

---

# Resident Conditions and Quality of Care

## CHAPTER 4

---

**F**ederal nursing home reform during the late 1980s shifted the focus of regulation away from physical plant issues and toward resident outcomes, such as functional status, quality of life, and satisfaction. With this shift came a greater emphasis on the quality of care provided in nursing homes. This chapter describes the condition of nursing home residents and the quality of care they receive in Minnesota and the surrounding states. We asked:

- **Are Minnesota's nursing home costs higher because facilities are providing services to more costly and medically needy residents than neighboring states?**
- **Are Minnesota's costs higher because its facilities deliver a superior quality of nursing home care compared with neighboring states?**

To assess the condition of nursing home residents, we analyzed federal data on residents' functional ability and special care needs. For our evaluation of nursing home quality of care, we interviewed ombudsman staff, long-term care advocates, and public health department staff; analyzed federal data on selected performance indicators; and reviewed national literature.<sup>1</sup> Staffing levels, which is one component of quality care, was discussed in Chapter 3.

## RESIDENT ABILITIES AND CONDITIONS

Nursing homes frequently use a resident's ability to perform activities of daily living to assess the level of care needed. Activities of daily living (ADLs) are basic self-care tasks such as eating, bathing, dressing, getting to and using the bathroom, and getting in and out of a bed or chair. A resident who is dependent on staff to

---

<sup>1</sup> The Minnesota Department of Health generated data from the HCFA's On-Line Survey Certification and Reporting (OSCAR) system. Data on performance indicators are collected as part of the federally-mandated nursing home certification survey process. Every Medicaid-certified nursing home is surveyed (at least once every 18 months) by a team of inspectors from their state Department of Health. Some nursing home providers have expressed concern about consistency of the survey process and resulting data from state to state. A national evaluation of the survey process published in 1993 identified a number of areas in which better procedures were needed, but it also found that surveyors were reasonably accurate at the extremes in identifying very good and very bad nursing homes. (Institute of Medicine, *Nursing Staff in Hospitals and Nursing Homes: Is It Adequate?* (Washington, D.C.: National Academy Press, 1996): 140.) The latest revision of the survey was effective beginning July 1, 1995.

perform ADLs will need more hours of direct nursing care than someone who is able to perform these activities independently. The functional status of nursing home residents, as measured by activities of daily living, is an important predictor of the cost of a resident's nursing home care.<sup>2</sup> Minnesota and other states use a resident's ability to perform ADLs as one factor in determining a person's case-mix category. We found that:

**More residents in Minnesota nursing homes required nursing assistance with daily activities.**

- **Compared with neighboring states, Minnesota had more nursing home residents who were dependent on nursing staff to perform activities of daily living.**

Table 4.1 shows that, nursing homes in Minnesota had a higher percentage of residents who were dependent on nursing staff for bathing, dressing, transferring, toilet use, and eating than neighboring states.<sup>3</sup> The data also show that the percent of Minnesota's nursing home residents with ADL dependencies, while generally higher than neighboring states, was below the national average.

We also evaluated the share of residents with special needs who require increased nursing care and careful review by nursing and other staff to ensure that an adequate care program is being provided. Analysis of federal data on residents with special care needs revealed that:

**Table 4.1: Percent of Residents Requiring Assistance or Dependent on Nursing Staff to Perform Activities of Daily Living, 1995-96**

Status	Activity	Percent of Residents					
		Minnesota	Iowa	North Dakota	South Dakota	Wisconsin	National Average
Dependent	Bathing	42%	34%	37%	29%	37%	46%
	Dressing	39	31	32	21	33	40
	Transferring	27	24	24	18	25	32
	Toilet Use	35	28	30	23	31	39
	Eating	16	13	17	13	15	22
Requiring Assistance	Bathing	53%	61%	57%	68%	56%	48%
	Dressing	44	52	49	59	50	46
	Transferring	38	39	41	47	42	42
	Toilet Use	37	40	41	47	41	38
	Eating	30	26	25	28	26	29

Source: U.S. Department of Health and Human Services, Health Care Financing Administration, Online Survey Certification and Reporting System, 1995-1996.

<sup>2</sup> Brent C. Williams and others, "Activities of Daily Living and Costs in Nursing Homes," *Health Care Financing Review* 15, no. 4 (Summer 1994): 117. This article found that four ADL measures (transferring, toileting, eating, and bed mobility) explain 30 percent of the variance in nursing costs among nursing home residents.

<sup>3</sup> Data on resident conditions are generated from unaudited reports completed by each nursing home. Some questions have been raised about the accurateness of this data. Although imperfect, the OSCAR system is the best source of data for state-by-state comparisons of resident abilities and conditions.

- **The proportion of Minnesota's nursing home residents with special conditions was similar to neighboring states in most areas, although Minnesota had more residents with behavior problems and bladder and bowel incontinence.**

As shown in Table 4.2, approximately 35 percent of Minnesota's nursing home residents had behavioral problems. Of these, 79 percent were enrolled in behavior management programs, substantially more than surrounding states, except North Dakota. Compared with neighboring states, more Minnesota residents had incontinent bladders (54 percent) and bowels (38 percent). The percent of Minnesota nursing home residents who were physically restrained (23 percent) is higher than the national average, but lower than South Dakota and Wisconsin.

In other areas, the proportion of Minnesota nursing home residents with special conditions was similar to or lower than neighboring states. In some instances this may be indicative of quality care. For example, Minnesota had fewer residents with contractures than some states, 15 percent compared with 16 to 39 percent in neighboring states. A contracture, an abnormal shortening of a muscle making it resistant to stretching, may occur if joints are improperly supported and positioned, and inadequately exercised. Contractures and pressure sores can often be prevented through proper treatment and care.

**Table 4.2: Percent of Nursing Home Residents With Special Conditions, 1995-96**

Category	Condition	Percent of Residents					
		Minnesota	Iowa	North Dakota	South Dakota	Wisconsin	National Average
Mobility	Bedfast	2%	3%	3%	3%	4%	6%
	Chairbound	46	39	47	47	49	52
	Physically restrained	23	4	12	24	34	19
	Contractures	15	20	23	39	16	23
Skin Integrity	Pressure sores	4	4	3	5	5	8
Bladder/Bowel Status	Indwelling or external catheter	5	5	5	6	7	8
	Bladder incontinence	54	48	48	46	49	52
	Bowel incontinence	38	29	30	25	35	45
Mental Status	Dementia	42	44	42	39	41	43
	Behavioral symptoms	35	20	25	27	24	20
	In a behavior management program	79	45	81	63	50	58
Special Care	Tracheotomy care	< 1	< 1	< 1	< 1	< 1	1
	Ostomy care	2	2	2	2	2	2
	Suctioning	1	1	1	1	1	2
	Tube feeding	2	2	3	2	3	8
	Respiratory treatment	6	6	6	6	5	6

Source: U.S. Department of Health and Human Services, Health Care Financing Administration, Online Survey Certification and Reporting System, 1995-1996.

---

**The quality of care provided in nursing homes is difficult to measure.**

## QUALITY OF CARE

Quality of care in nursing homes is a complex concept that is difficult to measure. The Institute of Medicine defines quality of care as, "...the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge."<sup>4</sup> Advocates and ombudsman staff for the elderly told us that staffing level, mix (licensed nurses to aides), and competency; individualized care; staff-resident relationships; and overall feelings of safety and security are important quality of care indicators for nursing home residents and their families. Advocates we spoke with generally consider the quality of care in Minnesota nursing homes to be above average compared with surrounding states, but acknowledged the difficulty in objectively measuring quality of care.

According to the research, nursing homes with higher costs do not necessarily provide a higher quality of care.<sup>5</sup> Providing adequate and competent staffing at each level of nursing care is important in providing quality nursing home care. Reimbursement methods, particularly the use of reimbursement limits for nursing or direct care, have been found to influence nurse staffing levels, which directly impacts resident outcomes.<sup>6</sup> An ideal analysis of quality of care would compare a broad range of factors including: staffing level and mix, environmental factors, assistance with ADLs, infection control, quality of resident-staff relationships, changes in health status, conditions attributable to the care provided (facility-acquired pressure sores and injuries), and resident and family satisfaction. Unfortunately, data are not available to perform such a comprehensive analysis.

Analysis in Chapter 3 revealed that Minnesota provided more hours of nursing care per resident day and a higher ratio of licensed nurses to nursing aides than most of the states evaluated. To further examine quality of care, we reviewed performance indicators selected to represent resident outcomes, services or activities provided, and environmental factors. These performance indicators are summarized in Table 4.3. We ranked states worse than the national average if the percentage of homes with deficiencies was more than two percentage points above the national average. We found that:

- **While Minnesota performs above the national average on many performance indicators, the quality of care in Minnesota's nursing homes appears to be similar to that in neighboring states.**

Based on 36 selected performance indicators, Minnesota's homes rated worse overall than the national average on 5 measures: 1) providing a safe, sanitary and com-

<sup>4</sup> Institute of Medicine, Division of Health Care Services, *Nursing Staff in Hospitals and Nursing Homes: Is It Adequate?* (Washington, D.C.: National Academy Press, 1996), 107.

<sup>5</sup> Joel W. Cohen and William D. Spector, "The Effect of Medicaid Reimbursement on Quality of Care in Nursing Homes," *Journal of Health Economics* Vol. 15 (1996): 24; John Holahan and Joel Cohen, "Nursing Home Reimbursement: Implications for Cost Containment, Access and Quality," *The Milbank Quarterly* 65 no. 1 (1987): 139.

<sup>6</sup> Cohen and Spector, 44; Institute of Medicine, *Nursing Staff in Hospitals and Nursing Homes*, 148-149.

**Table 4.3: Selected Performance Indicators, 1995-96**

DESCRIPTION	Percent of Facilities Not Meeting Requirements					
	MN	IA	ND	SD	WI	Ntl
The facility immediately informs the resident, resident's physician, and legal guardian or family member of an accident requiring intervention, a significant change in resident's health status, a need to alter treatment, or a decision to transfer or discharge the resident from the facility.	2%	3%	11%	4%	4%	6%
Each resident is given privacy during medical treatment, written and telephone communications, personal care, and visits.	9	3	9	7	5	8
Each resident who wishes to self-administer his or her own medications is allowed to once the interdisciplinary team has determined that it is safe.	10	1	5	6	1	3
Each resident is free from any physical restraints imposed for purposes of discipline or convenience, and not required to treat medical symptoms.	13	12	14	20	10	16
Each resident is free from any chemical restraints imposed for purposes of discipline or convenience, and not required to treat medical symptoms.	1	0	1	0	0	1
Each resident is free from verbal, sexual, physical, and mental abuse.	1	1	0	0	1	2
Each resident is cared for in a manner and in an environment that maintains or enhances his or her dignity and respect.	15	6	22	11	7	17
The facility provides an ongoing program of meaningful activities to meet the interests and the physical, mental and psychosocial well-being of each resident.	6	4	13	13	12	12
The facility provides medically-related social services to attain or maintain the highest practicable physical, mental and psychosocial well-being of each resident.	7	4	0	7	7	9
The facility provides a safe, clean, comfortable, and homelike environment, allowing each resident to use his or her personal belongings to the extent possible.	4	6	5	14	6	11
Each resident is provided with clean bed and bath linen in good condition.	1	<1	1	0	1	3
The facility makes a comprehensive assessment of each resident's needs, including physical and mental status, impairments, nutritional status, treatment needs, and activity and rehabilitation potential.	34	23	14	43	23	26
A comprehensive care plan is developed for each resident by a team of qualified professionals and is periodically reviewed and revised.	3	3	17	2	7	6
Services required in residents' care plans are provided by qualified persons.	5	2	9	4	3	5
Each resident receives the care and services necessary to attain or maintain his or her highest practicable physical, mental, and psychosocial well-being.	6	11	9	2	12	12
Each resident receives the care needed to maintain or improve his or her activities of daily living (bathe, dress, walk, eat, communicate, and toilet).	6	7	6	1	3	5
Each resident unable to independently perform the activities of daily living receives the necessary care and services to maintain good nutrition, grooming, and personal and oral hygiene.	5	7	9	2	6	10
Each resident receives the care necessary to prevent skin breakdown, and a resident with a bed sore also receives treatment to promote healing and prevent infection.	11	28	21	14	7	16
A resident who enters the facility without a urinary catheter is not catheterized unless clinically necessary.	1	2	0	1	1	1
A resident who has problems with bladder control receives the treatment and care necessary to prevent urinary tract infections and to restore as much normal bladder function as possible.	17	20	13	3	8	12

**Table 4.3: Selected Performance Indicators, 1995-96, continued**

DESCRIPTION	Percent of Facilities Not Meeting Requirements					
	MN	IA	ND	SD	WI	Ntl
A resident who enters the facility without a limited range of motion (ROM) does not experience a reduction ROM in these abilities unless unavoidable for clinical reasons.	0%	2%	0%	0%	2%	1%
A resident with limited range of motion receives appropriate treatment and services to increase his or her movement capacity and/or prevent further decrease in ROM.	9	11	3	0	7	9
A resident who is fed by a tube receives the appropriate treatment and service to prevent complications (pneumonia, vomiting, dehydration) and to restore, if possible, normal eating skills.	2	6	2	0	1	5
The facility ensures that the resident environment remains as free of accident hazards as possible.	11	7	1	26	13	18
Each resident receives adequate supervision and assistance devices to prevent accidents.	3	7	6	2	3	8
The facility ensures that each resident maintains his or her nutritional status (such as body weight), unless unavoidable due to clinical reasons.	2	4	1	11	1	8
Each resident receives sufficient fluids to maintain proper hydration and health.	3	3	5	1	1	3
Each resident receives proper care for injections, fluids supplied through tubes, colostomy/ileostomy, respiratory, tracheotomy, foot care, suctioning, and prostheses.	2	3	2	2	<1	4
Each resident's drug regimen is of proper dosage and duration with adequate monitoring.	7	10	3	25	8	11
Sufficient nursing services are provided at all times to meet the needs of residents.	3	5	6	3	2	5
Each resident receives a nourishing, palatable, well-balanced diet that meets his or her daily nutritional and special dietary needs.	<1	0	0	0	1	<1
Food is stored, prepared, distributed and served under sanitary conditions.	13	19	23	17	6	25
The facility has established and maintains an infection control program designed to provide a safe, sanitary, and comfortable environment that helps prevent the development and spread of disease and infection.	14	9	31	5	2	13
All essential mechanical, electrical, and patient care equipment is maintained in safe operating condition.	1	0	0	0	0	3
Resident rooms are designed or equipped to ensure full visual privacy for each resident.	8	<1	11	21	2	3
The facility provides a safe, functional, sanitary, and comfortable environment for residents, staff and the public.	19	2	17	0	2	6

Source: U.S. Department of Health and Human Services, Health Care Financing Administration, Online Survey and Certification Report - ing (OSCAR) Report #18, "Comparison of Deficiency Patterns in Tag Number Order," 1995-1996. Generated by the Minnesota Department of Health on July 16, 1996.

<sup>1</sup>According to staff at the Minnesota Department of Health, this performance indicator is applied differently in Minnesota than other states.

---

**Nursing homes in Minnesota ranked above the national average on many performance measures.**

comfortable environment; 2) comprehensively assessing each resident's needs; 3) caring for residents with bladder control problems in a manner that prevents urinary tract infections; 4) allowing residents capable of administering their own medications to do so; and 5) providing full visual privacy in resident rooms.<sup>7</sup> Nursing homes in North and South Dakota rated worse overall than the national average on eight measures, while homes in Iowa were worse on two measures, and homes in Wisconsin did not perform worse than the national average on any measure.<sup>8</sup>

When these deficiencies are compared among the states, we found that nursing homes in Minnesota, North Dakota, and South Dakota were worse than the national average in providing full visual privacy in resident rooms. Nursing homes in Minnesota and South Dakota ranked worse than the national average for not allowing self-administration of medications and not comprehensively assessing residents. Homes in Minnesota and Iowa ranked worse than the national average in providing adequate treatment and care for residents with bladder control problems, while homes in Minnesota and North Dakota were worse than the national average in not providing a safe, sanitary and comfortable environment.

The use of physical restraints on residents in nursing homes has been criticized because restraining residents may decrease muscle tone, and increase the likelihood of falls, incontinence, pressure ulcers, depression, confusion, and mental deterioration.<sup>9</sup> We found that 13 percent of Minnesota nursing homes were cited for the overuse of physical restraints, which is better than the national average (16 percent). Staff from the Minnesota Department of Health told us that the use of physical restraints in Minnesota nursing homes is still too high, and the department would like to reduce the use of physical restraints.

Federal regulations categorize nursing home deficiencies by the scope of the problem (whether deficiencies are isolated, constitute a pattern, or are widespread) and the severity of the violations (whether there is harm or jeopardy to residents). The inspection and certification process focuses on substandard quality of care when inspecting a nursing home. Inspectors cite a nursing home for substandard quality of care when: 1) a resident has been or is likely to be seriously injured or harmed; 2) there is a pattern of, or widespread actual harm occurring to residents; or 3) there is a widespread potential for more than minimal harm.<sup>10</sup>

---

<sup>7</sup> Environmental deficiencies usually involved unclean floors, low hot water temperatures, and inaccessible call-light switches in bathrooms. Assessment deficiencies were cited because specific assessments were not performed on complex residents, such as pain control, hot pack use, indwelling catheter justification, and continued use of physical restraints. The bladder function deficiencies cited identified improper placement and care of catheter bags and failure to provide residents with toileting opportunities.

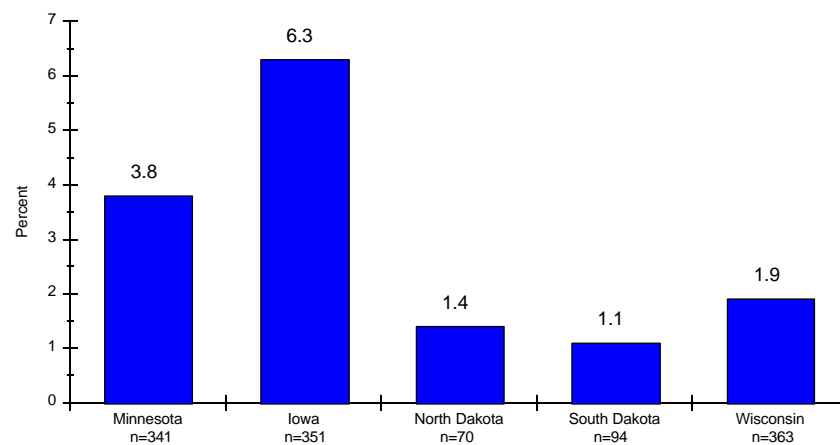
<sup>8</sup> We ranked states better than the national average if the percentage of homes with deficiencies was more than two percentage points below the national average. Nursing homes in Minnesota and South Dakota rated better than the national average on 14 measures, compared with 10 in North Dakota, 19 in Iowa, and 21 in Wisconsin.

<sup>9</sup> Institute of Medicine, *Nursing Staff in Hospitals and Nursing Homes*, 138.

<sup>10</sup> U.S. Department of Health and Human Services, *State Operations Manual*, Transmittal No. 273 (June 1995): 7-41 - 7-43. Due to changes made in the survey and survey process beginning July, 1995, only survey certification information collected between July 1, 1995, and July 16, 1996 were used when comparing the scope and severity of nursing home citations.

Between July 1995 and July 1996, 6.8 percent of all deficiencies cited in Minnesota nursing homes were substandard quality of care citations, compared with 2.8 percent in Wisconsin, 4.7 percent in North Dakota, 7.3 percent in Iowa, and 21.6 percent in South Dakota.<sup>11</sup> Figure 4.1 illustrates the percent of nursing homes receiving substandard quality of care citations in each state.<sup>12</sup> Minnesota, with 4 percent of facilities receiving substandard quality of care citations, was higher than all other states examined, except Iowa.

**Figure 4.1: Percent of Nursing Homes with Substandard Quality of Care Citations, 1995-96**



Source: U.S. Department of Health and Human Services, Health Care Financing Administration, On-Line Survey Certification and Reporting System, July 1995-July 16, 1996.

## SUMMARY

This chapter examined whether Minnesota nursing home costs are higher because facilities provide services to more medically needy and costly residents, or because they deliver a superior quality of care compared with neighboring states. We found that nursing homes in Minnesota had a larger percentage of residents who were dependent on nursing staff to perform activities of daily living, including bathing, dressing, transferring, using the toilet, and eating than surrounding states.

Nursing home residents with special care needs require more nursing care and more careful review by nursing and other staff to ensure that adequate care is being provided. Minnesota had more residents with behavior problems, and bladder and bowel incontinence than surrounding states. In other areas, the proportion of

<sup>11</sup> South Dakota had a total of 125 citations, compared with totals ranging from 407 in Wisconsin to 1,358 in Iowa.

<sup>12</sup> Thirteen nursing homes in Minnesota were cited for substandard quality of care, compared with one facility each in North and South Dakota, seven in Wisconsin, and 22 in Iowa.

Minnesota's nursing home residents with special conditions was similar to or lower than surrounding states. In some instances this may be indicative of quality care. For instance, Minnesota had fewer residents with muscle contractures, a condition that can often be prevented through proper care and treatment.

Unfortunately, comprehensive data are not available to measure the quality of care in nursing homes. Using federal data, we found that, while Minnesota performed above the national average on many performance indicators, the quality of care in Minnesota's nursing homes appears to be similar to that in neighboring states. In summary, Minnesota's higher nursing home costs may be partially attributable to a higher percent of nursing home residents who are dependent on nursing staff for daily care, but do not appear to be related to a higher quality of care than neighboring states.