathing for routine practices.
Baths and showers occur on multiple shifts.	88.2%	
Example given of a resident who has more than usual bathing because of preference.	45%	
An example given of a resident who routinely gets up after 10 a.m.	62.5%	
An example given of a resident who routinely goes to bed after 10 p.m.	65%	
Refrigerators are permitted in resident rooms and at least 1 resident has one.	32.5%	
Strong management at nursing unit level	50%	This was a rather subjective indicator. Strong meant unit coordinators had responsibility for hiring and if other personnel were assigned as part of unit teams.
PT hours per resident per week.		Only 14 homes could calculate this. Instructions were to count both contract and employed PTs and use a convenient time period. Range for those reporting was 6 to 120; 5 homes had 80 or more PT hours per resident per week.
OT hours per resident per week.		Only 15 homes could calculate this, using the same guidelines as for PT. The range was 3 to 120; 4 homes had 80 or more OT hours per resident per week.
Speech therapy hours per resident per week.		Only 7 could calculate this. The range was 1 to 40 hours.
NF employs a director of rehabilitation or a clinical nurse specialist.	25%	
NF employs restorative nurse's aides.	70%	
All therapy (PT, OT, ST) hours per resident per week.		21 homes could calculate this; some could give total that could not disaggregate by type of therapist. The range was from .10 to 192 hours. Median was slightly under an hour.
All therapist time plus all therapy aide time per resident per week.		21 homes could calculate this. The median was 1 hour and the range from .12 to 600 hours.
Medical director present 8 or more hours a week	30%	50% reported medical director present 4 or more hours a week. It is hard to distinguish their presence for medical director activities from care of their own patients.
Number of residents using medical director for primary care.		Median was 31 and the range from 0 to 115. A few NFs prohibited the medical director from being PCP.
Number of physicians practicing as PCPs in NF (including medical director).		The range was 1-50 and the median 6. We tried to look at whether criteria for attending privileges were applied but could not get good information on this.
Dental clinics at least quarterly.	60%	
Podiatry clinics at least quarterly.	65%	
Eye clinics at least quarterly.	45%	
Dermatology clinics at least quarterly.	17.5%	

Table 9.2. Frequencies for On-Site Indicators and Comments, Wave 2

Wave 2 Item (Maximum N = 57)	Prevalence	Comments
% Medicaid days in 2000	Median 65%	Range 0 to 95%
% Medicare days in 2000	Median 7.4%	Range 0 to 59%
Occupancy rate in 2000	Median 92%	Range 58% to 99.32%
Same owner for last 2 years	82.5%	
Facility operated by a hospital	10.5%	
Facility operates Assisted Living	19.3%	
Facility operates senior housing	14.0%	
Facility operates adult day care	14.0%	
Hours per week of staff developer(s)		Respondents had difficulty calculating. Range was from 10 hours to 130 hours per week.
NF employs paid clergy/chaplain	35%	
Hours per week of paid chaplain or clergy	Median 34 hrs	Range for those who had paid clergy, chaplains, or spiritual directors was 4 to 200 hours. If we remove 3 outliers, none had more than 4 hours a week clergy. It appears some respondents did not understand these questions.
NH employs MDS/PPS coordinator(s)	98.2%	
Hours per week of PPS coordination	Median 40 hours	All but 5 Wave 2 respondents had at least 2 FTEs for MDS/PPS coordination.
NH employs QI manager	67%	
Hours per week of QI manager		24 of 57 failed to complete this item.
CNAs assigned permanently to unit	75.5%	
CNAs assigned permanently to residents on day and evening shifts	57.9%	By specifying day and evening shift, we made this questions easier for administrators to complete
CNA turnover rate in 2000	Median 50%	Range from 3% to 154%
RN turnover rate in 2000	Median was 35%	Range from 1% to 192%
Registries used for CNAs	41%	
Hours of CAN registry use in 2000	Median 5589	Range from 45 to 60,000 hours. When top and bottom outliers are removed, range is from 383 to 29, 124 hours.
Registries used for licensed personnel	48%	
Hours RN/LPN registry use in 2000	Median 3000	Range 160 to 60,000. The high one may be an error; the next highest use is 23, 552. With our qualitative work at Wave 1, we found that some facilities used registry nurses for long periods of time in key positions. There was one instance of the DON coming from a registry.
Total weekly hours for all activities personnel	Median 140 hours	Range from 55 hours to 32, 142
Total weekly hours for all social work personnel	Median 40 hours.	Range from 38 to 564.
Administrator months tenure at this NF	Median 26 months.	Range from 2 months to 318 months.
Administrator experience in any other NF	Median 42 months.	Range from 0 to 285 months.
Administrator mos at this NF in any role	Median 38 months	Range from 0 to 264. Question was not sufficiently clear. The 11 who said 0 did not count the administrator's position as administrator in total.
# of administrators in last 2 years	54.4 had only 1; 10.6 % had 3 +	
DON months tenure at this NF	Median 24 months.	Range is 1 to 213 months.

Table 9.2, cont'd. Wave 2 Item (Maximum N = 57)	Prevalence	Comments
DON months at this NF in any role	Median 27 months.	Question was not sufficiently clear. The10 who said 0 did not count the DONs position as DON as part of the total.
# of DONs in last 2 years	52.6 had same DON; 11% had 3 or more DONs	The greatest number of DON changes in 2 years was 8.
Activity Director (AD) mos. tenure at NF	Median about 3 years	Range from 1 to 182 months.
AD experience as AD at any NF	Median 8 to 216 months	47% were in first job as AD.
AD months at this NF in any role	Median 3 years	22.8% began employment as AD; question misunderstood because some respondents did not include months as AD in the total
# of ADs in last 2 years	61% had same AD for 2 years	
Director of SW (DSW) mos tenure at NF	Median 2 years	Range 3 to 168 months
DSW experience as DSW at any NF	50% had not been DSW elsewhere	
DSW months at this NF in any role	24.6% had only been DSW at the NF	
# of DSWs in last 2 years	49.2% had same DSW for 2 years	12.2% had 3 or 4 people in role in 2 years.
Activity Director field	30% had therapeutic recreation degrees	29.8% did not have an activity-related degree such as art therapy, music therapy, adult education, OT
1 or more others in Activity Dept have activity-related degree	42%	
Activity personnel work on Saturday	98%	
Activity personnel work on Sunday	81%	
Activities after dinner at least 2 days per wk	71.9%	
Activity van as least ½ time serving 8 + res.	38.6%	
NF keeps count of its volunteers	43.9%	
Number of volunteers	Median 32	Range 2 to 1126. The 1126 is an outlier, with the next highest number being 223. In Wave 1, we found some administrators count all members of auxiliary.
NF keeps count of its volunteer hours	50.9%	
Number of volunteer hours	Median is 2112	Range is 50 to 40,095 hours. After dropping high outlier, the range is 50 to 23,000 hours.
Employ restorative aides	77.2%	
Hours of restorative aides per week		Range from 1 to 208 hours per week/
Employ GNP or physician assistant	47.4%	
Number of dining rooms	19.3 % had 1; 42.1% had 4 or more	1 NF had 10 dining rooms, 4 had 7, and 4 had 6.
Wait staff (not CNAs) serve meals ✔ In entire NF ✔ Part of NF ✔ No wait staff	 9.1% 23.6% 65.5%	
Plates removed from trays for service	70%	33% removed food from trays in only part of NF
Food served family style in serving bowls on table	14.5%	1 NF used family style service in entire NF, and the rest did so selectively
Restorative dining occurs		This question was misunderstood and results not useful.

Table 9.3. Frequencies for On-Site Indicators and Comments, Waves 1 and 2 Combined

Item (Maximum N is 97)	Prevalence	Comments
Mean % private rooms	19.51%	Range 100% to 0
Mean % Medicaid payer mix in year before.	64.33%	Range 0 to 98%; 9 could not calculate so Item N is 88.
Mean % Medicare payer mix in year before.	8.59%	Range 0 to 59%
Mean number administrator changes in last 2 yrs	1.24	✔ These items on tenure of leadership were meant to tap both experience with the facility and with the various roles, that is, both capability and continuity in the NF. The responses ranged enormously. Administrator changes in last 2 years ranged from 0 to 6 and DON changes in last 2 years ranged from 0 to 8. ✔ Future analyses might combine the tenure and experience variables in a variety of ways and develop an index of change. ✔ Our qualitative interviews made it clear that the data on tenure in a role and change needs to be interpreted collectively. We visited a NFs where administrators and DONs were both new in role but the administrator was the previous long-time DON and the DON was the staff developer. The former administrator was also on site running the campus. Despite all the role changes, this NF obviously showed substantial stability of leadership personnel.
Mean months tenure of administrator at NF	62.71	
Mean months experience of administrator as administrator of any NF	95.29	
Mean months administrator employed at NF in any capacity	78.83	
Number of DON changes in last 2 years	1.34	
Mean months DON tenure at NF	46.64	
Mean months DON has been a DON at any NF	52.25	
Mean months DON has been employed at this facility in any capacity	81.14	
Mean months tenure of director of activities	62.43	
Mean months activity director experience in position at any NF	68.27	
Mean months activity director employed at NF in any capacity	86.45	
Mean months tenure of director of social wk	55.47	
Mean months DSW experience as DSW at any NF	55.25	
Mean months DSW employed at NF in any capacity	57.80	
Staff developer hours per resident per week	23.73	Range 0 to 130.
% CNAs employed for 1 year or more at NF	56.19	This was defined as % of CNAs currently employed who were also on payroll the previous year. Only 71 of 97 NFs could calculate this. The standard deviation for the item was 25.09%.
% CNAs employed for 5 years or more at NF	30.83	This was defined as % of CNAs currently employed who were also on payroll 5 years before. Only 66 of the 97 NFs could calculate this. The standard deviation for the item was 23.4%.
Mean number of paid total activity staff hours per week	163.50	The range here was from 4 to 873. Even when calculated as a rate per resident to take into account NF size, the range is great. Some activity programs have 7 or 8 FTEs and use many part-time individuals on the staff.
Total social work hours per week in NF	80.63	This ranged from 0 (in a NF where the administrator served as social service designee) to 564. Sometimes a licensed SW served as admissions director or volunteer coordinator. Which social work personnel to count requires definition.
Mean # of dining rooms/areas in NF	3.65	Range from 1 to 20.
Dementia special care unit	43.8%	
Occupancy of 90% or more in last year	65.3%	
Occupancy of 80-89% in last year	23.7%	
Occupancy below 80% in last year	10.6%	
Ownership: public ✔ Proprietary ✔ Private non profit ✔ Public (e.g. county)	51.5% 42.3% 6.2%	

Table 9.3, cont'd, Item	Prevalence	Comments
Owned & managed by hospital	15.2%	We expected hospital-based programs to be less homelike, with negative QOL results. In Wave 1, however, we saw examples that cast doubt on that hypothesis because physical plants and policies were conducive to QOL. In one, the menus were determined by preferences of NH residents not hospital patients. Two hospital-based programs argued that economies of scale with kitchens, laundries, volunteer programs, therapies, etc. allowed them to generate a higher QOL for their residents, though our sample is too small to explore this.
Assisted living on campus	26.0%	
Retirement housing on campus	17.2%	
Operates adult day center	22.9%	
Same owner for 2 years or more	84.4%	
Employs staff developer (not DON or Adm)	84.6%	
Employs clergy/pastor or spiritual dir. 50%+	34.7%	Sometimes hard to tell time commitment if clergy serves hospital or campus
1 or more staff dedicated as MDS/PPS coordinator	83.9	The 15 that did not use an MDS coordinator tended to be small and to have no Medicare program
Staff member (not DON or admin) does QI ✔ Employed at 50% time or more for QI	52.4% 30.9%	
Permanent assignment of CNAs to units	73.2%	We were told this changes with RN shortages and desire to distribute payroll employees across units
Permanent assignment of CNAs to residents	56.4%	Although 53 DONs stated that they used permanent assignment, they qualified it in many ways. Some used it for part of the facility only. Some used it for some shifts only. Almost all who used permanent assignment maintained a pool of floaters who moved among units. Although an attractive indicator for QOL, a yes/no answer did not seem an appropriate way to approach that question.
Registry/ pool for CNAs in last 3 most	35.6%	Some NFs had a policy never to use pools even with nursing shortages. Such NFs often asked staff to work extra shifts, ran with short shifts, or maintained in-house pools or rosters. Using pool use as a negative indicator may be a problem because working double or understaffed shifts may be worse than using pools.
Registry/pool for licensed staff last 3 months	47.3%	
Restorative CNAs employed	78.3%	
50+ active volunteers in resident programs	46.0%	These numbers are hard to obtain. It seems important not to count those who visit occasionally with youth groups and the like. Some facilities keep poor records of this.
Educational level of Activities Director ✔ high school only or plus CNA or LPN ✔ college or graduate school	 51.6 48.4	In Wave 1, 12 of 40 activities programs were headed by former CNAs, typically people who started as activity staffers.
Paid activity staff on duty on Saturdays	96.8	
Paid activity staff on duty on Sundays	84.2	
Activities after dinner at least 2 days a wk	70.7	
Van can transport 8+ residents for non-medical events	44.7	NFs with adult day care tended to have vans available with drivers in the middle of the day
PT in house (not contracted)	56%	
OT in house (not contracted)	52%	
Speech therapy in house (not contracted)	48.8%	

Table 9.4. Variables Studied at Wave 1 and their Significant Relationship to QOL

	N NFs	# significant QOL domains		Variable type
		Adjusted	Unadjusted	
Size: i.e., Licensed capacity of NH beds	39			Continuous
Number of residents in house	38			Continuous
Location: Urban or rural	40			Dichotomous
Chain status	39			Dichotomous
If nonprofit, it is: nonsectarian,. Protestant, or Catholic or Jewish	20	3	1	Categorical.
Facility has a home care program	33			Dichotomous
Unionized – paraprofessionals only	35			Dichotomous
Unionized - licensed staff(RN/LPN with/without paraprofessionals	35			Dichotomous
Starting CNA wage in $	32			Continuous
Top CAN hourly wage in $	28	1	0	Continuous
Administrator at facility in role for at least 2 years	38	0	1	Dichotomous
Administrator has Nursing Credential by type of RN education	33	1	1	Categorical
Administrator has Nursing Credential: yes/no	32	0	1	Dichotomous
QI process in place clearly includes quality of life	34			Dichotomous
Resident satisfaction data are routinely collected	35			Dichotomous
Family satisfaction data are routinely collected	35	0	1	Dichotomous
Designated QI leader by role	36			Categorical
CNA training on site	31	1	1	Dichotomous
Practicum site for CAN training	28	0	1	Dichotomous
Practicum site for RN training	29	1	0	Dichotomous
Teaching affiliations other than nursing	29	1	5	Dichotomous
Designated staff developer other than administrator	34			Categorical
Orientation for new staff a week or more before working floors.	26			Dichotomous
Staff development deals explicitly with QOL (beyond mandatory)	25	0	2	Dichotomous
Staff development at high frequency - at least every 2 weeks	25	1	4	Dichotomous
Highly individualized staff development	25	0	2	Dichotomous
Mechanism to identify staffs' educational needs	25	1	1	Dichotomous
Activities director has been in job for 2 years or more	38	2	1	Dichotomous
Number of months of Act. Director at NF in any capacity	33	1	0	Continuous
Number of months experience as an Act. Director at any NF	34	0	1	Continuous
Educational level of other activities personnel	36	1	0	Categorical
Activities Director has gone to educational program in last year	26			Dichotomous
Activity staff hours per resident per week	34	3	3	Continuous
Activity department annual budget excluding salaries.	27	0	2	Continuous
Separate activity schedule for more than 1 unit (e.g. dementia unit)	36	3	1	Dichotomous
Activity calendars on weekly basis	35	1	2	Dichotomous
Paid volunteer coordinator at 50% or more time	38			Dichotomous
Van with capacity to transport 6 resident for non-medical trips	40	1	1	Dichotomous
Trips/outings at least monthly	38	0	2	Dichotomous
Trips/outings at least quarterly	38	0	1	Dichotomous
Television, radios, record players are available for loan	21			Dichotomous
Activity department aware of which residents have no visitors	36			Dichotomous
Beauty shop opened 15+ hours per week	37	1	1	Dichotomous
Beauty shop opened 3 separate days or more	38	1	1	Dichotomous
Beauty shop opened on Thursday, Friday, or Saturday.	37	1	1	Dichotomous
Activities department enables a resident to pursue outside interest	37			Dichotomous
Evidence of house pets other than fish	35	2	2	Dichotomous
A resident has brought own pet	33			Dichotomous
Eden Alternative consciously attempted	35	3	1	Dichotomous
Regular animal visitation	34	1	2	Dichotomous
Exercise programs	38			Categorical
Discussion groups programmed	38	1	0	
Arts/crafts regularly programmed	36	2	2	Categorical
Movies regularly programmed	36	1	2	Categorical
Bingo/games regularly programmed	38			
				Categorical

Table 9.4 cont'd, Wave 1	N NFs	# significant QOL domains		
		Adjusted	Unadjusted	
Socials/parties regularly programmed	35			Categorical
Resident council meets monthly with at least 10 residents attending	39	1	1	Dichotomous
Active food committee apart from resident council	39			Dichotomous
A family council exists	37	2	2	Dichotomous
A family council meets quarterly with at least 5 attending	36			Dichotomous
A resident's handbook has been developed	33			Dichotomous
Resident rooms cable ready	28	0	1	Dichotomous
Resident rooms have phone jacks	28	0	2	Dichotomous
Intergenerational programming with preschool on site	37	0	3	Dichotomous
Affiliation with elementary or secondary school	35			Dichotomous
Affiliation with 4-H, scouting or other youth connections	32			Dichotomous
Children regularly volunteer	28			Dichotomous
Residents have opportunity to volunteer (1 or more resident does)	36	5	3	Dichotomous
Clergy/pastoral counseling/spiritual well-being employed	38	1	1	Categorical
Social worker director's education	39	1	1	Categorical
Social work director employed in role for 2 years or more	36	1	1	Dichotomous
SW consultation at least 1/2 a day per month	37			Dichotomous
Other mental health consultation available - e.g., psychologist.	35			Dichotomous
Admissions director is BSW or MSW or related field	39	1	0	Dichotomous
Therapeutic resident group(s) take place	38	9	5	Dichotomous
Therapeutic or support groups for family take place	39	6	6	Dichotomous
Facility discourages residents to bring valuables to facility	38			Dichotomous
Facility policy to replace lost articles after reasonable search time	37	0	1	Categorical
Complaint policy transparent & easy to use.	36			Dichotomous
Number of people changing room in NF in last 2 weeks	26	1	3	Continuous
Number of room changes made that were sought by resident	19			Continuous
Rate of room changes per resident in 2 weeks	20	0	1	Continuous
Highest nursing education level of DON	34			Categorical
DON in place in role for 2 years or more	36	0	1	Categorical
50%+ of care conferences attended by a family member	28			Dichotomous
25%+ of care conferences attended by a resident	27			Dichotomous
MDS nursing component is completed by charge nurses	36			Dichotomous
Care planning meetings are attended by line nurses	31			Dichotomous
Strong unit management	37	0	2	Dichotomous
Baths/or showers routinely offered twice a week +	35			Dichotomous
Baths and showers occur on more than one shift	34	3	4	Dichotomous
One or more residents bath more than twice a week by choice.	35	2	1	Dichotomous
One or more resident routinely sleeps past 10 a.m.	34	1	0	Dichotomous
One or more resident routinely goes to bed after 10 p.m.	35	0	3	Dichotomous
Refrigerators permitted in resident rooms (a resident has one)	35	1	1	Dichotomous
Facility employs an ADON	37	1		Dichotomous
Physical therapy hours per week	14			Continuous
Occupational therapy hours per week	15			Continuous
Speech therapy hours per week	7			Continuous
A director of rehab or clinical nurse employed	30			Dichotomous
Therapy hours (OT, PT, ST + rehab aides) per resident per wk	21			Continuous
MD present 4 hours+ per week	37			Dichotomous
MD present 8 hours+ per week	37			Dichotomous
Number residents using medical director as primary care provider	35			Continuous
Number of MDs who practice in NF as primary care provider	36			Continuous
GNP, PA or equivalent present 8 hours per week	37			Dichotomous
Dental clinics in facility at least quarterly	35		1	Dichotomous
Podiatry clinics in facility at least quarterly	34			Dichotomous
Eye clinics in facility at least quarterly	33			Dichotomous
Hearing clinics in facility at least quarterly	33	1	0	Dichotomous
Dermatology clinics in facility at least quarterly	32	1	0	Dichotomous

Table 9.5 Indicators Significantly Related to Individual Domains with Wave 1 Data Only

		Domains											# sig.
		cmf	Fc	pri	dig	ma	enj	rel	sec	swb	aut	ind	
Private nonprofit-	adj.			+						+		+	3
	unadj.									+			1
Top CNA hourly wage	adj.									+			1
	unadj.												
Administrator there 2 yrs or more	adj.												
	unadj.								+				1
Administrator is nurse.	adj.	+											1
	unadj.	+											1
Type of nurse credential.	adj.												
	unadj.	+											1
Family satisfaction collected	adj.												
	unadj.			+									1
CNA training on site	adj.						+						1
	unadj.						+						1
Practicum site for CNAs	adj.												
	unadj.				+								1
Practicum site for RNs	adj.			−									1
	unadj.												
Other trainees (non-nursing).	adj.				+								1
	unadj.	+		+	++					+		++	5
Staff development on QOL	adj.												
	unadj.				+						+		2
Staff development frequency	adj.				+								1
	unadj.			+	+			+				++	4
Individualized staff develop	adj.												
	unadj.	+						+					2
Mechanism for outside education for staff seeking career ladder	adj.						+						1
	unadj.	+											1
Activity director there 2 yrs	adj.			+							+		2
	unadj.										+		1
# months Activity Director in NH in any capacity	adj.	+											1
	unadj.												
# months Activity Director in role in any NH	adj.												
	unadj.		+										1
Educational level of activity personnel	adj.			+									1
	unadj.												
Activity staff hours per resident	adj.	+							++	+			3
	unadj.	++							++		+		3
Activity department budget	adj.												
	unadj.	+		++									2
Multiple activity schedules	adj.	+	+								+		3
	unadj.										+		1
Activity calendar put out weekly basis	adj.			+									1
	unadj.	+		+									2

Table 9.5, page 2

Variable		cmf	fc	pri	dig	ma	enj	Rel	sec	swb	aut	ind	# sig domains
Van that holds at least 6	adj.								+				1
	unadj.								++				1
Trips/outings at least monthly	adj.												
	unadj.			++					+				2
Trips/outings at least quarterly	adj.												
	unadj.			+									1
Beauty shop open. 15+ hrs/wk	adj.									+			1
	unadj.									++			1
Beauty 3 separate days	adj.									+			1
	unadj.									+			1
Beauty Thurs. Fri. or Sat.	adj.				+								1
	unadj.				+								1
Evidence of house pets	adj.	+							+				2
	unadj.	+							+				2
Claims to be Eden Alternative NF	adj.		+							+	+		3
	unadj.									+			1
Regular animal visits	adj.				++								1
	unadj.		+		++								2
Activities include discussion groups	adj.										++		1
	unadj.												
Activities include music groups	adj.										++		1
	unadj.										+		1
Activities include arts and crafts	adj.					++		+					2
	unadj.					++		+					2
Activities include movies	adj.										+		1
	unadj.	+									+		2
Resident council meets monthly with at least 10 present	adj.		++										1
	unadj.		++										1
Family council in existence	adj.							+		+			2
	unadj.							+		+			2
Resident rooms have cable TV	adj.												
	unadj.			+									1
Resident rooms have phone jacks	adj.												
	unadj.			+	+								2
Preschool on site	adj.												
	unadj.				+					+		+	3
1 or more resident volunteers	adj.			+	+			+	+	++			5
	unadj.							+	+	++			3
Clergy/pastor employed 50%+	adj.									+			1
	unadj.									+			1
Social Work Director education	adj.					+							1
	unadj.					+							1

Table 9.5., page 3 Variable		# sig. cmf	fc	pri	dig	ma	enj	rel	sec	swb	aut	ind	# sig domains
Social Director there for 2yrs	adj.									+++			1
	unadj.									+++			1
Admissions Director has BSW or MSW	adj.							+					1
	unadj.												
Therapeutic resident groups	adj.	+	+	++	+			++	++	++	+	++	9
	unadj.	+						++	+	++		++	5
Therapeutic family groups	adj.		+	+			++		++	++		++	6
	unadj.		++				+++		++	++	+	++	6
# changing room or bed	adj.				−								1
	unadj.	−		−	−								3
Rate of room change per resident in 2 week period	adj.												
	unadj.		−		+								1
Strong unit management	adj.												
	unadj.			+	+								2
Baths routinely 2x a week	adj.												
	unadj.												
Baths on more than one shift	adj.	+		+	+								3
	unadj.	+		+	+						+		4
Example of a resident having baths more than 2 times a week	adj.					+						+	2
	unadj.											+	1
Rising time is individualized	adj.		+										1
	unadj.												
Bed time is individualized	adj.												
	unadj.	+						+			+		3
Refrigerator in resident's room	adj.					+							1
	unadj.					+							1
Employ ADON	adj.										++		1
	unadj.												
Therapy hrs for therapy aides	adj.										+		1
	unadj.										+		1
Quarterly dental clinic	adj.												
	unadj.									+			1
Quarterly hearing clinic	adj.									+			1
	unadj.												
Quarterly dermatology clinic	adj.									+			1
	unadj.												
Significant relationship counts		21	9	24	20	3	2	10	16	24	11	17	

Table 9.6. Variables Studied at Wave 2 and their Significant Relationship to QOL Domains

Potential Indicator	N NFs	# significant QOL domains Adjusted	Unadjusted	Variable type
Size: i.e., Licensed capacity of NH beds	56			Continuous
Having an SCU	56			Dichotomous
% private rooms	57	1	2	Continuous
% Medicaid	55	3	3	Continuous
% Medicare	54			Continuous
% occupancy	55			Categorical
Ownership	57	2	5	Categorical
Run by hospital	57	1	1	Dichotomous
Owns an Assisted Living Facility	57	1	2	Dichotomous
Owns senior housing	57	2	4	Dichotomous
Runs adult day care	57			Dichotomous
Administrator months in role at facility	57			Dichotomous
Administrator months as administrator in any facility	56			Continuous
Administrator has Nursing Credential: yes/no	51			Continuous
Administrator change in last 2 years	57			Continuous
Director of Nursing months at NH	55			Continuous
Director of Nursing months at other NH	50			Continuous
Director of Nursing months in NH any position	55	1	1	Continuous
Direct of Nursing change in last 2 years	55			Continuous
Activities Director at NH	54	1	1	Continuous
Activities Director position at other NH	52			Continuous
Activities Directory any position in NH	52			Continuous
Director of Social Work months in NH	55			Continuous
Director of Social Work months at other NH	50			Continuous
Director of Social Work months in NH any position	55	1	0	Continuous
Staff Developer	57			Dichotomous
Staff Developer # of hours per week	45	2	1	Continuous
Clergy or Chaplin	57	1	1	Dichotomous
MDS/ PPS Coordinator	57			Dichotomous
QI Manager	55			Dichotomous
NF has QI manager for 50% +	33			Dichotomous
NF has QI manager for 25% +	33			Dichotomous
CNA assigned to nursing unit	57	1	2	Dichotomous
CNA assigned to specific resident	57			Dichotomous
CNA 1 year + experience	51			Continuous
CNA 5 year + experience	47			Continuous
CNA registries	56	2	4	Dichotomous
Licensed personnel registries	56	4	6	Dichotomous
Rehab aides	57	2	4	Dichotomous
Activities personnel hours per week	54			Continuous
Social Work personnel hours per week	56	1	1	Continuous
Volunteer hours 50+	25	3	5	Dichotomous
Activities Director highest level of education	54	4	4	Categorical
Activities Director education	54			Dichotomous
Activities Director degree if college educated	36			Categorical
Activities Director work on Saturday	56			Dichotomous
Activities Director work on Sunday	56	4	5	Dichotomous
Activities Director works after dinner	53			Dichotomous
Van for use by Social Worker for transporting up to 8 residents	56			Dichotomous
Physical Therapy offered in house by NF	56			Dichotomous

Table 9.6, continued

	N NFs	# significant QOL domains		Variable type
		Adjusted	Unadjusted	
Occupational Therapy offered in house by NF	56			Dichotomous
Speech Therapy offered in house by NF	57			Dichotomous
# of dinning rooms available	56			Continuous
# of dinning rooms per licensed beds	55			Continuous
# of private rooms	57	1	1	Continuous
# of beds with 3 + residents	57	0	1	Continuous
% of NF Occupied	55	1	1	Continuous
# of hours per week of paid clergy or chaplain	18			Continuous
# of hours per week for coordinator	51			Continuous
# of hours per week for manager	33			Continuous
% of CAN turnover for NF	53			Continuous
% of RN turnover for NF	53			Continuous
# of CNAs in NF in 2000	53			Continuous
# of RN + LPN	53	1	1	Continuous
# of CAN for 1 year	53			Continuous
# of RN + LPN for 1 year	52			Continuous
# of CAN for 5 years	49			Continuous
# of RN + LPN for 5 years	48			Continuous
# of CAN hours	19	1	1	Continuous
# of licensed personnel hours	21	1	0	Continuous
# of Activities Director in NH for 2 years	55			Continuous
# of Director of Social Work in NH for 2 years	55			Continuous
NF keeps account of volunteer	56			Dichotomous
# of volunteers	25	2	2	Continuous
NF has account of volunteer hours	57			Dichotomous
# of volunteer hours	33	3	2	Continuous
NF has estimate of volunteer hours	33			Continuous
# of hours for rehab aides	44			Continuous
Geriatric NP or PA for NF	57	1	1	Dichotomous
Staff serve meals for all of NF	55			Dichotomous
Staff serve meals for part of NF	55			Dichotomous
Staff serve no meals for NF	55	0	1	Dichotomous
Food on table for all of NF	54			Dichotomous
Food on table for part of NF	54	2	4	Dichotomous
Food on table for none of NF	54	2	3	Dichotomous
Family style food service for all of NF	55			Dichotomous
Family style food service for part of NF	55	3	2	Dichotomous
Family style food service for none of NF	55	1	1	Dichotomous
Restorative dining for all of NF	54	1	1	Dichotomous
Restorative dinning for part of NF	54	2	2	Dichotomous
Restorative dinning for none of NF	54			Dichotomous
Fine dinning for all of NF	54			Dichotomous
Fine dinning for part of NF	54	1	1	Dichotomous
Fine dinning for none of NF	54	1	1	Dichotomous

Table 9.7. Indicators that Significantly Influence Individual Domains at Wave 2

Variable label		cmf	fc	priv	dig	act	enj	Rel	sec	swb	aut	ind	# sig. Dom
% private rooms	adj.			++									1
	unadj.		+	++									2
%Medicaid	adj.			−	−				−−−				3
	unadj.			−−	−				−−−				3
Ownership	adj.			+			+						2
	unadj.			+	+		++			+	+		5
part of a hospital	adj.							+					1
	unadj.							++					1
runs assisted living.	adj.			++									1
	unadj.			+			+						2
runs senior housing	adj.			+			+						2
	unadj.	+		+			+		+				4
months.DON at NH in any position	adj.					−−							1
	unadj.					−−							1
months activity director in role at NH	adj.									++			1
	unadj.									+			1
months Social Work at NH in any position	adj.					−−							1
	unadj.												
# hrs/wk of SD	adj.		−									−	2
	unadj.		−										1
paid clergy or pastor or spiritual director	adj.			++									1
	unadj.			++									1
	unadj.												
CNAs permanent to nursing unit	adj.										+		1
	unadj.						+				+		2
Used registries for CNA	adj.						+	+					2
	unadj.		+				+	+		+			4
Used registry for licensed nurses	adj.						++	++		+++		+	4
	unadj.	+	+				+++	+++		+++		+	6
rehab aides	adj.							−−		−−			2
	unadj.						−	−−		−−−		−	4
wkly hrs SW personnel	adj.											−	1
	unadj.											−	1
50+ hrs volunteers	adj.						+++	++		+			3
	unadj.				+		+++	++		+		+	5
Act Dir highest education	adj.		+	+	+				+				4
	unadj.		+++	+	++				+				4
Activities staff work on Sundays	adj.				−	−	−	−					4
	unadj.		−		−	−	−	−					5
% occupancy	adj.									+			1
	unadj.									+			1
	adj.											−	1

Variable label		cmf	fc	priv	dig	act	enj	Rel	sec	swb	aut	ind	# sig. Dom
	unadj.											– –	1
# of CNA 1 yr	adj.												
	unadj.												
# of hrs CNA	adj.				–								1
	unadj.				–								1
# of hrs licensed nursing personnel	adj.				–								1
	unadj.												
# of volunteers	adj.									+	++		2
	unadj.									+	++		2
NF counts volunteer hours	adj.												
	unadj.												
# of volunteer hours	adj.		–							+	–		3
	unadj.									+	–		2
geriatric NP or PA	adj.										– –		1
	unadj.										– –		1
food on table not trays, entire NF	adj.												
	unadj.												
Food on table not trays part of NF	adj.			++					++				2
	unadj.		++	+		+			+				4
Food always on trays	adj.			–		– –							2
	unadj.			–		– – –					–		3
Food dished out family style in part of NF	adj.	–			–							–	3
	unadj.				–							–	2
Food never served family style	adj.	++											1
	unadj.	++											1
Restorative dining in entire NF	adj.		– –										1
	unadj.		– –										1
Restorative dining in part of NF	adj.							–			– –		2
	unadj.							– –			– –		2
Fine dining in part of NF	adj.							–					1
	unadj.							– –					1
No fine dining	adj.							+					1
	unadj.							+					1
QOL findings count		5	11	18	8	13	15	18	8	18	9	11	

Table 9.8. Variables Combined at Both Waves and their Relationships to QOL Domains

Variable		Number significant domains		
		Unadjusted	Adjusted	Type of variable
# of licensed beds	96	0	0	Continuous
Has a dementia special care unit	96	4	0	Dichotomous
% of private rooms	94	5	0	Continuous
% of Medicaid days in 2000	88	7	2	Continuous
% of Medicare days in 2000	87	5	0	Continuous
Occupancy rate (categorical)	97	2	1	Categorical
Ownership (for-profit, non-profit, public)	97	6	5	Categorical
NF operated by hospital	92	1	0	Dichotomous
NF operates assisted living	96	6	5	Dichotomous
NF operates senior housing	93	6	3	Dichotomous
NF operates adult day care	96	7	1	Dichotomous
NF same owner for 2 years	96	0	0	Dichotomous
# of months administrator in NF in role	92	4	1	Continuous
# of months administrator in role at any NH	83	0	0	Continuous
# of months administrator at this NF	87	6	4	Continuous
# of administrators in last years	94	3	2	Continuous
# months of DON in this NF as DON	90	0	0	Continuous
# months of DON as a DON in any NF	77	2	1	Continuous
# months of DON at this NF in any role	83	2	0	Continuous
# of DONs in last 2 years	92	2	1	Continuous
# months activity director at NF in role	93	1	1	Continuous
# months AD as AD in any NF	86	2	0	Continuous
# months of AD at this NF in any role	86	3	0	Continuous
# months of Director of SW in NF in role	89	6	4	Continuous
# months of DSW as a DSW in any NF	78	6	2	Continuous
# months of DSW at NF in any role	88	1	0	Continuous
NF employs staff developer	91	0	0	Dichotomous
# of hours a week of staff developer	71	3	0	Continuous
NF employs clergy, chaplain	95	3	3	Dichotomous
NF employs MDS/PPS coordinator	93	3	0	Dichotomous
NF employs QI manager	84	2	0	Dichotomous
NF employs QI manager at least 50% time	65	2	0	Dichotomous
NH employs QI manager at least 25% time	62	1	0	Dichotomous
CAN assigned permanently to residents	94	1	1	Dichotomous
% CNAs working 1 year or more	71	0	0	Continuous
% CNAs working 5 years or more	66	0	0	Continuous
registries used for CAN	90	0	0	Dichotomous
registries used for licensed personnel	91	2	2	Dichotomous
NF employs rehabilitation aides	92	3	3	Dichotomous
weekly hours for all activities personnel	93	0	2	Continuous
weekly hours for social work person	95	0	0	Continuous
50 or more volunteers in year	63	7	6	Dichotomous
activities director's highest education	93	3	0	Categorical
activities director's has degree in relevant field	93	4	3	Dichotomous
activities director's actual field	74			Categorical
activities staff work on Saturday	95	0	0	Dichotomous
activities staff work on Sunday	95	2	1	Dichotomous
act. staff after dinner twice a week or more	92	0	1	Dichotomous
van for social travel for 8 residents or more	94	3	1	Dichotomous
PT in house or contracted	84	0	0	Dichotomous
OT in house or contracted	84	0	0	Dichotomous
speech therapist in house or contracted	84	0	1	Dichotomous
number of dining rooms	91	0	0	Continuous
number dining room per licensed beds	89	6	0	Continuous

Table 9.9. Indicators that Significantly Influence Individual Domains (Wave 1 and 2 Combined)

Variables:		cmf	f c	pri	dig	ma	enj	ind	rel	sec	swb	aut	# sig. dom.
Has dementia SCU	unadj.	+		++						+	+		4
	adj.												
% sample in private rooms in NF	unadj.	++	+	+++	++		+						5
	adj.												
% Medicaid	unadj.	-	- - -	- - -	- -		-	- - -		-			7
	adj.				- -					-			2
% Medicare	unadj.		++	++			+	+++	+				5
	adj.												
% occupancy rate in year prior to interviews	unadj.						+				++		2
	adj.										++		1
Tax status	unadj.			+++	+++		+++		+	++	+++		6
	adj.			+	+		+			+	++		5
Owned by hospital	unadj.								+				1
	adj.												
NF has assisted living on campus	unadj.	++	++	++			++			++		+	6
	adj.	+	+	+			+			++			5
Retirement housing on campus	unadj.	+++		++	+		++		++ +	++	+		6
	adj.	++					++			++			3
Has adult day care	unadj.			+	+		++		+	+	+	+	7
	adj.						+						1
# Mos, tenure administrator	unadj.	+			+					+	+		4
	adj.	+											1
# Mos. as administrator at any NF	unadj.												
	adj.												
# Months administrator at this NH in any capacity	unadj.	++		+	+		+		++	++			6
	adj.	++					++		++	++			4
# changes in administrator in last 2 years	unadj.	-			-						- -		3
	adj.										- -		2
	adj.											-	1
# mos DON tenure at this NF in any capacity	unadj.							-	+				2
	adj.												
# mos activity director's tenure	unadj.										+		1
	adj.				+								1
# mos. Activity director at any NF	unadj.		+		+								2
	adj.												
# mos activity director's tenure at this NF in any capacity	unadj.		+		+				+				3
	adj.												
# mos. enure of Social Work Director (SWD)	unadj.	++		+			+++		+++	++	+		6
	adj.				+		+++		++	+			4
Months of SWD experience as SWD in any NF	unadj.	+			++		+		+	+	++		6
	adj.							+			+		2

Table 9.9, page 2 Variables:		cmf	f.c.	pri	dig	ma	enj	ind	rel	sec	swb	aut	# sig. dom.
Staff developer hrs per resident per wk	unadj.		- - -	-				- -					3
	adj.												
NH employs clergyperson	unadj.			++			+				++		3
	adj.			++			++				++		3
1 or more FTEs for MDS and/or PPS coordination	unadj.		- -	-	-								3
	adj.												
NH employs QI director (not admin. or DON)	unadj.			-				+					2
	adj.												
QI director 50% or more time	unadj.			-	-								2
	adj.												
QI director 25% or more time	unadj.										-		1
	adj.												
Permanent assignment of aides to units	unadj.											+	1
	adj.											+	1
Permanent assignment of aides to residents	unadj.											+	1
	adj.											+	1
	adj.												
Registry used for licensed personnel	unadj.						++				++		2
	adj.						+				++		2
Restorative Nursing Aids (RNAs) employed	unadj.						- -		- -		- -		3
	adj.						- -		- -		- -		3
Number of paid activity staff hours per resident per wk	unadj.												
	adj.						+			+			2
50 or more active volunteers in the activities program	unadj.	+		+	+		++		++	+	++		7
	adj.	+		+			+++		++	+	+++		6
Educational level of activities director	unadj.							+			+	+	3
	adj.												
Activity director's field	unadj.			+		+	++				++		4
	adj.			+			++				+		3
Paid activities staff are on duty on Sundays	unadj.		-		-								2
	adj.				-								1
Activities after dinner on at least 2 days per wk	unadj.												
	adj.						+						1
Van with capacity for 8+residents for non-medical trips	unadj.	+		++						+			3
	adj.			+									1
Speech therapists are on staff	Unadj.												
	adj.								-				1
Number of dining rooms per licensed beds	Unadj.	+	+	+	+		+			+			6
	adj.												
Findings count		18	11	25	20	21	31	7	15	21	26	8	

Table 9.10: Relationship of Indicators to Facility Overall QOL: Wave 1 Data Only

Potential indicators available at Wave 1	Values			
	Low QOL	Medium QOL	High QOL	P value
Private nonprofit For profit =1, nonprofit =2, public=3	1.53	2.0	1.77	
Top CNA hourly wage	$10.71	$10.88	$11.90	
Administrator there 2 yrs or more	53%	6&%	73%	
Family satisfaction collected	31%	64%	64%	
CNA training on site	58%	67%	70%	
Practicum site for CNAs	58%	42%	40%	
Practicum site for RNs	.58	43%	40%	
Other trainees (non-nursing).	.50%	43%	70%	
Staff development on QOL (beyond mandatory)	10%	62%	43%	.064
Staff development frequency	1.89	1.50	1.50	
Staff development oriented to individual staff needs	22%	37%	64%	
Mechanism to identify staff educational needs	22%	37%	75%	.086
Activity director there 2 yrs	79%	75%	83%	
# months Activity Director in NH in any capacity	130	164	108	
# months Activity Director was an AD at any NH	91	121	115	
Educational level of activity director High school =1, College = 2, Graduate degree = 3, CAN = 4, LPN = 5	3.36	2.50	2.38	.054
Activity staff hours per resident	0.99	1.26	1.66	.027
Activity department budget	$4160	$5348	$8008	
Multiple activity schedules	29%	30%	59%	
Activity calendar put out weekly basis	15%	10%	33%	
Van that holds at least 6	40%	44%	58%	.075
Trips/outings at least monthly	73%	91%	92%	
Trips/outings at least quarterly	86%	91%	92%	
Beauty shop open. 15+ hrs/wk	57%	73%	83%	
Beauty 3 separate days	60%	82%	75%	
Beauty Thurs. Fri. or Sat.	50%	82%	75%	
Evidence of house pets	40%	77%	82%	.092
Claims to be Eden Alternative NF	7%	10%	45%	.037
Regular animal visits	69%	80%	50%	
Activities include discussion groups: >weekly =1, weekly =2, >monthly=3, monthly=4, <monthly=5	1.27	2.0	1.25	
Activities include music groups	1.67	1.64	1.25	
Activities include arts and crafts	2.33	2.40	1.82	
Activities include movies	1.50	2.18	2.18	
Resident council meets monthly with at least 10 present	1.07	1.0	1.08	
Family council in existence	1.33	1.42	1.50	
Resident rooms have cable TV	1.36	1.13	1.33	
Resident rooms have phone jacks	1.45	1.25	1.22	
Preschool on site	1.86	1.73	1.75	
1 or more residents volunteers	1.14	1.30	1.42	
Clergy/pastor employed 1+FTE=1, .5-1=2, <.5=3, none=4	3.57	3.17	2.75	
Social Work Director education HS=1, CAN=2, AA=3, BSW=4, BS=5, MSW=6, MS=7	5.79	4.75	4.46	

 N varies by indicator but is never more than 40.

Table 9.11: Relationship of Indicators to Overall Facility QOL with Wave 2 Data Only

Potential indicators available at Wave 2	Mean Values			
	Low QOL	Medium QOL	High QOL	p value
% private rooms	21.4	17.7	22.8	
%Medicaid	67.7	56.3	66.2	
Ownership	1.44	1.61	2.31	
Part of/owned by a hospital	0%	4%	39%	
NF runs assisted living.	11%	26%	19%	
NF runs senior housing	6%	17%	19%	
Months.DON at NH in any position	59.6	67.3	66.4	
Months activity director months in role at	43.8	48.4	72.7	
Months social work director at NH in any position	48.0	24.0	50.9	
# hrs/wk of staff development		1.38	1.57	
paid clergy or pastor or spiritual director	28%	35%	44%	
CNAs permanent to nursing unit	22%	37%	42%	
Used registries for CNAs	28%	43%	53%	
Used registry for licensed nurses mos	33%	48%	77%	
Employees rehabilitation aides	91%	70%	75%	
wkly hrs SW personnel				
Volunteer hours	3358	7182	4973	
Act Dir highest education HS=1, CNA=2, LPN=3, AA=4, college=5, grad school-6	3.50	3.81	4.13	
Activities staff work on Sundays	94%	91%	73%	
% occupancy	91.4	89.0	90.9	
# of RN+ LPN	48.19	40.95	1.67	
# of CNA 1 yr	62.9	40.4	52.2	
# of hrs CAN	17275	20767	3886	.074
# of hrs licensed nursing personnel	6705	6797	2804	
# of volunteers	44.1	133.6	83.9	
NF counts volunteer hours	7.0	1.48	1.38	
# of volunteer hours	3358	7182	4973	
geriatric NP or PA employed	41%	43%	37%	
food on table not trays in entire NF	0%	5%	0%	
Food on table, not trays, in part of NF	22%	41%	30%	
Food dished out family style in part of NF	17%	9%	13%	
Food never served family style	83%	86%	87%	
Restorative dining in entire NF	33%	33%	40%	
Fine dining in part of NF	28%	24%	20%	
No fine dining	56%	62%	60%	

Note: N varies by indicator as shown on other tables but is never more than 57.

Table 9.12: Relationship of Indicators to Overall Facility QOL with Waves 1 and 2 Data

Potential Indicators available for both Waves	Mean Values			
	Low QOL	Medium QOL	High QOL	P value
Has a dementia SCU	36%	50%	55%	
% private rooms	14.1%	21.2%	23.6%	
% Medicaid	66.3	61.6	65.6	
% Medicare	9.5	8.1	8.2	
% occupancy rate				
Tax status For profit=1, not for profit=2, public=3	1.36	1.54	1.76	.039
Owned by hospital	6%	15%	28%	.071
NF operates assisted living	21%	23%	36%	
NF operates retirement housing	9%	4%	31%	.086
NF operates adult day care	16%	20%	34%	
# Mos tenure of administrator	44.9	73.9	70.1	
# Mos. As administrator at any NF	102.8	102.8	78.8	
# Months administrator at this NH in any capacity	58.6	75.2	103.6	
# changes in administrator in last 2 years	1.30	1.29	1.11	
# mos DON tenure at this NF in any capacity	91.9	67.5	97.4	
# mos activity director's tenure	51.2	68.7	66.8	
# mos. activity director at any NF	68.2	67.6	68.0	
# mos activity director's tenure at this NF in any capacity	95.2	86.0	75.9	
# mos. tenure of Social Work Director (SWD)	38.1	48.1	78.3	.053
Months of SWD experience as SWD in any NF	25.9	54.1	90.9	.030
Staff developer hrs per wk	23.1	22.9	25.8	
NH employs clergyperson	22%	37%	46%	
MDS and/or PPS coordinator does care planning	79%	91%	81%	
NH employs QI director (not admin or DON)	59%	43%	56%	
QI director 50% or more time	50%	36%	63%	
QI director 25% or more time	27%	19%	26%	
Permanent assignment of aides to units	1.31	1.20	1.22	
Permanent assignment of aides to residents	47%	69%	52%	
Registry used for licensed personnel in last 6 mos	41%	47%	56%	
Restorative Nursing Aids (RNAs) employed	87%	76%	69%	
Number of paid activity staff hours per wk	145.7	162.9	183.9	
Table 9.12, continued. Potential indicators available for both Waves	Value			

	Low QOL	Medium QOL	High QOL	P value
Educational level of activities director HS=1, CNA=2, LPN=3, AA=4, college=5, grad school-6	3.44	3.33	3.32	
Activity director's field Ther rec=1, Rec=2, music or artr=3, OT==5, educ=6, other=7	5.28	6.40	4.21	
Paid activities staff are on duty on Sundays	84%	86%	88%	
Activities after dinner on at least 2 days per wk	72%	68%	85%	
Van with capacity for 8+residents for non-medical trips	1.64	1.56	1.44	
Speech therapists are on staff	41%	45%	40%	
Number of dining rooms per licensed beds	.026	.028	.029	

N varies by indicator as shown on previous tables, but is never more than 97.