Using National Data to Examine the Quality of Care in Ohio's Skilled Nursing Facilities

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Background

As consumers, we all recognize that there are many different aspects of quality. Some of us like fast service, some a low cost, and yet others friendly service. An array of factors contribute to a quality experience and thus there are a range of quality definitions. Quality in Ohio's skilled nursing facilities is assessed using multiple strategies including an annual inspection by the Ohio Department of Health, resident and family satisfaction surveys, and quality indicators data from the national nursing home Minimum Data Set (MDS) on areas such as falls and pressure ulcers. The federal regulatory agency, the Centers for Medicare and Medicaid Services (CMS), combines the state survey, MDS quality indicators and facility staffing data to construct an aggregate measure of nursing home quality. This aggregate 5-star rating scale is publicly available, similar to the model used to review restaurants or hotels on travel websites.

However, these data are not analyzed to compare quality across states. To gain a better understanding of quality in Ohio nursing homes, we compare state-specific data to the nation overall for the three sets of quality measures that comprise the aggregate 5-star rating. Each of these quality measures examines a different dimension of quality. In this brief we examine the quality indicators that are available nationally and in Ohio through CMS' Nursing Home Compare website.

Ohio is a national leader in its efforts to collect survey data from residents and family members and we hope that CMS and other states will add resident and family satisfaction data in the future to complete the national quality comparisons. Currently, only the MDS and the Certification and Survey Provider Enhanced Reporting (CASPER) data are collected nationally, and we rely on these data sources to examine Ohio results in a national context. These data sources have been criticized by both the nursing home industry and researchers. For example, there are noteworthy differences in the inspection survey results across states, and the MDS quality indicators are collected by the facilities themselves, rather than by an independent source. Despite these limitations, these data do provide an opportunity for states to view themselves in a national context.

Ohio in Comparison to the Nation and Surrounding States

One of the largest states in the nation, Ohio has the 6th highest number of individuals age 65 and older and the 6th highest supply of nursing home beds. In 2015, Ohio had 962 facilities, containing more than 93,000 beds. Similar to the nation overall, the majority of beds are located in urban areas (75%) and are in proprietary facilities (79%). The typical nursing home has about 100 beds (See Table 1). In 2003, Ohio's Medicaid reimbursement rate was the 6th highest in the nation; by 2009 it had dropped to the 21st highest. Ohio's median private pay daily rate in 2013 was $239, very close to the national average of $240 per day.

Table 1: Ohio's Nursing Facility Characteristics, 2013

	All Nursing Facilities	County Homes	Hospital Based Long-Term Care Unit
Number of Facilities	**962**	**18**	**25**
Licensed/certified nursing facility beds 12/31/13	93,350	1881	1157
Average number of beds available daily	92,787	1877	1135
Average number of beds	96	104	45
Location (percent)			
Urban	75.3	55.6	80
Rural	24.7	44.4	20
Ownership (percent)			
Proprietary	79	—	28
Not-for-profit	18.7	—	64
Government	2.3	100	8

Source: Biennial Survey of Long-Term Care Facilities, 2013.

In Table 2, we present Ohio and national data for long-stay residents on Medicaid that are aged 65+ for the three areas of quality that comprise the CMS 5-star rating: state survey results, direct care staffing levels, and the MDS quality indicators. Comparative results on the number of facility deficiencies shows that Ohio recorded a weighted average of 5.73 deficiencies, lower than the national weighted average of 5.86, for a ranking of 18 (1= best ranking). In looking at nursing home staffing levels, Ohio facilities recorded 3.48 hours per resident day, slightly below the national average of 3.52 for a ranking of 39th (1= most staff). The RN and LPN nursing staff levels were equivalent to the national average, but the state tested nursing assistants level of 2.24 hours per resident day was below the national average (2.28 for a 39 ranking). Recent changes will shift the staff tracking mechanism from facility reporting to payroll data. A review of the MDS nursing quality indicators shows that Ohio is below the national average on all 10 of the quality indicators, ranging from a 32/50 ranking to a 47 ranking. Ohio's lowest ranking came on the measures examining urinary tract infections

(rank 47), unexplained weight loss (rank 47) and use of antipsychotic drugs (23.2% compared to 19.9% for a 46 ranking). On some measures, Ohio's differences in comparison to the best state in the nation were considerable. For example, the use of antipsychotic medications in the lowest state was below 9%.

To place results in a regional context we compared Ohio's data to the surrounding states assuming that they might have similar economic conditions (Table 3). For the average number of deficiencies per facility, two states, Michigan and Pennsylvania, had a lower number of deficiencies, and the remaining three states had a higher number of deficiencies than Ohio. For the staffing measures, only West Virginia ranked lower. Three states, Michigan (10/10 indicators had higher quality scores), Indiana and Pennsylvania (7/10 higher quality scores), ranked above Ohio on average on the MDS quality indicators, and two states, Kentucky and West Virginia, were comparable.

Table 2: Adjusted-Nursing Home Quality Indicators Comparing Ohio and the Nation Overall

	Ohio	National		
	Average	Average	Best State	Worst State
Total Deficiencies				
Total Number of Deficiencies	5.73	5.86	4.7	7.31
Direct Care Staffing Levels				
Registered Nurse (HPRD)	0.42	0.42	0.57	0.37
Licensed Practical Nurses (HPRD)	0.82	0.82	0.85	0.73
Certified Nurse Aides (HPRD)	2.24	2.28	2.44	2.2
Total Nurse Staffing (HPRD)	3.48	3.52	3.71	3.41
Nursing Home Compare Quality Measures (percentage)				
Falls with Major Injury	0.39	0.35	0.26	0.43
Moderate to Severe Pain	10.36	8.52	3.85	11.21
High-Risk Residents with Pressure Ulcers	4.47	4.4	3.29	5.17
Urinary Tract Infections	5.22	4.67	3.16	5.28
Low-Risk Residents Who Lose Control of Bladder/Bowel	48.04	46.31	28.83	62.66
Catheter Inserted or Left in	3.05	2.95	2.51	3.72
Physically Restrained	1.52	1.48	0.61	1.95
Weight Loss	6.73	5.91	3.77	7.07
Depressive Symptoms	6.58	6.23	4.25	7.51
Antipsychotic Medications	23.18	19.85	8.77	26.65

Sources: 2013 Calendar Year MDS and CASPER Data. HPRD = Hours per resident day. (See footnote 1.)

Table 3: Adjusted Nursing Home Quality Indicators Comparing Ohio to Border States

	Ohio		Indiana		Kentucky		Michigan		Pennsylvania		West Virginia	
	Avg.	Rank	Avg.	Rank	Avg.	Rank	Avg.	Rank	Avg.	Rank	Avg.	Rank
Total Deficiencies												
Total Number of Deficiencies	5.73	18	5.82	24	5.78	21	5.57	9	5.59	11	5.99	38
Direct Care Staffing Levels												
Registered Nurse (HPRD)	0.42	31	0.44	18	0.40	41	0.43	27	0.45	12	0.38	48
Licensed Practical Nurses (HPRD)	0.82	27	0.82	20	0.82	24	0.82	23	0.82	32	0.81	34
Certified Nurse Aides (HPRD)	2.24	39	2.34	9	2.24	37	2.30	17	2.33	10	2.21	46
Total Nurse Staffing (HPRD)	3.48	39	3.59	10	3.46	41	3.55	17	3.59	11	3.41	50
Nursing Home Compare Quality Measures (percentage)												
Falls with Major Injury	0.39	36	0.39	38	0.36	22	0.35	19	0.33	13	0.39	39
Moderate to Severe Pain	10.36	38	10.24	36	9.63	29	8.40	16	8.05	13	9.65	30
High-Risk Residents with Pressure Ulcers	4.47	35	4.31	29	4.82	45	3.98	17	4.67	44	4.51	36
Urinary Tract Infections	5.22	47	4.92	36	5.16	42	4.68	26	4.55	20	5.09	41
Low-Risk Residents Who Lose Control of Bladder/Bowel	48.04	38	56.28	47	52.00	45	47.94	37	59.26	49	45.13	23
Catheter Inserted or Left in	3.05	32	3.13	39	3.22	42	2.66	5	2.96	26	2.98	28
Physically Restrained	1.52	34	1.40	28	1.87	48	1.41	29	1.53	35	1.87	49
Weight Loss	6.73	47	6.47	45	6.39	44	5.73	24	6.27	42	6.21	39
Depressive Symptoms	6.58	40	5.16	6	6.60	41	6.02	30	6.72	44	6.86	46
Antipsychotic Medications	23.18	46	18.81	28	20.50	35	17.41	17	18.30	25	21.12	40

Sources: 2013 Calendar Year MDS and CASPER Data. HPRD = Hours per resident day. (See footnote 1.)

We also examined whether the nature of facility ownership had an impact on the quality measures. As shown in Table 4, Ohio's not-for-profit facilities had higher staffing ratios and fewer deficiencies than Ohio's proprietary nursing homes. Both not-for-profit and proprietary homes in Ohio had fewer deficiencies compared to their national counterparts and were comparable in staffing. For the 10 MDS quality indicators Ohio's not-for-profits had lower quality scores on four items, higher on two and were comparable on the remaining four. In all 10 categories Ohio's proprietary facilities were below the national average.

Table 4: Adjusted Nursing Home Quality Indicators Comparing Ohio and the Nation Overall by Ownership

	For-Profits		Not-For-Profits	
	Ohio	National	Ohio	National
Total Deficiencies				
Total Number of Deficiencies	5.95	6.13	4.8	4.96
Direct Care Staffing Levels				
Registered Nurse (HPRD)	0.41	0.41	0.47	0.46
Licensed Practical Nurses (HPRD)	0.82	0.83	0.8	0.81
Certified Nurse Aides (HPRD)	2.18	2.2	2.45	2.45
Total Nurse Staffing (HPRD)	3.41	3.44	3.72	3.72
Nursing Home Compare Quality Measures (percentage)				
Falls with Major Injury	0.39	0.35	0.38	0.36
Moderate to Severe Pain	10.27	8.14	10.38	9.22
High-Risk Residents with Pressure Ulcers	4.52	4.43	4.28	4.38
Urinary Tract Infections	5.16	4.62	5.37	4.9
Low-Risk Residents Who Lose Control of Bladder/Bowel	47.65	45.22	50.17	50.45
Catheter Inserted or Left in	3.13	3.01	2.64	2.67
Physically Restrained	1.62	1.58	1.06	1.06
Weight Loss	6.76	5.84	6.67	6.16
Depressive Symptoms	6.85	6.46	5.56	5.63
Antipsychotic Medications	23.64	20.38	21.12	17.89

Sources: 2013 Calendar Year MDS and CASPER Data. HPRD = Hours per resident day. (See footnote 1.)

Summary and Conclusion

As a state with a large number of nursing homes, Ohio often has been a leader in efforts to improve quality. The state has implemented a number of pilot quality initiatives, such as Music and Memory, A Matter of Balance, and Opening Minds through Art. Ohio has also been a leader in developing the Long-Term Care Consumer Guide, a website designed to provide consumers with quality information; including input from residents and families. The state has also experimented with revisions to its reimbursement system to better reward quality. Despite these initiatives to enhance quality, these findings indicate mixed results. Ohio has, on average, fewer deficiencies identified through the state inspection process, but is slightly below the average on the ratio of direct care staff to residents and consistently lower on the MDS quality indicators. While some of these differences are relatively small and the data have limitations, these findings do suggest that the state has some areas for improvement. A continued and ongoing assessment of the quality of Ohio's facilities appears warranted. In particular, efforts to examine the data in greater depth for areas where Ohio has scored well below the national average, such as antipsychotic drug use, is warranted. A more in-depth look at these results could find, for example, that negative results are concentrated in certain

regions or certain types of facilities. Qualitative studies of best practices to examine facilities with very high quality ratings could lead to industry-wide improvements as well. Ohio has shown a consistent interest in enhancing nursing home quality and it is important to use these results as a stepping stone to continue these efforts.

Footnote 1: All quality measures are weighted by the number of long-stay Medicaid residents aged 65+ in free-standing nursing homes and adjusted for resident and facility characteristics using the most recent MDS assessment in calendar year 2013. Resident characteristics adjusted for include: age, gender, marital status, race, behavioral health (i.e., depression score, hallucinations, delusions), activities of daily living score, active diagnoses (i.e., diabetes, dementia, stroke, Parkinson's disease, seizure disorder, anxiety, depression, bipolar disorder, psychotic illness, schizophrenia, and COPD). Facility characteristics adjusted for include: ownership, chain membership, number of beds, occupancy rate, payer-mix, and presences of special care units, and in the case of non-staffing quality measures, the hours per resident day (HPRD) of direct care nurse staffing (i.e., registered nurse, licensed practical nurses, and certified nurse aides). For the depressive symptoms quality measure, depression diagnoses and depression scores are not included as controls.

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