

Nursing Home and Home Health Care

Key Findings:

- The measures used in this report reveal variation across both States and measures, thereby highlighting the opportunity to improve quality of nursing home and home health care.
- Progress has been made in reducing use of physical restraints in nursing homes. Nationally, less than 10% of chronic care nursing home residents are in physical restraints, although this ranged from 2.7% to 22.4 % among States.
- Although not all patients can be expected to improve, 57% of home health patients who needed assistance with bathing improved.
- Although not all patients can be expected to improve, 35% of home health patients who needed assistance with managing oral medications improved.

Background and Impact

Nursing home and home health services are an important component of the U.S. health care system, accounting for at least \$132 billion or 9 % of national health expenditures in 2001.ⁱ According to the latest available national data, there were 1.6 million current nursing home residents and 2.5 million discharges from nursing homes during 1999, and approximately 1.4 million patients were served by home health agencies in 2000.^{1,2} Nearly all (98%) of the Nation's 18,000 nursing homes and 90% of home health agencies are certified by either the Medicare or Medicaid programs.

Nursing home and home health are part of the spectrum of services addressing a person's needs for long-term care, post-acute care, and rehabilitative, chronic, and palliative care. Care in this spectrum consists of a broad range of health and social services delivered in a variety of settings (institutions, outpatient and community settings, and the home) by many different providers. This section of the report focuses on the quality of services provided by a subset of all these providers—nursing homes, the major institutional provider of long-term care services, and home health agencies—because national data are currently available on these providers. Table 1 illustrates the different types of patient needs and the types of providers offering care for these needs. These categories are not mutually exclusive, since people often have multiple needs (e.g., a frail elder with several chronic conditions recently discharged from the hospital), and providers may serve many types of patients (e.g., nursing homes providing care, long-stay residents with dementia or physical disabilities, and short-stay residents who have post-acute care needs, such as hip fractures, or who are terminally ill).

ⁱ This amount does not include expenditures for hospital-based nursing homes or home health agencies. See <http://cms.hhs.gov/statistics/nhe/definitions-sources-methods>.

Table 1. Spectrum of patient needs and providers

Distinctions	Post-acute health care	Long-term care	Palliative care	Chronic health care
Types of needs	People who need treatment after or instead of hospitalization for an acute illness, injury, or exacerbation of a disease process	People who need assistance with activities of daily living (ADLs) and instrumental activities of daily living (IADLs)	People who need care for minimizing effects of terminal illnesses, including supportive care services providing physical, psychosocial, and spiritual care for themselves and their families	People who need on-going management or treatment of a health condition, such as diabetes, arthritis, hypertension, or heart disease
Types of providers	<i>Skilled nursing facilities (SNF)</i> ⁱⁱ <i>Home health agencies</i> Specialty hospitals - rehabilitation and long-term care hospitals Outpatient/independent therapy services Informal care (family and friends)	<i>Nursing facilities (NF)</i> ⁱⁱ Community based residential care (assisted living facilities, life care communities, board and care, adult foster care) <i>Home health agencies</i> Home and community-based service provider (e.g., adult day care, In-home, personal care, homemaker service agencies) Consumer-directed care Informal care (family and friends)	Hospice care agencies <i>Home health agencies</i> <i>Nursing homes</i> Informal care (family and friends)	Outpatient and physician offices <i>Home health agencies</i> <i>Nursing homes</i> Informal care (family and friends)

Note: Measures examined in this report appear in bold and italics.

Source: Adapted from Scanlon W. Understanding Post-Acute, Chronic, and Long-Term Care.³

Services within this spectrum often are not disease- or condition-specific but rather focus on ADL and IADL needs, minimizing the effects of disability, maintaining function, and slowing deterioration. At the palliative care end of the spectrum, hospice care for terminally ill people and their families.⁴

Quality of care in nursing homes has been an ongoing concern for years.^{5,6} This concern was addressed in the Omnibus Budget Reconciliation Act of 1987 (OBRA-87) or Public Law 100-203, which established goals for quality care and patient quality of life in nursing homes. OBRA-87 also mandated monitoring of the quality of home health care.

ⁱⁱ Skilled nursing facility and nursing facility are terms used by Medicare and Medicaid. In this report, the term “nursing home” is used for both.

How the NHQR Measures Nursing Home and Home Health Quality of Care

Nursing Home Care

OBRA-87 and subsequent Federal regulations added new requirements for quality of care, resident assessment, and care planning and provided a range of new enforcement remedies.⁷ The regulations required that all Medicaid and Medicare certified nursing homes use a standardized comprehensive functional assessment tool to assess all residents and assist in developing individualized care plans. The Minimum Data Set (MDS) is used as the core functional assessment instrument of the Resident Assessment Instrument (RAI) and covers a number of domains, including ADLs, continence, cognitive patterns and delirium symptoms, mood and behavior patterns, skin condition, nutritional status and weight loss, disease and health conditions (including pain), and special treatments and procedures.ⁱⁱⁱ Since OBRA-87 was enacted, the following improvements have been reported:

- Improved processes of nursing home care, such as increased comprehensiveness of care plans and decreased use of restraints.⁷
- Improved outcomes of selected health conditions (dehydration, malnutrition, pressure sores).⁸
- Slowed deterioration in seven of nine outcomes of nursing home residents.⁹
- Declines in the rates of antipsychotic drug use.¹⁰

Using measures derived from MDS data for 2002, this report presents information on quality by facility performance for both long- and short-stay residents.^{iv} The development of these measures and their selection are described elsewhere.^{11,12} All of these nursing home measures are used by CMS for their Nursing Home Quality Initiative, for which national public reporting started in November 2002.

More detail on all these measures, including risk adjustment, is available in the Measures Specification and Data Sources Appendix to this report.

ⁱⁱⁱ See Measure Specifications Appendix and www.cms.hhs.gov/medicaid/mds20/man-form.asp for more information on the MDS.

^{iv} This report uses Centers for Medicare & Medicaid Services (CMS) definition of chronic care and post-acute care. Chronic care refers to patients who typically enter a nursing facility because they are no longer able to care for themselves at home. These patients (or residents) tend to remain in the nursing facility anywhere from several months to several years. The chronic quality measures (QMs) are calculated on any residents with a full or quarterly MDS in the target quarter. Post-acute care refers to patients who are admitted to a facility and stay less than 30 days. These admissions typically follow an acute-care hospitalization and involve high-intensity rehabilitation or clinically complex care. The post-acute QMs, are calculated on any patients with a 14-day MDS assessment (required under the Prospective Payment System [PPS]) in the last 6 months. See CMS Web site for exact specification: www.cms.hhs.gov/quality/nhqi/Nat1UserMan_v1_1.pdf.

Home Health Care

OBRA-87 also affected home health services by mandating that Medicare monitor the quality of home health care and services with a "standardized reproducible assessment instrument...the extent to which the quality and scope of items and services furnished by the agency attained and maintained the highest practicable functional capacity of each individual as reflected in such individual's plan of care...and clinical records..." [1891(c)(2)(C)]. Starting in 1999, uniform assessment data are collected for all adult, nonmaternity Medicaid and Medicare patients in home health agencies, using the Outcome and Assessment Information Set (OASIS). The OASIS data do not constitute a comprehensive assessment, but agencies are required to integrate the OASIS items into their own assessment instruments. Agencies are required to submit their OASIS data for only a subset of their patients (Medicare and Medicaid patients receiving skilled services). The data are then sent to CMS, and a variety of outcome reports are derived for quality assurance and improvement.

The Home Health Outcome-Based Quality Improvement (OBQI) System is a voluntary framework for quality improvement based on OASIS data.^{13,14} This OBQI system includes a total of 41 outcome measures.

Quality of care in the area of home health is summarized by performance in 12 of these outcome measures in the following categories:

- Meeting the patient's basic daily needs (four measures).
- Improvement in getting around (four measures).
- Improvement in physical health (two measures) and mental health status (one measure).
- Percentage of patients admitted to acute-care hospitals (one measure).

These quality measures are based on OASIS assessment data from January 1, 2002 to December 31, 2002 for approximately 7,000 home health agencies (HHAs), predominantly for Medicare patients (about 92%). Most of these home health measures are also being used by CMS for the Home Health Quality Initiative. The AHRQ Technical Expert Panel (TEP) on Home Health Quality Measures provided input for both the CMS public reporting initiative and this report. The TEP noted that some measures were better than others for national, as compared with agency level, reporting and also better for different audiences, e.g., consumers versus policymakers.^v

^v See TEP transcript at <http://www.ahrq.gov/qual/nhrq02/hhmtep.htm>.

More detail on all of these measures, including risk adjustment, is available in the Measures Specification and Data Sources Appendix.

How the Nation Is Doing^{vi}

Assessing how the Nation is doing requires a comparison of State rates with national averages, since there are no data or only limited trend data on the home health and nursing home measures included in this report. Some measures show a large variation in State performance on both nursing home and home health quality. This variation highlights the opportunities for improvement in both nursing home and home health quality of care.

Providing Quality Services to Chronic Care Nursing Home Residents^{vii}

Restraints

OBRA-87 states that, "residents have the right to be free from any physical or chemical restraint imposed for purposes of discipline or convenience and not required to treat the resident's medical symptoms" (HCFA, 42 CFR 483.13(a)). Restraints should be imposed only to insure the physical safety of the resident or that of other residents and only on the written order of a physician, "with a time limit and circumstances of use noted." CMS encourages gradual restraint reduction because of the many negative outcomes associated with restraint use.

The baseline data in this report indicate a national average (see the Measures Specification and Data Sources Appendix for calculation) of less than 10% of residents in physical restraints, ranging from 2.7% to 22.4 % among the States. Twenty-eight States had significantly fewer residents in restraints than the national average and 12 States had significantly more residents in restraints (see Figure 15A).

State survey data over a number of years indicate that use of restraints has declined dramatically, from 44% in 1989 to 21% in 1992, and approximately 13% in 2002.¹⁵ These data also show that the percentage of nursing facilities that are restraint-free has risen from 1% to 11% during this time.

^{vi} Adjusting for known contributing factors, such as gender, age, and insurance status (multivariate analysis) would allow for more detailed exploration of the data, but this generally was not feasible for this report. Any adjustments that were done are noted in the detailed tables. The data presented in this report do not imply causation.

^{vii} Nursing home data are from MDS downloaded from the CMS Nursing Home Compare Web site, November 2002, www.medicare.gov/nhcompare/home.asp.

Pain

Although untreated pain reduces quality of life, it is a common problem in nursing homes.¹⁶ Pain control is important for both chronic and post-acute care patients. Pain is often unrecognized, especially for the most cognitively impaired residents.¹⁷

Nationally, almost 11% (range of 7% to 29.3%) of long-stay residents experiencing pain are reported by staff to have moderate or excruciating pain during a 7-day period. Seventeen States report greater percentages of residents in pain than the national average (Figure 15C). This measure is very limited as a quality measure because it only counts the percent of residents with pain symptoms; it does not directly measure the facility efforts to control or reduce the pain.

Activities of Daily Living

The functional capacity to perform ADLs declines naturally with many disease states, but it is not an inevitable consequence. There are intervention programs nursing homes can provide to residents to minimize the rate of decline in ability.^{18,19,20,21} This particular measure focuses on 4 ADLs (bed mobility, transfers, toilet use and eating), termed “late-loss”, because these are generally the last four ADL functions to be lost.^{viii} Nationally, 15.4% (range of 10.4% to 24.5%) of long-stay patients experience a loss in ability to perform at least one of 4 late loss ADLs. Although there is no clinical benchmark rate, there may be opportunities for preventing decline in late-loss ADLs. Fifteen States are doing better at preventing this decline than the national average, and 11 States are doing worse.

Pressure Sores

Prevention and treatment of pressure sores in nursing homes is a quality of care dimension subject to Federal regulations. Pressure ulcers are defined as any lesion caused by unrelieved pressure resulting in damage to the underlying tissue. Lesions are classified according to stage of tissue damage, with Stage 1 being the least serious and Stage 4 being the most serious. Pressure sores are associated with considerable morbidity and a four-fold risk of death among the geriatric population.²² The incidence of pressure sores may be minimized but not totally eliminated with proper prevention practices,²³ and there may be opportunities to improve the treatment of pressure sores.^{24,25}

The national prevalence rate for pressure sores (Stages 1 to 4) for long-stay residents is 8.5%.^{ix} This rate ranges in States from about 5% to 12%. Fifteen States have higher prevalence rates for pressure sores, and 21 States have lower rates than the national average. The State rate for pressure sores is unlikely to be zero since not all facilities can achieve zero pressure sore rates given the fact that some pressure sores cannot be prevented among high risk residents.

^{viii} This general pattern of ADL loss has been studied by Cohen-Mansfield et al, 1995, and Katz et al, 1993.

^{ix} Although patients with pressure sores at nursing home admission are excluded, their subsequent MDS reassessments are included in the numerator if the sore has not healed.

Providing Quality Care to Post-Acute Care (Short Stay) Nursing Home Residents

Pain

It is estimated that nationally one-fourth of all short-stay nursing home residents reported daily pain. There is considerable variation among the States, ranging from 15% to 48%. Thirteen States have a lower occurrence of daily pain in residents than the national average, and 17 States have a higher occurrence (Figure 15B).

A larger percentage of short-stay patients report pain compared with long-stay residents. Part of this difference may be attributed to the types of diagnoses and procedures among the post-acute care patients (e.g., more pain as a result of surgery or post-fall trauma). It is also more difficult to detect pain in long-stay patients with dementia.¹⁷

Walking Maintenance or Improvement

This measure demonstrates achievement of a rehabilitative goal for many short-stay patients. Walking plays a vital role in performing daily activities, and it is important in maintaining and preventing functional decline. Often, post-acute care patients are temporarily or permanently impaired as a result of surgical procedures or other injuries. The national rate is 30% of patients with improved walking within 2 weeks, with some variation among States (range of 21.7% to 38.7%). Ten States have better walking rates than the national average, and 13 States have worse walking rates. With a 30% average, it is possible that the time frame for measurement (between day 5 and day 14 of a PPS assessment) may be too short to capture maximum improvement in walking for many short-stay residents. Also, an interactive effect could exist with pain whereby if pain is resolved or reduced in the patient, walking improvement might be more likely to occur. Early mobilization and adequate pain control are deemed to be goals for many hip fracture patients to improve their ability to walk.²⁶

Delirium

Delirium is an acute state of confusion, with changes in awareness, attention, cognition, and perception, which often fluctuate over the course of a day. Delirium represents a sudden and significant decline in previous level of functioning. Not all cases are preventable. Delirium is a complex condition and is considered an acute medical emergency, for which the underlying cause needs to be promptly treated. However, because of its broad range of signs and symptoms, delirium is often misdiagnosed as a psychosis, depression, or dementia. If left misdiagnosed or untreated, delirium can significantly increase the need for nursing care, decrease ability to function, delay rehabilitation, and increase length of stay.

The national prevalence rate for residents with delirium symptoms is under 4%, ranging from 1.6% to 7.1%. There is no clinical benchmark rate for delirium.

Providing Quality Care to Home Health Patients^x

There are national data for the selected OASIS measures for 2 years (2001 and 2002). However, since the differences are small (1 % or less) between the 2 years, this report provides the national rates for 2002 and rates for each State to illustrate variation in performance. In the home health areas measured by OASIS data, there are no established target clinical benchmarks although each agency can view their rates as baselines for continuous quality improvement.

Meeting Basic Daily Needs^{xi}

Bathing is an important ADL to maintain independence in the community. Almost 57% of all episodes^{xii} that can achieve improvement^{xiii} achieved improvement in this ADL. State rates ranged from 51% to 65%, with 25 States below the national average (see Figure 15D).

Management of oral medications is another area where there are opportunities for improvement. The national average was 35%, with States ranging from 25% to 43%. Thirty States were below the national average (see Figure 15E).

Upper body dressing is an area where 61% of episodes showed improvement, and there was less variation in rates among the States (range of 56% to 65.8%).

Because not every patient can be expected to improve, the measure set includes a stabilization measure to indicate the percentage of patients that stayed the same or did not decline. Almost 91% of episodes did achieve stabilization^{xiv} in bathing, with States ranging from 88.5% to 96%.

Getting Around

This category contains four distinct measures for describing how well a home health patient can get around his or her home. Nationally, one-third of episodes showed improvement in walking or moving around. Fourteen States did significantly better than the national average, while 22 States did significantly worse. Three of the measures— “improving in getting to and from the toilet without help,” “improving in getting in and out of bed without help,” and “having less pain when moving around”—had national average rates between 50% and 60%. However, the measure for “pain when moving around” had more variation among the States, with 31 States achieving less than the national average.

^x Home health data are from the Center for Health Services and Policy Research, University of Colorado, from Outcome and Information Set (OASIS) data.

^{xi} Across these measures, different scales are used. For example, Management of oral medications is measured on a three-point scale, while bathing has six levels. This may be one reason for the big difference in improvement rates between bathing (57%) and oral medications (35%).

^{xii} Episode is defined as the period of start of care to discharge from HHA or transfer to inpatient facility

^{xiii} A person is not included if they are at the highest level and cannot improve any more. See Measures Specification and Data Sources Appendix.

^{xiv} A person is excluded from stabilization measures if they are at the lowest level and cannot decline any more. See Measurement Specifications and Data Sources Appendix.

Effectiveness

Nursing Home and Home Health Care

Physical Health

About half of the episodes experienced a decrease in shortness of breath (53%) and urinary incontinence (47%). Eighteen and 22 States showed less improvement than the national average for shortness of breath and urinary incontinence, respectively.

Mental Health Status

About 40% of episodes experienced improvement in patients being confused less often. The rates of improvement in States ranged from 30% to 48%, with 23 States showing less improvement than the national average.

Acute Care Hospitalization

Overall, 28% of all home health episodes had an admission to an acute care hospital. State rates range between 21.5% and 35.3%, with 21 States having worse rates (i.e., higher) than the national average (see Figure 15F). Some of these hospitalizations may represent good quality home health care, i.e., serious health problems are recognized by the home health agencies, and the patient is appropriately hospitalized. Also, this measure, as defined in OASIS, may also include some scheduled admissions, such as for elective surgery or chemotherapy, or it may include hospitalizations that may not be avoidable due to patient frailty.

What Is Not Known

National data are available on certain key aspects of nursing home care because uniform data collection has been mandated in Medicare and Medicaid certified facilities since 1990. More recently, the government has required home health care reporting using uniform OASIS data for most adult patients. Thus, certain key outcomes can be tracked in home health as well. However, these areas, such as those reported in this section, are only a portion of the spectrum of care required by the frail elderly and other people who need long-term, post-acute, and palliative care services. Improvements can be made in our national tracking in this area. For example, the home health data used in this report largely represent the Medicare and Medicaid populations receiving skilled home health care (92%), so it is unknown how representative these data may be for quality of care for other home health patient populations.

National quality measurement of long-term care and home health care poses special challenges. There are other age groups besides the elderly who use home health and nursing home services. Although both the MDS and OASIS data are collected for these age groups, the quality measures are not disaggregated by age because, on average, groups other than the elderly constitute only a small proportion of nursing home residents and home health patients. Although the numbers for these measures may be too small to be reported separately, it is not known if quality outcomes may vary by age groups. In addition to distinct age groups, other groupings exist for which data

are not always available or analyzed (e.g., short- and long-term home health patients, reason for entering care, diseased condition trajectory). Finally, clinically achievable benchmarks have not been identified for some of the measures in this section (e.g., late-loss ADL decline, delirium, and walking improvement).

A number of MDS and OASIS data limitations exist.^{27,28} The nursing home and home health measures are based on patient assessment data reported by the nursing facilities and agency providers. It is, therefore, possible that facility or agency reports may not always accurately reflect the real prevalence of a condition. For example, it is likely that pain in nursing homes is underestimated because MDS data are completed by staff and pain may be unrecognized.¹⁶ The MDS data only identify residents with pain or suspected to have pain; they do not identify efforts in controlling the pain. Patients may also differ in their acceptance of pain medication for personal or cultural reasons. Finally, staff in some nursing homes may do a better job of checking for pain than in others; lower rates may be misleading. Lower rates may also be misleading for pressure sores. For example, facilities that closely monitor for skin changes or those who serve a more disabled population may actually have higher rates than facilities that do not closely monitor. In addition, determination of Stage 1 pressure sores is known to be the least reliable of all stage determinations.

Post-acute-care measures entail issues unique to their population. The post-acute measures only include residents accessing their Medicare Part A benefit; those enrolled in Medicare HMO coverage are not included. For some nursing homes with large or active post acute care units, this population can constitute a majority of their admissions. Small sample sizes are an issue for post-acute measures, i.e., they exclude facilities with less than 20 patients over a 6-month period; thus, there is no information on nursing homes with small numbers of residents. This minimum denominator size results in about 40% to 45% of facilities being excluded. The short timeframe for the post-acute-care measure that calculates change between the 5th and 14th day may make the rates seem lower than expected. Furthermore, in terms of data limitations, many post-acute-care residents are excluded because they are discharged before getting a second assessment.

Some controversy exists as to whether the nursing home measures have been sufficiently validated to be considered as a more global measure of quality care, rather than as indicators of potential quality problems.²⁹ In addition, there is some concern about the appropriateness of the risk adjustment methodology used.³⁰ HHS is continuing to work on refining measures and considering alternative risk-adjustment methods. In the home health area, there is variation among outcome measures in how well risk adjustment works using current methods, i.e., some measures are better risk adjusted than others.^{xv}

The selected nursing home and home health measures do not represent all possible key domains,³¹ such as satisfaction with care or quality of life. For these two domains, no national data yet exist. Some States, however, have begun collecting resident and family satisfaction

^{xv}See Shaughnessy and Hittle, 2002, for a summary of the risk-adjustment methodology, including a discussion of ongoing research to improve risk adjustment.

Effectiveness

Nursing Home and Home Health Care

data.¹⁵ Staffing levels in nursing homes, and the overall shortage of nurse aides, are important issues,³² however, there is not sufficient evidence on thresholds to make a link with quality. HHS is currently reevaluating its approach to assessment and data collection in post-acute and long term care. In particular, developments in electronic records will enhance data collection in these settings. CMS also has a program for the refinement and evolution of OASIS and OBQI. This program involves monitoring issues and conducting ongoing applied research for improving OASIS, outcome reporting, outcome measures, risk adjustment, and OBQI applications.

What Can Be Done

A number of strategies may be considered for improving quality of long-term care.³³ Some of the most common strategies include:

- Providing consumers with more information.
- Developing and implementing practice guidelines.
- Developing and improving approaches to quality.
- Improving information systems.

In November 2001, HHS announced the Quality Initiative, a commitment to ensure quality health care for all Americans through accountability and public disclosure. The initiative, led by CMS, has two components: one, to empower consumers with quality of care information to make more informed decisions about their health care, and two, to stimulate and support providers and clinicians to improve the quality of health care.

The Quality Initiative was launched nationally in the fall of 2002 for nursing homes. As part of the information component, CMS's Nursing Home Compare^{xvi} began reporting quality measures on all certified nursing homes in November 2002. In May 2003, Home Health Compare began reporting measures for certified home health agencies in eight States and started national reporting in the fall of 2003. These measures are also intended to motivate nursing home facilities and home health agencies to improve care.

For the second component of the Quality Initiative, CMS has contracted with two quality improvement organizations (QIOs)—one for nursing homes and one for home health care—to lead and support other QIOs in every State in implementing quality improvement objectives for the specific CMS quality measures. For nursing home care, the QIOs are working with a volunteer group of 15% of nursing homes nationally to help them implement a system of quality

^{xvi} Nursing Home Compare at www.medicare.gov/Nhcompare/Home.asp provides information about every Medicare-certified nursing home in the country.

improvement within their organization for three to five of the quality measures. For this subset, QIOs are bringing nursing home teams together for training sessions in quality improvement and for sharing best practices, as well as working with nursing homes between training sessions to provide technical assistance to nursing home teams. QIOs are also working closely with other State organizations to conduct State and regional educational sessions and provide educational materials to help improve quality of care for each of the measures. Home health care is a new setting for QIO activities, and QIOs are working with Medicare-certified agencies to teach them how to implement and manage continuous quality improvement systems by using the Outcome-Based Quality Improvement (OBQI) system. QIOs will work with the agencies on an ongoing basis to assist them in interpreting quality data, selecting the most appropriate areas for improvement, developing plans to improve care and monitoring, and evaluating patient outcomes over time. As a resource to providers and QIOs, the Medicare Quality Improvement Clearinghouse at www.medqic.org, and another site, www.obqi.org, have links to a number of guidelines, educational tools, interventions, and other resources that have been developed for many key areas in nursing home and home health care.

In the area of home health, two OBQI demonstration projects in 28 States found that the OBQI process had an impact on patient outcomes as measured by OASIS. The relative rate of decline in hospitalization was 22%, and the rates of improvement for other targeted home health outcome measures averaged between 5% and 7% per year.³⁴

Implementation of guidelines and practice protocols can improve quality in nursing homes,^{35,36} but there are some barriers to sustained and widespread use of the guidelines and protocols. These protocols may not always be feasible with current nursing home staffing numbers, staff educational levels, and turnover.^{37,38} The researchers recommended that staffing needs be estimated for implementing guidelines to do realistic quality change planning.

For nursing home and home health care, the strategy of improving information systems for quality monitoring has been combined with the regulatory oversight process. For several years, the MDS data have been used by State survey agencies to identify potential problems as part of their onsite nursing home evaluations, which occur at least once during a 15-month period or as a result of a complaint being investigated. The evaluations ensure that the nursing home residents receive quality care and services in a safe and comfortable environment in accordance with rules established by CMS. As of May 1, 2003, State survey agencies began using data generated by OASIS to help identify areas of focus or the types of patients to include in the sample selection in their home health evaluations (<http://www.cms.gov/medicaid/lcsp/sc0313.pdf>). These evaluations generally are conducted at least once every 36 months.

There are some studies and evaluations underway on how to change the culture and working conditions in the nursing home and home care settings,^{xvii} and some studies on small scale

^{xvii} AHRQ grant HS11962-01, "Working Conditions and Adverse Events in Home Health Care," AHRQ grant HS11523-01, "Patient Safety in Home Care," and AHRQ grant HS12028-01, "Nursing Home Working Conditions and Quality of Care."

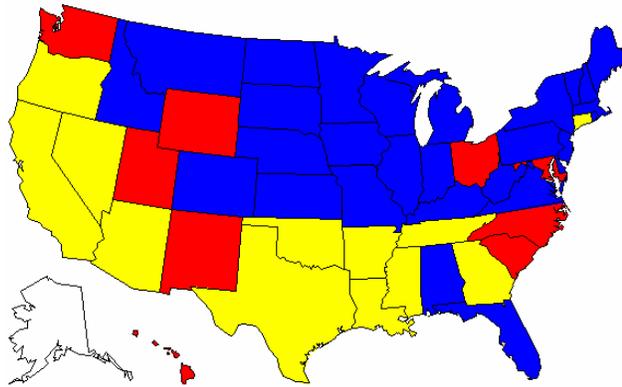
Effectiveness

Nursing Home and Home Health Care

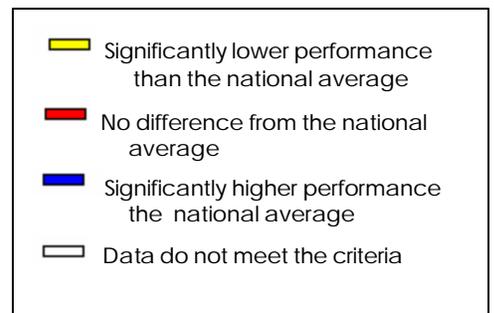
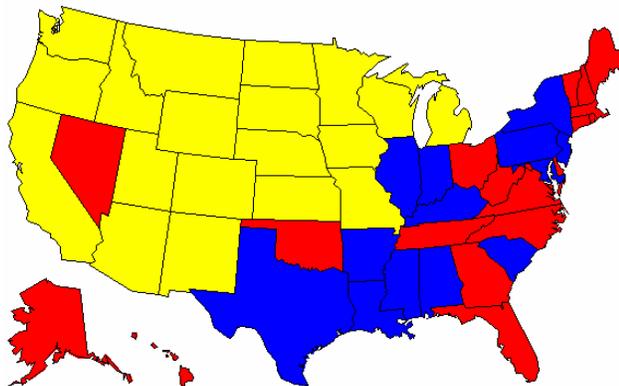
initiatives have been completed.³⁹ The expectation is that these work and culture changes will result in improved quality of care for patients.⁴⁰

Figure 15. National variation in nursing home and home health care

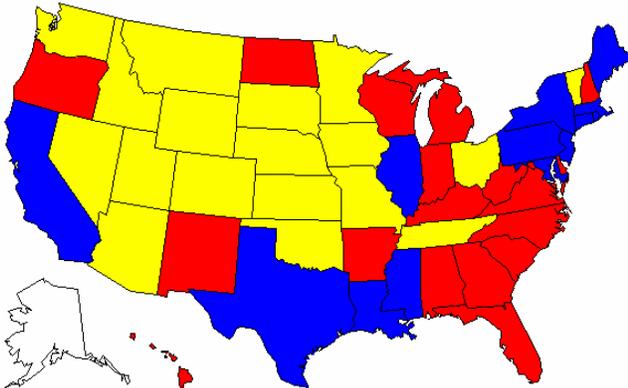
A. Percent chronic care nursing home residents with physical restraints



B. Percent post-acute care nursing home residents with pain during week that was excruciating at any time or moderate among residents experiencing daily pain

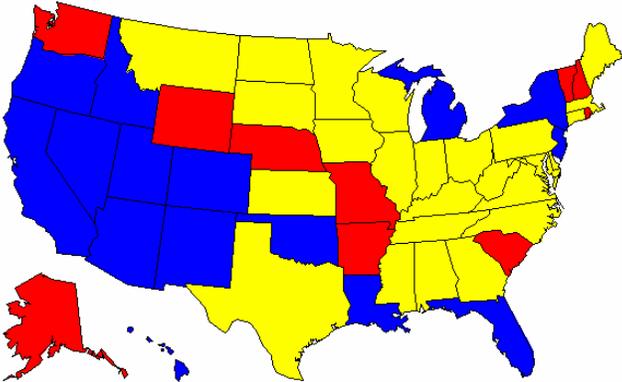


C. Percent chronic care nursing home residents with pain during week that was excruciating at any time or moderate among residents experiencing daily pain



D. Improvement in bathing

- Home health patients who get better at bathing

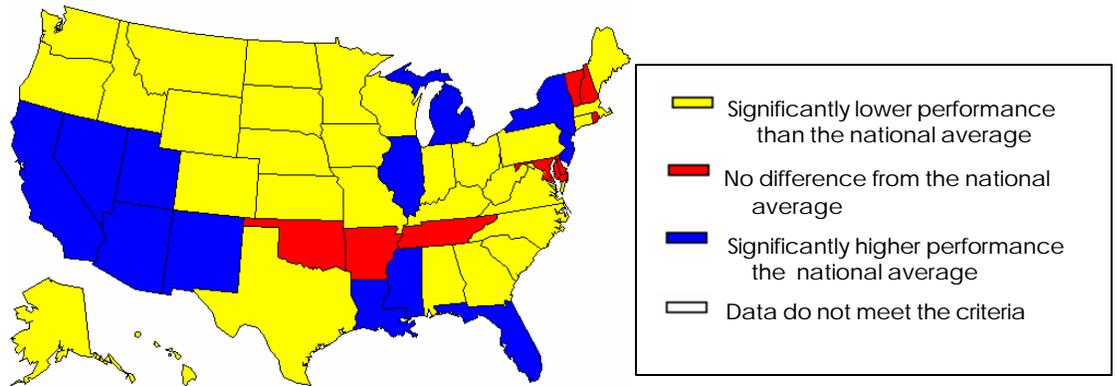


Effectiveness

Nursing Home and Home Health Care

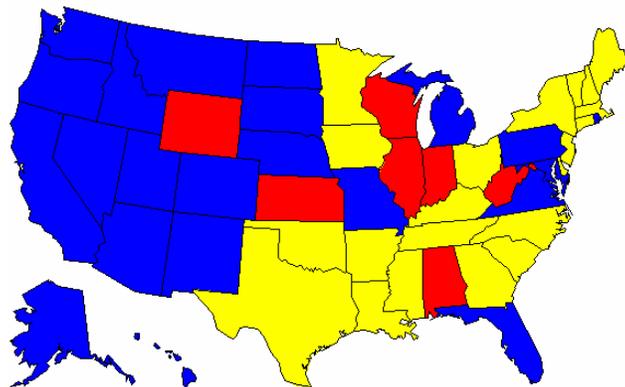
E. Improvement in management of oral medications

- Home health patients who get better at taking their medicines correctly (by mouth)



F. Acute care hospitalization

- Home health patients who had to be admitted to the hospital



List of measures

Nursing Home and Home Health Care

MEASURE TITLE	National/State ^{xviii}	
Nursing facility care:		
Chronic care: % of residents with pain	Table 1.87	
Chronic care: Late-loss ADL worsening	Table 1.88	
Chronic care: Infections prevalence	Table 1.89a (UTI, some states) Table 1.89b (all infections, more states)	
Chronic care: Stage 1-4 pressure ulcer prevalence	Table 1.90a (sheet=w/risk adj)	Table 1.90b
Chronic care: Restraint use prevalence	Table 1.91	
Post acute care: Failure to improve/manage delirium symptoms	Table 1.92a (sheet=w/risk adj)	Table 1.92b
Post acute care: % of residents with pain	Table 1.93	
Post acute care: Improvement in walking	Table 1.94	
Home health care:		
Meeting the patient's basic daily needs		
Outcome: improvement in upper body dressing	Table 1.95	
Outcome: improvement in management of oral medications	Table 1.96	
Outcome: improvement in bathing	Table 1.97	
Outcome: stabilization in bathing	Table 1.98	
Improvement in getting around		
	Table 1.99	
Outcome: improvement in transferring		
Outcome: improvement in ambulation/locomotion	Table 1.100	
Outcome: improvement in toileting	Table 1.101	
Outcome: improvement in pain interfering with activity	Table 1.102	

^{xviii} National and State rates are contained in same table.

Effectiveness

Nursing Home and Home Health Care

Improvement in physical and mental health

Outcome: improvement in dyspnea	Table 1.103
Outcome: improvement in urinary incontinence	Table 1.104
Outcome: improvement in confusion frequency	Table 1.105

Percentage admitted to acute care hospitals

Outcome: acute care hospitalization	Table 1.106
-------------------------------------	-------------

References

- ¹Jones A. The National Nursing Home Survey: 1999 Summary. National Center for Health Statistics. *Vital Health Stat* 13(152). 2002.
- ² National Center for Health Statistics (NCHS). 2000 National Home and Hospice Care Survey, 2003, <http://www.cdc.gov/nchs/about/major/nhhcsd/nhhcsd.htm>
- ³ Scanlon W. Understanding post-acute, chronic, and long-term care. U.S. G.A.O. testimony. Jan. 24, 2003
- ⁴ Gabrel C. An overview of nursing home facilities: Data from the 1997 National Nursing Home Survey. Advance data from vital and health statistics; no. 311 Hyattsville, MD: National Center for Health Statistics, March 2000.
- ⁵Institute of Medicine (IOM). *Improving the quality of care in nursing homes*. Washington, D.C.: National Academy Press, 1986.
- ⁶ Nursing home quality: Prevalence of serious problems, while declining, reinforces importance of enhanced oversight. Report to Congressional Requestors, United States General Accounting Office Report number FAO-03-561, July 2003.
- ⁷ Hawes, Mor, Phillips, Fries, Morris, Steele, Greene, Nennstiel. The OBRA -87 Nursing home regulations and implementation of the Resident Assessment Instrument: Effects on process quality. *JAGS* 45:977-985, 1997.
- ⁸ Fries B, Hawes C, Morris JN, et al. Effect of the National Resident Assessment Instrument on selected health conditions and problems. *JAGS* 1997;45:994-1001.
- ⁹ Phillips CD, Morris JN, Hawes C, et al. Association of the Resident Assessment Instrument (RAI) with changes in function, cognition, and psychosocial status. *JAGS* 1997;45:986-993.
- ¹⁰ Garrard J, Chen V, Dowd B. The impact of the 1987 Federal regulations on the use of psychotropic drugs in Minnesota nursing homes. *Am J Public Health* 1995;85:771-776.
- ¹¹ Morris J, Moore T, Jones R, et al. Validation of long-term and post-acute care quality indicators. Final Report, CMS Contract No: 500-95-0062, June 10, 2003.
- ¹²Centers for Medicare & Medicaid Services (CMS). Nursing Home Quality Initiative: Quality measure criteria and selection. August 9, 2002.
- ¹³ Centers for Medicare & Medicaid Services (CMS). *Outcome-based quality improvement (OBQI) implementation manual*. September 2002, available online at: <http://www.cms.hhs.gov/oasis/obqi2002.zip>
- ¹⁴ Shaughnessy P, et al. *OASIS and outcome-based quality improvement (OBQI) in home health care* (final report of the National Medicare OBQI Demonstration), February 2002. (<http://www.cms.hhs.gov/oasis/Summary-WebSite.pdf>)
- ¹⁵ Castle NG. 2002. Nursing homes with persistent deficiency citations for physical restraint use. *Medical Care*, 40(10): 868-878.
- ¹⁶ Teno J, Weitzen S, Wetle T, Mor V. Persistent Pain in Nursing Homes, *JAMA* 285(16): 2081, Research Letter 4/25/01.
- ¹⁷ Fries B, Simon S, Morris J. et al. Pain in U.S. Nursing Homes: Validating a Pain scale for the minimum data set” *The Gerontologist* 41(2):173-179, 2001.
- ¹⁸ Schnelle J, Alessi C, Simmons S, et al. Translating clinical research into practice: A randomized controlled trial of exercise and incontinence care with nursing home residents. *JAGS* 50:1476-1483, 2002.
- ¹⁹ Morris J. et al. Nursing rehabilitation and exercise strategies in the nursing home. *J Gerontology: Medical Sciences* Oct. 1999;54: M494-500.
- ²⁰ Cohen-Mansfield J, Werner P, Reisberg B. Temporal order of cognitive and functional loss in a nursing home population. *J Am Geriatr Soc* 1995Sep; 43(a): 974-8.
- ²¹ Katz S, Ford AB, Moskowitz RW, Jackson BA and Jaffe MW. Studies of illness in the aged: The index of ADL: A standardized measure of biological, and psychosocial function. *JAMA* 1993; 185: 914-9.
- ²² Ratcliff CR Rodeheaver GT. Pressure ulcer assessment and management. *Primary Care Practice*. 1999;Mar-Apr;3(2):242-258.
- ²³ Bergstrom N, Allman R, Carlson C, et al. Pressure ulcers in adults: Prediction and prevention. Clinical practice guideline. Rockville, MD: AHCPR, 1992: AHCPR Pub. No. 92-0047.
- ²⁴ Bergstrom N, Bennett M., Carlson C, et al. Treatment of pressure ulcers. Clinical practice guideline, No. 15. Rockville, MD:AHCPR, 1995: AHCPR Pub. No. 95-0652.

-
- ²⁵Saliba D, Rubenstein L, Simon B, Hickey E, Ferrell B, Czarnowski E, and Berlowitz, D. Adherence to pressure ulcer prevention guidelines: Implications for nursing home quality. *JAGS* 51:56-62, 2003.
- ²⁶Morrison RS, Magaziner J, McLaughlin MA, et al. The impact of post-operative pain on outcomes following hip fracture. *Pain*, 2003. Jun;103(3):303-311.
- ²⁷Harris M, Chute C, Harvell J, White A, Moore, T. Toward a national information infrastructure: A key strategy for improving quality in long term care. Report prepared under contract #282-98-0006, U.S. DHHS/OASPE, May 2003.
- ²⁸Fortinsky R, Garcia R, Sheehan J, Madigan E, Tullai-McGuinness, S. Measuring disability in Medicare home care patients. *Medical Care* 41(5): 601-615, 2003.
- ²⁹Manard B. *Nursing home indicators: Their uses and limitations*. Washington, D.C.: AARP Public Policy Institute, December 2002.
- ³⁰Shaughnessy PW, Hittle DF. Overview of risk adjustment and outcome measures for home health agency OBQI reports: Highlights of current approaches and outline of planned enhancements, September 2002, available online at: <http://www.cms.hhs.gov/providers/hha/RiskAdj1.pdf>
- ³¹Fortinsky R. Data, information, and quality indicators for home health care. Paper prepared for the National Policy Meeting on Home Health Care Quality, sponsored by the Center for Home Care Policy and Research, Visiting Nurse Service of New York, June 30-July 1, 2003.
- ³²Centers for Medicare & Medicaid Services (CMS). 2002. *Appropriateness of minimum staffing ratios in nursing homes*. Report to Congress. Baltimore, MD: author.
- ³³Wiener J. An assessment of strategies for improving quality of care in nursing homes. *The Gerontologist* 43:19-27, Special Issue II, 2003.
- ³⁴Shaughnessy P, Hittle D, Crisler K, Powell M, et al. Improving patient outcomes for home health care: Findings from two demonstration trials of outcome-based quality improvement. *JAGS* 50:1354-1364, 2002.
- ³⁵Institute of Medicine (IOM). *Improving the quality of long term care*. Washington, D.C.: National Academy Press, 2001.
- ³⁶Schnelle, J., Kapur, K., Alessi, C. and others. "Does an Exercise and Incontinence Intervention Save Healthcare Costs in a Nursing Home Population? *JAGS* 51:161-168, 2003.
- ³⁷Schnelle JF, Ouslander JG, Cruise PA. Policy without technology: a barrier to improving nursing home care. *Gerontologist*. 1997 Aug;37(4):527-32.
- ³⁸Schnelle JF, Cruise PA, Rahman A, Ouslander JG. Developing Rehabilitative Behavioral Interventions for Long-Term Care: Technology Transfer, Acceptance, and Maintenance Issues. *JAGS* 46:771-777, 1998.
- ³⁹Reinhard S and Stone R. Promoting quality in nursing homes: The Wellspring Model New York: The Commonwealth Fund, January 2001.
- ⁴⁰Eaton S. Beyond "unloving care": Linking human resource management and patient care quality in nursing homes. *Int J Human Resource Mgmt* 2000;11(3):591-616.