

# QUALITY OF CARE IN OHIO'S SKILLED

# NURSING FACILITIES:

# HOW ARE WE DOING COMPARED TO THE NATION OVERALL?

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## BACKGROUND

As our population ages, we have both the responsibility and the opportunity to care for our older citizens in a way that ensures quality care while also providing a good quality of life. We have come a long way in this direction over the last 50 years. Today's nursing homes largely serve two very different groups of older adults; those coming from the hospital for short rehabilitation stays who return to the community, and long-stay residents—often with dementia—for whom the nursing facility becomes their home. In this study, we focus on long-stay nursing home residents, specifically older adults age 65 and over, who have been in a freestanding nursing home for 100 days or longer or are not likely to return to the community.

The national responsibility for nursing home quality lies with the federal regulatory agency, the Centers for Medicare and Medicaid Services (CMS). To ensure quality, CMS primarily relies on three indicators of quality: an annual inspection survey, completed by a state agency under contract to CMS; a series of quality indicators collected uniformly across the nation through an assessment called the Minimum Data Set (MDS), examining such areas as falls and physical restraints; and facility-level data examining the ratio of direct care staff to residents. These three sets of quality indicators are combined into a Five-Star Quality Rating System that is an aggregate measure of nursing home quality. The Nursing Home Five-Star Rating System is similar in concept to the approach used to review restaurants or hotels on travel websites.

Unfortunately, prior to 2019, this Five-Star Rating System was structured so that every state had approximately the same proportion of facilities at each star rating, which meant, from a rating perspective, there were minimal quality differences across states. To gain a better understanding of comparative quality in Ohio nursing homes, we examine state specific data for the three sets of quality measures that comprise the aggregate five-star rating. Each of these quality measures examine a different dimension of quality. In this brief, we compare the individual quality indicators available nationally to Ohio state-specific results.

In 2017, Ohio nursing homes recorded a weighted average of 4.5 deficiencies, well under the national average of 6.1 for a  
**17/50**  
national ranking

For overall direct care staffing levels Ohio ranked **25<sup>th</sup>** in the nation

Between 2013 and 2017 Ohio improved on **8 of 10** quality indicators examined

There have been criticisms of the data sources that we rely on for this study. For example, there are noteworthy differences in the inspection survey results across states, the MDS quality indicators are collected by the facilities themselves, rather than by an independent source, and before the April, 2018 introduction of a payroll-based reporting system, there were reports that some nursing homes may have overstated staffing levels. Despite these limitations, these data do provide an opportunity for states to view themselves in a national context.

## OHIO'S NURSING HOME INDUSTRY

As one of the largest states in the nation, Ohio has the sixth highest number of adults 65 and older and the sixth highest supply of nursing home beds. In 2017, Ohio had 968 facilities, containing more than 90,000 beds. Similar to the nation overall, the majority of beds are located in urban areas (76%) and are in proprietary facilities (80%). The typical nursing home has 100 beds. The vast majority of facilities are either free-standing or located within continuing care retirement communities, but a small number are located within hospitals (19) and these units are excluded from this study (See Table 1).

<b>Table 1. Ohio's Nursing Facility Characteristics, (2017)</b>		
	<b>All Nursing Facilities</b>	<b>Hospital-Based Long-Term Care Unit</b>
<b>Number of Facilities</b>	968	19
<b>Licensed/Certified Nursing Facility Beds on 12/31/17</b>	90,886	767
<b>Average Number of Beds</b>	96	45
<b>Location (percent)</b>		
Urban	76.5	75.0
Rural	23.5	25.0
<b>Ownership (percent)</b>		
Proprietary	79.1	37.5
Not-for-profit	18.8	50
Government	2.1	12.5

**Source:** Biennial Survey of Long-Term Care Facilities, 2017.<sup>1</sup>

## NURSING HOME QUALITY

In the following tables, we present data for Ohio and the nation for the three areas that comprise the CMS Five-Star Rating: state survey results, direct care staffing levels, and the MDS quality indicators for the time period 2013-2017. As shown in Table 2, results from the state surveys found that Ohio recorded an average of 4.5 deficiencies in 2017, well under the national average of 6.1 for a ranking of 17/50 (1=best ranking). Although this represents a slight increase in deficiencies for Ohio since 2013 (4.3), the state's change was lower than the national increase, so Ohio's ranking improved. Of greater importance, Ohio's deficiency score, which assigns points to each deficiency based on severity and scope, shows Ohio's score of 29.5 to be well below the national score of 43.2, for an Ohio ranking of 14/50. The national trend in worsening deficiency performance could be due to a more rigorous survey process now in place or a decline in actual quality due to staffing shortages as a result of the strong economy.

Nursing home staffing levels are also shown in Table 2. In 2017, Ohio facilities recorded 3.6 hours per resident day (HPRD) of direct care nursing staff, slightly above the national average of 3.53. The registered nurse and certified nursing assistant HPRD were equivalent to the national average, and the use of licensed practical nurses was slightly higher (0.92 vs 0.83). Between 2013 and 2017, Ohio's direct care staffing ratios increased slightly (3.56 to 3.6) while the national numbers were essentially unchanged (3.52 vs. 3.53), resulting in Ohio improving from a 39 ranking to 25<sup>th</sup> (1=higher staffing).

**Table 2. Deficiencies and Staffing Levels Comparing Ohio to the Nation, (2013 through 2017)**

		2013	2015	2017
<b>Deficiencies</b>				
Number of Deficiencies	Ohio	4.32	4.11	4.47
	Nation	5.83	5.84	6.09
Deficiency Score	Ohio	25.65	26.03	29.54
	Nation	39.79	41.03	43.16
<b>Staffing Levels (HPRD)</b>				
Registered Nurses Providing Direct Care	Ohio	0.43	0.47	0.43
	Nation	0.42	0.45	0.43
Licensed Practical Nurses	Ohio	0.89	0.88	0.92
	Nation	0.81	0.82	0.83
Certified Nurse Aides	Ohio	2.24	2.29	2.24
	Nation	2.29	2.29	2.26
Total Direct Care Staff	Ohio	3.56	3.65	3.60
	Nation	3.52	3.56	3.53
Social Services Staff	Ohio	0.10	0.10	0.10
	Nation	0.10	0.10	0.10
Activities Staff	Ohio	0.19	0.19	0.19
	Nation	0.17	0.18	0.18

Note. All outcomes are calculated from calendar year MDS and CASPER data, weighted by number of residents. The nation row includes all states except Ohio. HPRD = hours per resident day.

A review of the primary MDS nursing home quality indicators for long-term residents shows that in 2017, five of Ohio's quality indicators were better than the national average, four were worse, and one was the same (See Table 3). Between 2013 and 2017, Ohio improved in eight of the ten quality indicators, with residents with pain and with incontinence the only indicators that did not improve. Several areas showed major improvement including a drop in the percentage of residents using antipsychotic medications (21.4 to 14.9) a drop in residents who were physically restrained (1.8 to 0.23), a drop in residents with urinary tract infections (5.3 to 2.5), and a drop in high-risk residents with pressure ulcers (3.6 to 3.0). Ohio has a negative result in one area when compared to the nation overall; a higher proportion of residents with depressive symptoms (10.6 versus 3.8).

**Table 3. MDS Quality Indicators Comparing Ohio to the Nation, (2013 through 2017)**

		2013	2015	2017
<b>Falls with Major Injury</b>	Ohio	0.39	0.39	0.32
	Nation	0.36	0.36	0.33
<b>Moderate to Severe Pain</b>	Ohio	6.97	7.14	7.20
	Nation	6.75	6.84	6.97
<b>High-Risk Residents with Pressure Ulcers</b>	Ohio	3.64	3.45	2.96
	Nation	4.06	3.82	3.56
<b>Urinary Tract Infections</b>	Ohio	5.30	3.90	2.46
	Nation	5.02	3.95	2.59
<b>Low-risk Residents Who Lose Control of Bladder/Bowel</b>	Ohio	43.63	40.82	45.02
	Nation	45.64	47.78	49.40
<b>Catheter Inserted or Left In</b>	Ohio	2.61	2.54	2.43
	Nation	2.64	2.59	2.54
<b>Physically Restrained</b>	Ohio	1.77	0.78	0.23
	Nation	1.52	0.92	0.40
<b>Weight Loss</b>	Ohio	5.57	5.77	5.29
	Nation	5.59	5.48	5.16
<b>Depressive Symptoms</b>	Ohio	12.59	10.59	10.63
	Nation	5.03	4.54	3.78
<b>Antipsychotic Medications</b>	Ohio	21.38	18.84	14.86
	Nation	20.31	17.09	14.42

Note. All outcomes are calculated from calendar year MDS. The nation row includes all states except Ohio.

Because surrounding states have similar employment and environmental circumstances, we examined Ohio's results in the context of our border states for 2017 (See Table 4). For the average number of deficiencies and for the deficiency score, one state, Kentucky, ranked better, and four were below Ohio.

For the overall direct care staffing measure, Ohio ranked 25<sup>th</sup>, with only one state in the region, Michigan (13), ranked higher. Ohio ranked below the median (32/50) and below Michigan and Pennsylvania on registered nurse staffing. For licensed practical nurse staffing, Ohio ranked above every state in the region (12<sup>th</sup>). Ohio ranked 29/50 on certified nurse aides, with only Michigan recording a higher ranking (10).

In reviewing the MDS quality indicators, Ohio ranked above the median in eight of the ten indicators. Ohio led the region on the quality indicators that examined high risk pressure ulcers and use of catheters. Additionally, Ohio ranked second in the region in low-risk residents with incontinence and residents who are physically restrained. On one quality indicator, residents with depressive symptoms, Ohio had the lowest ranking in the region.

**Table 4. Quality Indicators Comparing Ohio to Border States, (2017)**

	Ohio		Indiana	Kentucky	Michigan	Pennsylvania	West Virginia
	Avg.	Rank	Rank	Rank	Rank	Rank	Rank
<b>Deficiencies</b>							
Number of Deficiencies	4.47	17	23	9	43	32	42
Deficiency Score	29.54	14	18	11	44	28	41
<b>Direct Care Staffing Levels (HPRD)</b>							
Registered Nurses	0.43	32	36	41	25	22	38
Licensed Practical Nurses	0.92	12	16	21	23	20	18
Certified Nurse Aides	2.24	29	44	33	10	32	41
Total Direct Care Staff	3.60	25	36	34	13	27	37
Social Services Staff	0.10	32	15	43	16	35	25
Activities Staff	0.19	27	14	37	11	25	7
<b>Nursing Home Compare Quality Measures (Percent)</b>							
Falls with Major Injury	0.32	16	14	31	21	10	40
Moderate to Severe Pain	7.20	31	29	25	11	24	13
High-Risk Residents with Pressure Ulcers	2.96	15	29	33	31	24	20
Urinary Tract Infections	2.46	18	16	16	15	13	45
Low-Risk Residents Who Lose Control of Bladder/ Bowel	45.02	13	35	26	34	42	10
Catheter Inserted or Left In	2.43	17	34	36	27	23	39
Physically Restrained	0.23	16	10	46	29	24	41
Weight Loss	5.29	19	18	4	17	21	5
Depressive Symptoms	10.63	48	47	15	18	22	40
Antipsychotic Medications	14.86	22	16	50	9	30	11

Note. All outcomes are calculated from calendar year MDS and CASPER data, weighted by number of residents.

HPRD = Hours per resident day.

In addition to looking at quality measures for all freestanding facilities, we completed an analysis by facility characteristics. In Table 5, we examine the quality indicators by whether a facility is considered to have a low or high proportion of Medicaid residents (facilities with 60% or greater were classified as high). In 2017, low proportion Medicaid facilities in Ohio had fewer deficiencies (3.7 vs. 5.1), lower deficiency scores (25.5 vs. 33.0), and higher direct care nursing staff levels (3.8 vs. 3.4), when compared to high Medicaid facilities in the state. Low Medicaid facilities used more registered nurses (0.47 vs. 0.40) and certified nurse aides (2.37 vs. 2.13), but fewer licensed practical nurses. For the MDS quality measures, low and high proportion Medicaid facilities in Ohio tend to have small differences in quality except for three measures: high Medicaid facilities have 1) worse quality for the presence of depressive symptoms; 2) higher use of antipsychotic medications; and higher use of physical restraints. In contrast, low Medicaid facilities report having more residents who lose control of their bladder/bowel.

**Table 5. Quality Indicators Comparing Low and High Medicaid Facilities in Ohio to the Nation, (2017)**

	Low Medicaid		High Medicaid	
	Ohio	Nation	Ohio	Nation
<b>Deficiencies</b>				
Number of Deficiencies	3.72	5.53	5.10	6.44
Deficiency Score	25.46	38.28	32.98	46.17
<b>Staffing Levels (HPRD)</b>				
Registered Nurse	0.47	0.50	0.40	0.39
Licensed Practical Nurses	0.96	0.83	0.89	0.84
Certified Nurse Aides	2.37	2.37	2.13	2.20
Total Direct Care Staff	3.80	3.70	3.42	3.42
Social Services Staff	0.11	0.11	0.09	0.09
Activities Staff	0.21	0.20	0.18	0.17
<b>MDS Quality Measures (Percent)</b>				
Falls with Major Injury	0.30	0.35	0.34	0.31
Moderate to Severe Pain	7.22	7.03	7.20	6.93
High-Risk Residents with Pressure Ulcers	3.00	3.45	2.92	3.63
Urinary Tract Infections	2.65	2.81	2.30	2.45
Low-Risk residents Who Lose Control of Bladder/Bowel	48.55	52.18	42.06	47.63
Catheter Inserted or Left In	2.44	2.54	2.43	2.54
Physically Restrained	0.09	0.27	0.34	0.48
Weight Loss	5.41	5.15	5.20	5.17
Depressive Symptoms	8.55	3.36	12.38	4.04
Antipsychotic Medications	13.26	12.80	16.32	15.46

Note. All outcomes are calculated from calendar year MDS and CASPER data, weighted by number of residents. The cut-off for low/high Medicaid facility is 60%. The nation column includes all states except Ohio.

We also examined whether facility ownership had an impact on the quality measures. As shown in Table 6, Ohio's not-for-profit facilities had fewer deficiencies and higher staffing levels than Ohio's proprietary nursing homes. For example, the deficiency score was 32.3 in the proprietary and 20.0 in the not-for-profit nursing homes. Both not-for-profit and proprietary nursing homes in Ohio scored better than the national average on deficiencies within their groupings.

For staffing, not-for profits had more direct care staff overall (4.1 vs. 3.5) and had higher staffing across the board. In reviewing the MDS quality indicators we find minimal differences by ownership status for most MDS quality indicators. Proprietary facilities have worse quality in terms of depressive symptoms and antipsychotic medication use, but better quality in terms of residents who loss control of their bowel or bladder.

<b>Table 6. Quality Indicators Comparing Proprietary and Not-for-Profit Facilities in Ohio to the Nation, (2017)</b>				
	<b>Proprietary</b>		<b>Not-For-Profit</b>	
	<b>Ohio</b>	<b>Nation</b>	<b>Ohio</b>	<b>Nation</b>
<b>Deficiencies</b>				
Number of Deficiencies	4.82	6.43	3.37	5.18
Deficiency Score	32.38	46.08	19.99	34.77
<b>Staffing Levels (HPRD)</b>				
Registered Nurse	0.42	0.40	0.50	0.50
Licensed Practical Nurses	0.91	0.84	0.95	0.80
Certified Nurse Aides	2.15	2.18	2.61	2.48
Total Direct Care Staff	3.48	3.42	4.05	3.78
Social Services Staff	0.09	0.10	0.11	0.11
Activities Staff	0.18	0.17	0.23	0.21
<b>MDS Quality Measures (Percent)</b>				
Falls with Major Injury	0.30	0.31	0.36	0.36
Moderate to Severe Pain	7.24	6.98	7.04	6.96
High-Risk Residents with Pressure Ulcers	2.91	3.67	2.94	3.32
Urinary Tract Infections	2.30	2.40	2.92	3.07
Low-Risk residents Who Lose Control of Bladder/Bowel	43.43	48.33	52.20	53.16
Catheter Inserted or Left In	2.45	2.56	2.38	2.50
Physically Restrained	0.27	0.41	0.05	0.29
Weight Loss	5.22	5.17	5.59	5.22
Depressive Symptoms	11.95	3.90	6.30	3.15
Antipsychotic Medications	15.19	14.68	13.18	13.33

Note. All outcomes are calculated from calendar year MDS and CASPER data, weighted by number of residents. The nation column includes all states except Ohio. HPRD = hours per resident day

## 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 made a substantial investment in operating a Long-Term Care Consumer Guide, available via a web site designed to provide consumers with quality information. Ohio is one of the few states in the nation that examines and makes public satisfaction data from residents and family members. Ohio has also been involved in a series of quality projects and programs to enhance the lives of residents. Data from this study show that between 2013 and 2017 Ohio saw improvements in its national quality rankings. However, the study has identified some important areas for a more in-depth policy review. Resource availability does appear to impact quality in some areas. Facilities that had a lower proportion of Medicaid residents recorded fewer deficiencies and had higher staffing levels. This finding also held for a comparison of ownership, with not-for-profits also having fewer deficiencies and higher staffing. In neither of these comparisons did we find MDS quality differences. Further research examining the link between reimbursement rates and quality and retention of direct care staff will be critical next steps for state policy-makers to continue to enhance Ohio's quality efforts. Although progress has been documented, there is much room to improve for Ohio to become a top ten state nationally on the array of quality indicators.

## ENDNOTES

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<sup>1</sup> Biennial Survey of Long-Term Care Facilities, 2017.

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