U.S. Department of Health and Human Services
Assistant Secretary for Planning and Evaluation
Office of Disability, Aging and Long-Term Care Policy

STATE EXPERIENCES WITH MINIMUM NURSING STAFF RATIOS FOR NURSING FACILITIES:

Findings from Case Studies of Eight States

November 2003

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ABSTRACT

This paper reports on (1) what is known about the status of states' minimum nursing staff ratios and (2) findings from case studies that examine states' experiences with implementing or modifying these standards in a selected number of states. A review of the published and unpublished literature on state standards identified 36 states with established minimum ratios in 2003, with the District of Columbia scheduled to implement its ratios in 2005. Since 1997, 23 states have made changes to their minimum nursing staff ratios. We chose 10 states out of the total 23 with a recent change to their minimum nursing staff ratios to find out why the states set, modified, or eliminated their staffing ratios; how the standard in question was implemented; how compliance was monitored; and the perceived effects of the standards. The 10 case study states--Arkansas, Arizona, California, Delaware, Minnesota, Missouri, Nevada, Ohio, Vermont, and Wisconsin--represent a diverse group in terms of population size and geographic area. Of these states, Vermont instituted new staffing ratios; Arkansas, California, Delaware, Minnesota, Ohio, and Wisconsin modified existing ratios; and Arizona, Missouri, and Nevada eliminated their ratios. Guided discussions were held with a set of state officials and key stakeholders in each state. In eight of the 10 states, we were able to have discussions with most state officials and key stakeholders; however, we were not able to hold a sufficient number of discussions in Arizona and Nevada to include these states in the analysis. Findings from our research reveal that staffing ratios can be implemented or removed in different ways, including through passage of new legislation, as part of new regulations, through written administrative policy or procedures, or through the Medicaid reimbursement structure. Among the eight case study states, all but Vermont had some form of a minimum staffing ratio in place prior to the change in their requirement. Recent changes to state ratios typically came about as a reaction to publicity about quality problems in nursing homes and with the goal of improving the quality of resident care in nursing facilities. However, we found considerable variation across the study states in the type of ratio, measurement of the ratio, adjustment for case mix, monitoring and enforcement of the ratio, and payment for ratios, with substantial disagreement about the best approach among various stakeholder groups.

EXECUTIVE SUMMARY

In an effort to improve the quality of care in nursing homes, Congress passed the Nursing Home Reform Act of 1987, requiring, in part, nursing homes that wish to be certified for participation in Medicare or Medicaid to provide a minimum of eight hours per day of registered nursing (RN) service and 24 hours per day of licensed nursing (LN) service. Regulations implementing this legislation also require, "sufficient nursing staff to attain or maintain the highest practicable ... well-being of each resident." However, the Nursing Home Reform Act and resultant regulations do not mandate a specific staff-to-resident ratio or a minimum number of hours per resident day for resident care, and concerns about the quality of care in nursing homes have continued.

The Department of Health and Human Services (DHHS) has sponsored research examining the relationship between the level of nursing staff and the quality of resident care in nursing homes. Recently, the Centers for Medicare and Medicaid Services (CMS) reported the findings of research conducted by Abt Associates in their Phase I and Phase II studies. These reports find a relationship between staffing levels and quality of care and evidence of critical thresholds for nursing staff, below which nursing home residents are at risk for serious quality-of-care problems, and above which no measurable increases in quality of care are observed with additional nursing staff.

Despite improvements in both the data and the analysis from the Phase I to the Phase II studies, DHHS expressed concerns about Phase II's findings. In a letter from DHHS Secretary Tommy Thompson to Congress, Thompson pointed out that the relationship between the number of staff and the quality of care is complex, listing several important staffing issues related to nursing home quality of care that the Phase I and II studies do not adequately address. Subsequently, the DHHS Office of the Assistant Secretary for Planning and Evaluation (ASPE) determined that more information about nursing home staffing requirements was needed.

The purpose of this study is to identify states with established minimum nursing staff ratios for nursing homes and examine those states' experiences with implementing or modifying these standards. A review of the published and unpublished literature on state standards identified 36 states with established minimum ratios in 2003, with the District of Columbia scheduled to implement its ratios in 2005. Twenty-three states have changed their minimum nursing staff ratios since 1997. Three of these states--Arizona, Missouri, and Nevada--previously had staffing ratios but no longer do. The 14 states, and the District of Columbia until 2005, that do not have minimum nursing staff ratios use the federal nursing staff requirements for Medicaid and Medicare participating facilities, or have state professional coverage standards for nursing home licensure that are similar to or exceed the federal requirements. These professional coverage standards are not the focus of this study.

We chose 10 states out of the total 23 with recent changes in their minimum nursing staffing ratios to find out why the states set, modified, or eliminated their staffing ratios; how the standard in question was implemented; how compliance was monitored; and the perceived effects of the standards. The 10 case study states--Arkansas, Arizona, California, Delaware, Minnesota, Missouri, Nevada, Ohio, Vermont, and Wisconsin--represent a diverse group in terms of population size and geographic area. Of these states, Vermont instituted new staffing ratios; Arkansas, California, Delaware, Minnesota, Ohio, and Wisconsin modified existing ratios; and Arizona, Missouri, and Nevada eliminated their ratios.

Research methods involved guided discussions with state officials and key stakeholders. The stakeholders were chosen to represent those affected by the nursing staff standards--consumers, nursing homes, and their employees. Discussants were sent a project description and a copy of the discussion guide we used during the telephone conversations. Discussants were assured that we would not identify or quote anyone by name.

In eight of the 10 states, we were able to have discussions with most state officials and key stakeholders. However, we were not able to hold a sufficient number of discussions in Arizona and Nevada to include these states in the analysis. In Arizona, key state officials had no knowledge of the circumstances surrounding the elimination of the minimum staffing ratios in 1997, and stakeholders told us they had come into their positions after 1997. In Nevada, state officials were not available for interviews. However, we were able to hold a discussion with one key Nevada stakeholder who provided us with some insight into why this state eliminated its staffing ratio.

Findings from our research reveal that staffing ratios can be implemented or removed in different ways, including through passage of new legislation, as part of new regulations, through written administrative policy or procedures, and/or through the Medicaid reimbursement structure. The state authority establishing the ratios often affects how easy it is to modify or eliminate them.

Among the eight case study states, all but Vermont had some form of a minimum staffing ratio in place prior to the changes in their requirements. Recent changes to state ratios typically came about as a reaction to publicity about quality problems in nursing homes and with the goal of improving the quality of resident care in nursing facilities. However, we found considerable variation across the study states in the type of ratio, measurement of the ratio, adjustment for case mix, monitoring and enforcement of the ratio, and payment for ratios.

Three of the study states--California, Minnesota, and Vermont--use an hours per resident day only (hprd) approach, with the level set at about 3.0 hprd. Another three study states--Delaware, Ohio, and Wisconsin--use a combination hprd and staff-to-resident

ratio, which is a compromise that adds to the complexity of the system. Arkansas was the only case study state to use a staff-to-resident ratio only.

The time period to which hprd ratios apply is also a matter of some controversy among stakeholders. Five of the six study states with the hprd have opted to calculate compliance over a 24-hour period. Some observers advocate calculations over a 24-hour period to ensure adequate staffing on all days, particularly weekends, while others generally prefer calculations over a week or more (as in Vermont) to ensure flexibility.

Most observers agreed that adjustment of the ratios to take into account resident case mix would be ideal but recognized that this would add more complexity to the ratios, and few had suggestions about how to form a case-mix adjusted ratio. Only two states--Minnesota and Wisconsin--have adjusted their hprd requirements for resident case mix. Wisconsin's standard has three hprd categories (intensive skilled nursing care, skilled nursing care, and intermediate care) that are based on resident need. Minnesota recently rescinded a case-mix adjusted ratio that relied on data from the state's mandatory resident assessment instrument. Currently, Minnesota is studying how to implement a new case-mix adjusted ratio to accompany its new case-mix reimbursement system. The outcome of this state's study could shed some light on this particular aspect of ratios.

In addition to the variation in ratios, we saw variation in the enforcement of the standards across the states. States generally rely on the state licensing process for monitoring and enforcement of staffing ratios, because meeting the minimum ratios is part of state nursing home licensure and regulatory requirements. In addition to the survey process, Arkansas and Vermont periodically review monthly staffing data submitted by facilities, which helps state officials monitor staffing ratios. Most states also monitor staffing when investigating any complaints about poor quality of care that may be related to insufficient staffing. Nursing facilities that are not in compliance with a staffing ratio receive a deficiency citation and are generally required to submit a plan of correction only when the problem is not severe or has not resulted in serious harm to residents. If the harm is serious or the problem persistent, more severe remedies are available, including directed plans of correction, fines, and restrictions on new admissions. No information was provided regarded states use of these more severe penalties.

Observers had contradictory comments about the use of federal and state staffing standards. For example, most stakeholders agreed that when Missouri eliminated its staffing ratio, staffing and quality did not change as a result. In fact, some discussants suggested that the number of citations for staffing-related quality of care problems had increased, not because there were more quality problems but because it was easier to cite staffing problems under the federal standard of having "sufficient staff" than under the old staff-to-resident ratio. In contrast, stakeholders in other states believed that it is easier to cite a facility for insufficient staff when a ratio exists.

Eight study states have some form of data collection on nursing staff, although the content of the state data sets and the years for which data are available vary widely. The data most often come from Medicaid cost reports, but in Wisconsin and Delaware data are also available from an annual survey of facilities. Arkansas and Vermont collect data from the monthly staffing reports that facilities submit. California has the most extensive and most readily available data, derived from an annual report that merges Medicaid cost reporting with a state public disclosure report.

Most states have not used their data to examine the effects of changes to their staffing ratios, vis-à-vis either the level of staffing or quality. Most respondents were unwilling even to speculate about whether an effect could be found in the data and there are documented limitations associated with current data sources such as OSCAR and MDS. Some state officials said, and the data from California and Wisconsin support the contention, that the implementation or strengthening of a staffing ratio has resulted in increased staffing in nursing facilities overall. Advocates and ombudsmen generally say that it is too early to tell whether ratio changes have had any effect, while providers tend to say that most facilities in the state were already staffing above the new ratios, so there has been no effect. Furthermore, while it might be possible in some states to link the state staffing data to deficiency data, the problem of how to interpret any changes in deficiency citations would remain. Factors such as increased administrative attention to selected care areas and training provided to surveyors on citation practices may increase deficiency citations in those areas.

Although a few advocates complained of lax enforcement and a few providers complained of inadequate reimbursement, for the most part, the implementation of new ratios in three states ran relatively smoothly. These states--California, Ohio, and Wisconsin--had made incremental changes to their existing ratios. Those states where implementation was more controversial include Arkansas, Delaware, and Vermont. These states made more comprehensive changes to staffing requirements, involving phase-in periods, implementing standards by shift, or implementing a new system altogether, as in Vermont. Concern over reporting requirements and delayed increases in Medicaid reimbursement for nursing facilities were some of the implementation issues these states encountered. In most states, observers did not report a statewide shortage of certified nurse assistants (CNAs). However, certain rural and urban areas experience difficulty in recruiting these workers. Most providers asserted that a licensed nurse shortage continues to be somewhat problematic for their facilities but does not appear to have affected their ability to comply with the ratios for these professionals. Observers in some states reported that facilities' use of agency personnel increased as a direct result of changes to minimum staffing requirements, while others said this had not occurred in their states.

Other staffing-related initiatives included increased Medicaid nursing home reimbursement through a variety of mechanisms, such as a bed tax, quality improvement fee, or wage pass-through. Surprisingly, some of the states did not measure whether the

funding was spent as intended. Several case study states also have undertaken various special studies or programs to examine issues such as staffing shortages and recruitment and retention in their long-term care labor market, and to provide recommendations to address these problems.

Most observers agreed that minimum ratios can help impose a standard on those facilities where staffing falls below the ratios. Thus, staffing ratios may serve as a minimum bar for facilities, not a standard that most need to strive to reach. Observers also asserted that facility staffing is not the only factor that affects the quality of care that nursing home residents receive. Other factors such as staff training and facility management also affect quality, and when asked for recommendations for the federal level, very few stakeholders called for national standards.

Introduction

The purpose of this paper is to provide federal and state policymakers with information on the structure, implementation, and enforcement of state-established minimum nursing staff ratios for nursing homes in a selection of the states that have imposed them. The experience of states that have established staffing ratios as a method for addressing quality problems can be instructive for policymakers who are considering implementing, modifying, or eliminating minimum nursing staff ratios.

This paper provides updated background information about federal nursing home nursing staff standards, describes 36 states' and the District of Columbia's minimum ratios as of August 2003, and discusses the experiences of eight states that have made recent changes to their nursing home staffing standards. Researchers reviewed recent literature, obtained state administrative codes, and contacted state officials to refine the description of state standards. From these descriptive data, the researchers chose 10 states with recent changes in their staffing ratios in which to conduct case studies. The case study states were chosen from among those that had made a change in their staffing standard since 1997. Case study methods rather than quantitative analyses were necessary because of the limitations of the data at the national and state levels.

This research reveals great variation among the states in their approach to staffing ratios and little consensus about what constitutes the most appropriate form or level for staffing ratios. Staffing ratios reflect such factors as local conditions in the nursing home market, Medicaid reimbursement policies, and the concerns of key stakeholders. For state policymakers wishing to pursue a new staffing ratio or modify an old one, the variation across the states provides a range of options for consideration.

Background and Policy Context

The Nursing Home Reform Act of 1987 established new federal requirements for nursing homes participating in Medicare and Medicaid. Federal law requires a minimum of eight hours per day of registered nursing (RN) service and 24 hours per day of licensed nursing (LN) service. In practice, these staffing requirements may be waived if the facility demonstrates that it meets certain conditions, such as the inability to recruit the required personnel despite diligent efforts or location in a rural area with an insufficient labor supply.

Federal regulations also require nursing homes to provide "sufficient nursing staff to attain or maintain the highest practicable ... well-being of each resident." The Nursing Home Reform Act, however, did not mandate a specific staff-to-resident ratio or a minimum number of hours per resident day for resident care.

In response to continuing congressional concerns about the quality of care in nursing homes, the Department of Health and Human Services (DHHS) has sponsored research examining the relationship between the level of nursing staff and the quality of resident care in nursing homes. Two reports detailing the findings of this research have recently been completed. The Phase I report, based on research conducted by Abt Associates and prepared by staff at the Centers for Medicare & Medicaid Services (CMS), found a relationship between staffing levels and quality of care, and identified preliminary evidence of critical thresholds for nursing staff, below which nursing home residents are at risk for serious quality-of-care problems. The analysis, however, had major data and sample limitations.

The Phase II study, conducted by Abt Associates for CMS, attempted to overcome these limitations by replicating the Phase I analyses using a larger, more nationally representative sample of nursing homes along with more recent and improved data. Results of the Phase II analysis support the contention that there is a level of staffing below which residents are at substantially greater risk of suffering from quality-of-care problems. However, each type of nursing staff (i.e., certified nurse assistant (CNA), licensed practical nurse (LPN), RN, and RN/LPN) also has an upper threshold at which quality increases level off. Beyond these upper thresholds, further additions to staff were seen to yield no further measurable increases in the quality of care.

Despite improvements in both the data and the analysis, DHHS continued to raise concerns about the study's findings. In a letter to Congress conveying the Phase II results, DHHS Secretary Tommy Thompson stated that "it would be improper to conclude that the staffing thresholds described in this Phase II study should be used as staffing standards." He pointed out that the relationship between the number of staff and quality of care is complex, listing several important issues related to nursing home quality of care that the Phase I and II studies do not adequately address. Specifically, the quantitative analyses did not take into account factors such as facility management and organizational structure, tenure and training of staff, and the mix of staff by type and level of experience, which are likely to affect quality independently of the numbers of staff. Nor did the study link the effects of the current nursing shortage to the analyses of staffing ratios. Secretary Thompson also expressed DHHS's serious reservations about the reliability of the staffing data used in the study. In addition, he expressed concern that the study did not provide enough information to address the question posed by Congress, the "appropriateness" of establishing minimum ratios. The full text of the letter is provided in **appendix 1**[1].

The DHHS Office of the Assistant Secretary for Planning and Evaluation (ASPE) determined that more information about nursing home staffing requirements was needed. ASPE sponsored this study to examine the experience of states that have made recent changes to this type of staffing standard.

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[1] The full text of the letter can be accessed at www.cms.hhs.gov/medicaid/reports/rp1201ltr.asp.

Methods

We took a two-pronged approach to determining what is currently known about state minimum nursing home nursing staff ratios and their implementation. We first completed a review of the published and unpublished literature on state standards.[2] The purpose of the literature review was to identify states with minimum nursing staff ratios and to learn what we could about how this type of standard is being implemented. Second, we attempted to conduct case studies in ten states that had made recent changes to their nursing staff ratios to find out why the states had chosen to set, modify, or eliminate staffing ratios; how the standard in question was implemented; how compliance was monitored; and the perceived effects of the standards. We were successful in completing case studies in eight of the chosen states.

The literature review under the current project examined articles and reports from 1999 to February 2003 to update and verify the earlier information on minimum nursing staff ratios collected under the CMS Phase I staffing study. In this study, Abt researchers completed a review of the relevant literature on nurse staffing and quality of care through 1999. We gathered reports using Internet search engines and searched federal and state web sites, web sites of nursing home advocacy organizations, and online services such as Medline. The literature review also includes conference proceedings from the last three years on state nursing staff standards, CMS Phase I and Phase II staffing studies, and studies completed in the last three years on state-initiated staffing standard activities. To categorize states by type of minimum nursing staff ratio and the date the ratio was established, we reviewed the state code or authorizing language when available and contacted state officials by telephone to update state information. When state code or authorizing language was not available, staff used information from the literature.

From the literature review, we identified 36 states with established minimum ratios in 2003, with the District of Columbia scheduled to implement its ratios in 2005. Another group of 23 states were identified as having made major changes to their staffing ratios since 1997. A change was defined as one of three different actions: instituting a new staffing ratio, or modifying or eliminating an existing ratio. We assumed that if we considered changes that took place before 1997, we risked failing to find state officials or key stakeholders who were familiar with the change and the circumstances under which it was conceived and implemented. A matrix summarizing states' nursing staff ratios appears in **appendix 2**.

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[2] An annotated literature review appears in "State Experiences with Minimum Nursing Staff Ratios for Nursing Facilities: Findings from the Research to Date and a Case Study Proposal" (February 2003). The full report can be accessed at http://aspe.hhs.gov/daltcp/whatsnew.shtml#sep2003.

We chose 10 of these 23 states in which to conduct case studies. Since we wanted to examine the full range of state actions regarding staffing ratios, we chose states representing each of the three types of changes in staffing ratios mentioned above. We also focused on states that independently collected some type of data on nursing staff to investigate any quantitative evidence about the efficacy of staffing ratios. To understand how state experiences might vary across the country, we chose states that varied by size and geographic region. Based on these criteria, we chose the following states: Arkansas, Arizona, California, Delaware, Minnesota, Missouri, Nevada, Ohio, Vermont, and Wisconsin. Of these states, Vermont instituted new staffing ratios; Arkansas, California, Delaware, Minnesota, Ohio, and Wisconsin modified existing ratios; and Arizona, Missouri, and Nevada eliminated their ratios.

The primary research method we used in the case studies was guided discussions with a set of state officials and key stakeholders in each state to obtain the perspective of those affected by the nursing staff standards--consumers, nursing homes, and their employees. In each state, we first contacted the nursing home ombudsman, who helped us identify state licensure officials as well as consumer advocates and worker representatives. We identified state nursing home representatives through the American Health Care Association and the American Association of Homes and Services for the Aging, the two largest national associations representing the nursing home industry. As the research progressed, we found that nursing staff ratio changes were frequently linked with changes in Medicaid nursing home reimbursement, so we asked state licensure officials to provide us with contact information for the appropriate state payment officials.

We telephoned each discussant to describe the project and sent each a brief project description and a copy of the discussion guide that we planned to use during the telephone discussion. We also assured discussants that we would not identify or quote anyone by name. We produced detailed summaries of each discussion for later analysis.

In eight of the 10 states, discussions were held with most state officials and key stakeholders for a total of 8 ombudsmen, 8 state licensure officials, 7 state Medicaid reimbursement officials, 5 other state officials[3], 8 consumer advocates, 1 worker representative, 1 researcher, and 15 nursing home representatives. We were not able to hold a sufficient number of discussions in Arizona and Nevada, both of which had eliminated their ratios, to include these states in the analysis. In Arizona, key state officials had no knowledge of eliminating their minimum staffing ratios, while stakeholders told us they had come into their positions after the state eliminated its ratio in 1997, and in Nevada state officials were not available for interviews. However, in the latter state we were able to hold a discussion with one key stakeholder who provided us with some insight (see discussion below) into why this state eliminated its staffing ratio. The standard

[3] Other state officials include Department of Health staff involved in compiling and reporting data and policy analysis.

discussion guides that we used for our discussions with state officials and key stakeholders appear in **appendix 3**.

Findings

This section reports findings in two parts: (1) the status of state staffing ratios as they existed in early 2003 and (2) findings from the eight case study states. Observations obtained from the stakeholder in Nevada are noted when appropriate.

1. Status of State Nursing Staff Ratios in 2003

Our review of the recent literature and available state administrative or regulatory code for minimum nursing staff ratios in nursing homes identified 36 states with such ratios. These states' ratios are expressed as either hours per resident day (hprd) or as a ratio of staff to residents or staff to beds; in some cases, both formulations are used. An hprd is defined as the minimum number of hours of direct nursing care for each resident, each day; a staff-to-resident ratio is the minimum number of full-time employees (FTEs) for each resident; and a staff-to-bed ratio is the minimum number of FTEs for each nursing home bed.

The remaining 14 states and the District of Columbia (until 2005) either (1) use the federal nursing staff requirements when surveying nursing homes that wish to be certified for participation in Medicare or Medicaid (i.e., having a minimum of eight hours per day of RN service and 24 hours per day of LN service, and sufficient staff to attain or maintain the highest practicable ... well-being of each resident), or (2) have state professional coverage standards for nursing home licensure that are similar to or exceed the federal requirements. Hawaii is an example of a state that exceeds the federal requirements because it requires one RN on duty at all times. These professional coverage standards (those described in item 2) are not the focus of this study.

Minimum State Nursing Staff Ratios Differ across States

While a majority of states have established minimum nursing staff ratios for nursing homes, these standards are quite complex and differ markedly across the states. Differences include the type of staff to whom the ratios apply, as well as differences in the ratios and the facilities to which they apply. States set their standards in different forms. For example, California requires 3.2 hours of direct care per resident day while Maine maintains a direct care staff-to-resident ratio of 1 to 5 during the day, 1 to 10 in the evening, and 1 to 15 at night. Among the 36 states with minimum nursing staff ratio standards, 21 states express the ratio only as hours per resident day (California, Colorado, Connecticut, Georgia, Idaho, Illinois, Indiana, Iowa, Louisiana, Massachusetts, Minnesota, Mississippi, New Jersey, New Mexico, North Carolina, Tennessee, Utah,

Vermont, West Virginia, Wisconsin, and Wyoming). Four express their standard only as a staff-to-resident ratio (Arkansas, Maine, Oregon, and South Carolina). Nine have standards expressed as both hours per resident day and a staff-to-resident ratio (Delaware, Florida, Kansas, Maryland, Michigan, Ohio, Oklahoma, Pennsylvania, and Texas). Alaska expresses the requirement as a staff-to-occupied-bed ratio, while Montana's requirement is based on the number of beds, occupied or not.

In some states with more than one type of ratio, one form may be translated into the other. For example, Texas requires 0.4 hours of licensed care staff per resident per day or a 1 to 20 licensed nurse-to-resident ratio every 24 hours. In other states with more than one ratio standard, one form is in addition to the other. In 2001, Ohio added a standard of 2.75 hours of direct care per resident to complement its 1-to-15 direct care staff-to-resident ratio.

State minimum staffing ratios also differ in other ways. Ratios can vary by facility size or type, such as an intermediate care facility versus a skilled nursing facility. State definitions of these facilities differ, but skilled nursing facilities generally care for residents with more medically related needs. Other variation in standards occurs by personnel group, such as (1) licensed staff (RN, LPN, or licensed vocational nurse [LVN]), (2) nonlicensed staff (CNAs), or (3) other staff who may provide direct care, such as an activities coordinator or therapy aide. The period of time over which the ratio is calculated may also differ. Some states average staff over a week, others over a 24-hour period, and others by shift or time of day (e.g., days versus evenings). Due to the number of dimensions in which ratios can vary, there is little consistency across states in how the ratios are expressed, and direct comparisons across states should be made with caution. Connecticut, for example, has ratios that vary by shift, staff type, and nursing facility licensure category, including Medicare and Medicaid certified nursing facilities, with eight separate nursing staff ratios depending on a facility's licensure category (chronic/convalescent home versus rest home with nursing supervision), whether a staff person is licensed or unlicensed, and the shift. The ratios for chronic/convalescent homes, for example, are 0.47 hprd (days) and 0.17 hprd (nights) for licensed staff, and 1.4 hprd (days) and 0.5 hprd (nights) for direct care staff. The hprd requirements for a rest home with nursing supervision are about half those required for chronic/convalescent homes by shift and staff type.

Most states with minimum nursing staff ratios established their current standards in the past decade. Twelve states (Arkansas, California, Delaware, Florida, Iowa, Maine, Minnesota, Mississippi, New Mexico, Ohio, Oklahoma, and Vermont) established their current standards in the year 2000 or later. Sixteen states (Alaska, Georgia, Indiana, Kansas, Louisiana, Maryland, Massachusetts, New Jersey, North Carolina, Oregon, Pennsylvania, South Carolina, Texas, Utah, West Virginia, and Wisconsin) established their standard in the 1990s; seven states (Colorado, Connecticut, Idaho, Illinois, Michigan, Montana, and Tennessee) in the 1980s; and one state (Wyoming) in the 1970s.

Three states (Arizona, Missouri, and Nevada) previously had staffing ratios but no longer do. The District of Columbia will implement its standard in 2005. Eleven other states (Alabama, Hawaii, Kentucky, Nebraska, New Hampshire, New York, North Dakota, Rhode Island, South Dakota, Virginia, and Washington) do not have staffing ratios. At a minimum, these states and the District rely on the federal requirements for "sufficient staff" and eight hours per day of RN service and 24 hours per day of LN service.

2. Case Study Findings

Although we were able to obtain information about the basic structure of state staffing requirements from the literature review, many questions about how states implement, monitor, and enforce these requirements were not addressed in the literature. The case studies shed some light on the following issues:

- History and evolution of staffing ratios in the states
- Structure of the ratios
- Monitoring and enforcement of compliance with staffing ratios
- Cost of monitoring ratios
- State data collection efforts
- Observer opinion on outcomes associated with ratios
- Implementation issues
- Related staffing initiatives
- Cost and financing of staffing ratios.

For states that rescinded their ratios, in addition to the topics listed above we examined the reasons behind the change and the perceived effect on staffing and quality. A detailed summary of the findings from each state's case study appears in **appendix 4**, and three tables summarizing the information underlying the following cross-state comparison appear in **appendix 5**.

Evolution of Staffing Ratios

All of the case study states except Vermont had some form of state staffing ratio in place prior to the implementation of their current standard. Vermont had eliminated its earlier ratio in 1997. The older staffing ratios had been in place, in some cases, for several decades, and discussants often viewed them as having been too low to affect staffing or quality in any appreciable way. In all but two of the eight case study states that have modified their ratios, the new ratios represent an increase in the required staffing level. Minnesota eliminated its case-mix adjusted ratio because it was incompatible with the state's move to a new case-mix reimbursement system; however, it maintained an hprd standard that is not adjusted for resident case mix. Missouri eliminated its preexisting ratio.

While the details differ by state, the recent increases in state staffing ratios were typically made in reaction to publicity about quality problems in nursing homes and with the goal of improving the quality of resident care in nursing facilities. Advocacy groups were frequently involved in promoting state action in response to the publicity. Arkansas had experienced high-profile lawsuits concerning nursing home quality, and California has been the subject of some highly negative reviews by the federal General Accounting Office. A state senator in Delaware led that state's effort to change ratios because of the problems his father had experienced in nursing facilities. In Ohio and Wisconsin, state officials responded to a stream of consumer complaints about inadequate staffing, and in Vermont, union-sponsored organizing activity was instrumental in generating support for that state's new ratio.

The study states that rescinded their ratios--Arizona, Missouri, and Nevada--each had different reasons for the change. Like Minnesota, Nevada is also changing its reimbursement system and has eliminated staffing ratios that existed for Medicaid-certified facilities. Consumer advocates were influential in eliminating Missouri's ratio because they believed that it was not having the desired effect on staffing or quality. A range of observers there noted that, in their opinion, some facilities provided good care while not meeting the ratio, while poor-quality facilities successfully defended themselves against staffing citations by citing their compliance with the state's then-established staffing ratio. A staffing standard remains part of Missouri's fire and safety code. However, this standard is not specific to nursing staff. Instead, the current ratio applies to all nursing home personnel. We were unable to find any information on Arizona's change because observers in that state were not familiar with the circumstances under which the ratio was rescinded.

Staffing ratios can be implemented in different ways, including through passage of new legislation, as part of new regulations, or as changes to written administrative policy or procedures or the Medicaid reimbursement structure. Often, the history of the ratios and the state authority establishing the ratios affect the evolution of the ratio. In Delaware, the minimum requirement was established through passage of Senate Bill 115, also know as "Eagle's Law." California's 3.2 hprd also resulted from a change in the law. However, this same law authorized the Department of Health to establish staff-to-resident ratios in regulation, and incorporated an accompanying change in Medicaid reimbursement. In contrast, in Ohio the ratio was implemented as part of a routine five-year review of all nursing home licensure requirements. These distinctions are important because the state authority establishing the ratio affects how easy it is to modify or eliminate. Arizona's requirement existed in written state policy.[4] Therefore elimination did not require passage of legislation or new regulation.

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[4] Charlene Harrington. *Nursing Home Staffing Standards in State Statutes and Regulations.* Kaiser Commission on Medicaid and the Uninsured. San Francisco, CA: University of California, May 2001.

Ratios' Structure

The case study states use an hprd standard, a staff-to-resident ratio, or both mechanisms. Two of the states with staff-to-resident ratios--Arkansas and Delaware--have standards that vary by time of day. This time-specific variation was instituted because of consumer complaints about short staffing during nights or evenings, even while facilities may have met the previously required state-established ratios. In neither of these states do the ratios take into account resident case mix. Delaware attempted to develop an acuity-based staff-to-resident ratio based on the care needs of the residents but found that the resulting scheme would have been too complex to administer.

Consumer advocates and nursing home ombudsmen tend to favor staff-to-resident ratios, saying that this type of standard is easier for consumers to understand and thus easier for them to determine whether a nursing home is in or not in compliance. Advocates and some state officials also say that a staff-to-resident ratio that varies by shift is preferable to the hprd approach because the former is easier to administer and helps ensure adequate coverage for an entire day. Facilities, on the other hand, generally prefer the flexibility that an hprd standard allows. Provider representatives point out that a staff-to-resident ratio with a one-size-fits-all approach fails to address differences in the configuration of a facility's physical structure and local labor market conditions. For example, if a facility has several wings with 20 residents each, a 1-to-15 staff-to-resident ratio may be difficult to meet. And facilities in rural areas, where transportation and day care arrangements may be inadequate, sometimes find it very difficult to find staff for evening, night, or weekend shifts.

Two of the study states--Ohio and Missouri--have or had long-standing staff-to-resident ratios that did not vary by shift. Ohio's standard has existed since 1972, while Missouri first established its ratio in the 1950s but dropped it in 1998. Wisconsin also dropped its staff-to-resident ratio but replaced it with a case-mix adjusted hprd in 1998, in response to consumer complaints about inadequate staffing.

Six of the study states use an hprd approach, with the level set at around 3.0 hprd. These states currently fall into two categories: (1) hprd-only in California, Minnesota, and Vermont; and (2) hprd and a staff-to-resident ratio in Delaware, Ohio, and Wisconsin. Those states using hprd only have chosen this form largely in response to industry concerns about the perceived rigidity of the staff-to-resident approach. The California legislature has directed the Department of Health to devise a staff-to-resident ratio that can be translated into its 3.2 hprd by 2005. This combination presumably would help meet advocates' need for clarity of the standard and providers' need for a more flexible system. Some officials in those states with a combination of standards believe that adds to a system's complexity.

Only two states--Minnesota and Wisconsin--have adjusted their hprd requirements for resident case mix. Minnesota's old system was the most sophisticated of the case study states; it relied on data from the state's mandatory resident assessment instrument to assign residents to one of 11 case-mix groups. Each facility's required hprd depended upon the average case-mix weight calculated for that facility on a daily basis. Wisconsin's standard has three hprd categories (intensive skilled nursing care, skilled nursing care, and intermediate care) that are based on resident need.

Another issue is the time period over which ratios are calculated. Some observers prefer calculations over a week or more, as in Vermont, to ensure flexibility in the application of standards, whereas others prefer calculations over a 24-hour period to ensure adequate staffing on all days, particularly weekends. Yet another set of observers would like calculations by shift to help ensure sufficient staffing at night. Five of the six study states with the hprd have opted to calculate compliance over a 24-hour period.

Most states have separate requirements for licensed nurses and direct care workers. Licensed nurses are generally defined as RNs or LPNs, and direct care workers are defined as staff that provide direct care, generally CNAs, but they can also be licensed nurses. Ohio allows the hours of a wide range of staff to be counted, including activity aides, therapists, and social workers. In all but one of the study states, contract or temporary staff are considered the same as permanent staff. The only state that places a restriction on counting temporary staff's time is California, which requires that these workers have eight hours of orientation to the facility before their hours can be counted toward the hprd.

Most of the study states do not allow waivers of the direct care staffing requirements. However, some states do allow waivers of the licensed nursing staff under limited conditions; facilities generally must demonstrate that they have made serious recruitment efforts. State officials and most stakeholders told us that such waivers are rarely granted in those states that allow them.

In summary, there is considerable variation across the case study states in terms of the type of ratio used, whether the ratio is adjusted for case mix, the time period over which the ratio is measured, and the type of staffing hours that can be counted toward meeting the ratio.

Monitoring and Enforcing Ratios

States generally rely on the state licensing process for the monitoring and enforcement of staffing ratios because meeting the minimum ratios is part of state nursing home licensure and regulatory requirements. During the licensure and certification survey, most states' surveyors take a sample of staff schedules, time sheets, or payroll records to determine facility compliance. States vary in which time period is chosen for the sample.

Some states select a random period or the time period immediately preceding the survey. Random selection of a time period and reliance on payroll records is considered more likely to produce data typical of the facility's staffing levels. Two states, Arkansas and Vermont, also periodically review monthly staffing data submitted by facilities in addition to the state survey process. Arkansas requires facilities to submit monthly staffing reports that are desk-reviewed. Site visits are conducted if it appears that a facility has violated the ratios. Vermont requires nursing facilities to submit monthly data on staffing in a uniform format. These reports are audited periodically, with state surveyors comparing payroll records against the facilities' reports to determine their accuracy. Most states also monitor staffing when investigating any complaints about poor quality of care that may be related to insufficient staffing.

Two states have a screening process to determine whether to pull staffing records. Ohio uses a screening tool to see if facilities have had any care problems that may be related to staffing; only then does the surveyor examine staffing records to determine compliance with the state's ratio. California examines nursing staff levels when surveyors' findings indicate that staffing may be inadequate. Missouri followed a similar pattern for monitoring its old ratio.

In most states, the data that surveyors collect typically go into an electronic spreadsheet that calculates whether facilities comply with that state's ratio. If a facility is not in compliance and the problem is not severe or has not resulted in serious harm to residents, the nursing home receives a deficiency citation and is generally required to submit a plan of correction. If harm is serious or the problem persistent, more severe remedies are available in most case study states, including directed plans of correction, fines, and restrictions on new admissions. The study states generally did not provide information on the frequency and severity of sanctions.

Information on the cost of monitoring facility compliance was scanty. When asked about these costs, most states replied that costs are minimal or unknown.

State Data Collection

All of the eight study states have some form of data collection, although the data elements, the years for which data are available, and the availability of the data for outside users vary across the states. California, for example, reports on productive hours by type of staff (nursing category as well as permanent versus contract staff) as well as turnover rates by facility. In contrast, Delaware has only total salary cost for nurses from the Medicaid nursing home cost report; however, the state has data on wages and hours by nursing category (with contract staff reported separately) from the annual Nursing Wage Survey it conducts for reimbursement purposes. The state of Arkansas collects per-shift staffing data broken out by direct care staff and licensed staff, and resident daily census. This requirement has been in place since November 2001and the data are self-reported. Some

states audit their data, while others do not, so quality and consistency may vary across states and even across years within states.

The data most often come from Medicaid cost reports but in Wisconsin and Delaware there are also data from an annual survey of facilities, and Arkansas and Vermont collect data from the monthly staffing reports that facilities submit. California has the most extensive and most readily available data, derived from an annual report that merges Medicaid cost reporting with a state public disclosure report. California data are posted on the state's web site and are freely available. However, the state does not regularly analyze the data. Wisconsin, on the other hand, produces annual reports on staff levels, turnover, and retention and provides average data for similarly sized facilities so that consumers can make relevant comparisons. It also reports deficiencies. Vermont makes data from its monthly staffing reports available to the local nursing home association for distribution to its members. The data include total wages and benefits as well as average hourly wages and benefits by category of staff. Missouri has Medicaid cost report data from 1990. The University of Missouri has a longitudinal dataset of Medicaid cost report data dating back to 1990. University staff are able to run analyses and trend data such as nursing staff hours per patient day.

Outcomes Associated with Ratios

Most states have done little analysis to determine the outcome of their ratios, either with regard to the level of staffing or the effect on quality, and state officials and observers differ in their opinions about what the effects have been. State officials tended to say, and the data from California and Wisconsin support the contention, that the implementation or strengthening of a staffing ratio has resulted in increased staffing in nursing facilities overall. Prior to implementation in 2000, California data show that 25 percent of facilities were staffing at or above 3.2 hprd in 1999. By 2001, that number had risen to 67 percent, based on a sample of 111 facilities.[5] Wisconsin data show that the average hprd increased from 3.2 in 1998/1999 to 3.4 in 2002; during the same time period, citations for staffing ratio violations increased. The reason for the increase in citations is unclear.[6,7] An independent consultant's review of the effects of Delaware's Phase I ratios found a statistically significant relationship between the newly required staffing levels and fewer

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[5] Department of Health Services' Licensing and Certification Program. *Nursing Staff Requirements and the Quality of Nursing Home Care: A Report to the California Legislature.* Sacramento, CA: California Department of Health Services' Licensing and Certification Program, June 2001.

[6] Wisconsin Department of Health and Family Services, Division of Health Care Financing, Bureau of Health Information, *Trends in Wisconsin Nursing Homes 1990-1999 (PHC 5308).* October 2001.

[7] Wisconsin Department of Health and Family Services, Division of Health Care Financing, Bureau of Health Information, *Wisconsin Nursing Homes and Residents, 2001 (PHC 5347).* December 2002.

incidents of poor-quality care as measured by quality indicators from CMS OSCAR data.[8] It is important to note that it can be difficult to relate changes in quality to trends in deficiency citations because many factors can affect citations, including increased administrative focus on certain care areas (e.g., nutrition and hydration), training provided to surveyors on citation practices, and so on.

Advocates and ombudsmen generally say either that it is too early to tell whether ratio changes have had any effect on staffing or quality or that there has been no effect. Most providers said that most facilities in the state were already staffing above the new ratios so there has been no effect. Both the consumer and provider points of view tend to support the contention that these ratios serve as a minimum bar for facilities, not a standard that most need to strive to reach. Interestingly, most stakeholders agreed that when Missouri eliminated its staffing ratio, staffing and quality did not change as a result. In fact, some discussants suggested that the number of citations for staffing-related quality-of-care problems in Missouri had increased, not because there were more quality problems but because it was easier to cite staffing problems under the federal standard of having "sufficient staff" than under the old staff-to-resident ratio.

A state licensure official in one state said that while staffing levels in facilities had not changed appreciably since implementation of the ratios, coverage during nights and weekends had improved because facilities shifted their staff coverage from days to nights and weekends. Such shifts could be one explanation for the contention that *overall staffing* has changed little in the opinions of most advocates and industry representatives. It is also possible that such shifts in staff coverage could improve the quality of care in the previously understaffed periods. However, it is unknown what, if any, impact on quality might occur during hours for which staffing coverage is reduced as a result of moving staff from one shift to another.

Implementation Issues

Although a few advocates complained of lax enforcement and a few providers complained of inadequate reimbursement, for the most part, the implementation of new ratios in three states ran relatively smoothly. These states--California, Ohio, and Wisconsin--had made incremental changes to their existing ratios.

Those states where implementation was problematic include Arkansas, Delaware, and Vermont. These states made more comprehensive changes to staffing requirements, involving phase-in periods, implementing standards by shift, or implementing a new system altogether, as in Vermont. Implementation of the reporting requirements in Vermont

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[8] Delaware Nursing Home Residents Quality Assurance Commission. *Efficacy of Minimum Nursing Staffing Levels Required under Eagle's Law: Quality of Care, Labor Trends, and Nursing Home Cost and Availability*. December 2001.

(i.e., nursing homes submitting uniform monthly staffing data and the periodic auditing of it) appears to have been difficult. State officials reacted by simplifying the format and providing assistance to facilities that requested it on how to complete the monthly staffing report.

State budget problems affected the implementation of ratios that were phased in and accompanied by increases in Medicaid reimbursement for nursing facilities. In Arkansas, Phase II of its three-tier, phased-in ratio was delayed and Phase III was postponed due to budgetary problems but implemented on October 1, 2003. Delaware's budget problems also led to an indefinite postponement of Phase III of its implementation, and Phase II ratios were modified because providers complained of a labor shortage.

Surprisingly, labor shortages for CNAs were not seen as critical issues in most states. Some stakeholders speculated that the economic downturn in 2002 and 2003 has led to a larger labor supply for such entry-level positions. However, stakeholders noted shortages of CNAs in certain rural and urban areas where recruitment was difficult. In Vermont, the problem in rural areas relates to a small labor pool. In California, some urban areas reportedly have difficulty recruiting CNAs because of the high cost of living.

Most providers reported that a licensed nurse shortage continues to be somewhat problematic for their facilities but does not appear to have affected their ability to comply with the ratios for this type of profession.

States reported mixed views on whether the use of agency personnel increased as a direct result of increases in minimum staffing ratios, with Delaware and Vermont reporting more agency usage. However, a facility's use of agency staff may be driven by local labor market conditions and competition for labor.

Neither the nursing shortage nor state budget problems were cited as reasons for the actions that Minnesota and Missouri took to rescind their staffing ratios.

Related Staffing Initiatives

Increased Medicaid nursing home reimbursement generally accompanied increased state staffing requirements in the case study states. The states either used some form of bed tax or quality improvement fee to generate increased Medicaid revenue, which they then passed back to facilities to help facilities pay their labor costs, or they implemented wage pass-throughs designed to require facilities to spend the increased funding on staffing. Surprisingly, some of the states did not measure whether the funding was spent as intended. California monitored the use of the pass-through funds and facilities that did not use the funds for staffing were required to return them and pay an additional 10 percent of the amount as a penalty. According to Vermont state officials, the two wage pass-throughs had no observed effect on staffing levels.

Many of the case study states have also undertaken various special studies or programs to examine issues such as staffing shortages and recruitment and retention in their long-term care labor market and provide recommendations to address these problems. Two programs merit particular attention. Minnesota gave facilities funding to start scholarship programs for staff to increase their training; the funding could be used for complementary needs such as child care as well as for tuition payments. Missouri has the Quality Improvement Program of Missouri, which is a technical assistance program run as a partnership between the Missouri Department of Health and Senior Services and the University of Missouri. The goal of the program is to help nursing facilities use data from assessments of residents to improve resident outcomes. The assistance includes confidential on-site consultations on the best use of staff to maximize the quality of care residents receive. More than half of Missouri's nursing facilities have received at least one such consultation.

Discussion and Summary

Several conclusions can be drawn from our discussions with state officials and key stakeholders. First, most observers agreed that minimum ratios can help impose a standard on those facilities that have inadequate staffing. These observers also emphasized that facility staffing is not the only factor affecting the quality of care that nursing home residents receive. Other factors, such as staff training and facility management, also affect quality.

When asked for recommendations and lessons learned, very few stakeholders called for national standards. States can develop their own ratios through negotiations among the key stakeholders and state officials. When these negotiations occur, there is substantial disagreement between advocates and the industry over the form these ratios should take--staff-to-resident ratios or hprds--with advocates generally arguing for the former on the grounds of clarity of standard and the industry arguing for the flexibility inherent in the latter. Delaware has settled the issue by adopting both approaches, which is a compromise that adds to the complexity of the system.

Most observers agreed that adjusting the ratios to take into account facility case mix would be important but recognized that this would add more complexity to the ratios. Furthermore, few had any suggestions about the form a case-mix adjustment should take. Minnesota had a case-mix adjusted ratio and is studying how to implement a new one to accompany its new case-mix reimbursement system. The outcome of this state's study could shed some light on this particular aspect of ratios.

In addition to the variation in ratios, we saw variation across the states in how the standards were enforced, and observers had contradictory comments about the interplay of federal and state staffing standards. In some states, observers asserted that poor-

quality facilities could use compliance with a state staffing ratio as a defense when they were cited under the federal staffing requirements for failing to provide "sufficient staff." In other states, observers said that it is easier to cite facilities for inadequate staff when there is a numerical standard against which to judge them.

We did not find any quantitative evidence that definitively linked improvements in quality to changes in a state's staffing ratio. Most respondents were unwilling even to speculate on whether an effect could be found in the data. There are documented limitations associated with survey deficiency data (OSCAR data) and the nursing home minimum data set (MDS) data from which quality indicators and measures are calculated. Most of the study states collect staffing data but these data are not generally designed nor have they been used for the purpose of assessing changes in quality at the facility level.

It might be possible in some states to link the state staffing data to deficiency data but the problem of how to interpret any changes in deficiency citations would remain. Specifically, in most states, change in the staffing standard came about as a result of negative publicity about the quality of care in nursing facilities. The increased attention to the issue of quality could have spurred surveyors to document deficiencies that might otherwise have been overlooked or addressed without official sanction. In addition, as mentioned, increased administrative attention to selected care areas may increase deficiency citations in those areas.

In the states we have studied, increasing staffing requirements generally involves increasing Medicaid payment to nursing homes, through a variety of mechanisms. While state budget shortfalls have delayed implementation of phased-in ratios, it is not clear how much additional reimbursement facilities need to meet the new standards. If most facilities are already staffing at or above the required level, additional funds would not necessarily be needed to meet new state *minimum* staffing requirements. For example, Ohio set aside $13 million in state fiscal year 2002 to help pay for facilities' compliance with the new hprd. Only 19 facilities applied for funds through the state's cost-based reimbursement system and just $1 million in total was distributed.

An issue that often arises in public policy discussions concerning nursing home staffing ratios is how to equitably pay nursing homes for the staffing costs associated with such ratios. Equity is an important consideration because nursing homes have a range of approaches to staffing their facilities. As stated, observers reported that most nursing homes in our study states have a history of staffing at or above the state-established standard. Interestingly, in our discussions with stakeholders the issue of payment equity across facilities did not arise. However, as was seen in how states define and enforce staffing ratios, states varied in how they paid for staffing costs related to the state-established ratios. Minnesota intends to adjust its case-mix payment method for staffing costs using results from a study that measures staff time devoted to residents with varying levels of care needs. Ohio has limited staffing payment increases to those facilities that

incurred additional costs when they increased staffing levels up to the state-established ratio. Arkansas and Delaware increased payments, which were linked to changes in staffing ratios, to all facilities.

Currently no clear path toward a staffing ratio acceptable to all parties exists. Considerable work will be needed to balance the interests of all stakeholders while keeping the cost of reform within the constraints of increasingly strapped state and federal budgets.

In summary, some of the critical details that would have to be worked out and for which we found considerable variation across the study states include the following:

- Type of ratio
- Type of staff counted toward meeting the ratio
- Adjustment for case mix
- Measurement of the ratio
- Monitoring and enforcement of the ratio
- Payment for ratios

Even if all these details could be worked out, it is hard to say what effect a ratio will have once it is in place. It is plausible that ratios serve effectively as a minimum boundary for those facilities that previously have not provided staffing at the level the new ratio requires. Further, depending on the type of ratio, ratios could result in a redistribution of existing staff across shifts, potentially improving care on some shifts while negatively affecting care on others. It is also likely that the desirable minimum boundary moves over time as the type of residents changes over time.

Staffing standards are generally not enacted or increased in a policy vacuum but, rather, may be just one tool policymakers use to try to improve nursing home quality in the state. Many of the study states put in place other quality initiatives at the same time they changed their ratio. Observers generally agree that teasing out the effects of staffing ratios, when implementation was accompanied by other quality improvements or increased reimbursement, would be very difficult, if not impossible.

Finally, it is important that attention to the number of staff not divert attention from other important staffing and quality initiatives. Reports of facilities that were staffing above the state-mandated minimums but still providing substandard care and, conversely, facilities with clearly superior care but only average levels of staffing provide evidence, albeit anecdotal, that our understanding of the relationship between staffing and quality of care is still incomplete. While there was near-universal agreement among discussants that quality and staffing were related, there was similar agreement that the number of staff alone does not determine quality.

APPENDIX 1.
LETTER FROM DHHS

THE SECRETARY OF HEALTH AND HUMAN SERVICES
WASHINGTON, D.C. 20201

March 19, 2002

The Honorable J. Dennis Hastert
Speaker of the House of Representatives
Washington, D.C. 20510

Dear Mr. Speaker:

As required by the Omnibus Budget Reconciliation Act of 1990, a study was performed on the appropriateness of establishing minimum staffing ratios in nursing homes. The enclosed study reflects the conclusions of Abt Associates, Inc., which prepared the work under a contractual relationship begun by the previous administration in 1998.

This Phase II study was designed to respond to the current public concern about inadequate nursing home staffing and a long-standing requirement for a study and report to Congress on the "appropriateness" of establishing minimum nurse staffing ratios in nursing homes. As you know, the Phase I report was delivered to Congress in July 2000.

The question of the relationship between the number of staff and quality of care is complex and the Phase I and Phase II studies made good faith efforts at addressing the question. However, the Department has concluded that these studies are insufficient for determining the appropriateness of staffing ratios in a number of respects. Specifically, we have serious reservations about the reliability of staffing data at the nursing home level and with the feasibility of establishing staff ratios to improve quality given the variety of quality measures used and the perpetual shifting of such measures.

In addition, the studies do not fully address important related issues such as:

- the relative importance of other factors, such as management, tenure, and training of staff, in determining nursing home quality;
- the reality of current nursing shortages; and
- other operational details such as the difference between new nurses and experienced nurses, staff mix, retention and turnover rates, staff organization, etc.

For these reasons and others, it would be improper to conclude that the staffing thresholds described in this Phase II study should be used as staffing standards. Most important, the Phase I and Phase II studies do not provide enough information to address the question posed by Congress regarding the appropriateness of establishing minimum ratios. We will

continue to work to address critical knowledge gaps. For example, one project that we are currently funding will develop a method to more accurately collect nurse-staffing information. Apart from this report, the Department has taken and continues to take several important actions toward fulfilling this Administration's commitment to achieving high-quality nursing home care and providing reliable, understandable information to the public. Last November, we announced an initiative that will help Medicare and Medicaid beneficiaries find those nursing homes that consistently provide high-quality care using risk-adjusted, valid quality measures. Under the initiative, CMS is developing reliable, straightforward information on the quality of nursing homes, to help beneficiaries find the best facility for their needs. In order to accomplish this, CMS is conducting a pilot program in six states using Quality Improvement Organizations (QIOs), formerly known as Peer Review Organizations, to help disseminate and publish this information. The six states in the pilot program are Colorado, Florida, Maryland, Ohio, Rhode Island, and Washington. Following successful implementation of the pilot project, CMS will refine and expand the initiative to provide risk-adjusted quality information for nursing homes in every state. Importantly, the QIOs will work with the nursing home industry on quality improvement efforts based on the publicly reported measures and will actively help people to better use quality information.

While we implement this nursing home quality initiative, CMS will continue to move forward with our Nursing Home Oversight Improvement Program. This program is a multi-pronged approach designed to improve our oversight of nursing homes and to build consistency and accountability into the survey and certification process. The Nursing Home Data Compendium for 2000 that we recently forwarded to Congress is a direct result of this initiative: This report, the first comprehensive aggregation of individual-level data will serve as a valuable resource for policy makers concerned with nursing home care.

I look forward to working closely with you as we strive to improve nursing home quality in America. I am also sending a copy of this report to other Congressional leaders.

Sincerely,

Tommy G. Thompson

Enclosures

APPENDIX 2.
OVERVIEW OF STATE'S NURSING HOME NURSE STAFFING STANDARDS

Overview of State's Nursing Home Nurse Staffing Standards[1]				
State	**Year Standard Established or Reauthorized[2]**	**Staffing Standard[3] Applicable Facility Size or Type[4]: Staff Type[5] -- Shift[6]**	**Project Activities**	
			Changes Since 1997[7]	**Obtained State Code[8]**
Alabama	n.a.	n.a.	No	n.a.
Alaska	1992	1-60 occupied beds: 1 RN 7 days per week -- days 1 RN 5 days per week -- evenings LPN on shifts when RN not present 60+ occupied beds: 2 RNs 7 days per week -- days 1 RN 7 days per week -- evenings 1 RN 7 days per week -- nights	No	Yes
Arizona	n.a.	n.a.	Yes Rescinded hprd in 1997.	n.a.
Arkansas	2003	All facilities: 1 LN: 40 residents -- days 1 LN: 40 residents -- evenings 1 LN: 80 residents -- nights 1 CNA: 7 residents -- days 1 CNA: 9 residents -- evenings 1 CNA: 14 residents -- nights	Yes Converted formula factors to ratios in 2001. Increased ratios January 6, 2003.	Yes
California	2000	Skilled Nursing Facilities: 3.2 Direct Care hprd, averaged daily	Yes Increased hprd in 2000.	Yes
Colorado	1988	All facilities: 2.0 Direct Care hprd, averaged daily	No	Yes
Connecticut	1981	SNF/NF: 0.47 LN hprd -- days 0.17 LN hprd -- nights 1.4 Direct Care hprd -- days 0.5 Direct Care hprd -- nights ICF: 0.23 LN hprd -- days 0.08 LN hprd -- nights 0.70 Direct Care hprd -- days 0.17 Direct Care hprd -- nights	No	Yes

State	Year Standard Established or Reauthorized[2]	Staffing Standard[3] Applicable Facility Size or Type[4]: Staff Type[5] -- Shift[6]	Project Activities	
			Changes Since 1997[7]	Obtained State Code[8]
Delaware	2002	All facilities: Either Phase II modified ratios, averaged weekly: 1 LN: 15 residents -- days 1 LN: 23 residents -- evenings 1 LN: 40 residents -- nights 1 CNA/NA: 8 residents -- days 1 CNA/NA: 10 residents -- evenings 1 CNA/NA: 20 residents -- nights 3.28 Direct Care hprd (averaged daily) OR Phase I ratios, averaged daily: 1 LN: 20 residents -- days 1 LN: 25 residents -- evenings 1 LN: 40 residents -- nights 1 CNA/NA: 9 residents -- days 1 CNA/NA: 10 residents -- evenings 1 CNA/NA: 22 residents -- nights 3.28 Direct Care hprd (averaged daily)	Yes Increased hprd and added ratios in March 1, 2001. Incremental increase in hprd and ratios in January 1, 2002.	Yes
District of Columbia	Beginning 2005	All facilities: 1 LN: 35 residents -- days (0.23 hprd) 1 LN: 45 residents -- evenings (0.18 hprd) 1 LN: 50 residents -- nights (0.16 hprd) 1 CNA/NA: 5 residents -- days (1.6 hprd) 1 CNA/NA: 10 residents -- evenings (0.8 hprd) 1 CNA/NA: 15 residents -- nights (0.53 hprd) 3.5 Direct Care hprd, averaged daily	Yes Effective January 1, 2005.	Yes
Florida	2001	All facilities: 1.0 LN hprd, averaged daily 1 LN: 40 residents 2.6 CNA hprd, averaged daily 1 CNA: 20 residents	Yes Increased hprd and added ratios in 2001.	Yes
Georgia	1998	SNF: 2.0 Direct Care hprd, averaged daily Medicaid Level 1 and 2: 2.5 Direct Care hprd, averaged daily	Yes Increased hprd in 1998.	Yes[9]
Hawaii	n.a.	n.a.	No	n.a.

State	Year Standard Established or Reauthorized[2]	Staffing Standard[3] Applicable Facility Size or Type[4]: Staff Type[5] -- Shift[6]	Project Activities	
			Changes Since 1997[7]	Obtained State Code[8]
Idaho	1989	SNF: 2.4 Direct Care hprd, averaged daily ICF: 1.8 Direct Care hprd, averaged daily	No	Yes
Illinois	1989	SNF: 2.5 Direct Care hprd, averaged daily, of which 20% must be LN time 40% of hprd -- days 25% of hprd -- evenings 15% of hprd -- nights ICF: 1.7 Direct Care hprd, averaged daily, of which 20% must be LN time	No	Yes
Indiana	1997	All facilities: 0.5 LN hprd, averaged weekly	Yes	Yes
Iowa	2000	All facilities: 2.0 Direct Care hprd, averaged weekly, of which 20% must be LN time	Yes Prior to 2000, IA had separate ratios for SNF and ICF facilities. In 2000 the state rescinded ratio for SNF, leaving previous ICF ratio to apply to all facilities.	Yes
Kansas	1997	All facilities: 2.0 Direct Care hprd, averaged weekly 1.85 Direct Care hprd, averaged daily, and 1 nursing personnel[10]: 30 residents per nursing unit	Yes	Yes
Kentucky	n.a.	n.a.	No	n.a.
Louisiana	1998	Survey staff will utilize 2.35 hprd, averaged daily, until necessary rule changes can be made, however, federal standard much be met.[11]	Yes Skilled levels of care were eliminated January 1, 2003 with implementation of Medicaid case mix reimbursement.	No[12]
Maine	2001	All facilities: 1 Direct Care staff: 5 occupied beds -- days 1 Direct Care staff: 10 occupied beds -- evenings 1 Direct Care staff: 15 occupied beds -- nights	Yes Increased ratios effective June 1, 2001.	Yes

State	Year Standard Established or Reauthorized[2]	Staffing Standard[3] Applicable Facility Size or Type[4]: Staff Type[5] -- Shift[6]	Project Activities	
			Changes Since 1997[7]	Obtained State Code[8]
Maryland	1997	All facilities: 2.0 hprd Direct Care, averaged daily, and 1 nursing service personnel[13]: 25 patients, or fraction thereof	No Standard reauthorized without change in 1997.	Yes
Massachusetts	1994	SNF/NF Level I: 2.6 Direct Care hprd, averaged daily, of which 0.6 LN hprd SNF/NF Level II: 2.0 Direct Care hprd, averaged daily, of which 0.6 LN hprd ICF Level III: 1.4 Direct Care hprd, averaged daily, of which 0.4 LN hprd	No	Yes
Michigan	1980	All facilities: 1 Direct Care staff: 8 occupied beds -- days 1 Direct Care staff: 12 occupied beds -- evenings 1 Direct Care staff: 15 occupied beds -- nights 2.25 Direct Care hprd, averaged daily	No	Yes
Minnesota	2001	All facilities: 2.0 Direct Care hprd, averaged daily	Yes In 2001, MN repealed the 0.95 hours Direct Care per standardized resident day[14] standard with conversion to a Medicaid payment methodology based on the MDS and RUGs.	Yes
Mississippi	2000	All facilities: 2.8 Direct Care hprd, averaged daily	Yes Increased hprd in 2000.	Yes
Missouri	n.a.	n.a.	Yes Regulation rescinded on September 30, 1998.	n.a.
Montana	1980	Facilities with 100 beds or less: Day shift must have: 90 beds or less: 8 RN hours 91-100 beds: 16 RN hours 40 beds or less: no LPN requirement	No	Yes

State	Year Standard Established or Reauthorized[2]	Staffing Standard[3] Applicable Facility Size or Type[4]: Staff Type[5] -- Shift[6]	Project Activities	
			Changes Since 1997[7]	Obtained State Code[8]
		41-75 beds: 8 LPN hours 76-100 beds: 16 LPN hours 8 beds or less: no NA requirement 9-15 beds: 4 NA hours 16-20 beds: 8 NA hours 21-25 beds: 12 NA hours 26-30 beds: 16 NA hours 31-35 beds: 20 NA hours 36-40 beds: 24 NA hours 41-45 beds: 28 NA hours 46-50 beds: 32 NA hours 51-55 beds: 36 NA hours 56-60 beds: 40 NA hours 61-65 beds: 44 NA hours 66-70 beds: 48 NA hours 71-75 beds: 52 NA hours 76-80 beds: 48 NA hours 81-85 beds: 52 NA hours 86-90 beds: 56 NA hours 91-95 beds: 52 NA hours 96-100 beds: 56 NA hours Evening shift must have: 50 beds or less: no RN required 51-100 beds: 8 RN hours 50 beds or less: 8 LPN hours 76-100 beds: 8 LPN hours 15 beds or less: no NA requirement 16-20 beds: 4 NA hours 21-30 beds: 8 NA hours 31-35 beds: 12 NA hours 36-45 beds: 16 NA hours 46-50 beds: 20 NA hours 51-60 beds: 24 NA hours 61-65 beds: 28 NA hours 66-90 beds: 32 NA hours 91-95 beds: 36 NA hours 96-100 beds: 40 NA hours Night shift must have: 70 beds or less: no RN required 71-100 beds: 8 RN hours 70 beds or less: 8 LPN hours 81-100 beds: 8 LPN hours 20 beds or less: no NA requirement 21-25 beds: 4 NA hours 26-40 beds: 8 NA hours 41-45 beds: 12 NA hours 46-60 beds: 16 NA hours		

State	Year Standard Established or Reauthorized[2]	Staffing Standard[3] Applicable Facility Size or Type[4]: Staff Type[5] -- Shift[6]	Project Activities	
			Changes Since 1997[7]	Obtained State Code[8]
		61-65 beds: 20 NA hours 66-80 beds: 24 NA hours 81-85 beds: 20 NA hours 86-100 beds: 24 NA hours Facilities with 100 beds or more: Staffing standards are given individual consideration.		
Nebraska	n.a.	n.a.	No	n.a.
Nevada	n.a.	n.a.	Yes Did away with hprd skilled levels of care for Medicaid certified facilities in Medicaid payment policy. In process of changing MDS case-mix reimbursement where 94% of direct care staffing reimbursement must go toward nursing, effective July 1, 2003.	n.a.
New Hampshire	n.a.	n.a.	No	n.a.
New Jersey	1994	All facilities: 2.5 Direct Care hprd, averaged daily, of which 20% must be LN time Additional hprds for residents receiving the following services: Wound care -- 0.75 hprd Tube feeding -- 1.00 hprd Oxygen therapy -- 0.75 hprd Tracheostomy -- 1.25 hprd Intravenous therapy -- 1.50 hprd Use of respirator -- 1.25 hprd Head trauma -- 1.50 hprd	No	Yes
New Mexico	2000	SNF or SNF/ICF facilities: 2.5 Direct Care hprd, averaged weekly ICF only: 2.3 Direct Care hprd, averaged weekly	Yes Established ratios in 2000.	Yes
New York	n.a.	n.a.	No	n.a.
North Carolina	1996	All facilities: 2.1 Direct Care hprd, averaged daily	No	Yes
North Dakota	n.a.	n.a.	No	n.a.

State	Year Standard Established or Reauthorized[2]	Staffing Standard[3] Applicable Facility Size or Type[4]: Staff Type[5] -- Shift[6]	Project Activities	
			Changes Since 1997[7]	Obtained State Code[8]
Ohio	2001	All facilities: 1 Direct Care staff: 15 residents, or major part thereof, and 2.75 Direct Care hprd, averaged daily, of which 0.20 RN hprd 2.0 CNA hprd 0.55 Other[15] hprd	Yes Changed from one "attendant":15 residents and added hprd in 2001.	Yes
Oklahoma	2002	All facilities: 1 Direct Care staff: 6 residents -- 7:00am-3:00pm 1 Direct Care staff: 8 residents -- 3:00pm-11:00pm 1 Direct Care staff: 15 residents -- 11:00pm-7:00am Flexible staff scheduling: 2.86 Direct Care hprd per occupied bed 1 Direct Care staff: 15 residents 2 Direct Care staff on duty and awake at all times	Yes Increased ratios and added hprd in September 1, 2000. Increased ratios in 2002, and added flexible staff scheduling March 1, 2003 for facilities in compliance with shift-based staffing ratios for at least 3 months.	Yes
Oregon	1993	All facilities: 1 CNA: 10 residents -- day shift (7:00am-3:00pm) 1 CNA: 15 residents -- swing shift (3:00pm-11:00pm) 1 SNF: 25 residents -- night shift (11:00pm-7:00am)	No	Yes
Pennsylvania	1999	For following facilities' census, day shift must have: 59 and under: 1 RN 60-150: 1 RN 151-250: 1 RN and 1 LPN 251-500: 2 RNs 501-1,000: 4 RNs 1,001+: 8 RNs For following facilities' census, evening shift must have: 59 and under: 1 RN 60-150: 1 RN 151-250: 1 RN and 1 LPN 251-500: 2 RNs 501-1,000: 3 RNs 1,001+: 6 RNs For following facilities' census, night shift must have: 59 and under: 1 RN or LPN 60-150: 1 RN 151-250: 1 RN and 1 LPN 251-500: 2 RNs 501-1,000: 3 RNs 1,001+: 6 RNs All facilities: 2.7 Direct Care hprd, averaged daily, and 1 Direct Care staff: 20 residents.	Yes Increased hprd in 1999.	Yes

State	Year Standard Established or Reauthorized[2]	Staffing Standard[3] Applicable Facility Size or Type[4]: Staff Type[5] -- Shift[6]	Project Activities	
			Changes Since 1997[7]	Obtained State Code[8]
Rhode Island	n.a.	n.a.	No	n.a.
South Carolina	1999	All facilities: 1 CNA: 9 residents -- days 1 CNA: 15 residents -- evenings 1 CNA: 22 residents -- nights	Yes Increased ratios in 1999.	Yes
South Dakota	n.a.	n.a.	No	n.a.
Tennessee	1986	All facilities: 2.0 Direct Care hprd, averaged daily, of which 0.4 LN hprd	No	Yes
Texas	1992[16]	All facilities: 0.4 LN hprd, averaged daily or 1 LN: 20 residents	No	Yes
Utah	1995	Small Health Care Facilities with 4-16 beds: 2.0 Direct Care hprd, averaged daily, of which 20% must be LN	No	Yes
Vermont	2001	All facilities: 3.0 Direct Care hprd, averaged weekly, of which 2.0 CNA hprd	Yes Established hprd in December 15, 2001.	Yes
Virginia	n.a.	n.a.	No	n.a.
Washington	n.a.	n.a.	No	n.a.
West Virginia	1997	All facilities: 2.25 Direct Care hprd, averaged daily[17]	Yes	Yes
Wisconsin	1998	Intensive Care Residents: 3.25 Direct Care hprd, averaged daily, of which 0.65 LN hprd Skilled Nursing Residents: 2.5 Direct Care hprd, averaged daily, of which 0.50 LN hprd Intermediate Care Residents: 2.0 Direct Care hprd, averaged daily, of which 0.40 LN hprd	Yes Increased hprd in 1998. Added Intensive Care hprd category.	Yes
Wyoming	1978	SNF: 2.25 Direct Care hprd, averaged daily ICF: 1.5 Direct Care hprd, averaged daily	No	Yes

State	Year Standard Established or Reauthorized[2]	Staffing Standard[3] Applicable Facility Size or Type[4]: Staff Type[5] -- Shift[6]	Project Activities	
			Changes Since 1997[7]	Obtained State Code[8]

1. Sources: Review of the state code, when available, and telephone contacts with state officials by Urban Institute staff. Charlene Harrington. *Nursing Home Staffing Standards in State Statutes and Regulations*. Kaiser Commission on Medicaid and the Uninsured. San Francisco, CA: University of California, May 2001; Department of Health Services' Licensing and Certification Program. *Nursing Staff Requirements and the Quality of Nursing Home Care: A Report to the California Legislature*. Sacramento, CA: California Department of Health Services' Licensing and Certification Program, June 2001; Paraprofessional Healthcare Institute and National Citizens' Coalition for Nursing Home Reform. *National Survey on State Initiatives to Improve Paraprofessional Health Care Employment: October 2000 Results on Nursing Home Staffing*. Bronx, NY: Paraprofessional Healthcare Institute, October 2000.
2. Where no date is given the federal standard applies. The federal requirement is 24-hour licensed nursing services sufficient to meet the nursing needs of the nursing home's residents, and 1 RN for 8 consecutive hours/7 days a week. Federal regulations also require nursing homes to provide "sufficient nursing staff to attain or maintain the highest practicable ... well-being of each resident."
3. Indicates only state staffing standards that are quantifiable either by established hours per resident day (hprd) or as a ratio of staff-to-resident or staff-to-occupied beds. All information will be verified in case studies.
4. Different standards may apply for different sizes of facilities (measured by the number of beds or number of occupied beds) or for different types of facilities including skilled nursing facilities (SNFs), nursing facilities (NFs), and intermediate care facilities (ICFs). Some states have defined categories within facility types, e.g., SNF 1, SNF 2, and SNF 3, or Medicaid Level 1.
5. Standards may apply to only one class of personnel, i.e., registered nurse (RN), licensed practical nurse (LPN), licensed vocational nurse (LVN), certified nursing assistant (CNA), or nursing assistant (NA); or to groups of personnel such as licensed nursing (LN) personnel, i.e., RN, LVN, and LPN; or direct care staff, i.e., RN, LVN, LPN, CNA, and NA who provide nursing care directly to residents (administrative and ancillary staff time generally excluded).
6. Staffing standards may vary by day, evening, or night shifts. A shift is typically defined as 8 consecutive hours worked.
7. Indicates whether state has increased, eliminated, or delayed implementation of any quantifiable nurse staffing standards since 1997. We chose the year 1997 as a cut-off point in order to increase the likelihood of obtaining information on factors associated with state policy changes from state officials and stakeholders.
8. Only applies to states with quantifiable nursing staff ratios.
9. Obtained state code for SNF direct care ratio, Medicaid Level I and II ratio exists in GA Dept. of Medicaid Assistance, pt. II Policies for Nursing Facility Services Sec. 609 "Required Nursing Hours" (Medicaid NHs).
10. "Nursing personnel" means all of the following: (1) Registered professional nurses; (2) licensed practical nurses; (3) licensed mental health technicians in nursing facilities for mental health; (4) medication aides; (5) nurse aides; and (6) nurse aide tranees. Source: KAR 28-39-144, Definitions. November 2001.
11. http://www.dhh.state.la.us/hss/staffing_hours_for_nursing_homes.htm
12. LA hprd exists in state policy and procedures, LA Dept. of Health and Hospitals, Bureau of Health Service Financing, Louisiana Minimum Licensure Standards, Sections 9811 and 9813.
13. Maryland defines nursing service personnel are defined as RNs, LPNs, and support personnel.
14. As found in prior Minnesota Rules, a standardized resident day is based on a facility's daily census and takes into account both the number of residents and the case mix.
15. In Ohio, "Other" includes nurses, nurse aides, activity aides, physical and occupational therapists and therapy assistants, dieticians, and social service workers.
16. Texas' nursing staff ratio has been in regulation since 1992, but may exist as far back as 1990. There have been no changes to this requirement since 1992. Source: John F. Willis, State LTC Ombudsman, Texas Department of Aging 3/21/03.
17. Table 64-13A of WV Administrative Rule 64 CSR 13 outlines minimum ratios of resident care personnel to residents.

APPENDIX 3.
DISCUSSION GUIDE FOR STATE OFFICIALS

Discussion Guide for State Officials

Description of Ratios

1. Our research revealed the following information about your state's nursing staff ratios; is this information correct? By nursing staff ratio we mean any nursing staff standard that is expressed in the form of an hour to resident day (hprd), staff-to-resident, or staff-to-bed.

Implementation of Ratios

1. What were the state's goals when it set its ratios and what factors influenced the state's decision? Factors might include:
   - Quality issues
   - Cost issues
   - Consumer and provider advocacy

2. What factors influenced the state's choice of ratio type (i.e., hprd, staff-to-resident, or staff-to-bed) and level?

3. How does the state measure whether its goals were achieved?

4. In your opinion, what factors have affected implementation of staffing ratios? Factors might include:
   - Nursing home quality
   - Nursing home payments
   - State budgetary situations
   - Labor shortages

5. Has your state taken into account the following factors when implementing ratios?
   - Resident case-mix?
   - Experience and training of staff?
   - Turnover of staff ?
   - Innovative models (e.g., Wellspring, the Eden Alternative)?

6. When were the ratios actually implemented?

Monitoring and Enforcing Ratios

1. How does your state monitor and enforce the staffing ratios? Please address the following:
   - Measurement of staffing level. What types of personnel are counted? Are staff counted by category or aggregated, or counted by shift? How frequently are staff counted and for what period of time?
   - Use of waivers. Are waivers permitted? If so, what criteria are used to grant them and how long can waivers remain in effect? Does the state collect data on the waivers?
   - Involvement of survey process
     - How do states determine whether a facility has complied with ratios?
     - Can providers use contract staff to comply?
     - What are the sanctions for non-compliance?
   - Monitoring staffing through cost reports.

2. What issues have arisen during monitoring and enforcing staffing requirements?

Other State Staffing Initiatives

1. Has your state implemented any other initiatives designed to increase staffing in nursing facilities? If so, how do these initiatives fit in with the staffing ratios? State initiatives might include:
   - Recruitment of workers
   - Increasing payment to nursing homes
   - Linking payment incentives with staffing levels
   - Wage-pass-throughs
   - Training and career ladders for workers

2. If your state uses payment incentives to increase staffing, how are these payments structured and what are their costs to the state Medicaid program?

Lesson Learned from Staffing Ratios

1. What are your opinions about the outcomes of the staffing ratios? How has a change in staffing ratios affected the following:
   - Staffing in nursing homes
   - Provider use of agency personnel
   - Quality of care
   - Costs to providers and the state

2. Does your state have reports or data related to any of these outcomes? How does the state use reports on staffing levels?

3. Does your state collect data on nursing facility staffing either through Medicaid Cost Reports or some other state data collection effort? If so,
   - What source(s) and types of data are collected?
   - Are data available electronically and/or stored in a database?
   - Is there an independent review of this data?
   - Who is the state contact person for these data?

4. What lessons has your state learned as a result of implementing ratios?

5. Any recommendations for federal policy on staffing levels in nursing homes?

Discussion Guide for State Officials

(states that have rescinded/reduced standards)

Description of Ratios

Our research revealed the following information about your state's former nursing home nursing staff ratios established _____, rescinded _____.

Is this information correct? When were these ratios first established? [By nursing staff ratio we mean any nursing staff standard that is expressed in the form of an hour per resident day (hprd), staff-to-resident, or staff-to-bed.]

Implementation of Ratios

1. What were the state's goals when it set its ratio(s), and what factors influenced the state's decision to establish this standard? Factors might include:
   - Quality concerns
   - Cost issues
   - Consumer and/or provider advocacy

2. Which constituencies supported the implementation of the standards? Which opposed it and why?

Monitoring and Enforcing Ratios

1. How did your state monitor and enforce the staffing ratios while they were in place? Please address the following:
   - What types of personnel were counted? Were staff counted by category or aggregated; were they counted by shift? Were contract staff counted in the totals? Were any type of nursing staff or nursing activity explicitly excluded from the calculation?
   - What method was used to count staff (e.g., self-reported, in the survey process, on-site time card reviews, cost reports, other)? How frequently were staff counted and over what time period?
   - Were waivers permitted? If so, what criteria were used to grant them? How many waivers were granted?
   - What role did survey and certification or licensure personnel play in compliance?
   - What were the penalties for non-compliance?

2. What issues arose during monitoring and enforcing staffing requirements? How were these resolved?

3. Do you have an estimate of the cost to the state for administration, monitoring, and enforcement of the staffing standards?

4. While the staffing ratios were in place, how did they affect the following:
   - Staffing in nursing homes
   - Quality of care
   - Provider use of agency personnel
   - Costs to providers and the state

5. Has the state produced any reports on outcomes in these areas?

6. Does or did your state collect data on nursing facility staffing or quality either through Medicaid Cost Reports or some other state data collection effort? If so,
   - What source(s) and types of data are/were collected?
   - Are data available electronically and/or stored in a database?
   - Is/was there an independent review of this data?
   - Who is the state contact person for these data?

Change in the State Staffing Standard

1. What factors influenced the state's decision to rescind/reduce/replace this standard? Factors might include
   - Administrative problems with implementation?
   - Quality concerns
     - Quality goals not achieved?
     - Other means identified to meet quality goals?
   - Cost issues
     - Nursing home cost increases?
     - State budgetary issues?
   - Consumer and/or provider issues
     - Dissatisfaction with the standards as implemented?
     - Opponents of the standards rallied support for change?
   - Nursing shortage?
   - Other?

2. Did the state replace the staffing standard with anything (program, policy, or regulation)? If so, please describe the new initiative.

3. Are the goals of the new initiative the same as those originally envisioned for the staffing standard? If not, what are the new goals and why did they change?

4. What constituencies and factors influenced the choice of the new initiative?

5. What has been the impact on nursing home staffing and quality since the staffing requirements was changed? Has the state produced any reports on outcomes in these areas?

6. What has been the impact on nursing home staffing and quality of the new initiative? Has the state produced any reports on outcomes in these areas?

7. What has been the impact of the change from the staffing standard to the new initiative, if any, on costs to the state? To nursing facilities? Has the state produced any reports on these costs?

Other State Initiatives

1. Does your state have any other initiatives designed to affect staffing in nursing facilities? If so, how did these initiatives fit in with the staffing ratios and how do they fit in with the initiative that replaced the staffing ratio, if any? State initiatives might involve:
   - Recruitment of workers
   - Increasing payment to nursing homes
   - Linking payment incentives with staffing levels
   - Wage pass-throughs
   - Training and/or career ladders for workers

2. If increased payments was linked to increased nursing home staffing, how did the state monitor the effect of the initiative on staffing? Do you have an estimate of the cost of these initiatives?

3. How have these initiatives changed since the end of the staffing ratios? How do they fit in with the initiative that replaced the staffing ratio, if any?

Lessons Learned from Staffing Ratios

1. What lessons has your state learned as a result of implementing and rescinding ratios?

2. Do you have any recommendations for federal policy on staffing levels in nursing homes?

APPENDIX 4.
SUMMARY OF CASE STUDY FINDINGS FOR EIGHT STATES

Summary of Case Study Findings for Arkansas

Background

Prior to changing its ratios in 2001, Arkansas had regulations governing staffing. The requirements involved (1) licensed staff-to-resident ratios, which varied by shift and facility size and were measured on a weekly basis, and (2) NA/CNA-to-resident ratios, which varied by shift and were measured over a 24-hour period. The NA/CNA ratios allowed for substitution of one LPN for an NA/CNA.

Advocates and legislators pushed for changes in these standards because of their concerns about poor-quality care, which came about, at least in part, because of lawsuits against nursing homes and stories about poor-quality care that appeared in the media. In addition, some viewed the old regulations as too complicated because they required individual calculations for each category of resident within a facility, which also made the standards difficult to monitor. However, some observers said that the complexity did not affect facilities' ability to comply with the standards.

The latest regulations were designed to ensure adequate staffing throughout the day and to be less complicated than the preexisting standards. Policymakers also decided to implement the new ratios in stages to ensure that there was sufficient funding to reimburse nursing facilities for the increased staffing costs that they assumed would result from the new requirements.

Staffing Ratios

The state's current staffing ratios were implemented in tiers. The first tier was supposed to take effect on July 1, 2001, but implementation was delayed until November 2001 while officials worked out differences of opinion about the regulatory language. The total direct care staff-to-resident ratios were 1 to 7 (days), 1 to 10 (evenings), and 1 to 16 (nights); the LN-to-resident ratios were 1 to 40 (days/evenings) and 1 to 80 (nights). Due to insufficient general revenue to compensate nursing facilities for the increased staffing costs, the second tier took effect six months late, on January 6, 2003. The LN-to-resident ratios remained unchanged, but the total direct care staff-to-resident ratios changed to 1 to 7 (days), 1 to 9 (evenings), and 1 to 14 (nights). The third tier was to have taken effect on July 1, 2003, raising total direct care staff-to-resident ratios to 1 to 6 (days) but keeping other standards the same. This tier was postponed due to budgetary problems, but will be implemented October 1, 2003. In addition to these staff-to-resident ratios, the state requires that there be sufficient staff to meet residents' needs, and facilities can be cited for insufficient staff even if they meet the ratio.

Staff in the total direct care staff category can include CNAs, CNA trainees (in conformity with federal regulations), nurses, and some therapy personnel. Temporary agency staff time is counted toward meeting the ratio requirements. Although the decision is not final, state officials say that single task workers will be counted toward compliance with the ratios.

Key Stakeholders' Positions

Although policymakers believed that the new ratios, coupled with increased funding for staffing in nursing homes, would improve quality, key stakeholders were dissatisfied with the new legislation. While state officials believed that quality would improve, they also felt that increased staff alone might not result in higher quality if the staff were improperly trained or insufficiently monitored.

While advocates supported the establishment of ratios, they did not support the final legislation because it allowed any direct care worker to be counted toward minimum staffing requirements. Advocates also wanted mechanisms to ensure that the increased funding for nursing homes go toward more staffing. Advocates believed that the flexibility the industry received in the form of the ratio (by time of day, allowing leeway on staff starting times) would make it harder for families to monitor facility compliance.

One group fought certain aspects of ensuring compliance with the ratio requirements. For example, a facility can be cited for inadequate staff if the minimum number of staff is not present for the whole shift. It was argued that it would be preferable to measure FTEs and allow flexible staffing plans with overlapping shifts at mealtimes rather than requiring a specified number of staff per shift with the shifts defined by the state.

Monitoring of Nursing Facility Compliance

The state has two methods of monitoring facility compliance with staffing ratios. Facilities submit monthly reports to the Office of Long Term Care (OLTC), with counts of staff by eight-hour shift, for three shifts a day. The state does desk reviews of the monthly staffing reports and only conducts on-site reviews of payroll records and daily sign-in sheets if it appears that the facility has violated the ratios. OLTC usually looks closely at facilities that report 10 to 20 percent of their shifts as being short-staffed or those for which there have been complaints about short-staffing. Despite the training provided to facilities, self-reporting is not very accurate, but the errors appear to be "honest mistakes." In addition to the monthly reviews, during state surveys surveyors review the two pay periods that precede the survey for compliance with ratios. If noncompliance is found, surveyors may conduct a review of one to three months of payroll records.

The penalties the state imposes vary by the frequency of violation of the staffing ratios. For those facilities out of compliance for no more than 20 percent of their shifts, the state can cite deficiencies or impose monetary penalties, which cannot exceed $5,000 a month. For those facilities out of compliance for more than 20 percent of their shifts, “enhanced” penalties may be imposed. These enhanced penalties include fines of up to $7,500 and restrictions on new admissions.

Facilities have appealed their penalties, especially denial of admissions. No one has won on appeal, but some facilities have won lower penalties. State officials and advocates believe that the system of identifying patterns of violations and enhanced penalties works fairly well. In the opinion of one observer, failing to require imposition of fines when facilities’ noncompliance is below 20 percent means that facilities can short-staff every weekend without suffering serious penalties.

There is some disagreement among observers about whether waivers of the staffing standards are allowed. State officials clarified that no waivers have been granted under the current regulations, which allow waivers for up to three months when residents move to a new facility because of a natural disaster or regulatory actions taken against their old facility.

State officials stated that there were no additional costs to the state associated with monitoring facility compliance with the staffing ratios. The state was not able to report how much extra payment, if any, nursing homes received as a result of having to comply with the new staffing ratios. Officials said that they did not set aside extra funding to pay nursing homes for the additional staff they may have had to hire because the state moved to a cost-based reimbursement system in 2001. The Medicaid nursing facility budget for state fiscal year 2004 is $469,398,312.

Implementation Issues

In addition to the budgetary delays described in the background section, labor issues have affected implementation, although some do not view this as a major impediment. Shortages of CNAs have been problematic, as have staff absences and turnover. Urban facilities have more staffing problems than suburban or rural areas, probably because of greater alternative employment opportunities in the urban areas. One observer reported that facilities sometimes have more problems filling day shifts than evening or night shifts; the reason for this is unclear.

Outcomes Associated with Staffing Ratios

There is a broad range of opinion on the effect of the standards on staffing and quality. Some respondents believe that the implementation of staffing requirements has led to increased staffing and that, on average, facilities are meeting the standards. However, compliance can vary by region because, in sparsely populated areas, the labor pool from which to recruit CNAs is quite small. Some observers believe that increased staffing offers the possibility of better quality of care, but that increased staff alone may not raise the quality of care if caregivers are, for example, poorly trained or insufficiently monitored. Other respondents assert that the ratios have not affected staffing or quality. Still others say that staffing has increased in facilities, but that there are just as many complaints about poor quality care. And yet others say that the new standard has increased staffing and improved quality.

Data Collected

Facilities submit monthly reports on daily census and staffing. Apparent staffing violations may lead to on-site review of staffing logs and payroll records. Data include average number of hours of direct care staff by facility type (size category, ownership) and time of day, but no payer or case-mix information. Monthly report data, which are not audited, are electronically available from November 2001.

Other Staffing Initiatives

In March 2001, Arkansas began charging facilities a Quality Assurance Fee with the increased federal funds used to finance higher reimbursement for facilities. This fee, which was approved by CMS, initially was $5.25 per occupied bed per day and reached $6.86 in 2003. The proceeds provide cost-based reimbursement for direct care staff--a 100-percent pass-through of all direct care costs (up to a cap of 105 percent of the 90th percentile of facility expenditures). The Quality Assurance Fee has brought substantial new money into the system, estimated at $100 million to $140 million a year. Several facilities that staff above the rate ceiling do not receive compensation for the extra staff they have hired.

Lessons Learned

Observers had some advice about the structure and enforcement of staffing ratios. Ratios must be on a per-shift, per-day basis, tied to daily census to avoid abuses of the system that are possible when staff coverage is averaged over a longer time period. The ratios must be minimums and variations should not be permitted. There should be no

ambiguity in the law that will allow facilities to avoid compliance. One observer finds that hprd requirements are much harder to enforce and more subject to abuse than staff-to-resident ratios.

These ratios permit facilities to staff up on shifts that are easier to fill, leaving other shifts, like the night shift, understaffed. Regulations need to be interpreted consistently and enforcement should recognize the steps that facilities take to improve care.

Another observation is that funding for nursing facilities must accompany increased staffing requirements. Sufficient reimbursement can help ensure that the pay of staff is sufficient to attract people to the job.

Summary of Case Study Findings for California

Background

California established its first staffing standard for nursing homes in 1980, using a 2.7 hprd. In 1999, the state raised the requirement to 3.0 hprd and counted all licensed staff hours twice in a practice known as "doubling." The rationale for doubling was to increase the number of licensed staff, a response to increased resident acuity, and the perception that licensed staff could provide better quality of care. According to provider groups, with doubling the 3.0 hprd was effectively 2.8 hprd. This standard was measured over a two-week period.

Observers offered several reasons for the state's increased staffing requirements in 2000. Initially, there was broad support among advocates, nurse associations, and unions for legislation requiring staff-to-resident ratios. Broad support for the change stemmed from public attention to the results of the GAO report on quality in California nursing facilities. Providers wanted to link staffing and funding so that they could afford to hire sufficient staff. Advocates wanted an adequate number of staff to help ensure quality of care, and ratio requirements in a format that consumers and workers could easily understand. There was additional support for increased minimum standards from the governor's office as part of his Aging with Dignity initiative.

A bill with staff-to-resident ratios was introduced in the state legislature. However, the actual legislation that passed increased the staffing standard to 3.2 hprd, with elimination of the doubling factor, and required the California Department of Health Services (DHS) to establish staff-to-resident ratios in regulation by August 2003. The new legislation also required DHS to change the Medicaid reimbursement methodology from a flat-rate to a facility-specific payment system by 2004; the due date was subsequently extended to August 2005. With the addition of payment provisions, advocates withdrew their support from the legislation, stating that the focus had changed from a staffing bill to a reimbursement bill. The goals of the final bill were to make ratios easier to enforce and easier for residents to understand, thus improving the quality of care.

Staffing Ratios

California's current staffing standard, 3.2 hprd, with no doubling, was established in January 2000 and took effect on April 1, 2000. The 3.2 standard is averaged over a 24-hour period. The following staff are counted toward the standard: RNs, LPNs, medical technicians, CNAs, and NAs with a specified level of training. Contract staff who have had an eight-hour orientation to the facility and MDS nurses are also included. The director of nursing is excluded for facilities with more than 60 beds.

DHS is designing a ratio that would convert the 3.2 hprd to a staff-to-resident ratio that varies by time of day and by type of nursing staff (RN, LPN, and CNA). The new requirement will allow facilities to petition for waivers if they can demonstrate the need for a different staff-to-resident ratio either by time of day or staff mix for a particular unit. However, the overall staffing level cannot fall below 3.2 hprd. One of the biggest considerations in development of the staff-to-resident ratio is cost because policymakers are concerned about funding this initiative given the state's current budget deficit and proposed Medi-Cal budget cuts. This form of ratio will lead to additional costs because 3.2 hprd does not convert to a whole person and facilities will not be able to fall below the 3.2 hprd. The only planned reimbursement change is reforming the state's Medi-Cal payment system, and there is uncertainty as to whether the new payment system will be case-mix adjusted. Given California's budgetary situation, it is not clear how the state will come up with the additional funds for conversion to the staff-to-resident ratio.

Key Stakeholders' Positions

Although the move to the current 3.2 hprd standard initially had broad-based support, and, based on their observations, stakeholders generally believe that the new standard has improved quality, substantial controversy exists about the next move to a staff-to-resident ratio. One group believes that this move will decrease facilities' flexibility and will not take into account the wide variety of services and needs in facilities across the state. Another group believes that the staff-to-resident ratio is easier to understand and thus easier to enforce.

Monitoring of Nursing Facility Compliance

California monitors facility staffing during the annual survey when surveyors' findings indicate that staffing may be inadequate, and as part of the investigation protocol when there is a staffing complaint. During the annual survey, surveyors randomly choose two weeks of time cards and assignment sheets, which do not include the survey period, and calculate the hprd. They exclude staff time spent on administrative tasks, hours of staff in training or orientation, vacation time, and sick-leave hours.

Facilities cannot obtain waivers under the 3.2 hprd. If surveyors find that staffing is below the standard, the facility is given a deficiency citation per incident and must implement a plan of correction. If a care problem is found that is associated with staffing, facilities may be fined $1,000 to $100,000 per incident, depending on the severity of the violation.

DHS estimates that reviewing payroll records and calculating the 3.2 hprd takes an additional four hours of survey time, or an extra $200 per survey.

Implementation Issues

One group of observers asserted that the staffing standard is not part of the routine survey and so is rarely enforced. Although this group considers enforcement inadequate, it believes that the existence of a standard improves staffing. Another group says that current enforcement is not cumbersome, but believes that monitoring and enforcement would be harder for all under staff-to-resident ratios. State officials are discussing new policies and procedures for monitoring and evaluating the new staff-to-resident ratio that will not be more costly than current practice. Enforcement is likely to be stronger, but the system must be as simple as possible to administer.

Labor shortages and high turnover of nurse administrators, LNs, and CNAs have affected nursing facilities, with urban areas facing more shortage problems in part due to the high cost of living. This situation may be exacerbated by the imposition of staffing ratios in hospitals, which could increase competition for licensed staff. Proposed state budget cuts threaten to decrease Medicaid rates and cut supportive service programs to the elderly, which could adversely affect quality over time.

Outcomes Associated with Staffing Ratios

Prior to implementation, 25% of facilities reported staffing at or above the 3.2 hprd in 1999. By 2001, post-implementation, that number had risen to 67 percent, based on a sample of 111 facilities. Deficiencies in the federal “substandard quality of care” have decreased overall since the implementation of the 3.2 hprd standard. In 1999, 437 deficiencies were issued, compared to 316 in 2000 (CA DHS, 2001).

However, it is uncertain whether facilities are relying more on agency personnel to meet the 3.2 hprd. With state budget cuts resulting in the loss of survey and quality assurance staff, state officials maintain they do not have the personnel to determine whether staffing is related to quality. They believe that it plays a critical part and that a stable workforce leads to a better quality of care.

Data Collected and Reports Available

Each licensed facility is required to submit an annual financial disclosure report four months after its fiscal year ends. Data from this report have been available electronically since the late 1970s. While data elements have changed over time, the current report captures revenue, patient-days by payer category, aggregated costs, self-reported productive hours for nursing staff by type (i.e., DON, RN, LVN, aide) and time of day, and staff turnover rates. All reports are desk-audited and any discrepancy is resolved with the

facility. Data are released regularly and in a timely manner, with the past 25 years of data available on CD-ROM. Electronic data from 2000 are also available to the public through the Office of Statewide Health Planning and Development's (OSHPD) web site. OSHPD receives numerous requests for the data from state agencies, state legislators, labor unions, researchers, policy organizations, and nursing home associations.

Other Staffing Initiatives

The state has implemented wage pass-throughs and career ladder initiatives to help improve staffing and address high turnover in facilities. The first wage pass-through in 1999 appropriated $36 million from the state general fund for a 5-percent wage increase to direct care staff. The second wage pass-through in 2000 appropriated $44.7 million, which provided a 7.5-percent increase to nursing home staff. State staff audited use of these funds to ensure that the money went toward direct care. If not, the state required facilities to reimburse the state and pay 10 percent of this amount as a penalty. The state did not provide information on the amounts of these wage pass-throughs. The state is also in the process of designing a new Medi-Cal reimbursement system with some discussion of moving toward a case-mix reimbursement system. However, there is concern that the change may not be what providers are hoping for because of recent budget cuts.

In 2001, California funded an $8 million-dollar quality award program, by which CNAs were given monetary awards if their facility had few deficiencies. Due to funding limitations this program was not reauthorized.

The state has also used training programs and career ladder initiatives to improve recruitment and retention of CNAs. Recently, the state passed new legislation that increased training requirements for CNAs to 160 hours. In addition, training programs funded via the federal Workforce Investment Act have been used to provide career ladder incentives and thus make the CNA's job more attractive. Other career ladder programs are just getting off the ground. In January 2002, the state announced an initiative that provides for a career ladder for CNAs (feeding assistants working toward being CNAs, CNAs working toward being LPNs, etc.), a program that will be piloted over the next three years.

Lessons Learned

Most observers agreed that increased staffing will increase quality. Others advocate for flexibility to allow facilities to meet individual residents' needs. Also, requirements for increased staffing must be accompanied by increased funding. New staffing standards should be phased in to permit the necessary training and hiring that increased staffing requirements may require. Active enforcement of staffing requirements is critical so that quality problems are prevented.

Outcome measures should be developed to help determine the effect of increased staffing. These measures should address such quality-of-life measures as increased social interaction by depressed residents, as opposed to negative outcome measures, such as deficiencies.

Most observers mentioned that something needs to be done to make the CNA job more attractive to these workers. Suggestions included hiring more staff so existing staff are not overwhelmed, making the CNA position the beginning of a career ladder, and providing better compensation and training to workers.

Summary of Case Study Findings for Delaware

Background

Prior to implementing its new standard in 2001, Delaware had a nursing staff ratio of 2.5 hprd that applied to skilled nursing facilities and 2.25 hprd for intermediate care facilities; these ratios had existed for about 20 years. These standards, along with the rest of the nursing home quality assurance system, came under scrutiny beginning in 1997.

The heightened attention to quality resulted from several high-profile incidents of poor-quality care in nursing facilities and the concern that certain nursing facility staff could have criminal histories. According to some interviewees, none of the groups with responsibility for ensuring quality--the ombudsman's office, survey staff, law enforcement, the attorney general's office, or the Medicaid fraud unit--took the lead in resolving these problems. As a result, policymakers believed that the components of the state's quality assurance system did not work well together.

Legislators responded to these problems by creating a new division within the Department of Health and Social Services (DHSS) to improve quality assurance in 1999. The Division of Long Term Care and Resident Protection took over facility licensure and certification, and investigation from the Division of Public Health. The investigative responsibility was expanded to include mandatory investigations under some circumstances. The division also received more investigative responsibility, including mandatory investigations under certain circumstances. Criminal background checks were also mandated during this first phase of nursing home quality reform.

The person who spearheaded many of the reforms that have passed since 1999, including the nursing staff ratio, was State Senator Robert Marshall. He took on the role because of the poor experiences his father had in nursing facilities. The ratio legislation, which was first proposed in 1999, is called "Eagle's Law" after the senator's father, Ignacious Eagle Marshall.

In 1999, Senator Marshall proposed a mandatory staffing bill that did not pass because it attempted to create a system in which the staffing requirement would be related to the care needs of the nursing home residents. The Department of Health and Social Services has had a system in place since 1989 to relate Medicaid reimbursement to the care needs of Medicaid nursing home residents and track resident acuity over time. This system did not account for residents whose care is reimbursed either by other payers or by private pay. In 1999, Senator Marshall proposed a mandatory staffing bill to create a system that would relate staffing to the care needs of every resident in a nursing facility. It did not pass.

During the next year, the department worked with Senator Marshall and key stakeholders to develop a "manageable" standard that residents and their families could understand. The standard was also designed to ensure sufficient staffing in facilities on nights, evenings, weekends, and holidays. The negotiators came up with a system that involves two sets of standards: licensed nurse and CNA staff-to-resident ratios and a minimum hprd. Negotiators also agreed on the need to raise Medicaid nursing facility reimbursement to finance the increased staffing requirements.

The ratios were initially based on recommendations from the National Citizens Coalition for Nursing Home Reform (NCCNHR) and the nursing staff studies that CMS sponsored. However, some negotiators argued that providers could not meet the 5.0 hprd standard that NCCNHR advocates because of labor shortages and cost to the facilities. In addition, Delaware has state-owned nursing facilities and did not want to increase its facility costs too much. Balancing all of these concerns, negotiators determined what the state could afford in terms of increased Medicaid reimbursement and decided to phase in the staffing requirement to allow some time for the determination of its effects and to give providers time to recruit staff.

Eagle's Law passed in the 2000 Delaware state legislative session. It contained new staffing ratio requirements and created the Delaware Nursing Home Residents Quality Assurance Commission. The commission has responsibility for overseeing quality assurance for nursing homes in the state, including implementation of the new ratios.

Staffing Ratios

Phase I of the staffing requirements began on March 1, 2001, required a minimum of 3.0 hprd of direct care, and required Medicaid reimbursement to change the definition of the Average Nursing Wage from the median to the 75th percentile, effective October 1, 2000. In addition, the following staff-to-resident ratios applied to all facilities.

1 LN[1]:20 residents -- days
1 LN:25 residents -- evenings
1 LN:40 residents -- nights

1 CNA/NA[2]:9 residents -- days
1 CNA/NA:10 residents -- evenings
1 CNA/NA:22 residents -- nights

[1] LN is licensed nurse, which is either an RN or LPN.

[2] CNA is certified nurse aide. NA is nurse assistant.

Before Phase II could begin on January 1, 2002, the newly created Delaware Nursing Home Residents Quality Assurance Commission had to review the effects of Phase I. Based on a consultant's study that reviewed quality indicators from CMS OSCAR data, the commission found that there was a statistically significant relationship between the newly required staffing levels and fewer incidents of poor-quality care as measured by 48 identified OSCAR deficiency labels that were combined into a "Nursing Deficiency" category.[3]

The commission had the legal authority to require that facilities comply with Phase II of the law, which required 3.28 hprd and more staff to residents. However, providers complained vigorously that the Phase II staff-to-resident ratio would require them to supply more than 3.28 hprd in some facilities because of their size. So, a compromise was reached whereby those providers who met the 3.28 hprd could choose to abide by either the Phase I staff-to-resident ratios on a daily basis or the Phase II staff-to-resident ratios on a weekly basis. Facilities have to inform the state licensure division of which option they have chosen in writing. All facilities have to meet a 3.28 hprd of direct care under Phase II; this phase's staff-to-resident ratios are the following.

1 LN:15 residents -- days
1 LN:23 residents -- evenings
1 LN:40 residents -- nights

1 CNA/NA:8 residents -- days
1 CNA/NA:10 residents -- evenings
1 CNA/NA:20 residents -- nights

Phase III of Eagle's Law, which has been postponed indefinitely due to the state's budgetary crisis, was to have become effective on May 1, 2003. It would have required 3.67 hprd of direct care if the commission had recommended moving to that level and the state had appropriated sufficient Medicaid funds to nursing facilities. Phase III also would have required the following staff-to-resident ratios for all facilities.

1 LN:15 residents -- days
1 LN:20 residents -- evenings
1 LN:30 residents -- nights

1 CNA/NA:7 residents -- days
1 CNA/NA:10 residents -- evenings
1 CNA/NA:15 residents -- nights

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[3] Delaware Nursing Home Residents Quality Assurance Commission. *Efficacy of Minimum Nursing Staffing Levels Required under Eagle's Law: Quality of Care, Labor Trends, and Nursing Home Cost and Availability*. December 2001.

The state has rules governing how different types of staff time are counted toward the hprd and the staff-to-resident ratios. CNA staff time can include the time that RNs, LPNs, or nurse aides-in-training spend doing CNA work. The time that the director and assistant director of nurses, the nurse assessment coordinator, the quality improvement coordinator, the nursing home administrator, and the nurse educator spend on their tasks cannot be counted toward the ratios. The standards also require that facilities have a nursing supervisor, who is an RN, on each shift, with up to 20 percent of her time devoted to resident care. No less than 25 percent of the nursing supervisor's time must be devoted to supervision and evaluation of direct care workers. Up to 75 percent of the charge nurse's time can be counted as direct care if the person is providing such care. Temporary agency personnel cannot serve as supervisors because they are not likely to be familiar with the facility or its residents but their care is counted toward the hprd and ratio requirements. Feeding assistants cannot be included in the state staffing calculations.

Nursing facilities have to go through the commission to obtain a waiver of the staffing ratios and no facilities had obtained one at the time of the interviews in spring 2003.

Key Stakeholders' Positions

Most stakeholders agreed that all parties engaged in extensive negotiations around the nursing staff standard and reached consensus about the new law. The providers agreed to the measure, at least in part, because Medicaid nursing facility reimbursement was increased to pay for the increased labor costs.

Monitoring of Nursing Facility Compliance

State survey staff monitor the staffing ratios when they do annual licensure and certification surveys and when they respond to complaints about staffing. On these occasions, they pull time sheets from the three-week time period prior to the survey and the time period during which a complaint occurred. The surveyors collect the hours worked from the time sheet, and a management analyst enters the data into a computerized spreadsheet that calculates the facility's hprd and staff-to-resident ratios. If the facility is close to the minimum requirements or there is a possibility that records might be inaccurate, the division's management analyst obtains the facility's payroll records to determine the facility's exact staffing levels. State budget estimates are that monitoring and enforcement of the ratio costs approximately $6 million per year.

Providers disagreed about the burden that measuring staff presents, with one group not complaining about it and another saying that the paperwork burden is too high and the system fosters micromanagement of facilities. One group would rather have surveyors focus on the training and supervision of CNAs and the outcomes of resident care.

If facilities do not meet the ratios, deficiencies are cited and facilities must file a plan of correction. Monetary sanctions are imposed if the staffing ratios are very low or deficiencies caused harm to residents (level G citations). State officials say that facilities have received citations and sanctions have been imposed. There is no particular type or subset of facilities receiving these citations.

Implementation Issues

Implementation of Phase I of the nursing staff ratio requirements appeared to be relatively smooth in that interviewees had few complaints about it. However, implementation of Phase II was problematic, and Phase III implementation has been postponed indefinitely.

An interviewee stated that in May 2002, some nursing facility representatives tried to delay the move from 3.0 to 3.28 hprd and advocated elimination of the staff-to-resident ratios by shift. Facilities' specific complaint about the staff-to-resident ratios was that they required staffing at a higher level than 3.28 hprd and that Medicaid payment levels did not support this extra staffing. Providers also complained that the labor shortage made it difficult to meet 3.28 hprd so a large number of providers submitted waiver requests to the commission. Most of the requests related to staff-to-resident ratios for the night shifts and weekends.

A compromise was reached whereby facilities had to meet the 3.28 hprd but could resort to the Phase I staff-to-resident ratio on a daily basis if they chose, rather than the new Phase II requirements, which involved compliance over a week. State budgetary concerns did not cause this change because the legislature had appropriated enough funding for Phase II.

Phase III is on hold because Delaware is facing a large budget crisis; at the time of the discussions with stakeholders, the state had a $300 million shortfall based on a $2.4 billion total state budget. Going to Phase III is also contingent on a study of the effects of the ratio on quality, which has not yet been conducted because of the budget crisis, and no one is sure that the state could increase Medicaid payment rates to accommodate Phase III in any case.

Outcomes Associated with Staffing Ratios

Stakeholders' opinions about the outcomes of the ratios are quite mixed. One group said that facilities were already staffing above the ratios on one or more shifts, but that the ratios for the remaining shifts have caused facilities to rely more on temporary agency personnel or to convert to assisted living facilities, which do not have staffing ratios.

Another group said that retention of staff has improved, because the trend in employee turnover is downward in Delaware, according to data from the American Health Care Association. Other stakeholders say that the effects of ratios are unclear at this point. Yet another group says that while some facilities have had sporadic difficulties meeting staffing requirements, particularly on the evening shift, generally, quality in facilities has improved because the number of serious deficiencies has gone down since the imposition of the staffing ratios. This was attributed, at least in part, to facilities retaining the same number of staff but shifting more of them to nights and weekends.

According to some observers, nursing facilities are using more temporary agency staff to meet the ratios since implementation of the new standards. Facilities end up paying agencies double or triple the hourly rate they pay their own employees and the temporary staff do not know the facility or the residents, which can lead to poor-quality care.

The state has tried to limit the use of agency personnel by capping the percentage of contract staff it will pay for under Medicaid at 30 percent. Facilities have increased their usage of such staff over the past three years so that about 30 percent of facilities were affected by the 30-percent cap as of October 2002.

Some observers are not sure that all of the state funding designed to help facilities pay for compliance with the staffing ratios is actually going toward staffing expenses. Each year the DHSS has responsibility for confirming that Medicaid reimbursement for direct nursing care does not exceed the cost of the services reported by each nursing facility on their cost reports. To date, no Medicaid participating facility has been found to have received Medicaid reimbursement for direct nursing care in excess of their reported cost for these services.

Data Collected and Reports Available

The state has been collecting data about facility staffing since before the imposition of the new staffing requirements. For reimbursement purposes, all Medicaid-certified facilities are required to submit two annual reports: the Nursing Home Cost Report and a Nursing Wage Survey. The Nursing Wage Survey identifies total wages and hours by nursing discipline (i.e., RN, LPN, and aide) for a two-week period representing the last full pay period in June, and includes a separate category for agency personnel hours. Facilities do not report wage survey information by shift, because Medicaid reimburses per day, not by shift. The Wage Survey enables the state to determine hourly average cost, or wage for each discipline. The average wage is multiplied by the required staff hours for each acuity level to determine the Direct Care Nursing (Primary Component) reimbursement rate. Data from the Medicaid Nursing Home Cost Report includes aggregated direct care cost data (not specific to discipline). The Cost Report is used to

determine the nondirect care (Base Rate) components of the Medicaid reimbursement rates.

Both the Cost Report and the Wage Survey are submitted by the nursing facilities to the state on paper. State analysts desk-audit the reports and enter the data into rate calculation software. Cost report data and Medicaid reimbursement rates are considered public record, although no consolidated reports are produced.

Other Staffing Initiatives

Delaware passed its nursing staff ratio requirements as part of a larger series of 24 nursing home reform bills. This package of bills essentially used the federal certification requirements as a base, then bumped up those requirements and incorporated them into the state's licensure requirements. Examples of these measures include mandatory criminal record checks for nursing home direct care staff, prohibitions against employment of people with criminal histories, and requirements governing the reporting of incidents and how these reports are handled. Drug testing is mandatory for all employees.

In addition to these increased requirements, the state substantially increased Medicaid payment rates between 1998 and 2001. According to the Delaware Division of Social Services, Medical Assistance Program, average daily rates increased from $105.22 a day in October 1998 to $171.62 in October 2002. This represents a 56-percent increase in rates over the last five years. The state estimates that it has spent about $14.2 million in additional nursing facility reimbursement expenditures since implementing the ratios on October 1, 2000.

In 1989, Delaware Medicaid introduced a prospective, multi-level, patient acuity-based reimbursement system called the Patient Index Reimbursement System (PIRS). Direct Nursing Care rates are universal in that all facilities get the same payment rate for residents at the same acuity level, if their residents have the same acuity level. Each of the eight patient acuity levels has a number of hours of direct care by staff type associated with it; the total number of direct care hours ranges from 3.28 hprd to 7 hprd for the highest-acuity facilities. Since Medicaid reimbursement is prospective, and presumes that staffing meets the state minimum requirements, facilities receive these payments whether they spend the nursing care dollars for staffing or not. Each of the eight primary acuity levels has three intermediate rates that recognize additional services such as rehabilitative care, psycho-social care, and the combination of these services, which result in a total of 32 potential reimbursement rates for each facility.

Teams of Medicaid nurses assign acuity levels to residents based on MDS and perform resident chart review every six months unless there is an intervening change in the

residents' conditions. Nurses review whether the residents' assigned levels of care are commensurate with their needs and their care plans.

Lessons Learned

Most observers view nursing staff ratios as one standard that is only part of a larger quality assurance system that should focus primarily on resident outcomes. The assumption is that it is not just numbers of staff that matter. Good management practices, continuity of staffing, tenure of staffing, and leadership also affect quality.

If ratios are used, some observers said that they should vary by the residents' acuity level, but others said that such a system would be very difficult to design and quite likely cumbersome. Some observers mentioned the burden of paperwork that new standards require and advocated for a simple system.

Summary of Case Study Findings for Minnesota

Evolution of Nursing Staff Ratios

Before 2001, three nursing staff standards applied to nursing homes in Minnesota. Since the 1970s, the state has required that facilities supply 2.0 hprd. In 1983, the state's move to case-mix reimbursement for nursing homes was accompanied by a regulatory change requiring 0.95 hours per standardized resident day (hpsrd);[4] this new standard was designed to take into account residents' case mix. Facilities had to meet 2.0 hprd or 0.95 hpsrd, which ever was greater. Implementation of the 0.95 hpsrd requirement and reimbursement system occurred in 1985. The third set of requirements is the federal and state standards requiring sufficient staffing to meet residents' needs.

Starting in 1973, Minnesota required nursing facilities to supply 2.0 hprd plus the additional nursing staff necessary to meet the needs of residents. None of the observers could recall the origins of this standard.

Observers said that when Minnesota's case-mix reimbursement system was implemented in 1983, the 0.95 hpsrd was instituted to ensure that nursing facilities provided staffing sufficient to meet residents' needs, particularly those requiring clinically complex care. There was also the desire to ensure that facilities were supplying appropriate care when they were receiving more reimbursement for residents with a high case-mix score. The state arrived at the 0.95 hpsrd using data from a study that estimated how much nursing staff time was necessary for residents in each of the 11 case-mix levels. The time was determined based on interviews with direct care staff, which asked them how much time they spent caring for various types of residents.

The state determined whether a facility met the 0.95 hpsrd by using a complex series of calculations that took into account individual residents' case mix, the number of residents in a facility by case-mix class, and the number of productive hours of nursing care each facility provided. A provider association stated, but state officials did not confirm, that the average facility provided 1.2 hpsrd, which translated to about 3.0 direct care hours per resident day. Waivers of the state staffing ratios were not permitted because the ratios were considered a minimum.

The state eliminated the 0.95 hpsrd in 2001 and retained the 2.0 hprd, as it moved to a new case-mix reimbursement system with 34 case-mix levels. The state made this move because providers complained about having to do two assessments--one for the old case-mix system and the MDS, which is required by federal rules.

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[4] As found in Minnesota Rules, a standardized resident day is based on a facility's daily census and takes into account both the number of residents and the case mix.

Despite several attempts to apply the 0.95 hpsrd using data to the new system, stakeholders could not reach consensus on how to do this. The essence of the problem is that the old payment system was based on staff time by level of care and the new system is based on cost by level. Although one group argued for elimination of staffing standards, the compromise that stakeholders reached was to study how a new staffing standard might be set. Until recently this study had been on hold due to state budgetary problems. The University of Minnesota has the contract for the study, which should be completed in 2005. In the meantime, the 2.0 hprd still applies, as do the federal and state sufficient staffing standards.

Key Stakeholders' Positions

One criticism of the 2.0 hprd is that calculating compliance over a 24-hour period can mask uneven distribution of staff, particularly during evening and night shifts, which tend to be understaffed.

Advocates argue for a staff-to-resident ratio that is not case-mix adjusted because such a ratio is hard for consumers to understand and is difficult for them to monitor.

Monitoring of Nursing Facility Compliance

Surveyors conduct state facility licensure surveys every two years. During these surveys, when both ratios were in place, surveyors examined a three-day sample, which included a weekend, from the previous two weeks of timecards to determine if the 2.0 or the 0.95 standards had been met. The amount of time that RNs, LPNs, CNAs, and trained medication aides spent in direct resident care was counted toward the staffing ratio requirements. Administrative staff time (e.g., DON time, staff training) was not included in these calculations, nor was the time that CNAs might spend on such tasks as housekeeping. If a facility had a census of 60 or less, then some of the DON hours could be counted. Temporary agency personnel time was counted, as was the time RNs spent doing the MDS assessments. One observer said that single-task workers are not likely to be counted toward meeting current or future staffing ratios because these workers are not considered nursing staff.

Fines for violating the 0.95 hpsrd were $300 a day for each day of noncompliance; these fines were imposed only after the facility received a notice of the need to correct the violation. Violations of the 2.0 hprd are $500 a day for repeated noncompliance.

According to state officials, surveyors used to spend up to half a day addressing the staffing ratio and part of this time involved verifying that the people listed as providing services had actually done so. Now, the 2.0 hprd is not routinely monitored because the

standard is so low that most facilities meet it and such monitoring has been found to be a "poor use of scarce resources."

Outcomes Associated with Staffing Ratios

Most observers believed that the staffing ratios have not had much effect on quality in recent years, because they are so low and most facilities are staffing above the requirements. However, some observers believe that a minimum staffing standard is necessary because seven facilities were still being cited under either the Minnesota sufficient staffing or the 2.0 hprd rule in 2002. According to one observer, about the time the 0.95 hpsrd was eliminated, quality in nursing facilities declined. This observer said that the decline could be attributed to low reimbursement and the labor shortage.

Some observers noted an increase in the use of temporary agency personnel in the 1990s because the booming economy and low unemployment rate made it hard for nursing facilities to attract workers who would stay in CNA jobs. Drawbacks that some observers attributed to reliance on temporary agency workers included facilities paying very high rates to agencies for their workers and the lack of productivity associated with these workers. State policymakers reacted by passing legislation regulating agency rates and practices.

Data Collected and Reports Available

The only staffing data that Minnesota collects is from nursing homes' annual Medicaid cost reports. Facilities report the number of productive hours of nursing by the DON, RNs, LPNs, and CNAs, which excludes in-service, lunch, vacations, and sick time. Agency staff hours count if those staff provide direct care. The reports ask for information on the hours of temporary nursing staff facilities use as well as the prices facilities pay for these staff.

Other Staffing Initiatives

Over the past few years, the legislature has passed a number of staffing initiatives. In 1999 and 2001, a coalition of consumer and labor advocates pushed for and obtained a 3-percent wage pass-through for nursing homes. Facilities had to obtain approval from the Department of Human Services for their plans for spending the additional money and the department is supposed to monitor the facilities' follow-through.

In July 2001, the state increased Medicaid nursing home reimbursement by $0.25 per patient day, with the money set aside for nursing home scholarship programs. The state paid for education and training of all staff, not just nursing staff. Funds could be used for

more than just educational expenses. For example, if a CNA trained to be an LPN, the program could pay for tuition, transportation, and child care. This is an extremely popular program. The state will recoup the money from facilities that did not spend all the scholarship funds from future reimbursement.

The 2001 legislative budgeting session resulted in passage of quite a few long-term care system changes, including study of revisions to Medicaid's nursing home payment system and the resultant elimination of the 0.95 hpsrd. The Departments of Health and Human Services contracted with the University of Minnesota to conduct four new studies:

1. A staffing time study to reweight the 34 case-mix classes
2. A study of nursing staff standards
3. A report on the theory and practice of minimum staffing
4. Design of a new reimbursement system.

Lessons Learned

Observer opinion was mixed about staffing ratios. Some felt that having a minimum is key to ensuring that those facilities that tend to have inadequate staffing provide some basic level of direct care. Others said that staffing ratios can become outdated as the industry changes and can be inflexible as case mix in a facility changes. Any new standard should be flexible, yet easy for consumers to understand. Ensuring that the state enforces standards was a key issue for another observer, as was the provision of staffing information that consumers can understand. Most stakeholders acknowledged that the quantity of staff was not the entire story on quality; other factors such as staff training and experience are important.

Summary of Case Study Findings for Missouri

Background

Missouri first implemented nursing staffing ratios in 1957, which required 1 nursing staff person to 10 residents during the day, 1 to 15 in the evening, and 1 to 20 at night, or a major fraction thereof.[5] The rule also stated that if more than 50 percent of residents were bedfast, then the facility had to hire more nursing staff. Nursing staff included RNs, LPNs, CNAs, NAs or untrained aides.

In the late 1970s, public attention to staffing issues heightened when several residents died in nursing home fires. As a result, a major reform bill directed the Division of Aging to assemble a special task force composed of state officials and medical professionals to develop new staffing standards in 1979. The task force proposed a nursing staff ratio of 2.5 hprd for skilled nursing facilities and 2.0 hprd for unskilled facilities. Nursing home operators opposed the proposed rule because they asserted that they provided good care under the old ratios. Shortly after publishing the proposed rules, the state expressed concern about their cost. Meanwhile, advocates feared facilities would staff up on the day shift in order to meet the requirements, while neglecting to assure sufficient staff at night.

As a result of these concerns, the 2.5 and 2.0 hprd were never adopted as final regulations. Instead, the state returned to the staff-to-resident ratios from 1957 under the governor's executive order in 1980. However, the requirement that facilities hire more nursing staff if more than 50 percent of residents were bedfast was not part of the order because stakeholders considered the requirement confusing and ill-defined. The state also established minimum staffing ratios in the nursing facility fire safety codes of 1 staff person to 10 residents (day), 1 to 15 (evening), and 1 to 20 (night) or a major fraction thereof. The safety code ratios count any staff person in the building, not just nursing staff.

Elimination of Staffing Ratios

In the mid-1990s, state officials convened a committee of surveyors, directors of nursing, providers, and researchers to review all nursing home regulations. Nurse staffing

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[5] The language "major fraction thereof" means the ratio of staff to residents must increase if the number of residents reaches more than half the amount stated in the resident ratio requirement. For example, half the number of the residents in Missouri's 1 to 10 daily staff-to-resident ratio is 5. If the facility's actual staff-to-resident ratio is 1 to 16, then another staff member is required; however, if the facility's ratio is 1 to 15, no additional staff is required. Thus the staff-to-resident ratio ranges from 1 staff for every 10-15 residents (day), 1 to 15-21(evening), and 1 to 20-30 (nights).

ratios were one of many issues that caused a vigorous debate. During the debate, a retired state official who had become a consumer advocate spearheaded the campaign to eliminate the state's nursing staff-to-resident ratio requirement. Advocates had become convinced that having the requirement did not affect quality in nursing homes because some facilities provided high-quality care with staffing below the minimum and poor-quality facilities were able to use their compliance with staffing requirements as a defense against sanctions for insufficient staffing. Advocates helped craft legislation that would (1) remove the nursing staff ratio, and (2) require that complaints related to insufficient staffing be investigated within 48 hours. While the first part of the bill passed in 1998, the second part did not. The staffing ratios still exist in the fire safety code.

Key Stakeholders' Positions

Prior to elimination of Missouri's staff-to-resident ratios in 1998, observers noted several problems with enforcement of the minimum requirement. Surveyors and state officials felt that the 1987 OBRA nursing home quality assurance standards regulations were tighter than the state regulations and that providers used the ratios to guide their staffing patterns, not as staffing minimums. When state surveyors cited facilities under the sufficient staffing standard, the state had difficulty holding them accountable and was largely unsuccessful in litigating the issue because providers successfully defended themselves by saying that they met the staffing ratios.

Some stakeholders felt that minimum levels provided a safety net and favored keeping the ratios. Advocates stated that they saw a gradual decline in nursing care as large corporations came into the state, and tried to increase staffing requirements without much success. According to these observers, facility nurses complained that they needed more staff, but facility owners were reluctant to staff above the minimum.

Monitoring of Nursing Facility Compliance

Prior to elimination of the staffing ratios, surveyors enforced them through the state survey process. Staffing payroll records and schedules were examined for compliance with the ratios only if surveyors observed a staffing problem. Survey staff also used their own observations, interviews, and resident outcomes to determine if there were enough staff to meet residents' needs. State officials say that it is easier to cite for staffing deficiencies without the ratios.

The state has three levels of citations for violations, Class I, II, and III, with Class I the most severe. If a facility puts residents in jeopardy and the deficiency is staffing-related, then the facility could receive a Class I citation. Penalties for noncompliance include a notice of noncompliance, plans of correction, loss of the ability to do nurse aide training,

and fines. However, facilities were not fined for noncompliance with staffing ratios when they were in effect.

Outcomes Associated with Elimination of Staffing Ratios

Observers feared staffing layoffs would occur with elimination of the ratios. However, no one reported a drop in staffing. Most stakeholders indicated that elimination of the ratios had no effect on staffing or quality. According to one observer, Medicaid cost report data show that the median number of staffing hours has gone up, but they believe that staffing problems still remain with some facilities. Some observers believe the number of citations for staffing deficiencies have increased since elimination, but did not supply any data to support that claim.

Recently there has been significant public attention to abuse and neglect in nursing homes, in part due to the deaths of four women from heat exhaustion caused by a facility's broken air conditioning system. The operator received a citation, but fixed the air conditioning system under the plan of correction; therefore no penalties or fines resulted. This event has focused advocates efforts on reforming the enforcement and complaint investigations system, but has not resulted in a call for imposition of staffing ratios.

According to some observers, another problem with enforcement has been the lack of continuity in leadership within the Division of Aging, which has oversight responsibility for the licensing and certification of nursing homes. Two years ago, the Division of Aging moved from the Department of Social Services to the Department of Health to become the Department of Health and Senior Services under the governor's executive order. The director of the Division of Aging is a political appointee and this position has a history of high turnover; typically, appointees average 18 months in their jobs. In the past, it has been difficult for anyone to take a political stance that would adversely affect the industry. Lack of continuity in departmental leadership often affects following up on collecting fines and related court action. The situation has created distrust among some who believe that providers have a strong influence over the administration's actions. This purportedly results in a lack of enforcement of some regulations.

Data Collected and Reports Available

The University of Missouri has a longitudinal dataset of Medicaid cost report data dating back to 1990. University staff are able to run analyses and trend data such as nursing staff hours per patient day. Medicaid cost report data, which is audited, can be purchased from the state in an electronic format for $100. Advocates find that it is difficult to get MDS data from the state and there is little assistance available for those wishing to

use these databases. Also, the state does not generate any consumer-friendly reports using MDS data.

Other Staffing Initiatives

Missouri has several initiatives related to improving staffing in nursing homes. In 1999, the state licensure department contracted with the University of Missouri, Sinclair School of Nursing to provide a confidential, clinical consultation program that nursing homes could join voluntarily and that would not affect survey findings. The University of Missouri created the Quality Improvement Care Program for Missouri's Long-Term Care Facilities (QIP-MO), which allows facilities to access a team of nurses that give on-sight and telephone consultation with the goal of improving quality. Consultation includes developing care plans, calculating desirable staffing ratios on professional and nonprofessional direct care staff, and educating nurses on the MDS process.

Participation in QIP-MO has increased since it became fully operational in 2000; the program administrator estimates that nurses made 1,500 site visits as of early summer 2003 and had contact with over half of the state's residential and nursing care facilities. Several observers believe that improvements on several quality indicators can be traced to the QIP-MO program. The program is funded by a facility assessment and costs about $600,000, but experienced a 26-percent budget cut in 2003 and remains financially vulnerable.

The state also has implemented several payment initiatives over the past few years. Missouri's current flat-rate reimbursement system is based on 1992 Medicaid cost reports. In 1995, Missouri implemented a provider tax as an add-on to facilities' base rate; originally set at $2.76 per occupied bed, the tax was $7.30 a bed in 2003. In 1996 and 1997, the state instituted a minimum wage adjustment for entry-level workers, and in 2001 there was an adjustment to the quality assurance fee, which requires facilities to devote $3.20 a bed toward direct care staff. These fees and taxes are used to draw down federal Medicaid funding.

Lessons Learned

Observers said that minimum staffing standards do not work because there is too much variation across facilities, and that minimum levels often become maximums, especially for those facilities providing substandard care. Staffing ratios, if they are imposed, should be based on the needs of residents. The number of staff is only one possible cause of poor resident outcomes; how staff perform their tasks and the type of management and instruction they have are also key to the quality of care. Observers encouraged provider participation in quality improvement programs such as QIP-MO that

are not tied directly to the survey and certification process and create neutral ground to educate facilities that want to improve their resident care.

Summary of Case Study Findings for Ohio

Background

Since 1972, Ohio has imposed three staffing requirements as a condition of licensure for nursing homes. Homes had to have at least one "attendant" awake and on duty for every 15 residents or major part thereof,[6] which translates roughly into 1.6 hprd and "sufficient additional staff" to care for residents. Also, there was a minimum requirement for registered nurse hours, which depended upon the size of the home. Observers generally agreed that the preexisting numerical standards were so low that they became meaningless over time and surveyors generally did not cite violations under the "sufficient additional staff" standard, because it was too vague to hold up in administrative hearings when providers challenged surveyors' findings. According to some observers, a drawback of the staff-to-resident ratio was that providers would use their compliance with this ratio as proof that they had enough staff when cited under the "sufficient additional staff" standard.

The Ohio Department of Health received complaints from consumers and facility staff about inadequate staffing in nursing facilities and the vague nature of the existing rules. In Ohio, all administrative rules are reviewed every five years, so when the nursing home licensure rules came up for review, the Department of Health took the opportunity to respond to these complaints by proposing a new staffing ratio along with many other changes to the nursing home licensure rules.

The department's initial proposal, based on internal discussions and a review of published articles available at the time, such as the NCCNHR resolution, the national expert panel recommendations, and the CMS time study, was a staff-to-resident ratio by shift that translated into a 4.0 hprd. This approach was chosen because the state wanted to increase the number of staff to meet residents' care needs, make it easy for surveyors and consumers to understand the ratio, ensure adequate staffing during evening shifts and weekends, and identify when there might be problems at a facility. The original recommendation was one nurse (RN or LPN) on duty for every 15 residents during the day and evening shifts and one nurse on duty for every 30 residents during the night shift. For nurse aides, the state proposed one for every 8 residents during the day and evening shifts and a 1-to-12 ratio at night.

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[6] The language "major part thereof" means the ratio of staff to residents must increase if the number of residents reaches more than half the amount stated in the resident ratio requirement. For example, half the number of the residents in Ohio's 1 to 15 staff-to-resident ratio is 7.5. If the facility's actual staff-to-resident ratio is 1 to 23, then another staff member is required; however, if the facility's ratio is 1 to 22, no additional staff is required. Thus the staff-to-resident ratio ranges from 1 staff for every 15-22 residents.

The Department of Health held biweekly meetings with provider and resident advocates and other state agencies for about a year to discuss the proposed staffing rule, along with other changes to the licensure regulations. During this negotiation period, providers said that they could not supply 4.0 hprd because of a labor shortage and expressed concern about costs to the state and the possibility that homes might get cited for staffing deficiencies, even if they provided good care. After much debate among the stakeholders and review of the CMS Phase I report, which was released during that time, the standard was revised to require a 1-to-15 nurse aide staffing ratio at all times and a minimum daily average of 2.75 hprd of direct care. Since the original proposal for 4.0 hprd was beyond what providers felt they could supply and what the state was willing to pay, stakeholders were willing to compromise on a smaller increase in the minimum standard when the alternative was no change at all. Due to concerns about the labor shortage, Ohio allows the time that licensed nurses spend providing nurse aide services to be counted toward compliance with the ratio. Nursing homes had asked for the 2.75 hprd to be calculated over a six-month or seven-day time period, but negotiators remained firm in calculating ratios over a 24-hour period because they wanted to help ensure adequate staffing on weekends.

The staffing ratio along with the other new licensure rules went to the Public Health Council for approval and then to a legislative committee--the Joint Committee on Agency Rule Review (JCARR). This committee could not modify the rules; it could either permit them to become effective or invalidate them. The revised rules became effective despite continuing nursing home opposition. Some providers, while participating in the negotiating process, continued to insist that any ratio be based on resident case mix. In contrast, the state's perspective was that such a system would be too difficult to implement and monitor.

Staffing Ratios

The new standard required all homes in 2001 to have one nurse aide for every 15 residents or major part thereof at all times and 2.75 direct care hprd, of which 0.20 hprd must be RN care, and 2.0 hprd nurse aide time. The remainder of the time--0.55 hprd--can be other staff time. The term "other" includes RNs and LPNs, nurse aides, activity aides, physical and occupational therapists and assistants, dieticians, and social service workers who provide direct care and services to the residents. Licensed nurses can count toward meeting the 1-to-15 nurse aide requirement as long as they are providing nurse aide services and are not counted toward meeting the other nursing requirements. These standards were effective October 1, 2001, but the state did not start monitoring compliance until January 1, 2002.

Nursing homes can get waivers to substitute LPN time for the 0.20 RN requirement. To get a waiver, a home must demonstrate that it has tried to recruit RNs, offers competitive wages, and that the waiver will not harm residents. According to state officials,

only 75 of the state's 920 nursing homes submitted waiver requests in 2002 and only 39 were granted. These waivers are very specific about the timing of the waiver (e.g., three out of five days) and are usually valid for a year.

Ohio is awaiting final federal regulations on feeding assistants before finalizing its licensure rules. The current draft rule does not permit feeding assistants' time to count toward compliance with the state's ratio.

Monitoring of Nursing Facility Compliance

During the survey, surveyors use a screening tool to determine whether to examine homes' staffing schedules. The tool includes questions related to resident care problems that could be affected by short staffing.[7] If the answer is yes to any of the questions, then the surveyor has to take data from the home's staffing schedule for that day and the previous six days, and enter the data into a spreadsheet to determine whether the home has met the staffing ratio and level requirements. For ancillary staff's direct care time to count, their time must appear on the staff schedule. If the surveyor questions the accuracy of the schedule, he or she pulls the relevant payroll records to verify that the schedule is correct.

According to state licensure officials, 145 nursing homes received citations for failing to meet at least one of the staffing requirements in 2002 for a total of 160 findings. Of those 160 findings, 9 were related to nurse aide staffing on the day shift, 32 on the evening shift, and 119 on the night shift. A total of 102 of the 160 findings occurred on weekends.

When nursing homes receive citations for not meeting staffing requirements, homes have to file a plan of correction. The state can also impose a directed plan of correction and, if a home fails to comply with this plan, the state could close the home. Home closure has not yet occurred in conjunction with a staffing deficiency. The state does not have the authority to impose monetary penalties for failure to comply with the staffing ratios.

The state did not provide information on the cost of monitoring its staffing ratio.

Implementation Issues

The main complaint about the new staffing ratio is the controversy over how to count licensed nurse staff time toward the ratio requirement. One observer mentioned having to

[7] For example, are call lights unanswered? Does the facility smell of urine or other odors? Are residents' personal care or nursing needs neglected? Are residents restrained inappropriately? Are meals served at inappropriate times? Another set of questions relates to resident care outcomes such as fecal impaction and decubitus ulcers.

"subdivide" a nurse's time. The other change from one "attendant" per 15 residents to one nurse aide per 15 residents has also been problematic in the view of some because is it hard to maintain sufficient staffing during the night shift. To help deal with these issues, most homes are said to run the staffing tool, a spreadsheet that is available on the state's web site, to ensure that they are in compliance with ratio requirements. Another complaint is that surveyors allegedly run a home's staffing numbers at the beginning of the survey instead of asking the questions related to resident care problems or outcomes first, or ask the nursing homes themselves to enter the staffing data into the electronic spreadsheet. The Department of Health clarified that staffing data are requested at the beginning of a survey only when the department has received a staffing-related complaint.

Outcomes Associated with Staffing Ratios

There are mixed opinions about the outcome of the staffing ratios to date. Some observers believe that it is too early to tell how effective the ratios have been in improving quality. Even if it were possible to determine if quality has improved in nursing homes, it would be hard to tease out the effects of the ratios, given that the entire set of rules regarding nursing home quality changed. Other observers claimed that the use of temporary agency personnel has increased and that nursing homes are overstaffed on the night shift due to the ratio requirements.

Data Collected and Reports Available

The state does not have a database on staffing data collected during surveys. Even if the state had such a system, it would only be available for those nursing homes that had positive answers to the screening questions. However, the state does collect data on certified nursing homes' staff wages and hours worked that show, in aggregate, what facilities paid for labor costs during a fiscal year.

Other Staffing Initiatives

Ohio has two other methods of dealing with labor force issues in nursing homes: various planning efforts and a generous facility reimbursement strategy. The planning efforts include a governor's summit on the health care workforce shortage in 2000, a Department of Health task force on labor force issues, and the Department of Aging's receipt of a Workforce Investment Act grant to identify barriers to employment and strategies for increasing the long-term care labor force. Various councils and committees on paraprofessionals are addressing training, regulatory reform, and criminal background checks for these workers. One observer characterized these efforts as creating a great

deal of discussion but not much action or results because no consensus has been reached about solutions to labor force problems.

Ohio uses a prospective, case-mix payment system, which provides facility-specific payments to certified nursing facilities; the system is rebased annually. The state uses MDS data to determine residents' case mix on a quarterly basis. The payment system has four cost centers:

1. Indirect (housekeeping, etc.)
2. Direct (nursing staff's payroll and benefits)
3. Capital
4. Other (medical supplies, utility bills, property taxes)

Nursing homes had projected that costs for the direct cost center would "go through the ceiling" with the changes to the nursing staff ratio requirements. Since state law requires Ohio to pay certified facilities immediately for the costs of any new federal or state mandates, the state budgeted about $13 million in FY 2002 for increased staffing. Since many nursing homes were already staffed at or above the ratio levels, the state ended up spending only $1 million for the 19 homes that applied for the extra payments. Speculation is that homes rescheduled their staff to cover nights or weekends so there were no major costs associated with new hires. According to one interviewee, nursing homes did not want to appear short-staffed, which might be another reason few certified facilities applied for the additional money.

Lessons Learned

Most observers agreed that it would be best to rely on assessment of resident outcomes when assuring quality. But some countered that staffing ratios can help assure a minimum staffing level that can help prevent poor outcomes. Prevention is preferable to dealing with problematic outcomes after they have occurred.

Some observers said that staffing is better addressed at the federal level because of the politics at the state level, while others said that the state level is the place to address this issue because the long-term care systems and labor markets differ so much among the states.

Summary of Case Study Findings for Vermont

Background

Vermont had staff-to-resident ratios by unit and by shift until the mid-1990s. According to one observer, the state repealed the staff-to-resident ratios because surveyors were focusing more on the ratio number, citing facilities for staff missing during part of a shift or for a certain number of hours, rather than whether staff were meeting the needs of residents. Vermont relied on the federal sufficient staff standard from 1997 until the new 3.0 hprd ratio became effective in 2001.

The goals of the new staffing ratio are to establish minimum staffing levels that will have a positive effect on the quality of care in nursing homes through increased staff retention caused by improvements in working conditions and wages. Interest in establishing ratios intensified when the United Electrical, Radio, and Machine Workers Union began organizing at a for-profit nursing facility. During the organizing process, consumers and workers raised numerous complaints about staffing shortages in the facility. Previously, workers were reportedly afraid to register complaints about working conditions because of fears of retaliation from their employer. State officials paid a surprise visit to the facility on a Sunday night. At that time, nursing staff reported low staffing levels and poor resident care that resulted in residents not being able to get to the toilet when necessary and unanswered resident call bells. The union organizing activity and associated legislative hearings resulted in a great deal of public attention toward staffing in nursing homes. Another factor precipitating the institution of a staffing ratio was the observation that LNAs were leaving their jobs because nursing facilities were short-staffed and LNAs felt overworked. Vermont's Department of Aging and Disabilities, while in the process of promulgating regulations on other nursing home issues, agreed to add a minimum staffing requirement as part of other regulatory changes to deal with staffing issues, for a "handful of problem facilities."

Staffing Ratios

On December 15, 2001, Vermont implemented its 3.0 direct care hprd averaged over a seven-day period; 2.0 hours of which must be provided by licensed nurse assistants (LNAs, Vermont's equivalent to CNAs). The ratio was implemented by regulation along with other regulatory changes. The state chose the 3.0 hprd standard based on the CMS-sponsored Phase I staffing report.

Staff included in the 3.0 hprd are RNs, LPNs, LNAs, and temporary agency nursing staff who are RNs, LPNs, or LNAs. Any time other staff spend on direct resident care is also included. For example, the hours that activity aides spend feeding residents can be

counted as long as these staff are LNAs. Also, when RNs or LPNs provide direct care, their hours can be counted toward the 2.0 hprd requirement for LNAs.

Key Stakeholders' Positions

Some stakeholders were dissatisfied with implementing an hprd ratio, arguing for a staff-to-resident ratio by shift. These stakeholders asserted that a staff-to-resident ratio would make it harder for facilities to supply inaccurate data and would ensure sufficient staffing on nights and weekends. Also, they argued that the hprd concept is hard for consumers to understand. Other stakeholders were not in favor of a staffing ratio, feeling that quality of staff is more important than quantity and that staffing shortages would affect facilities' ability to meet the ratio requirement. Based on past experience with citation issues around staff-to-resident ratios, the state was sensitive to the need for a flexible ratio and chose to establish an hprd requirement. Stakeholders who opposed ratios did not fight too hard against the proposed hprd requirement, believing that this was better than the "less flexible" staff-to-resident ratio.

There was also disagreement among stakeholders over calculation of the hprd over a week. Some stakeholders opposed calculating the 3.0 hprd on a weekly basis, stating that a weekly average does not address the low staffing that can occur at night and over the weekends and makes it hard for consumers to measure nursing home compliance. According to them, the ratio should have been calculated on a daily basis. Others felt that an hprd averaged over the week provides the flexibility facilities need without fear of penalties for problems with staffing on a particular shift or day, when events such as inclement weather or an employee calling in sick may affect staffing. While some stakeholders thought the 3.0 hprd level was set arbitrarily without much study, others felt the state examined available research, such as the CMS reports, and took these findings into consideration in determining a reasonable and achievable level.

Monitoring of Nursing Facility Compliance

Nursing facilities submit standard monthly reports on their staffing levels. These reports are audited periodically in a process separate from the annual survey and complaint investigations. The state randomly selects four nursing homes to audit per quarter. During the on-site audit, the Vermont state official dedicated to this task pulls payroll records for a week, chosen at random, and measures the payroll records against what the facility has reported to determine accuracy. If the report is not accurate, the official will educate the facility about proper reporting. If the payroll records show that the facility did not comply with the 3.0 hprd ratio, the facility is in violation of the minimum staffing requirements under state licensure regulations. During annual certification surveys and

complaint investigations, compliance with the federal staffing requirement is assessed and citations issued in cases of insufficient staffing.

When facilities are not in compliance with the staffing ratio, they are generally issued a low-level citation and must submit a plan of correction. Remedies for noncompliance generally do not involve enforcement action, unless a facility repeats the violation and there is a pattern of noncompliance. Waivers for the staffing requirement are technically allowed, but the state is very unlikely to grant one because the ratio is seen as the absolute minimum amount of staffing necessary to provide adequate care.

Implementation Issues

There are concerns that nursing facilities are not reporting their staffing accurately for various reasons. For example, they are alleged to count the time administrative staff spend in a short conversation with a resident as direct care time. Another concern is that LNAs do not record the time they spend with residents, their supervisors do, and that these data may be inaccurate or false. Other stakeholders said that facilities had a great deal of difficulty filling out the original forms on hours worked. For example, facilities believed they could use schedules rather than time cards for reporting purposes. According to stakeholders, schedules are not always correct because of last-minute changes, such as people calling in sick. The state audited the facilities and found gaps between hours reported and those actually worked; there was no systematic under- or over-reporting.

Due to these inaccuracies, the state revised the reporting form, gave it to facilities as an Excel spreadsheet, and then offered to do an audit of facilities' reports to educate them about how to complete them. State staff made educational visits to 24 of Vermont's 54 facilities. Stakeholders indicated that the technical assistance not only helped in educating management and staff on staffing requirements but also addressed compliance issues with other requirements, such as listing the proper information on time cards.

Although concerns existed about staffing shortages around the time Vermont implemented the ratios, some stakeholders find that the staffing shortage in Vermont has eased because of the softening economy and has not affected compliance with the ratio. An observer asserts that resident acuity has risen over time, and staffing shortages may impede some facilities' ability to increase staffing to meet resident needs. Thus, the 3.0 hprd may not be sufficient for these facilities. Others find that minimum staffing ratios have increased labor market competition and, in some cases, have added to existing labor shortage problems. For example, facilities near the state border have to compete with adjacent states that pay LNAs higher wages. Some facilities indicated they have put voluntary holds on their admissions due to their inability to find staff.

Outcomes Associated with Staffing Ratios

Data suggest that staffing levels have increased in Vermont since implementation of the hprd requirement. According to state officials, in December 2001, the average hprd was 3.25. As of February 2003, the statewide average weekly hprd for nursing homes had increased to 3.65. State officials also report no significant change in regulatory actions regarding staffing requirements since implementation of the ratio in 2001. Other stakeholders state that the ratio is ineffective with no major changes in staffing levels; still others assert that while staffing has increased, survey results have not improved commensurately because Vermont has always had high-quality care. Stakeholders say that facilities' use of agency personnel has increased since implementation of the ratio, while complaints about staffing have decreased, perhaps because of the ratio or due to the decrease in union activity once the one facility was organized. Some assert that the facilities that had the most difficulty complying with the new ratio were those located in sparsely populated areas near the Canadian border. According to stakeholders, no substantial Medicaid nursing facility costs were associated with the implementation of the ratio requirement because all but two or three facilities met the ratio before it was imposed.

Data Collected and Reports Available

The monthly staffing report that facilities submit contains total wages and benefits and average hourly wages and benefits by nursing category. The state provides the monthly staffing reports to the state's nursing home association, which in turn distributes it to its members. According to an observer, facilities value the information, and if they do not receive the report in a timely manner they call the association.

The Medicaid cost report requires facilities to submit a staffing pattern schedule that has a breakdown of wages and staffing hours by RN, LPN, LNA, and LNA-in-training. These cost reports are available in an electronic database.

Other Staffing Initiatives

In 2001, the state increased the nursing home bed tax and devoted the increased federal and state revenue to staffing; this occurred in response to a provider suit related to Medicaid underpayment. Under this program, nursing homes receive monthly wage supplements based on the amount of their nursing wages in base year 1997. There is no requirement that the supplement be spent on any category of employee or on wages at all. However, each year, nursing facilities must file a return showing the amount of their wage supplement payments and the increases in their salaries and wages. At the time of the payment system's next rebase, the state will compare each facility's cumulative wage

supplement payments with the increases in its wages. If the wage supplement payments are more than the wage increases, the facility will have to pay back the difference. State officials believe it unlikely that any repayments will be required. No increase in staffing was observed in relation to the wage supplement; speculation is that some of the money has been used for sign-on bonuses and to recruit foreign workers by paying for their visas and travel costs.

New initiatives include state-issued reports on long-term care workers; however, policy recommendations are yet to be released. Also, the state has applied for and received a Better Jobs/Better Care grant through the Robert Wood Johnson Foundation and Atlantic Philanthropies. The project involves the development of a career ladder for long-term care workers, best practices for nursing facilities, and a state seal of approval for facilities that have low turnover and employee retention initiatives.

Lessons Learned

Vermont stakeholders shared several lessons they had learned from their experience with implementing staffing ratios. Lessons for the state include the value of having a simple, accurate reporting method for staffing data accompanied by clear instructions. Collecting data by shift is complicated by the fact that facilities have set different shifts and some people work 12- to 14-hour shifts. Also, there should be a link between staffing and payment so that when ratios are imposed, Medicaid reimbursement will keep pace. An accurate measure of nursing home staffing should accompany such a link to ensure that the money is well spent.

Some stakeholders still oppose a minimum ratio, stating that information on quality should drive consumer decisions, not whether a facility meets a state-imposed standard. Some feel that an hprd is the appropriate type of ratio because it allows flexible use of licensed personnel, and while quality in facilities with low staffing may improve, staffing ratios will not affect those facilities already at or above the ratio. Some assert that the quality of the staff, such as experience, skill level, and training, and not quantity, is what affects the quality of nursing home care. Others believe that retention of workers is important because there are many more aides who are licensed than who work in the field, and that aides often leave because of poor working conditions and residents' failing to get the care they deserve. Recommendations for federal policy on minimum staffing ratios include taking into account the geographic variation and diversity of the population and the labor pool available in an area.

Summary of Case Study Findings for Wisconsin

Background

Wisconsin first implemented a staff-to-resident ratio, which was calculated on a weekly basis, in the late 1970s. Since that time, there have been two changes to the original requirement. In 1989, the state responded to complaints about staffing shortages on weekends by changing the ratio to a resident-based acuity measure hprd, which was calculated on a daily basis. The ratio required 2.25 hprd for skilled care residents; 2 hprd for intermediate care residents; 1.25 hprd for limited nursing care residents. For all three categories, RN/LPN hours were to account for at least 20 percent of the required hours. The requirement for personal care residents was 0.5 hprd. When Wisconsin made this change, policymakers believed that the best way to take into account the varying care needs of residents was to vary the ratio requirements by case mix.

In 1998, the state responded to complaints about inadequate staffing by increasing the hprd and adding the "Intensive Care" category to account for higher resident acuity in nursing facilities. Before setting the new ratios in 1998, a study group, headed by a member of the state assembly, conducted a review of general practices in Wisconsin nursing facilities and found that resident acuity had risen enough that staffing should increase and the ratio requirements should include a new minimum staffing requirement for "intensive skilled nursing care." In addition, state licensure and certification staff reviewed payroll records in nursing homes and used the results to document the need for a change to the minimum staffing requirements.

Staffing Ratios

Wisconsin's current minimum nursing staff ratios, which were implemented in 1999, have three categories based on resident need. A resident in need of intensive skilled nursing care must receive 3.25 hprd, of which 0.65 must be from an LN.[8,9] Skilled nursing residents must receive 2.5 hprd, of which 0.50 must be LN time.[10] And a resident in need

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[8] Intense skilled nursing (ISN) is provided to residents who need complex interventions and monitoring by professional nurses with specialized nursing assessment skills, provided on a continuous basis under the general direction of a physician (Wisconsin Department of Health and Family Services, Division of Health Care Financing, Bureau of Health Information, *Wisconsin Nursing Homes and Residents, 2001 (PHC 5347),* December 2002).

[9] An LN is defined as either an RN or LPN.

[10] Skilled nursing (SN) care is provided by, or under the supervision of, registered nurses and requires skill in assessing, observing, and supervising the physical, emotional, social, and restorative care needs of a patient, provided on a continuous basis under the general direction of a physician (*Wisconsin Nursing Homes and Residents*).

of intermediate care[11] must receive 2.0 hprd, of which 0.40 must be LN time. According to the authorizing legislation, staffing hours can be counted toward the ratios if trained staff are providing direct resident care. For example, ward clerk hours can count if the clerk is helping with certain resident care tasks and is a trained CNA. Tasks such as the routine completion of records, diagnostic consultant services, and scheduling resident appointments can be counted toward compliance with the hprd. Volunteer and single-task workers' time is not included if they are not CNAs.

Whenever a resident is admitted or readmitted, the facility must submit his or her MDS data to a state-employed RN who assigns a level of care to that resident. The residents' data are used to determine the facility's staffing ratio requirements.

Waivers for the overall nursing staff ratios are not allowed because they are considered the minimally acceptable staffing levels. However, some waivers are provided for licensed staffing requirements when a facility is unable to hire professional staff, can demonstrate a staffing shortage in its area, and can prove it has been engaged in active recruitment.

Key Stakeholders' Positions

Stakeholders disagree about the structure and effectiveness of the current ratios. One group believes that the current ratios do not reflect resident acuity. Advocates say the requirement does not consider acuity of residents within a facility. Policymakers disagree and believe that the current ratios do account for resident case mix and that ratios expressed as an hprd are a better method for capturing varying levels of resident need when compared to staff-to-resident ratios. One group of observers believes that the latest increase in the staffing ratio was a political compromise, because no new funding came with the rate increase and most facilities were already staffing at or above the current ratios. This same group believes that the ratio requirement did not compensate facilities for the costs associated with complying with the new ratios.

Monitoring of Nursing Facility Compliance

State surveyors measure staffing levels in facilities through the licensure or recertification survey process, or in response to a complaint. The surveyor asks facilities to provide staffing schedules and resident census data for a two-week period. Surveyors will verify the staffing schedule using time cards or payroll records only if they suspect that there may be a difference.

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[11] Intermediate care (ICF-1) is professional, general nursing care needed to maintain the stability of patients with long-term illness or disabilities (*Wisconsin Nursing Homes and Residents*).

The two-week period is randomly chosen except if the survey is in response to a complaint; then data would be collected from the time period during which the complaint occurred. The surveyor enters staffing data into a program that calculates the amount of staffing needed and the amount provided.

If staffing levels fall short of the ratio, the facility could face a citation. State citations are categorized into classes A, B, and C, and each comes with a monetary penalty. Class A violations are the most serious and come with a penalty of up to $10,000 per day. Class B sanctions involve direct threats to resident health or welfare and involve fines up to $5,000 per day. An indirect threat is a Class C violation, with fines of up to $1,000 per day. The sanction imposed on a facility depends on four factors:

1. Previous violations -- The state looks at the history of the facility's violations and whether the facility has been cited with similar violations in the past. Previous violations can lead to a tripling of the fine if the same code/situation was cited in the previous three years.
2. Financial benefit -- The state's staffing code says that the financial cost of the sanction cannot be less than the facility's benefit from having been understaffed.
3. Gravity -- The state looks at three subfactors: (1) whether harm could occur, (2) the probability for harm occurring, and (3) how extensive the violation was.
4. Good faith -- What did the facility do to correct the violation afterward and did it take measures to try to prevent the violation?

Also, directed plans of correction, curtailment of new admissions, and tripling of fines may be part of the sanction for inadequate staffing.

A nursing home can either pay the fine or appeal it. If the nursing home elects not to appeal the violation or the fine, it receives a 35-percent reduction in the amount of the penalty. Appeals almost always lead to a settlement conference before going on to a hearing. As of summer 2003, the backlog in determining some penalties extends to 1.5 years and is due to state staff turnover and delays in filling the positions. The goal is to have a six-month backlog.

State officials could not provide an estimate of the cost of monitoring and enforcing the staffing ratios.

Implementation Issues

Stakeholders generally agreed that implementation of the new ratios was smooth, possibly because most of the facilities were already operating at or above the new staffing levels, although some did have to staff up to meet the new requirements. Facilities believe that labor shortages have affected their ability to increase staffing levels, sometimes

causing voluntary holds on admissions, while other stakeholders say the issue is not the facilities' ability to recruit workers; rather, it is the facilities' decisions to operate with inadequate staffing.

There is concern among providers that Medicaid payment does not meet direct care costs and CNA wages are rising, making it difficult for some facilities to meet the staffing standard. As a result, some facilities are said to be in financial distress. The Wisconsin Association of Homes and Services for the Aging (WAHSA) estimates that (1) Medicaid payments cover 2.85 hprd of direct care, while on average facilities are staffing at 3.43 hprd of direct care, and (2) private payers subsidize Medicaid payments by about $50 dollars per day. Average Medicaid payment in 2001 was $106 per day, while private pay was $149 per day.[12]

Outcomes Associated with Staffing Ratios

Since the implementation of the new ratios in 1999, the average direct care hprd has increased, as have citations for staffing ratio violations. In 1998 and 1999 nursing homes provided, on average, 3.2 hprd at the skilled level of care. By 2000, that number had increased to 3.3 hprd, and in 2002, facilities on average provided 3.4 direct care hprd.[13,14] According to state officials, prior to implementation of the regulation, the number of citations for staffing ratio violations ranged anywhere from two to five per year between 1995 and 1998. In 1999, staffing citations increased to 19. Since 1999, 15 citations for staffing ratio violations occurred in 2000, 25 in 2001, and 18 in 2002.

State officials say that the increase in citations since 1998 resulted from the new requirements, not increased enforcement efforts. Some facilities, such as those in rural areas, have problems with staffing, but otherwise staffing citations occur randomly, and do not necessarily occur at the facilities with the lowest staffing levels. State officials say that since the implementation of the new ratios, the use of agency staff has not gone up, but also say that some facilities may use this type of staff in response to the federal sufficient staffing requirement.

According to the ombudsman, in 2001, only two of the 400 nursing homes in Wisconsin reported a staffing percentage lower than the required minimum. Another 124 homes reported staffing between the minimum and 25 percent more than the minimum

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[12] *Wisconsin Nursing Homes and Residents.*

[13] Wisconsin Department of Health and Family Services, Division of Health Care Financing, Bureau of Health Information, *Trends in Wisconsin Nursing Homes 1990-1999 (PHC 5308),* October 2001.

[14] *Wisconsin Nursing Homes and Residents.*

number of nursing hours required, 184 reported staffing between 25 percent and 50 percent more, and 107 reported staffing more than 50 percent higher.

Data Collected and Reports Available

The state conducts an annual survey of nursing homes that consists of self-reported data, which is stored electronically, edited, and cleaned. Data elements include the total number of paid hours for RNs, LPNs, and other staff by shift for a two-week pay period in December. The survey data also capture the number of full-time, part-time, and contract staff. The state has data from 1999 to 2001.

Wisconsin uses these data to produce a statewide annual report on nursing homes and residents and an annual Consumer Information Report for each facility. The Consumer Information Report provides data on the facility's federal deficiencies, staff turnover and retention rates, and staffing levels for that year, with comparisons to state averages for facilities of similar size. Facilities are required to post a copy of this report and consumers can access reports online. There were differing opinions regarding whether public access to nursing home data affects consumer demand and leads to increased staffing levels. One observer believes this information has had a competitive effect among facilities, while another feels that publicizing this information has not increased staffing nor produced any market changes, stating that people choose a facility based on reputation, availability, and word of mouth.

Medicaid cost report data contain staffing ratios for RNs, LPNs, and CNAs, but only require the dollar amounts that facilities pay for temporary agency staff because these amounts are what help determine nursing home rates, not the number of hours that staff work. Data are in the form of staffing hours by labor category per facility per resident day, and are in electronic format.

Other Staffing Initiatives

Wisconsin has had a number of initiatives related to staffing. One is an ombudsman program designed to raise public awareness of long-term care work, including career ladder training programs in technical colleges for workers. State officials meet regularly with the industry and advocates to discuss issues such as labor shortages, best practices, and staff retention. Wisconsin's most recent wage pass-through occurred in state fiscal year 2001 and amounted to $11.1 million; nursing homes had to apply for the money and verify that they spent it. This was controversial because some observers believed that some facilities operating above the required staffing levels used the new funds to pay current staff, not to add staff.

The use of single-task workers for feeding and transporting, which the nursing facility industry promoted, is another staffing initiative. The state permitted facilities to use these workers, but CMS told the state to cease this practice because single-task workers are not trained CNAs. The state reacted to this instruction by allowing single-task workers who were employed prior to 2002 to continue working. There have been no new single-task workers since that time. While CMS may be reversing its position on single-task workers, this will not affect the nurse staffing requirements, because single-task workers were never counted toward compliance.

Some stakeholders believe that labor shortages have made recruiting staff difficult, while others think that staffing initiatives should focus on the retention rather than the recruitment of workers. Stakeholders mentioned Wellspring, founded in Wisconsin, as a model that maintains high staff retention, possibly due to its inclusion of workers in the care management process. Wellspring believes that there are cost savings in the retention of their workforce. According to stakeholders, Wellspring was not an influence on the new staffing ratios and there were no complaints from Wellspring facilities about the ratio increase, possibly because Wellspring does not have a difficult time meeting the staffing requirements.

Lessons Learned

Some stakeholders say that averaging a staffing ratio over a day is much better than over a week, and that there might be some validity in looking at staffing by shift because some facilities may have distribution issues during a 24-hour period. When surveyors find that facilities have problems with the distribution of staff, they cite the federal requirement for insufficient staff. However, surveyors find they need a lot of evidence to prove that the problem they see is related to staffing; thus they are reluctant to cite the federal requirement.

Some believe that enforcing an average ratio does not address how much staff time is required to meet residents' needs. Others point to management effectiveness, staff training, outcomes, and ways to free up staff time (such as investing in technology, so that staff can provide more direct patient care) as important issues affecting quality. These methods have more effect on quality than staff "body counts."

Another group believes that staffing affects quality, but ideally examination of resident outcomes would indicate the true quality of care. Unfortunately, reliance on outcomes is problematic due to the lack of good measures for quality of life or quality of care.

Finally, reimbursement and facility staffing should be linked, with the Medicaid payment system providing incentives for facilities to provide sufficient staff to meet

residents' needs. Facilities must be accountable for how they spend the money they get for direct care.

APPENDIX 5.
COMPARISON OF EIGHT CASE STUDY STATES

TABLE 1. Description of Case Study States' Nursing Staff Ratios, Monitoring, and Sanctions in 2003						
State	**Preexisting Ratio**	**Current Ratio**	**Staff Counted Toward Compliance**	**Monitoring**	**Sanctions**	**Cost of Monitoring Ratios**
Arkansas	Began in 1989. Staff-to-resident ratio for licensed and certified staff, which varied by shift and NF size.	Began phase-in of new ratios in 2001. The current ratio is 1 LN:40 residents, days/evenings 1 LN:80 residents, nights 1 CNA:7 residents, days 1 CNA:9 residents, evenings 1 CNA:14 residents, nights Limited waivers available; however, none have been granted under current regulations.	LNs are RNs and LPNs. CNA includes CNAs, CNAs-in-training in conformity with federal regulations, LNs, and some therapy personnel involved in direct care. Temporary staff are also included.	Two methods: (1) desk reviews of the monthly staffing reports NFs submit, with on-site reviews when violations may have occurred, and (2) during surveys, surveyors pull payroll records and staff sign-in sheets for the last two pay periods or up to three months if there are questions about compliance.	Penalties depend on the frequency of violations. Facilities out of compliance for no more than 20% of shifts may receive deficiency citations and monetary penalties not to exceed $5,000 per month. Those out of compliance more than 20% receive enhanced penalties, with monetary penalties not to exceed $7,500, and restrictions on new admissions.	Monitoring and enforcement of staffing regulations continues to be accomplished with existing staff. No additional cost associated with change in ratio requirement.
California	First staffing standard in 1980; the hprd was raised to 3.0 in 1999. LN counted twice in practice known as "doubling."	3.2 hprd with no doubling. State required to establish in regulation a staff-to-resident ratio by August 2003. Compliance is measured over a 24-hour period. No waivers are granted.	RNs, LPNs, medical technicians, CNAs, and NAs with a specified level of training. Temporary staff with eight hours of orientation to the NF are included. Time these staff spend on administrative tasks, hours of staff in training or orientation, vacation time, and sick leave hours are not counted toward the ratio.	Monitoring occurs during annual surveys, when findings indicate staffing may be inadequate, and during complaint investigations. During the survey, surveyors choose two weeks of time cards and assignment sheets at random, but not including the survey period, and calculate the hprd.	NF is given a deficiency citation per incident and must implement a plan of correction. If care problem found to be associated with staffing, NFs may be fined $1,000-100,000 per incident, depending on the severity of the violation.	Four hours of survey time, or an extra $200 per survey, to review payroll records and calculate the 3.2 hprd.

State	Preexisting Ratio	Current Ratio	Staff Counted Toward Compliance	Monitoring	Sanctions	Cost of Monitoring Ratios
Delaware	From the early 1980s, state had a 2.5 hprd for SNFs and 2.25 hprd for ICFs.	Ratios were part of larger package of nursing home quality reforms. Phase-in of ratios began March 1, 2001. Current ratio is 3.28 hprd (averaged daily) and either: 1 LN:15 residents, days 1 LN:23 residents, evenings 1 LN:40 residents, nights 1 CNA/NA:8 residents, days 1 CNA/NA:10 residents, evenings 1 CNA/NA:20 residents, nights calculated over a week, or 1 LN:20 residents, days 1 LN:25 residents, evenings 1 LN:40 residents, nights 1 CNA/NA:9 residents, days 1 CNA/NA:10 residents, evenings 1 CNA/NA:22 residents, nights calculated on a daily basis. Waivers are available; however, none have been granted.	LNs are RNs and LPNs. The time RNs, LPNs, or CNAs-in-training spend doing CNA work can be counted toward the CNA requirements. Temporary staff hours are also counted.	During surveys and following staffing complaints, surveyors enter data from time sheets coming from the three-week time period prior to the survey or the time of the complaint. A management analyst enters the data into an electronic spreadsheet that determines compliance. If the time sheets might be inaccurate, the division's management analyst obtains payroll records to verify the data.	Deficiencies are cited as noncompliance and NFs must file a plan of correction. Monetary sanctions are imposed if staffing ratios are very low or have caused resident harm.	State budget estimates costs of approximately $6 million per year to monitor and enforce the ratios.

State	Preexisting Ratio	Current Ratio	Staff Counted Toward Compliance	Monitoring	Sanctions	Cost of Monitoring Ratios
Minnesota	Since the 1970s, the state has had a 2.0 hprd. In 1985 the state implemented a 0.95 hours per standardized resident day (hpsrd). NFs had to meet the higher of the two standards.	State dropped the 0.95 hpsrd and retains the 2.0 hprd and compliance is calculated over a 24-hour period. No waivers are available.	The time that RNs, LPNs, CNAs, and trained medication aides spend in direct resident care, which includes MDS assessment time, is counted. Temporary agency personnel time is counted. NFs with 60 or fewer residents can count some DON hours.	During biannual licensure surveys, surveyors used to pull time cards from a three-day sample, which included a weekend, from the two weeks prior to the survey to determine if NFs meet the 0.95 or 2.0 staffing standard. 2.0 hprd is not routinely monitored because the standard is so low that most facilities meet it.	Fines for violating the 0.95 hpsrd were $300 a day for each day of noncompliance. Violations of the 2.0 hprd are $500 a day for repeated noncompliance.	Surveyors used to spend up to half a day addressing the 0.95 hprd or 2.0 hprd staffing ratio requirements.
Missouri	State had ratios since 1957. In 1998, eliminated ratio of 1 nursing staff person to 10 (day), 1 to 15 (evening), and 1 to 20 (night), or major fraction thereof.	No minimum nursing staff ratio.	RNs, LPNs, CNAs, NAs and untrained aides counted toward pre-existing ratio.	Prior to elimination, staffing ratios monitored through survey process. Records and schedules were examined if surveyors observed a staffing problem.	For a staffing related deficiency a facility could receive the most severe citation (Class I). Penalties included notice of noncompliance, loss of ability to do nurse aide training, and fines.	Not applicable.

State	Preexisting Ratio	Current Ratio	Staff Counted Toward Compliance	Monitoring	Sanctions	Cost of Monitoring Ratios
Ohio	Since 1972, OH has had a "sufficient staff requirement," one "attendant" per 15 residents or major part thereof, and minimum RN hours depending on the NF's size.	Ratios were part of larger package of nursing home quality reforms. Since October 2001, one "direct care staff" person per 15 residents or major part thereof and 2.75 hprd, averaged daily, of which .20 hprd must be RN and 2.0 CNA. The remainder can be "other" staff time. Waivers are only available for the .20 hprd RN requirement.	RNs and LPNs can count toward meeting the 1:15 requirement, when they provide direct care and are not counted toward meeting the other nursing requirements. "Other" staff means: RNs and LPNs, nurse aides, activity aides, physical and occupational therapists and assistants, dieticians, and social service workers who provide direct care and services to the residents. Temporary staff not mentioned in OH summary.	Surveyors ask a series of resident-care-related screening questions to determine whether to monitor staffing. If monitoring is necessary, then the NF takes the previous week's staffing schedule, enters the data into a spreadsheet, which determines the NF's compliance.	NFs receive deficiency citations. Non-compliant NFs must file a plan of correction; the state can impose a directed plan of correction, if a NF fails to comply the state could close the home.	The state did not provide information on the cost of monitoring the state's staffing ratio.
Vermont	Until the mid-1990s, state had a staff-to-resident ratio by unit and shift, which was dropped by 1997.	As of December 15, 2001, 3.0 Direct Care hprd averaged over a seven-day period, 2.0 hours of which must be provided by LNAs. Waivers are technically allowed but not likely to be granted.	Staff included in the 3.0 hprd are RNs, LPNs, LNAs, and temporary staff who are RNs, LPNs, or LNAs. If other staff (i.e. activity aides) are LNAs, their time spent on resident care is also included. If RNs or LPNs provide direct care, their hours can be counted toward the 2.0 hprd requirement for LNAs.	NFs report their staffing levels monthly; reports are audited periodically in a process separate from their annual survey and complaint investigations. Four nursing homes are chosen at random to audit each quarter. The on-site audit involves an official pulling payroll records for a week, chosen at random to determine accuracy.	NF is generally issued a low- level citation. Noncompliant NFs must submit a plan of correction. Remedies for noncompliance generally are not imposed unless there are repeated violations and a pattern of noncompliance.	The cost of monitoring the state's ratios is minimal.

State	Preexisting Ratio	Current Ratio	Staff Counted Toward Compliance	Monitoring	Sanctions	Cost of Monitoring Ratios
Wisconsin	In 1989, state staffing ratios went from a staff-to-resident ratio calculated on a weekly basis to an hprd based on resident acuity calculated on a daily basis.	In 1998, state required NFs to supply 3.25 hprd, of which 0.65 must be from an LN to residents needing intensive skilled nursing care. Skilled nursing residents receive 2.5 hprd, of which 0.50 must be LN time. A resident needing intermediate care receives 2.0 hprd, of which 0.40 must be LN time. Compliance is measured over a 24-hour period. Waivers are not permitted. Some waivers for licensed staff are permitted when an NF can demonstrate a staffing shortage in its area and prove it has been actively recruiting licensed staff.	An LN is either an RN or LPN. All licensed or certified staff hours are counted.	During surveys, NFs supply two weeks of staffing and resident data from staffing schedules and resident census. Surveyors verify staffing schedule using time cards or payroll records if they suspect a difference. The surveyor enters staffing data into a program that determines whether the NF has complied with the staffing ratio. The two-week period is randomly chosen except if the survey is in response to a complaint.	Class A violations come with a penalty of up to $10,000 a day. Class B sanctions involve fines of up to $5,000 a day. An indirect threat is a class C violation, with a fine up to $1,000 a day. Also directed plans of correction, curtailment of new admissions, and doubling or tripling of fines may be part of the sanction.	State officials could not provide an estimate of the cost of monitoring the ratios.

TABLE 2. Results of Staffing Ratios				
State	**Observer Opinion on Outcomes**	**Implementation Issues**	**Related Staffing Initiatives**	**Lessons Learned**
Arkansas	Staffing has increased. Staffing has not changed. Quality has improved. NFs in rural areas of state had difficulty hiring staff. Day-shift hiring was more difficult than for other shifts.	Phase I was delayed while details of regulations were worked out. Phase II was delayed because of budget problems. Phase III of the staffing ratio implementation is on indefinite hold due to state budgetary problems.	State imposed a Quality Assurance Fee per occupied bed with the proceeds used to finance higher reimbursement for NFs. This was designed to help compensate NFs for increased labor costs.	Ratios should be imposed on a per-shift, per-day basis, and should take into account average daily census. Sufficient funding should accompany new staffing ratios. NFs that work to improve care should be rewarded.
California	25% of NFs had staffing at or above the 3.2 hprd in 1999. By 2001 that number had risen to 67%, based on a sample of 111 NFs. Deficiencies for the federal "substandard quality of care" have decreased overall since the implementation of the 3.2 hprd standard.	Implementation was smooth, although some complain of inadequate enforcement.	Two wage pass-throughs. Training programs and career ladder initiatives for CNAs.	Staffing will increase quality but NFs need flexibility to meet residents' needs. Increased staffing requirements must be accompanied by increased funding. Outcome measures should be developed to help determine the effect of increased staffing. Something must be done to make the CNA job a better one.
Delaware	NFs were already staffing above ratios on one or more shifts, but are now relying more on temporary agencies. Staffing retention has improved. Effects are unclear. NFs shifting staff to nights and weekends. Not sure extra payment is going to staffing.	Phase I implementation smooth. Phase II problematic because providers claimed they could not meet the ratios because of the labor shortage. Phase III is on hold because the state budget crisis is preventing increasing payments to NFs to compensate them for their increased staffing costs.	Ratio requirements were part of a larger NF quality assurance package. The package also included substantial increases in NF payments.	Ratios are only one part of quality assurance systems, which should focus on resident outcomes. Acuity-based staffing standards are best but difficult to design and likely cumbersome to implement.

State	Observer Opinion on Outcomes	Implementation Issues	Related Staffing Initiatives	Lessons Learned
Minnesota	Staffing ratios have not had much effect in recent years because they are so low. Minimum staffing standard is necessary because facilities are still being cited under the 2.0 hprd.	Controversy occurred over whether to eliminate the 0.95 hpsrd, but this was resolved by the promise of a study on which to base a new standard.	Several studies, wage pass-throughs, and a nursing home staff scholarship program have been implemented in the past few years.	Staffing ratios become outdated as the industry changes and can be inflexible. Any new standard should be flexible, yet easy for consumers to understand. Standards must be enforced. The quantity of staff is not the entire story on quality; other factors, such as staff training and experience, are important.
Missouri	Elimination of ratios had no effect on staffing or quality. Staffing hours have gone up, but problems remain with some facilities. Lack of leadership continuity in Division of Aging affected enforcement.	Not applicable.	The University of Missouri's QIP-MO program provides confidential technical assistance to NFs. Payment initiatives such as provider tax, minimum wage adjustment, and adjustment to quality assurance fee devoted to direct care staff.	Minimum staffing levels often become maximums. Staffing should be based on needs of residents. Staff performance and management is key to quality. Provider participation in quality improvement programs, such as QIP-MO, helps improve resident care.
Ohio	Too early to tell. Hard to determine effects of ratio since it was part of a larger package of reforms. Use of temporary personnel increased and NFs are overstaffed at night.	Controversy over how to count licensed staff time. Hard to maintain sufficient staff at night to meet ratios. Some surveyors may not be using the screening tool appropriately.	State must pay for any increased mandates for NFs immediately. State set aside $13 million in SFY 2002 for this purpose but few NFs applied and state spent only $1 million. Various planning efforts are underway regarding the labor shortage.	Some observers said it is best to focus on resident outcomes, while others said that ratios can help prevent poor outcomes.
Vermont	Some assert that staffing levels have increased, while others maintain staffing levels have not increased. Quality has not changed. Costs to NFs were minimal.	Much confusion among NFs about how to complete the form. Revised form and educational effort largely solved problem. Concerns about NF reporting accuracy.	State has had at least two wage pass-throughs. State has studied labor force issues.	Simple accurate reporting of staffing data is critical. Hprd is flexible, if a ratio is necessary, but hprd is hard to understand and monitor. Ratios only affect those NFs with the lowest staffing levels.

State	Observer Opinion on Outcomes	Implementation Issues	Related Staffing Initiatives	Lessons Learned
Wisconsin	The average direct care hprd has increased from 3.2 in 1998-1999 to 3.4 in 2002, as have citations for staffing ratio violations.	Implementation was smooth but some providers complain of inadequate Medicaid reimbursement.	Two wage pass-throughs. Single-task worker concept implemented and then phased out. An initiative to raise public awareness of long-term care work through technical colleges.	Measuring staffing by shift or by day can help mitigate short-staffing problems on nights and weekends. Provider payment needs to support staffing requirements. Management effectiveness, staff training, resident outcomes, and investing in technology can free up staff time and are more important than “body counts.”

TABLE 3. Available Data on Staffing				
State	**Data Collected**	**Dates Available and Format**	**Data Quality Control**	**Data Analyses or Reports**
Arkansas	Medicaid cost report: Number of staff Hours worked Monthly reports (per shift, per day): Census Direct care staff hours Licensed staff hours Linked to master facility database but not to MDS or OSCAR.	Data is available from November 2001. Stored in Microsoft Access 97 database.	Audited but not independently reviewed unless there is a violation. Both audited and original data retained.	No regular reports. No special reports to date.
California	Combined Medi-Cal/public disclosure annual report: Revenue Resident days by payer category Aggregated wages/salaries Self-reported productive hours (by staff type, time of day, temporary vs. permanent staff) Turnover rates	Data available at http://www.oshpd.cahwnet.gov/HQAD/HIRC/ltc/index.htm. Available on CD for 25 years; extract using SAS.	Desk audit of all reports for past five years.	Year-end report available each September. Reports posted on web site. Special report to legislature, June 2001.
Delaware	Nursing Wage Survey for two-week time period (representing last full-time period in June, Medicaid-licensed NFs only): Hours (by staff type, temporary vs. permanent staff) Wages Nursing Home Cost Report: Nursing staff costs	Wage survey data available in electronic format for 1999-2003. Cost report data available in electronic format for 2001-2002.	Desk audit of wage survey and cost reports.	No regular reports. Special report in December 2001.
Minnesota	Medicaid cost report: Productive hours (by staff type) Total salaries Temporary staff hours and costs reported separately.	Available up to 1995. No data 1996-1998. Limited data since then.	Not audited.	No regular reports.
Missouri	Medicaid cost report: Total hours Total salaries University of Missouri has longitudinal dataset of Medicaid cost report data from 1990.	Cost report data available from state in electronic format since early 1990s. Audited up to 2000. Cost for public access is $100. University's data not publicly available.	Desk-audited and in response to complaints.	No regular reports. No study done on effect of removal of standard. University has longitudinal study on QIP-MO.
Ohio	No statewide database available, except for aggregate spending on labor for each NF.			No regular reports.

State	Data Collected	Dates Available and Format	Data Quality Control	Data Analyses or Reports
Vermont	Monthly staffing report: Total wages and benefits Total hours (by staff type) Staffing pattern schedule submitted with Medicaid cost report.	Staffing schedules available electronically. Direct care hours by facility available at http://www.dad.state.vt.us/ltcinfo/staffing/staffingOct02.htm.		Monthly staffing reports provided by state to association.
Wisconsin	Annual Survey of Nursing Homes (NF-reported data): Total paid hours (by type of staff) for a two-week pay period in December Number of staff by full-time, part-time, and contract staff Patient acuity (by facility)	Available in electronic form from 1999 to 2001.	Edited and cleaned.	Annual reports issued with aggregate state data and for individual facilities.