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Evaluation of the Medicare Home Health Pay-for-Performance Demonstration

CY2008 Report - Volume 1: Agency Characteristics, Costs, and Quality Measure Performance among Treatment, Control, and Non- Participant Groups

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1. Introduction

The Medicare Home Health Agency Pay for Performance Demonstration was designed to test whether providing monetary performance incentives for home health agencies would improve patient outcomes and result in cost savings to Medicare. The demonstration evaluation has employed multiple research methods to ascertain the effects of the demonstration on home health agency practices and patient outcomes, as well as conducting analyses to estimate the extent to which demonstration results are likely to be replicated if a national pay for performance system is implemented. Analyses completed using data from the first year of the demonstration include:

1. Comparison of agency characteristics among treatment, control, and non-participating home health agencies in demonstration states.
2. Comparison of outcome quality measure performance among treatment, control, and non-participating home health agencies in demonstration states.
3. Qualitative analysis of clinical and quality improvement activities of agencies participating in the demonstration, focused particularly on high performing agencies, utilizing information collected during site visits and conversations with participating providers.
4. Analysis of responses to a survey of agencies participating in the demonstration regarding changes in organizational structure, staffing, and practices in response to the demonstration.

This document, which covers the first two analyses listed above, comprises Volume 1 of the Annual Report for calendar year 2008. The site visit and survey analyses are summarized in separate deliverables, which constitute Volumes 2 and 3 of the Annual Report.

2. Home Health Agency Characteristics: A Comparison of Demonstration Groups

The demonstration design calls for randomization of home health agency providers into treatment and control groups within regions, among all home health agencies that volunteered for the demonstration. Treatment agencies were eligible to earn incentive payments, while agencies in the control group were not eligible. The randomization process makes it unlikely that any substantial differences in agency characteristics will exist between treatment and control groups.

However, the voluntary nature of the demonstration leaves open the possibility that demonstration participants may differ from non-participating providers in the same states. Tables 1 through 4 present comparisons of the three groups of home health agencies, treatment, control, and non-participant, in the demonstration states. The analysis is intended to confirm that the treatment and control providers are similar on key agency characteristics, but more importantly, to identify differences between the demonstration participant groups and the non-participant group.

Table 1 shows number and percentage of HHAs within each of the demonstration groups by state. The states are grouped by the regions used for the Medicare pay for performance demonstration. The numbers of treatment and control HHAs are approximately equal within each state and region (chi square probability $> .95$ testing differences of treatment/control proportions by state), although participation rates differ significantly by state/region ($p < .001$). Specifically, participation rates are highest in Connecticut and Tennessee and lowest in Illinois and California. Table 2 shows a comparison of treatment, control, and non-participant home health agencies with respect to third-party accreditation and deemed status. Accreditation requires that the home health agency submit to a rigorous review by an independent accrediting agency. The home health agency may elect to have the accreditation review serve in place of the certification survey ordinarily conducted by the state, in which case it is considered “deemed” to have met the standards for certification. The distribution of accreditation and deemed status does not differ between treatment and control agencies. Non-participant home health agencies are not significantly different from treatment and control providers in accreditation status ($p = .282$), but they are twice as likely to be “deemed” as the demonstration participant agencies ($p < .001$).

Table 3 shows the distribution of treatment, control, and non-participant home health agencies by ownership/control type. As expected, treatment and control agencies are very similar, but non-participant HHAs are much more likely (77% vs. 56%-57%) to be a proprietary than demonstration participants, and half as likely to be under Government or Voluntary Non-Profit control as demonstration participants ($p < .001$). Table 4 shows a comparison of treatment, control, and non-participant home health agencies with respect to home health agency type. Demonstration participant agencies differ significantly from non-participants ($p < .001$), in that they are considerably more likely than non-participants to be among Visiting Nurses Associations or hospital-based agencies. Conversely, the percentage of HHAs identified as “Other Freestanding” is much higher among non-participants than among demonstration treatment and control agencies (70% vs. 54%). These results tend to parallel the ownership

results, since VNAs and hospital-based agencies are more likely to be non-profit than are freestanding providers.

In summary, treatment and control demonstration participants are closely matched on a variety of HHA characteristics, as would be expected given random assignment. Non-participant home health agencies in the same states tend to differ in systematic ways from demonstration participants, particularly in terms of ownership and type of home health agency. Because agency characteristics may affect the response of providers to pay for performance incentives, these systematic differences could affect the degree to which the response to a national pay for performance system would differ from the response of demonstration participants.

3. CY2008 Medicare Cost Savings and Incentive Payments

For the first year of the demonstration, Medicare cost savings, which determined the size of the incentive pool, were calculated for each demonstration region by the demonstration contractor. The results of these calculations were reported to CMS in a technical memorandum. (White & Goldberg, 2009) Costs attributed to Medicare patients of treatment agencies were compared with costs attributed to patients of control agencies in 2007 and 2008. Total Medicare cost was calculated for each patient during the home care episode (which could include multiple PPS payment episodes) and up to 30 days following the home health episode, for home health, inpatient, skilled nursing facility, outpatient, physician and other Part B, durable medical equipment, and hospice services. Medicare cost savings attributable to the demonstration was calculated as the difference between actual Medicare cost per day for the treatment group in 2008 and a target or expected cost per day for the treatment group. The target cost was calculated by applying the 2007 to 2008 Medicare cost per day growth rate (whether positive or negative) for control agency patients to the 2007 Medicare cost per day for treatment agency patients. Medicare cost per day declined from 2007 to 2008 in both groups and all regions. In three regions, the decrease in cost was greater for the treatment group than the control group, resulting Medicare cost savings. The amount of cost savings per day was \$.60 in the Connecticut/Massachusetts region, for a total cost savings of \$2,819,338. In the Alabama/Georgia/Tennessee region the cost savings per day was \$1.00, for a total of \$8,042,528. In California, cost savings per day was \$1.78, or \$4,490,892 total savings. In Illinois, Medicare cost per day was higher among treatment group agencies, which resulted in an estimated negative cost savings per day (or increased cost) of \$2.41, or a total cost increase of \$8,699,844. Based on these cost savings, the total incentive pool for 2008 was \$15,232,758. Because there was no cost savings in Illinois, treatment agencies in that state were not eligible for incentive payments. In each of the other regions, the incentive pool was equal to the estimated cost savings

with that region. Incentive payments were distributed to treatment agencies based on quality measure performance in 2008, with a portion of the incentive pool reserved for high performing agencies, and a portion reserved for agencies that showed improvement in quality measure performance from 2007 to 2008. Year 1 incentive payments were made to 59 percent of home health agencies in the treatment group. (CMS Office of Public Affairs, 2010)

4. CY2008 Quality Measure Performance among Home Health Agency Demonstration Groups

In order to compare the performance of demonstration treatment, control, and non-participant agencies on outcome quality measures, data were acquired from the national OASIS repository on episodes of care (defined as beginning with a start or resumption of care and ending with a discharge or transfer to inpatient facility) which occurred during calendar year 2008, where care was provided by any home health agency in the demonstration states. Only those episodes of care where Medicare was indicated as a payment source were selected for the analysis. The analyses include a comparison of treatment to control agencies as well as a comparison of the demonstration participants (treatment and control agencies combined) to non-participant agencies. All of these analyses were conducted using the entire pool of patient episodes for each specific provider group, yielding a measure of average home health agency performance within each group.

The purpose of these analyses is twofold; (1) to determine the extent to which treatment agencies, who were eligible for incentive payments, differed in performance from control agencies, who had no performance incentive within the demonstration, and (2) to determine whether non-participating agencies in the same states differed from the (volunteer) participants in their outcome quality measure performance. As reported in earlier deliverables (Nuccio, Richard, & Hittle, 2010; Nuccio & Richard, 2009), some providers reported implementing programs to improve care practices and focus on improving target outcomes, while other providers took a more passive approach to the demonstration, to the extent that agency clinical staff were not even aware that the agency was eligible for a performance incentive payment. In addition, very little feedback on quality measure performance was provided during the demonstration, other than what home health agencies could obtain by accessing their own outcome reports from the CMS OBQI reporting system. As a result, it would not be surprising to find considerable variability in the impact of the demonstration on home health agency quality measure performance. In addition to addressing the question of whether demonstration agencies who were eligible for payment incentives differed in quality measure performance from the

(volunteer) agencies who, by virtue of random assignment to the control group, were not eligible for an incentive, it is relevant to ask how the performance of agencies who volunteered to participate in the demonstration differed from non-participants.

Table 5 shows outcome quality measure performance for all demonstration states, by demonstration home health agency group. Adjusted outcomes are calculated based on the average expected value for all episodes of care of providers within the demonstration states (a constant reference value), using the same method as that employed for quality measure reporting on Home Health Compare (Centers for Medicare and Medicaid Services, 2011). (Home Health Compare uses a national reference value for risk adjustment, while the method used here employs an average reference value for all demonstration states. While this results in adjusted outcome rates that differ somewhat from those reported on home health compare, it does not affect the differences in outcome rates among treatment, control, and non-participant agency groups.) The first seven quality measures shown in Tables 5 through 12 are those that were used to determine eligibility for incentive payments under the demonstration. Therefore, they would be expected to show the greatest demonstration effect. As indicated in Table 5, none of these measures show a significant difference between treatment and control agencies, looking at all demonstration states combined. The remaining measures listed in Tables 5 through 12 were selected from among the 41 measures that are included in home health agencies' Outcome-Based Quality Improvement (OBQI) Reports. For all demonstration states, only two of these measures showed significant differences between treatment and control agencies. However, non-participating agencies were significantly different from participating on a number of measures. Of the 21 measures include in Table 5, 17 show significant differences between demonstration participants and non-participants. Of these, 15 indicate more favorable outcomes for patients of demonstration providers. While the magnitude of outcome differences is less than two percent for 10 of the 21 measures, three measures show differences exceeding four percent.

Tables 6 through 12 show similar comparisons within each of the demonstration states. In Massachusetts, as shown in Table 6, there are six measures on which treatment and control agencies show significant differences, although none of them are among the measures used to determine incentive payment eligibility. All but one of the significant differences indicate more favorable outcomes for patients of demonstration agencies. Non-participating agencies in Massachusetts differ significantly from demonstration participants on six measures, four of which indicate less favorable outcomes for patients of non-participating agencies. Results for Connecticut are shown in Table 7. Only three quality measures show differences between treatment and control agencies, all of them indicating less favorable outcomes for treatment

agency patients. Demonstration participants differ from non-participants on seven measures, all of them indicating more favorable outcomes for patients of demonstration agencies.

In the South Region, results for Tennessee are shown in Table 8. Treatment and control agencies differ significantly on ten of the 21 measures, three of which are among the measures used to determine incentive payments. It is notable that acute care hospitalization is higher among treatment agency patients, while all of the other measures where there are significant differences show more favorable outcomes for treatment agency patients. Non-participant agency patients differ from patients of participating agencies on only two outcome measures. In Alabama, as shown in Table 9, there are four measures on which treatment and control groups show significant differences, two of which are used for awarding incentive payments. All four show more favorable outcomes for treatment agency patients. Fourteen of the 21 measures show significantly more favorable rates for demonstration agencies compared to non-participating agencies, indicating a fairly strong self-selection bias in this state. In Georgia, as shown in Table 10, the treatment group differs from the control group on seven measures, three of which count toward incentive payment eligibility. One measure, acute care hospitalization shows poorer performance within the treatment group, while measures of patient improvement are more favorable for treatment agencies. The non-participant group differs from the demonstration group on only three measures.

Results for Illinois are somewhat surprising, particularly with respect to the treatment versus control group comparison. As indicated in Table 11, the treatment group shows consistently less favorable patient outcomes than the control group. For eleven of the 21 measures, the difference is statistically significant, with control agency patients experiencing more favorable outcomes by 3.4 to 7.2 percent. Demonstration participants differ from non-participant on ten measures, of which 8 are more favorable for demonstration agency patients. In California, treatment-control group differences are relatively small, as indicated in Table 12. Only four measure show significant differences and these are equally split in direction. There are significant differences between demonstration agencies and non-participants, almost all of which show more favorable outcomes for patients of participating agencies. While the large number of significant differences is partially a result of the larger number of home health patients in California, there are six measures for which the magnitude of the difference exceeds four percent.

5. Discussion

As discussed earlier, the randomization process employed under the demonstration has resulted in treatment and control groups that are very closely matched in terms of agency characteristics.

However, there is evidence that the providers who volunteered to participate in the demonstration differ systematically from providers in the same states who did not choose to volunteer for the demonstration. Specifically, non-profit and government-run agencies were more likely than proprietary home health agencies to volunteer for the demonstration, and Visiting Nurse Associations are over-represented in the demonstration, as are hospital-based agencies. While there are no groups of providers that are under-represented in the demonstration to such an extent as to invalidate the results of the demonstration, the observed differences between participants and non-participants are a reason for caution in generalizing from demonstration results.

The quality measure performance results are somewhat contrary to expectations. If the demonstration was effective in improving quality, one would expect there to be a difference in quality measures between the treatment group and the control group. However, the expected differences were observed in only some of the demonstration states, and in one state (Illinois) the treatment group actually performed more poorly than the control group. As a result, the analysis with all demonstration states combined showed virtually no difference between the treatment and control groups on almost all measures. The comparison of demonstration participants and non-participants with respect to quality measure performance are less surprising. In general, demonstration participants showed more favorable performance as a group in calendar year 2008 than non-participating agencies within the same states. This result is most likely due to self-selection bias. It would be logical for home health agencies with a greater concern for quality improvement and who are already performing well to be more likely to volunteer for a pay for performance demonstration.

Tables

Table 1: Home Health Agencies by Demonstration Group and State/Region

State/Region	Treatment Group	Control Group	Non-Participant Group	Total
Northeast				
Count	48	51	86	185
% of Region	25.9%	27.6%	46.5%	100.0%
% of Group	17.6%	18.0%	7.9%	11.2%
MA				
Count	24	26	62	112
% of State	21.4%	23.2%	55.4%	100.0%
% of Group	8.8%	9.2%	5.7%	6.8%
CT				
Count	24	25	24	73
% of State	32.9%	34.2%	32.9%	100.0%
% of Group	8.8%	8.8%	2.2%	4.4%
South				
Count	97	99	163	359
% of Region	27.0%	27.6%	45.4%	100.0%
% of Group	35.5%	35.0%	14.9%	21.8%
TN				
Count	47	41	41	129
% of State	36.4%	31.8%	31.8%	100.0%
% of Group	17.2%	14.5%	3.8%	7.8%
AL				
Count	26	28	87	141
% of State	18.4%	19.9%	61.7%	100.0%
% of Group	9.5%	9.9%	8.0%	8.6%
GA				
Count	24	30	35	89
% of State	27.0%	33.7%	39.3%	100.0%
% of Group	8.8%	10.6%	3.2%	5.4%
Midwest - IL				
Count	65	62	336	463
% of State	14.0%	13.4%	72.6%	100.0%
% of Group	23.8%	21.9%	30.7%	28.1%
West - CA				
Count	63	71	508	642
% of State	9.8%	11.1%	79.1%	100.0%
% of Group	23.1%	25.1%	46.5%	38.9%
Total				
Count	273	283	1093	1649
% of Total	16.6%	17.2%	66.3%	100.0%
% of Group	100.0%	100.0%	100.0%	100.0%

Table 2: Home Health Agencies by Demonstration Group, Accreditation, and Deemed Status

Accrediting Organization	Treatment Group	Control Group	Non-Participant Group	Total
ACHC				
Count	4	0	8	12
% of Accreditation Group	33.3%	0.0%	66.7%	100.0%
% of Demonstration Group	1.5%	0.0%	0.7%	0.7%
CHAP				
Count	17	21	50	88
% of Accreditation Group	19.3%	23.9%	56.8%	100.0%
% of Demonstration Group	6.2%	7.4%	4.6%	5.3%
JCAHO				
Count	38	35	153	226
% of Accreditation Group	16.8%	15.5%	67.7%	100.0%
% of Demonstration Group	13.9%	12.4%	14.0%	13.7%
None				
Count	214	227	882	1323
% of Accreditation Group	16.2%	17.2%	66.7%	100.0%
% of Demonstration Group	78.4%	80.2%	80.7%	80.2%
Total				
Count	273	283	1093	1649
% of Total	16.6%	17.2%	66.3%	100.0%
% of Demonstration Group	100.0%	100.0%	100.0%	100.0%
<hr/>				
Deemed Status	Treatment Group	Control Group	Non-Participant Group	Total
Yes				
Count	17	21	152	190
% of Deemed	8.9%	11.1%	80.0%	100.0%
% of Demonstration Group	6.2%	7.4%	13.9%	11.5%
No				
Count	256	262	941	1459
% of Non-Deemed	17.5%	18.0%	64.5%	100.0%
% of Demonstration Group	93.8%	92.6%	86.1%	88.5%
Total				
Count	273	283	1093	1649
% of Total	16.6%	17.2%	66.3%	100.0%
% of Demonstration Group	100.0%	100.0%	100.0%	100.0%

Table 3: Home Health Agencies by Demonstration Group and Ownership/Control Type

Ownership/Control Type	Treatment Group	Control Group	Non-Participant Group	Total
Voluntary Non-Profit				
Count	102	105	166	373
% of Owner Type	27.3%	28.2%	44.5%	100.0%
% of Demonstration Group	37.4%	37.1%	15.2%	22.6%
Proprietary				
Count	154	162	843	1159
% of Owner Type	13.3%	14.0%	72.7%	100.0%
% of Demonstration Group	56.4%	57.2%	77.1%	70.3%
Government				
Count	17	16	84	117
% of Owner Type	14.5%	13.7%	71.8%	100.0%
% of Demonstration Group	6.2%	5.7%	7.7%	7.1%
TOTAL				
Count	273	283	1093	1649
% of Total	16.6%	17.2%	66.3%	100.0%
% of Demonstration Group	100.0%	100.0%	100.0%	100.0%

Table 4: Home Health Agencies by Demonstration Group and Agency Type

Home Health Agency Type	Treatment Group	Control Group	Non-Participant Group	Total
Visiting Nurse Association				
Count	36	42	65	143
% of HHA Type	25.2%	29.4%	45.5%	100.0%
% of Demonstration Group	13.2%	14.8%	5.9%	8.7%
Government or Combination				
Count	23	22	142	187
% of HHA Type	12.3%	11.8%	75.9%	100.0%
% of Demonstration Group	8.4%	7.8%	13.0%	11.3%
Other Freestanding				
Count	148	155	763	1066
% of HHA Type	13.9%	14.5%	71.6%	100.0%
% of Demonstration Group	54.2%	54.8%	69.8%	64.6%
Facility-Based				
Count	66	64	123	253
% of HHA Type	26.1%	25.3%	48.6%	100.0%
% of Demonstration Group	24.2%	22.6%	11.3%	15.3%
Total				
Count	273	283	1093	1649
% of Total	16.6%	17.2%	66.3%	100.0%
% of Demonstration Group	100.0%	100.0%	100.0%	100.0%

Table 5: Risk-adjusted Quality Measure Performance CY2008 - Patients Pooled by Demonstration Group, All Demonstration States

Outcome Measures¹	Treatment Group	Control Group	Non-Participant Group	Treatment vs. Control Difference	Sig²	Demo vs. Non-Participant Difference	Sig²
Acute Care Hospitalization	28.0%	27.4%	27.2%	+0.6%		+0.5%	
Any Emergent Care	21.2%	21.2%	18.5%	+0.0%		+2.6%	**
Improvement in Ambulation Locomotion	48.1%	48.4%	46.3%	-0.3%		+2.0%	**
Improvement in Bathing	66.2%	65.9%	66.6%	+0.3%		-0.5%	
Improvement in Management of Oral Medications	46.5%	46.0%	44.3%	+0.5%		+1.9%	**
Improvement in Status of Surgical Wounds	82.5%	82.4%	82.4%	+0.1%		+0.1%	
Improvement in Transferring	55.2%	55.6%	53.1%	-0.4%		+2.3%	**
Improvement in Behavior Problem Frequency	66.1%	65.5%	62.6%	+0.6%		+3.1%	**
Improvement in Bowel Incontinence	69.2%	68.0%	65.2%	+1.2%		+3.4%	**
Improvement in Confusion Frequency	46.9%	46.2%	42.2%	+0.6%		+4.3%	**
Improvement in Dyspnea	64.5%	64.1%	61.5%	+0.4%		+2.8%	**
Improvement in Eating	61.1%	60.6%	56.2%	+0.6%		+4.6%	**
Improvement in Grooming	70.4%	70.3%	69.4%	+0.1%		+1.0%	*
Improvement in Light Meal Preparation	60.9%	60.8%	57.2%	+0.1%		+3.6%	**
Improvement in Lower Body Dressing	70.8%	70.9%	69.1%	-0.0%		+1.8%	**
Improvement in Pain Interfering with Activity	67.8%	66.6%	68.1%	+1.2%	*	-0.9%	*
Improvement in Speech and Language	49.8%	49.7%	43.3%	+0.1%		+6.5%	**
Improvement in Toileting	68.9%	68.9%	67.1%	+0.1%		+1.8%	**
Improvement in Upper Body Dressing	71.4%	71.5%	70.2%	-0.1%		+1.3%	**
Improvement in Urinary Incontinence	51.9%	49.2%	48.1%	+2.6%	**	+2.3%	**
Improvement in Urinary Tract Infection	86.7%	87.5%	87.9%	-0.9%		-0.8%	

¹ Outcome measures calculated for CY2008 patient episodes of care for which Medicare is identified as payment source.

² Statistical significance of outcome measure difference.

* Difference is significant at p<.05.

** Difference is significant at p<.01.

Table 6: Risk-adjusted Quality Measure Performance CY2008 - Patients Pooled by Demonstration Group, Massachusetts

Outcome Measures¹	Treatment Group	Control Group	Non-Participant Group	Treatment vs. Control Difference	Sig²	Demo vs. Non-Participant Difference	Sig²
Acute Care Hospitalization	27.5%	26.9%	29.3%	+0.5%		-2.1%	*
Any Emergent Care	22.0%	20.6%	20.6%	+1.5%		+0.7%	
Improvement in Ambulation Locomotion	49.2%	49.3%	49.0%	-0.0%		+0.3%	
Improvement in Bathing	65.4%	65.8%	66.0%	-0.4%		-0.4%	
Improvement in Management of Oral Medications	47.5%	47.1%	48.3%	+0.4%		-1.0%	
Improvement in Status of Surgical Wounds	81.7%	84.7%	87.0%	-3.0%		-3.8%	*
Improvement in Transferring	57.9%	55.7%	56.5%	+2.2%		+0.2%	
Improvement in Behavior Problem Frequency	67.7%	60.7%	69.3%	+7.0%	**	-5.2%	**
Improvement in Bowel Incontinence	69.7%	61.1%	66.0%	+8.6%	*	-0.5%	
Improvement in Confusion Frequency	45.9%	42.5%	42.4%	+3.4%	*	+1.8%	
Improvement in Dyspnea	67.7%	64.2%	65.2%	+3.5%	**	+0.6%	
Improvement in Eating	67.5%	66.3%	62.9%	+1.1%		+3.9%	*
Improvement in Grooming	71.5%	72.4%	71.1%	-0.9%		+0.9%	
Improvement in Light Meal Preparation	62.9%	65.6%	61.6%	-2.7%	*	+2.6%	*
Improvement in Lower Body Dressing	70.6%	72.6%	69.7%	-2.0%		+1.9%	
Improvement in Pain Interfering with Activity	69.3%	70.3%	67.9%	-1.0%		+1.9%	
Improvement in Speech and Language	53.1%	47.8%	48.0%	+5.3%	*	+2.4%	
Improvement in Toileting	73.0%	73.4%	72.5%	-0.4%		+0.8%	
Improvement in Upper Body Dressing	71.8%	73.6%	70.0%	-1.8%		+2.8%	*
Improvement in Urinary Incontinence	49.9%	47.6%	48.8%	+2.3%		-0.1%	
Improvement in Urinary Tract Infection	85.1%	86.5%	87.8%	-1.4%		-2.0%	

¹ Outcome measures calculated for CY2008 patient episodes of care for which Medicare is identified as payment source.

² Statistical significance of outcome measure difference.

* Difference is significant at p<.05.

** Difference is significant at p<.01.

Table 7: Risk-adjusted Quality Measure Performance CY2008 - Patients Pooled by Demonstration Group, Connecticut

Outcome Measures¹	Treatment Group	Control Group	Non-Participant Group	Treatment vs. Control Difference	Sig²	Demo vs. Non-Participant Difference	Sig²
Acute Care Hospitalization	28.4%	29.5%	31.7%	-1.2%		-2.7%	
Any Emergent Care	24.3%	24.8%	24.8%	-0.6%		-0.2%	
Improvement in Ambulation Locomotion	46.1%	47.1%	42.0%	-1.1%		+4.7%	
Improvement in Bathing	61.6%	62.8%	60.2%	-1.2%		+2.1%	
Improvement in Management of Oral Medications	45.4%	43.4%	38.0%	+2.1%		+6.3%	
Improvement in Status of Surgical Wounds	82.6%	82.6%	85.8%	+0.0%		-3.2%	
Improvement in Transferring	46.3%	52.2%	45.3%	-5.9%	**	+4.3%	
Improvement in Behavior Problem Frequency	58.2%	66.3%	67.5%	-8.1%	*	-4.5%	
Improvement in Bowel Incontinence	65.6%	69.6%	50.7%	-4.1%		+17.1%	**
Improvement in Confusion Frequency	39.3%	41.7%	33.4%	-2.3%		+7.3%	*
Improvement in Dyspnea	60.4%	62.6%	58.5%	-2.3%		+3.1%	
Improvement in Eating	61.3%	65.0%	59.3%	-3.7%		+4.1%	
Improvement in Grooming	69.4%	69.9%	66.0%	-0.5%		+3.7%	
Improvement in Light Meal Preparation	63.5%	61.5%	56.7%	+2.0%		+5.6%	
Improvement in Lower Body Dressing	70.1%	67.4%	56.2%	+2.7%		+12.4%	**
Improvement in Pain Interfering with Activity	60.8%	60.9%	64.3%	-0.1%		-3.4%	
Improvement in Speech and Language	43.6%	52.3%	35.7%	-8.7%	**	+13.0%	**
Improvement in Toileting	72.3%	72.6%	63.9%	-0.3%		+8.6%	*
Improvement in Upper Body Dressing	70.9%	69.7%	63.9%	+1.2%		+6.3%	*
Improvement in Urinary Incontinence	44.4%	43.3%	41.1%	+1.1%		+2.8%	
Improvement in Urinary Tract Infection	89.2%	91.1%	74.2%	-2.0%		+16.0%	**

¹ Outcome measures calculated for CY2008 patient episodes of care for which Medicare is identified as payment source.

² Statistical significance of outcome measure difference.

* Difference is significant at p<.05.

** Difference is significant at p<.01.

Table 8: Risk-adjusted Quality Measure Performance CY2008 - Patients Pooled by Demonstration Group, Tennessee

Outcome Measures¹	Treatment Group	Control Group	Non-Participant Group	Treatment vs. Control Difference	Sig²	Demo vs. Non-Participant Difference	Sig²
Acute Care Hospitalization	33.8%	29.4%	30.9%	+4.4%	**	+0.5%	
Any Emergent Care	23.6%	24.0%	22.0%	-0.4%		+1.8%	
Improvement in Ambulation Locomotion	47.8%	46.0%	44.2%	+1.9%		+2.6%	
Improvement in Bathing	65.8%	62.8%	61.2%	+3.1%	*	+2.9%	
Improvement in Management of Oral Medications	46.4%	42.2%	44.5%	+4.2%	*	-0.5%	
Improvement in Status of Surgical Wounds	85.7%	84.0%	81.4%	+1.7%		+3.3%	
Improvement in Transferring	53.2%	53.0%	49.8%	+0.2%		+3.3%	
Improvement in Behavior Problem Frequency	67.6%	63.0%	62.1%	+4.6%		+2.6%	
Improvement in Bowel Incontinence	68.3%	63.6%	63.0%	+4.8%		+2.6%	
Improvement in Confusion Frequency	44.8%	46.6%	42.7%	-1.8%		+3.1%	
Improvement in Dyspnea	60.9%	57.9%	56.8%	+3.0%		+2.3%	
Improvement in Eating	60.6%	54.4%	57.4%	+6.2%	**	-0.4%	
Improvement in Grooming	69.9%	66.0%	66.1%	+3.9%	*	+1.6%	
Improvement in Light Meal Preparation	63.4%	60.7%	57.2%	+2.7%		+4.6%	**
Improvement in Lower Body Dressing	72.7%	68.1%	67.5%	+4.5%	**	+2.5%	
Improvement in Pain Interfering with Activity	68.1%	62.9%	59.6%	+5.2%	**	+5.5%	**
Improvement in Speech and Language	50.3%	46.2%	44.3%	+4.1%		+3.6%	
Improvement in Toileting	67.1%	62.0%	64.0%	+5.1%	**	+0.1%	
Improvement in Upper Body Dressing	71.8%	67.0%	68.4%	+4.7%	**	+0.6%	
Improvement in Urinary Incontinence	52.3%	44.4%	44.0%	+7.9%	**	+3.7%	
Improvement in Urinary Tract Infection	84.8%	86.6%	84.5%	-1.8%		+1.3%	

¹ Outcome measures calculated for CY2008 patient episodes of care for which Medicare is identified as payment source.

² Statistical significance of outcome measure difference.

* Difference is significant at p<.05.

** Difference is significant at p<.01.

Table 9: Risk-adjusted Quality Measure Performance CY2008 - Patients Pooled by Demonstration Group, Alabama

Outcome Measures¹	Treatment Group	Control Group	Non-Participant Group	Treatment vs. Control Difference	Sig²	Demo vs. Non-Participant Difference	Sig²
Acute Care Hospitalization	30.4%	34.4%	32.1%	-4.0%	**	+0.6%	
Any Emergent Care	19.5%	20.1%	23.8%	-0.6%		-4.0%	**
Improvement in Ambulation Locomotion	52.1%	50.7%	47.9%	+1.4%		+3.4%	*
Improvement in Bathing	72.3%	66.7%	64.2%	+5.6%	**	+5.1%	**
Improvement in Management of Oral Medications	51.1%	47.7%	43.0%	+3.4%		+6.3%	**
Improvement in Status of Surgical Wounds	88.0%	88.0%	85.8%	+0.1%		+2.2%	
Improvement in Transferring	55.7%	55.1%	52.4%	+0.6%		+2.9%	
Improvement in Behavior Problem Frequency	73.6%	72.3%	59.7%	+1.3%		+13.2%	**
Improvement in Bowel Incontinence	73.0%	71.6%	62.0%	+1.3%		+10.3%	**
Improvement in Confusion Frequency	56.8%	56.1%	43.7%	+0.8%		+12.7%	**
Improvement in Dyspnea	64.3%	61.7%	57.4%	+2.6%		+5.5%	**
Improvement in Eating	57.9%	59.4%	60.5%	-1.5%		-1.8%	
Improvement in Grooming	70.3%	71.0%	69.1%	-0.7%		+1.6%	
Improvement in Light Meal Preparation	65.5%	60.7%	58.0%	+4.8%	*	+4.9%	**
Improvement in Lower Body Dressing	76.1%	74.7%	69.6%	+1.4%		+5.7%	**
Improvement in Pain Interfering with Activity	69.1%	67.8%	64.5%	+1.3%		+3.9%	*
Improvement in Speech and Language	53.6%	56.9%	49.2%	-3.2%		+6.1%	*
Improvement in Toileting	65.8%	64.2%	67.1%	+1.5%		-2.1%	
Improvement in Upper Body Dressing	73.4%	72.3%	68.7%	+1.1%		+4.1%	**
Improvement in Urinary Incontinence	60.6%	54.1%	42.3%	+6.5%	*	+14.7%	**
Improvement in Urinary Tract Infection	93.1%	92.6%	89.6%	+0.5%		+3.3%	

¹ Outcome measures calculated for CY2008 patient episodes of care for which Medicare is identified as payment source.

² Statistical significance of outcome measure difference.

* Difference is significant at p<.05.

** Difference is significant at p<.01.

Table 10: Risk-adjusted Quality Measure Performance CY2008 - Patients Pooled by Demonstration Group, Georgia

Outcome Measures¹	Treatment Group	Control Group	Non-Participant Group	Treatment vs. Control Difference	Sig²	Demo vs. Non-Participant Difference	Sig²
Acute Care Hospitalization	28.4%	26.1%	26.9%	+2.3%	*	+0.3%	
Any Emergent Care	22.3%	20.1%	22.4%	+2.2%	*	-1.2%	
Improvement in Ambulation Locomotion	49.3%	47.5%	48.3%	+1.8%		+0.1%	
Improvement in Bathing	69.3%	65.9%	63.7%	+3.4%	*	+3.8%	**
Improvement in Management of Oral Medications	45.9%	45.9%	42.0%	-0.0%		+3.9%	*
Improvement in Status of Surgical Wounds	86.3%	85.2%	81.9%	+1.1%		+3.8%	
Improvement in Transferring	56.5%	55.5%	55.1%	+1.0%		+0.8%	
Improvement in Behavior Problem Frequency	70.7%	68.0%	65.2%	+2.8%		+4.1%	
Improvement in Bowel Incontinence	74.4%	72.2%	68.1%	+2.2%		+5.3%	
Improvement in Confusion Frequency	53.7%	50.3%	50.2%	+3.4%		+1.7%	
Improvement in Dyspnea	65.1%	63.6%	62.0%	+1.5%		+2.3%	
Improvement in Eating	61.5%	55.9%	61.0%	+5.6%	**	-2.4%	
Improvement in Grooming	71.2%	68.7%	69.8%	+2.4%		+0.1%	
Improvement in Light Meal Preparation	61.8%	60.4%	60.3%	+1.5%		+0.8%	
Improvement in Lower Body Dressing	74.1%	71.7%	70.8%	+2.4%		+2.1%	
Improvement in Pain Interfering with Activity	72.3%	68.9%	66.8%	+3.5%	*	+3.9%	*
Improvement in Speech and Language	53.0%	45.8%	51.5%	+7.2%	**	-2.4%	
Improvement in Toileting	67.0%	64.4%	66.3%	+2.5%		-0.6%	
Improvement in Upper Body Dressing	73.2%	71.6%	70.3%	+1.6%		+2.1%	
Improvement in Urinary Incontinence	60.5%	54.2%	56.0%	+6.3%	**	+1.4%	
Improvement in Urinary Tract Infection	90.6%	87.1%	88.1%	+3.5%		+0.8%	

¹ Outcome measures calculated for CY2008 patient episodes of care for which Medicare is identified as payment source.

² Statistical significance of outcome measure difference.

* Difference is significant at p<.05.

** Difference is significant at p<.01.

Table 11: Risk-adjusted Quality Measure Performance CY2008 - Patients Pooled by Demonstration Group, Illinois

Outcome Measures¹	Treatment Group	Control Group	Non-Participant Group	Treatment vs. Control Difference	Sig²	Demo vs. Non-Participant Difference	Sig²
Acute Care Hospitalization	26.4%	24.5%	27.2%	+1.8%		-1.6%	*
Any Emergent Care	19.9%	19.3%	16.5%	+0.5%		+3.2%	**
Improvement in Ambulation Locomotion	46.6%	51.2%	47.1%	-4.7%	**	+1.5%	**
Improvement in Bathing	64.5%	68.3%	70.0%	-3.8%	**	-3.8%	**
Improvement in Management of Oral Medications	46.1%	50.6%	48.5%	-4.4%	**	-0.4%	
Improvement in Status of Surgical Wounds	79.3%	82.1%	80.6%	-2.9%		-0.1%	
Improvement in Transferring	55.4%	59.1%	52.8%	-3.7%	**	+4.3%	**
Improvement in Behavior Problem Frequency	67.7%	70.6%	67.8%	-2.9%		+1.2%	
Improvement in Bowel Incontinence	68.9%	69.3%	68.7%	-0.4%		+0.4%	
Improvement in Confusion Frequency	49.3%	48.3%	40.4%	+1.0%		+8.5%	**
Improvement in Dyspnea	65.3%	68.7%	61.9%	-3.4%	*	+4.9%	**
Improvement in Eating	61.5%	65.9%	60.1%	-4.4%	*	+3.3%	**
Improvement in Grooming	70.1%	74.9%	71.5%	-4.8%	**	+0.7%	
Improvement in Light Meal Preparation	60.1%	61.1%	60.5%	-0.9%		+0.0%	
Improvement in Lower Body Dressing	66.1%	73.3%	70.6%	-7.2%	**	-1.4%	
Improvement in Pain Interfering with Activity	68.8%	69.9%	71.1%	-1.1%		-1.8%	*
Improvement in Speech and Language	48.4%	54.3%	40.2%	-5.8%	*	+11.0%	**
Improvement in Toileting	67.3%	74.9%	67.9%	-7.6%	**	+2.9%	*
Improvement in Upper Body Dressing	68.9%	74.2%	72.2%	-5.4%	**	-0.9%	
Improvement in Urinary Incontinence	51.1%	50.9%	51.4%	+0.1%		-0.4%	
Improvement in Urinary Tract Infection	87.3%	87.3%	90.1%	+0.1%		-2.8%	

¹ Outcome measures calculated for CY2008 patient episodes of care for which Medicare is identified as payment source.

² Statistical significance of outcome measure difference.

* Difference is significant at p<.05.

** Difference is significant at p<.01.

Table 12: Risk-adjusted Quality Measure Performance CY2008 - Patients Pooled by Demonstration Group, California

Outcome Measures¹	Treatment Group	Control Group	Non-Participant Group	Treatment vs. Control Difference	Sig²	Demo vs. Non-Participant Difference	Sig²
Acute Care Hospitalization	24.6%	25.0%	25.5%	-0.5%		-0.7%	
Any Emergent Care	18.2%	20.0%	17.3%	-1.8% *		+1.9% **	
Improvement in Ambulation Locomotion	47.8%	48.1%	45.2%	-0.3%		+2.7% **	
Improvement in Bathing	67.1%	67.7%	66.2%	-0.6%		+1.2%	
Improvement in Management of Oral Medications	45.1%	45.3%	41.9%	-0.3%		+3.3% **	
Improvement in Status of Surgical Wounds	82.4%	78.4%	81.7%	+4.0% *		-1.6%	
Improvement in Transferring	56.5%	56.7%	53.0%	-0.2%		+3.6% **	
Improvement in Behavior Problem Frequency	60.7%	65.6%	59.2%	-4.9% *		+4.2% **	
Improvement in Bowel Incontinence	65.5%	70.0%	63.6%	-4.5%		+4.3% *	
Improvement in Confusion Frequency	43.3%	45.3%	42.3%	-2.0%		+2.0% *	
Improvement in Dyspnea	64.4%	68.4%	61.7%	-4.0% **		+4.8% **	
Improvement in Eating	58.4%	60.2%	52.7%	-1.8%		+6.7% **	
Improvement in Grooming	70.1%	70.2%	68.5%	-0.1%		+1.7% *	
Improvement in Light Meal Preparation	56.0%	57.8%	54.7%	-1.8%		+2.3% **	
Improvement in Lower Body Dressing	70.8%	69.7%	68.4%	+1.1%		+1.8% **	
Improvement in Pain Interfering with Activity	64.7%	64.9%	67.9%	-0.2%		-3.1% **	
Improvement in Speech and Language	46.9%	49.8%	42.7%	-2.9%		+5.7% **	
Improvement in Toileting	70.7%	71.4%	66.5%	-0.8%		+4.6% **	
Improvement in Upper Body Dressing	71.4%	71.9%	69.7%	-0.5%		+2.0% **	
Improvement in Urinary Incontinence	47.7%	51.0%	46.6%	-3.3%		+3.0% **	
Improvement in Urinary Tract Infection	84.1%	86.3%	87.6%	-2.2%		-2.3%	

¹ Outcome measures calculated for CY2008 patient episodes of care for which Medicare is identified as payment source.

² Statistical significance of outcome measure difference.

* Difference is significant at p<.05.

** Difference is significant at p<.01.

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