

Report to Congress: Appropriateness of Minimum Nurse Staffing Ratios In Nursing Homes

Organization of Phase 1 Report

Chapters 1 through 6 provide background, policy analyses and context for the study. Chapter 2 examines public policy and how it currently effects nurse staffing through quality regulations and Medicare and Medicaid payment rates. Chapter 3 presents a detailed analysis of current levels and trends of nursing home staffing in the U.S. Chapter 4 examines how HCFA's current non-ratio nursing home nurse staffing requirements are being implemented and assessed. Chapter 5 presents the results of focus groups discussions with direct care workers (Nurse Aides), and interviews with nursing facility management. Chapter 6, the last "background" chapter, provides a transition to the outcome analyses. This chapter critically reviews selected research on the relationship between staffing and resident outcomes.

Chapter 7 through 12, in a sense the core analysis of this Phase 1 report, present analyses on the relationship between staffing levels and quality outcomes. Chapters 7 and 8 assess the validity and reliability of OSCAR and Medicaid Cost Report Data. Chapters 9, 10 and 11 each present the results of an analysis of nurse staffing and a different set of quality outcome measures. Chapter 12, the last chapter of this core outcomes analyses, synthesizes the analyses of the preceding three chapters and extends the analyses to draw conclusions.

Chapter 13 examines three time-motion methods for setting nurse staffing levels. Chapter 14, the final chapter, asks how much nurse aide time is required to implement five specific, daily care processes that have been linked to good resident outcomes.

ACKNOWLEDGMENTS

This report was written by Health Care Financing Administration (HCFA) staff with many chapters based on reports prepared by the primary evaluation contractor for this study, Abt Associates Inc. (Contract #500-95-0062-T.O.3), or their subcontractors. Although this is a HCFA report for which it alone is responsible, each of the reports received from contractors and subcontractors has not been changed or altered in any way, other than minor editing. Marvin Feuerberg, HCFA project officer, is responsible for much of the study design, implementation, and analysis employed in this project. Jeane Nitsch and Ed Mortimore, HCFA, provided editorial assistance throughout the Report. Susan Joslin and Jeane Nitsch, HCFA, are responsible for compiling and formatting the chapters and producing the Report. Also, Eric DeLisle, HCFA, designed the cover. Elaine Lew, Beverly Cullen, Rosemary Dunn and Sally Jo Wieling, all of HCFA, contributed to several sections of the Report. Steven Pelovitz, Helene Fredeking and Cindy Graunke, HCFA, managed support for this project within HCFA and thereby moved this project forward.

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Additionally, the important role of other subcontractors, consultants, our Technical Expert Panel (TEP) and a very diverse range of individuals and organizations contributed time, experience, and knowledge to this project. While the list and their individual contributions are too long to fully enumerate here, Chapter 1 and an acknowledgment footnote at the beginning of each chapter details each of the individual contributions.

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**APPROPRIATENESS OF MINIMUM NURSE STAFFING RATIOS
IN NURSING HOMES
EXECUTIVE SUMMARY: PHASE 1 REPORT¹**

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Background

Purpose

The primary purpose of this study is to meet the requirements of Section 4801(b)(7)(e)(17)(B) of Public Law 101-508:

Study on Staffing Requirements in Nursing Facilities.--The Secretary shall conduct a study and report to Congress no later than January 1, 1992, on the appropriateness of establishing minimum caregiver to resident ratios and minimum supervisor to caregiver ratios for skilled nursing facilities serving as providers of services under title XVIII [Medicare] of the Social Security Act and nursing facilities receiving payments under a State plan under title XIX [Medicaid] of the Social Security Act, and shall include in such study recommendations regarding appropriate minimum ratios.

The Federal Reports Elimination Act of 1998 extended the due date of this report to January 1, 1999. This Report to Congress is Phase 1 of a two part report. The following is a summary of Phase 1. Phase 2 which will include policy recommendations is currently being developed.

Public Concern With Nursing Home Staffing

Recent reports by the U.S. General Accounting Office and the U.S. Office of the Inspector General and the Health Care Financing Administration's (HCFA's) comprehensive July 1998 nursing home Report to Congress have identified a range of serious problems including malnutrition, dehydration, pressure sores, abuse and neglect. Recent hearings before the U.S. Senate Special Committee on Aging, including a November 3, 1999, forum have pointed to nurse staffing as a potential root cause of many of the problems observed. In addition, a continuous flow of newspaper articles and television news reports highlighting inadequate care and abuse in nursing homes has heightened public concern with this issue.

This concern across the country regarding adequate staffing in nursing homes has been reflected in several States among both those responsible for licensure standards and rate-setters. At least 37 States have imposed new, more stringent staffing requirements under their State licensure

authority and 19 States have introduced State legislation in this area. Further, at least 10 States now explicitly tie some portion of rates to staff levels or wages and there has been some discussion of adding some feature like that to Medicare payments.

A 1996 report on nurse staffing by the Institute of Medicine (IOM) recommended a higher nursing home minimum (not a minimum ratio) of 24-hour registered nursing care. The IOM was not prepared to recommend a minimum ratio, in part because there was not sufficient knowledge

to appropriately adjust any recommended ratio by the case mix of the patient population. Although the need for increased staff may seem intuitively obvious, the empirical evidence in support of this general position and *supportive of specific ratios* is fragmentary. Although the IOM report provided some additional information, the essential question raised by the Omnibus Budget Reconciliation Act of 1990 (OBRA '90) -- whether an appropriate minimum ratio exists -- remained unanswered.

HCFA'S Current Authority/Role in Nurse Staffing Requirements

Over 95% of U.S. nursing homes participate in the Medicare and/or Medicaid program(s). HCFA is responsible for ensuring that the health and safety of the residents of these nursing homes, who represent one of the nation's most vulnerable populations. Under the statutory authority of OBRA '87, HCFA issued regulations and program guidance -- including a *general* requirement that nursing homes must provide “. . . sufficient nursing staff to attain or maintain the highest practicable . . . well-being of each resident . . .” Many professionals view this general requirement as too vague to serve as an adequate Federal standard. Federal regulations also specify *minimum* requirements of an 8-hour registered nurse and 24-hour licensed nurse coverage per day. However, since this minimum is the same for all facilities (e.g., the same for a 60 bed facility or a 600 bed facility) many professionals also view this requirement as inadequate; they argue for a required minimum nurse staff to resident *ratio*. These professionals recommend minimum nurse staffing ratios that would be adjusted upward for nursing homes with residents who have greater care needs, such as those who suffer from Alzheimer's Disease or other fragile medical conditions. The Congressional requirement for this study, described above, essentially asks the Secretary to determine if there is some appropriate ratio of nurses to residents.

Public Policy and Nursing Home Nurse Staffing

Public policy impacts nurse staffing indirectly through payment rates established by Medicare and by individual State Medicaid nursing home payment systems (usually administered by a rate-setting component of the State Medicaid bureau). In addition, public policy decision-making impacts nurse staffing directly through quality regulations, including explicit nurse staffing standards administered by the State Health Departments and State survey agencies.

Despite considerable variation among States' Medicaid payment systems and between Medicare and Medicaid, all of the nation's public payments for nursing home services are fundamentally driven by historical spending patterns. Thus, if nursing homes have been historically understaffed, then public payment rates could require adjustment if policy makers require substantially different staffing patterns. If such adjustments were considered, both the level of payments and the advantages and disadvantages of a system that ties payment more closely to actual spending on staffing would merit examination. These structural features of payment were found to be important to both a system's incentives and its overall cost.

Evaluation Contractors, Study Investigators, and Technical Expert Panel

Abt Associates is the prime evaluation contractor for this study. Important subcontractors and/or consultants to Abt or HCFA on this project include: University of Colorado Health Sciences Center, Andrew Kramer, MD, Principal Investigator; University of California, Los Angeles, Anna & Harry Borun Center for Gerontological Research, John F. Schnelle, Ph.D., Director and the UCLA Principal Investigator; Survey Solutions, Inc., Beth A. Klitch, President; Rosalie A. Kane, Ph.D., Division of Health Services, Research, Policy and Administration at the University of Minnesota School of Public Health; and Barbara B. Manard, Ph.D., Principal, the Manard Company, Chevy Chase, Maryland. In addition, HCFA staff have been responsible for much of the study design, implementation, and analyses employed throughout the project. HCFA staff have also integrated the various analyses into this Phase 1 final report

Technical Expert Panel (TEP)

Abt Associates convened a TEP to review and comment on key project deliverables, such as design plans for and results of technical analyses. The TEP was comprised of nationally recognized experts in long-term care, nursing, economics, and research and analysis.

Stakeholders Input

In addition to the formal TEP, Abt Associates and HCFA sought and obtained input on the planned study design from different stakeholders in the long-term care staffing debate through other mechanisms, such as official meetings with representatives from consumer advocates, unions, and the nursing home industry. In addition, informal conversations were held with policy experts not included on the Abt TEP.

Phase 1 and Phase 2 Reports to Congress

From the beginning of this study we recognized that all of the necessary analyses to provide a definitive answer to the three basic study objectives described below could not be addressed within the funding constraints of the current contract with our contractor, Abt Associates. In particular, a cost analysis could be required as part of this study; but whether such an analysis would be necessary could not be determined until we had some preliminary results indicating that low staffing ratios have a strong and consistent impact on resident quality outcomes. However, to be responsive to the long-standing concerns raised by Congress, the study and Report to Congress have been divided into Phase 1 and Phase 2 reports. The Phase 1 analyses are reported here.

Attribution and Phase 1 Analyses

A footnote on the first page of each of the 14 chapters details the appropriate attribution and acknowledgments for all of the analyses contained in the chapter. Although this is a HCFA Report for which it alone is responsible, *each of the reports received from contractors and*

subcontractors has not been changed or altered in any way, other than minor editing.

Study Approach

Study Objectives

The Phase 1 and Phase 2 reports will determine: 1) if minimum nurse staffing ratios are appropriate; and, if appropriate; 2) the potential cost and budgetary implications of minimum ratio requirements; and 3) if there are nurse staffing ratios that strongly determine good or *optimal* resident outcomes. The Phase 1 report will address the first and third study objectives. In both Phase 1 and Phase 2 reports, the phrase “nurse staffing” refers to all three categories of nurses: Registered Nurses (RNs), Licensed Practical Nurses (LPNs), and Nurse Aides/Nursing Assistants.

These objectives are formulated to be responsive to the Congressional language requiring the study. While the objectives appear reasonable and straight-forward, some potential policy issues are embedded in the objective of determining if there are *appropriate* minimum nurse staffing ratios. The policy perspectives defining “appropriate” has important implications for how the study questions are formulated and empirical analyses conducted.

How Should Appropriateness Be Defined?

The Congressional language requiring the study is clear but sparse. To formulate a study question open to empirical investigation, we must operationalize “appropriateness.” Consistent with this objective, the core analysis of this study presented in Chapters 9 through 12 has defined the key study question: *Is there some ratio of nurses to residents below which nursing home residents are at substantially increased risk of quality problems?* This key study question does not simply seek to determine if there is a generally positive relationship between staffing and quality outcomes. The question asks if there is some critical nurse to resident staffing ratio, a *threshold*, below which residents are at a substantially-increased risk of quality problems. If strong evidence supports the existence of such a threshold, then this finding in turn seemingly provides support for establishing a regulatory minimum ratio requirement. This conceptualization of appropriateness is what is expected from a regulatory agency; regulatory standards are typically *minimal* standards.

The “appropriateness” of minimum staffing ratios, however, could be defined as the staffing threshold required to attain *good* or optimal quality outcomes, as opposed to avoiding *bad* outcomes. Although the definition of appropriateness as minimal ratios, implicit in the analysis of Chapters 9 through 12, is consistent with normal regulatory standards, the alternative definition of appropriateness as optimal ratios would seem consistent - even required - by current

statutes and regulations. As discussed in greater detail in Chapter 4, OBRA '87 statutory language and implementing regulations and guidelines emphasize providing the scope of care and services (including sufficient qualified staff) for a long-term care facility resident to assure that he/she can attain and maintain his/her highest practicable physical, mental, and psychosocial well-being. Hence, it would appear that HCFA's *current* staffing regulations, particularly the general regulation requiring ". . . sufficient nursing staff to attain or maintain the highest practicable . . . well-being of each resident . . .," are intended to provide appropriate care conceptualized as an optimal standard, not a minimal standard.

Methods

Several very different analyses were conducted to address the study objectives. First, a number of policy issues were examined that would be relevant to considerations of appropriateness, particularly if a minimum ratio requirement appears warranted. Second, three different research strategies were employed to determine the relationship between staffing and quality: a review of research and consideration of expert recommendations; statistical analysis of the relationship between staffing and quality; and a time-motion analysis of how much time is required to implement "best practices" care processes.

Policy Issues

Four policy issues were examined. First, an analysis determined the impact of the recommended minimum standards as proposed by National Citizens' Coalition for Nursing Home Reform (NCCNHR) and a consensus panel of experts at the Hartford Conference (i.e., 4.55 minimum total nursing hours per resident day). In 1998, about 89% of facilities failed to meet this recommended minimum of 4.55 hours, and many facilities would have to increase staffing by 50% or more to meet this proposed requirement.

The second policy issue considered whether raising current minimum required levels could have the unintended consequence of lowering the staffing levels of other facilities that, in the absence of the new higher minimum, would staff at relatively higher levels. The analysis, conducted with an inherently limited study design, found that States with more demanding minimum standards had higher average staffing levels. However, the evidence was mixed and inconclusive as to whether higher-staffed facilities reduced their staffing in response to more demanding minimum standards.

The third policy issue considered whether nursing homes affiliated with chains experiencing financial difficulties have reduced their nurse staffing levels in an effort to control costs. For both 1998 and the first six months of 1999, the period prior to the filing of several large chains for protection of the bankruptcy court, total nursing hours for both "bankrupt" chains and other large chains decreased relative to other facilities. Relative to other facilities, total nursing hours for facilities associated with bankrupt chains decreased by a statistically significant 2% for 1998

and 3.5% for 1999.

The fourth policy issue examined whether State surveyors can accurately determine nursing home compliance with HCFA's *general* nursing home requirement that staffing must be sufficient to meet resident needs. If surveyors can accurately make this determination, there would be no need for a minimum ratio requirement even if low staffing is strongly associated with quality problems. One of the difficulties surveyors would have in determining compliance with a minimum ratio requirement is that no analysis conducted prior to this Report has been able to derive appropriate minimums that adjust for differences among facilities in the acuity and functional limitations in their resident populations. Despite the absence of a accepted minimum ratio requirement, surveyors must take residents' needs into consideration when determining whether staffing is sufficient. Hence, it is important to assess whether surveyors can in fact make this determination accurately considering the need for in-depth reviews, the cumbersome survey process, and limited survey time.

The analysis also examined the impact of a new mandatory investigatory protocol for surveyors to use in assessing the adequacy of staffing that was introduced in July 1999 through HCFA's State Operations Manual (SOM) interpretive guidelines. We found no evidence that surveyors typically meet the considerable burden of documentation currently required to determine compliance with the general staffing requirement; nor did the added guidance and training provided through the introduction of the mandatory investigatory protocol have any effect.

However, any conclusion that a particular staffing citation is or is not justified must be based on the documented evidence provided for that specific citation; and this study did find instances when surveyors provided the necessary documentation demonstrating facility noncompliance. Indeed, given the evidence presented throughout the Report that many quality of care problems may be due to low nurse staffing, it can be argued that the current staffing citation rate of around 7% may be far too low. That is, the problem may be not one of inappropriate staffing citations, but failure to cite when citation would be justified. Evidence did indicate that surveyors can easily and accurately determine compliance with HCFA's *specific* minimum requirements.

Findings

Relationship Between Staffing and Quality: Results of Three Basic Research Strategies

Although the link between low staffing levels and quality problems may seem intuitively obvious, there is no necessary connection. Of course, if all the nursing staff were removed, residents would not miraculously return to good health and functioning. Clearly, at *some* ratio of nurse staffing substantially increased levels of quality problems would occur. But there is no apriori reason, apart from empirical evidence, to assume that any or a substantial portion of nursing homes actually staff at these critically low levels.

We identified and used three basic research strategies for addressing the key study question of whether there are appropriate minimum nurse staffing ratios:

Review of Prior Research and Expert Consensus Evaluation of that Research

We found no way to conclude from the studies examined that there is a strong and consistently positive association between staffing and quality of care outcomes. Additionally, even if the evidence on the association between staffing and quality had been stronger and more consistent, none of the reviewed studies were designed to identify a critical ratio of nurses to residents below which nursing home residents are at substantially increased risk of quality problems. The same positive association is consistent with many very different critical ratio thresholds. Yet the existence and identification of thresholds is necessary in order to formulate recommendations for minimum staffing requirements.

Empirical Determination of the Relationship Between Staffing and Quality

This second research strategy empirically examined the relationship between staffing and quality for a large number of nursing homes largely in three states. The analysis was explicitly designed to identify potential critical ratio thresholds. The outcomes examined included avoidable hospitalizations, improvement in activities of daily living (ADLs) functioning, incidence of pressure sores, weight loss, and resident cleanliness and grooming. For all types of nursing staff, strong associations, adjusted for risk, were found between low staffing and the likelihood of quality problems across these measures. In addition, case mix indices were developed for grouping facilities based on staffing levels required to ensure adequate quality of care.

The analyses demonstrated that staffing thresholds exist below which quality of care is seriously impaired after controlling for case mix. These thresholds were at staffing levels that were above staffing ratios for a significant portion of facilities. The critical staffing ratio found in these analyses for nurse's aides was 2.0 hours per resident day in all facility case mix categories. Fifty-four percent of facilities fall below this threshold. For RN and LPN staff, the analyses suggested that certain minimum levels of staffing reduced the likelihood of quality problems in some areas, but higher "preferred minimum" levels existed above which quality was improved across the board. The analysis indicated a preferred minimum for RN and total licensed staff (RN and LPN) of 0.45 and 1.0 hours per resident day, respectively. Higher or lower thresholds were identified for different case mix categories. Currently, 67% and 56% of facilities fall below these preferred minimums for RN and total licensed staff, respectively. The minimum thresholds (0.2 and 0.75 hours per resident day) as opposed to the preferred minimum for RN and total licensed staff would still find 31% and 23% of facilities below these thresholds, respectively. Further analyses involving more states, facilities that were certified only for Medicare (which were excluded from this analysis), and refinement of methods for taking case mix into consideration will be required to establish national critical staffing levels. This

empirical analysis provides the core approach for developing minimum nurse staffing ratios. In addition, a simulation analysis was also conducted using a time-motion approach.

A Time-Motion Approach to Setting Nurse Staffing Standards

The third research strategy estimated the nurse aide time required to implement five specific daily care processes that have been linked to good resident outcomes: repositioning and changing wet clothes; repositioning and toileting; exercise encouragement/assistance; feeding assistance; and ADL independence enhancement (morning care). A simulation analysis estimated these times for six major categories of residents with different functional limitations and care needs that broadly define the nursing home population.

One key simulation estimated that the average number of *minimal* nurse aide staff necessary to provide all services (i.e., the equivalent of the stated OBRA '87 standard) that can benefit a hypothetical 40 resident unit of average acuity is 14.5 FTEs or 2.9 hours per resident day. This is an estimate of the *minimally necessary nurse aide staff to provide optimal care for a nursing home of average case-mix*. A nursing home with residents of higher or lower acuity would have a higher or lower threshold, respectively, if this optimal standard is to be met. Given that this is an optimal standard as opposed to the minimal nurse aide standard of 2.0 derived from the second research strategy, the order of magnitude of the two recommended standards are remarkably consistent. This time-motion derived standard should be viewed as a necessary condition for optimal care by nurse aides, not a sufficient condition. *Over 92% of the nursing homes in the United States fall below the 2.9 hours per resident day standard. Nearly half of facilities would need to increase nurses aide staffing by 50% or more to reach this threshold, including 16% that would be required to increase nurse aide staffing by at least 100%.* Although these estimates would change some if different thresholds were established for different levels of case-mix, the vast majority of nursing homes would still fall below the case-mix adjusted thresholds.

The high proportion of U.S. nursing homes identified in the above analyses that fail to meet critical minimum thresholds raises the question of whether the OBRA '87 standard to provide the care and services so that residents reach their highest practicable well-being is realistically attainable under current nursing home payment systems. The OBRA legislation and regulations are silent with respect to what exactly is required to meet the "highest practicable well-being".

Conclusion

The analyses conducted for this Report have firmly established that there are critical ratios of nurses to residents below which nursing home residents are at substantially increased risk of quality problems. These critical ratios (or thresholds) exist for certified nurse's aides, total licensed staff, and registered nurses. Furthermore, these thresholds are dependent on facility case mix; i.e., higher thresholds are warranted for facilities treating more complex residents.

Methods described in this report suggest that it is feasible to take case mix into consideration in defining staffing levels.

The analyses conducted for this Report indicate staffing levels will need to be increased in a substantial portion of facilities to improve quality. The analyses, based largely on three states, found that the strongest minimum thresholds were at 2.0, 0.75, and 0.2 hours per resident day for CNAs, licensed staff, and RNs respectively. Using a simulation method, the nurse's aide time necessary to provide optimal care was found to be 2.9 hours per resident day. However, further analysis in Phase 2 involving more states, facilities that are only Medicare-certified, and refinement of case mix classification methods are required before national optimal levels can be identified.

Not only would a considerable number of facilities be impacted if these staffing thresholds were to become minimum requirements, but there is some evidence that nursing home chains experiencing financial difficulties may have actually reduced their staffing from current levels. This study has also produced evidence raising doubts that surveyors typically can meet the considerable burden of documentation required to determine compliance with the general staffing requirement; however, they can easily and accurately determine compliance with HCFA's specific minimum requirements.

Given the strength of the research findings described above, it is unlikely that further research would alter the conclusion that minimum nurse staffing ratios should be established. However, a discussion of the appropriateness of establishing a new regulatory minimum would also have to include specification of the actual levels and an assessment of the costs, feasibility of implementation, and other considerations which are included in the ongoing Phase 2 study and Report to Congress.

Phase 2: Next Steps

As of July, 2000, the study design and time table for the Phase 2 Report has yet to be formulated. However, before any recommendations as to the appropriateness of minimum nurse ratio staffing ratios can be fully assessed, a number of analyses appear warranted. Specifically, the Phase 2 analyses will conduct the following five basic analyses/tasks:

- Identification of Specific National Optimal Staffing Ratios

Even if *some* minimum ratio is appropriate, the analysis completed for the Phase 1 report is unable to identify *specific optimal* ratios. Phase 2 will address the limitations of the Phase 1 analyses by testing ratios on more States, with more current data, with facilities that do not exclude Medicare-only facilities, and with more refined case mix classification methods than were tested in the Phase 1 report. Phase 2 will more fully examine empirically-derived minimum staffing levels and methods for case-mix adjustment as suggested by the analyses in Phase 1.

- Qualitative Case Studies

A number of important questions cannot be fully addressed with the largely quantitative analysis of secondary data found in the Phase 1 analysis. Needed case studies will consist of site visits to a sample of nursing homes in each of the targeted States to better understand the relationship between staffing and quality found in Phase 1 study. Although it is clear from the Phase 1 analyses that staffing numbers alone have an important impact on quality problems, there is research support that other staffing issues may also effect quality of care including: 1) turnover rates -- annual turnover rates in nursing homes are extremely high – in some cases exceeding 100 percent for aides and 60 percent for Directors of Nursing; 2) wages and benefits; 3) staff training; 4) career paths for nurse aides; and 5) management of staffing resources (e.g., allocation of staff across shifts and units). To the extent possible, these other aspects of staffing will be examined in the Phase 2 case studies.

- Cost Analyses

These analyses will detail the costs associated with various possible study recommendations for a regulatory requirement of minimum nurse staffing ratios. The cost analysis shall include an assessment of the impact of regulatory changes on providers and payers, including program costs to Medicare and Medicaid. It will also include offsetting cost savings that may result from reducing the rate of avoidable hospitalizations.

- Workforce Analysis

Even if the inherent cost increases in higher staffing levels could be absorbed by providers and other payers, it may not be possible to secure the necessary nursing staff at realistic wage levels. There is a widespread recognition of a nurse staffing shortage for both nursing homes and hospitals. The nature and extent of this nursing shortage will be integrated in some fashion with the cost analyses.

- Development of Accurate Staffing Data

As was shown in Chapter 3, the only ongoing source of uniform data on nursing home staffing throughout the U.S. is HCFA's On-Line Survey Certification and Reporting System (OSCAR) data. Unfortunately, the evidence presented in Chapter 7 indicates that these self-reported data are highly inaccurate. Yet, the accuracy of these data is important. First, HCFA is committed to provide this kind of information to consumers -staffing data should be placed on the Web. This reason alone warrants a new effort to report acceptably accurate nurse staffing data. Second, the results from one analysis in the Phase 1 Report indicates that relatively higher than average nurse aide staffing levels are a necessary condition for attaining good or optimal resident outcomes. Although it is unlikely that these higher levels would ever be established by HCFA as a minimum requirement, consumers arguably have the right to select homes with this standard in mind. Third, and most important, the preliminary results of the Phase 1 analysis indicate that a new minimum ratio requirement may be necessary for avoiding poor quality outcomes. Although costs would have to be considered (see above), the current inaccuracy of the OSCAR data precludes implementing a minimum nurse staffing requirement even if HCFA were to decide that it was appropriate. Under these circumstances, accurate staffing data will be necessary in order to monitor compliance with this new standard.

CHAPTER 1.0 APPROPRIATENESS OF MINIMUM NURSE STAFFING RATIOS IN NURSING HOMES: BACKGROUND, STUDY APPROACH, AND REPORT OVERVIEW²

1.1 Background

1.1.1 Congressional Requirement

² Author: Marvin Feuerberg, Health Care Financing Administration (HCFA). Editorial assistance provided by Jeane Nitsch, HCFA.

The primary purpose of this study and Report to Congress is to meet the requirements of Section 4801(b)(7)(e)(17)(B) of Public Law 101-508:

"Study on Staffing Requirements in Nursing Facilities.--The Secretary shall conduct a study and report to Congress no later than January 1, 1992, on the appropriateness of establishing minimum caregiver to resident ratios and minimum supervisor to caregiver ratios for skilled nursing facilities serving as providers of services under title XVIII [Medicare] of the Social Security Act and nursing facilities receiving payments under a State plan under title XIX [Medicaid] of the Social Security Act, and shall include in such study recommendations regarding appropriate minimum ratios."³

³ Unfortunately, there does not appear to be any clarity to the Congressional intent of this one sentence requirement other than the plain language of the law itself. In the breakdown of what appears in the bill, the conference report doesn't mention that the Secretary has to prepare the staffing study. Instead it talks about (17)(A), which has to do with "standards for certain professional services." The review of the House Bill, however, doesn't mention (17)(A) ("standards for certain professional services"). The Senate amendment contained a provision called, "Standards for Certain Professional Services.--Requires the Secretary to conduct a study on the hiring and dismissal practices of nursing facilities with respect to social workers, dietitians, activities professionals, and medical records practitioners, and report to Congress by January 1, 1993, on whether facilities have on their staffs persons with significantly different credentials as a result of the new regulations that became effective October 1, 1990, and the impact of staff composition on quality of care." The conference agreement included, "the Senate amendment, with an amendment to require that any regulations promulgated by the Secretary on medically-related social services, dietary services, and an on-going program of activities include requirements that are at least as strict as those applicable to providers of these services prior to the enactment of OBRA '87. The agreement also deletes

The Federal Reports Elimination Act of 1998 extended the due date of this Report to January 1,

the requirement for the Secretary to conduct a study on the hiring and dismissal practices of nursing facilities with respect to social workers, dieticians, activities professionals, and medical records practitioners." And, that's all it says. The conference agreement does not indicate what happened to the portion of the Senate amendment that required the study to focus on the impact of staff composition on quality of care; either that was abandoned, or it became the seed from which grew the current requirement for the staffing study. Whatever the case, it seems that there is no additional information about Congressional intent to be had from perusing the conference report. Indeed, there is nothing in the requirement for the study and the conference report that explicitly would limit the study to *nurse* staffing ratio(s), although that is the assumption of our effort.

1999. Unfortunately, a number of factors have contributed to the continued delay in completing this study and report. First, a sufficiently large and reliably accurate sample of Minimum Data Set (MDS) data to construct outcome measures only became available during the past five years. In addition, constructing the outcome measures file with these early and not fully standardized data has proved more difficult than anyone anticipated. Second, an internal interim report that was completed intramurally in October, 1996 indicated that this was an extremely complex study.⁴ A very comprehensive study would be required and the assistance of an external evaluation contractor would be needed. Consequently, more delays were incurred in the procurement process of securing funding, appropriate review, and selecting an evaluation contractor.

1.1.2 Public Concern With Nursing Home Staffing

A number of recent reports by the U.S. General Accounting Office, the U.S. Office of the Inspector General, and HCFA's massive July 1998 nursing home Report to Congress have identified a range of serious problems including malnutrition, dehydration, pressure sores, abuse and neglect.⁵ Recent hearings before the U.S. Senate Special Committee on Aging, including a November 3, 1999, forum, have pointed to nurse staffing as a potential root cause of many of the problems observed. Along with concerns with enforcement, staffing has emerged as the largest single concern of many consumer advocacy and labor groups including the National Citizens' Coalition for Nursing Home Reform; the National Senior Citizens Law Center; American Association of Retired Persons; the National Committee to Preserve Social Security and Medicare; American Federation of State, County and Municipal Employees; and the Service

⁴ Feuerberg, M., Mortimore, E., Kramer, A., "HCFA Study on Appropriateness of Minimum Nurse Staffing Ratios - Interim Report," Health Care Financing Administration, October, 1996, Baltimore, Maryland.

⁵ Nursing Homes: Additional Steps Needed to Strengthen Enforcement of Federal Quality Standards: Report to the Special Committee on Aging, U.S. Senate, U.S. General Accounting Office, (HEHS-99-46), March 1999; "Nursing Home Survey and Certification: Deficiency Trends," U.S. Office of the Inspector General, Department of Health and Human Services, (OEI-02-98-00331), March 1999; See Report to Congress: "Study of Private Accreditation (Deeming) of Nursing Homes, Regulatory Incentives and Non-Regulatory Initiatives, and Effectiveness of the Survey and Certification System," Health Care Financing Administration, July 1998.

Employees International Union. In addition, there has been a heightened public concern with this issue due to the continuous flow of newspaper articles and television news reports highlighting inadequate care and abuse in nursing homes.

For the advocates, the link between staffing and quality problems is manifest: “Advocates have long known that poor care -- both neglect and out-right abuse -- are directly tied to poor staffing. When one CNA (Certified Nursing Assistant) is responsible for 25 residents during a shift, it stands to reason that many people may not be given fluids, toileted, or turned during those eight hours. Even the most well-meaning and caring CNA cannot attend to the needs of residents when taking care of too many people. As the needs of nursing home residents have become more and more complex, nursing homes have continued to be staffed at low levels.”⁶

For the provider associations, in contrast, the link between staffing, particularly mandatory staffing ratios, and quality is far more complex. They point to underlying problems of a chronic short supply of potential nursing home workers, the difficulty of establishing universal mandatory ratios for different types of staff, and facilities with residents of differing acuity and functional limitations. Most importantly, the providers point to the contradiction of legislators demanding higher staffing and quality standards while providing low, inadequate reimbursement levels. The American Association of Homes and Services for the Aging (AAHSA) argues that increased staffing is not an effective strategy for the attainment of positive outcomes: “The measure of a nursing facility’s ability to successfully meet its residents’ needs must be based on actual performance rather than on the potential capacity of the facility to provide appropriate services. AAHSA believes that the impetus provided by OBRA ‘87 to shift the focus from paper compliance to resident outcomes has gone a long way toward ensuring the provision of optimal quality care to all residents of skilled nursing facilities and nursing facilities.”⁷

In a more recent statement, AAHSA’s Board of Directors, while still emphasizing outcome measurement, also appear to accept minimum staffing requirements provided reimbursement is adequate: “. . . the (AAHSA) Board agreed that . . . the field of outcomes measurement in health care, including long term care, is in its infancy and it will take time to reach . . . a gold standard. In the meantime, *we need good proxies to ensure that the elements of quality are in place. Staffing is perhaps the most important of these elements.* We believe there should be levels at which facilities are required to staff; that those levels should be based on sound methodological

⁶ National Citizens’ Coalition for Nursing Home Reform. News Release. October 29, 1999.

⁷ American Association of Homes and Services for the Aging. Statement before United States Senate Special Committee on Aging, A Forum on Nursing Home Residents: Short-Changed by Staff Shortages? November 2, 1999. See also the Written (forum) Statement of Judith A. Ryan, President and Chief Executive Officer, The Evangelical Lutheran Good Samaritan Society, on behalf of the American Health Care Association which emphasized that reimbursement must support adequate staffing.

research and, further, provided that reimbursement rates are based upon those levels. We do not believe such a methodology exists and we would support an effort to create one that considers factors such as case mix, physical layout, and other factors.”⁸

⁸ “Nursing Homes: Additional Steps Needed to Strengthen Enforcement of Federal Quality Standards: Report to Special,” Report to the Special Committee on Aging, U.S. Senate, U.S. General Accounting Office, (HEHS-99-46) March 1999; “Nursing Home Survey and Certification: Deficiency Trends,” U.S. Office of the Inspector General, Department of Health and Human Services, (OEI-02-98-00331), March 1999; See Report to Congress: “Study of Private Accreditation (Deeming) of Nursing Homes, Regulatory Incentives and Non-Regulatory Initiatives, and Effectiveness of the Survey and Certification System,” Health Care Financing Administration, July 1998.

In response to this public concern, particularly from consumer advocates and their families, at least 37 States have imposed new, more stringent staffing requirements under their State licensure authority, and 19 States have introduced State legislation in this area. Further, at least 10 States now explicitly tie some portion of their Medicaid payment rate to staffing levels or wages.⁹

1.1.3 HCFA’S Authority/Role in Nurse Staffing Study

1.1.3.1 Nursing Home Conditions of Participation

Over 95% of U.S. nursing homes participate in the Medicare and/or Medicaid program. For all residents in these program certified homes, it is HCFA’s responsibility to ensure that the health and safety of one of the nations’ most vulnerable populations is protected. To this end and under the statutory authority of OBRA ‘87, HCFA has issued many regulations and guidelines. Although some of these regulations refer to nurse staffing requirements, there is some concern that HCFA’s current requirements in this area may be inadequate; hence, the need for this study.

1.1.3.1.1 HCFA’s Nurse Staffing Requirement

Currently, the Social Security Act (The Act) mandates certain nurse staffing requirements in long term care (LTC) facilities. The *general* requirement is that nursing homes must provide “. . . sufficient nursing staff to attain or maintain the highest practicable . . . well-being of each resident . . .” Many professionals view this general requirement, when implemented in practice, as too vague to serve as an adequate Federal standard. There are also *specific minimum* requirements of 8-hours registered nurse and 24-hours licensed nurse coverage per day. However, since this minimum is the same for all facilities (e.g., the same for a 60 bed facility or a 600 bed facility) many professionals also view this requirement as inadequate; they argue for a required minimum nurse staffing to resident *ratio*. In addition, many professionals recommend minimum nurse staffing ratios that would be adjusted upward for nursing homes with residents who have greater care needs, such as patients who suffer from Alzheimer’s Disease and others with fragile medical conditions. The Congressional requirement for this study, described above, essentially asks the Secretary to determine in there is some appropriate ratio of nurses to residents.

⁹ See Chapter 2 for a more detailed discussion.

1.1.3.2 Evaluation Contractors

In September 1998 we had an opportunity to modify with end-of-the-year funds an existing contract with Abt Associates to assist us with the staffing study. We did just that in order to move this project forward. One consequence of this process was that the study design and a more detailed set of tasks and cost estimates had to be generated after the contract modification was awarded. This, and the difficulty of securing the necessary data, has caused some delays, as noted above. Important subcontractors and/or consultants to Abt on this project include: University of Colorado Health Sciences Center, Andrew Kramer, MD, Principal Investigator; University of California, Los Angeles, Anna & Harry Borun Center for Gerontological Research, John F. Schnelle, Ph.D., Director and the UCLA Principal Investigator; Survey Solutions, Inc., Beth A. Klitch, President; Rosalie A. Kane, Ph.D., Division of Health Services, Research, Policy and Administration at the University of Minnesota School of Public Health; Barbara B. Manard, Ph.D., Principal, the Manard Company, Chevy Chase, Maryland.

In addition, Mick Cowles, President, Cowles Research Group provided Online Survey and Certification Reporting (OSCAR) system data files, and Fu Associates has assisted with the development of analytic working files utilizing MDS and claims data for the outcome measures. Finally, HCFA staff have been responsible for much of the study design, implementation, and analyses employed throughout the project. In addition, HCFA staff have integrated all the various analyses into this Phase 1 final report.

1.1.4 Institute of Medicine (IOM) Report

A 1996 report on nurse staffing by the IOM recommended a higher nursing home minimum (not a minimum ratio) of 24-hour registered nursing care.¹⁰ It was not prepared, however, to recommend a minimum ratio, in part because there was not sufficient knowledge to appropriately adjust any recommended ratio by the case-mix of the patient population. Although the need for increased staff may seem intuitively obvious, the empirical evidence in support of this general position and *support of specific ratios* is fragmentary. Although the IOM report provided some additional information, the essential question raised by the OBRA '90, whether there exists an appropriate minimum ratio, remains unknown; hence, the need for this study.

1.1.5 Technical Expert Panel (TEP)

Abt Associates convened a Technical Expert Panel (TEP) to function as a sounding board for study plans and results by reviewing and commenting on key project deliverables, such as design plans for and results of technical analyses. The TEP was comprised of nationally recognized

¹⁰ Institute of Medicine, 1996. *Nursing Staff in Hospitals and Nursing Homes: Is it Adequate?* National Academy Press, Washington, DC.

experts in LTC, nursing, economics, and research and analysis. Individual members were nominated to the TEP because of their expertise in staffing related issues, and because they had not demonstrated a commitment for or against minimum staffing standards, as it was imperative that the TEP not be biased in their review of study plans or results.

While the reviewers are all experts in long term care, they represent very different disciplines and areas of expertise we view as critical to this study. These areas are nursing and qualitative research, quality indicators, clinical expertise, and cost analyses. Nursing knowledge and experience are also well represented among HCFA and our contractors' staff. There are seven individuals working on some aspect of this study who are a RN or hold a Master's-level nursing degree, several of which have worked in nursing homes as a Director of Nursing, charge nurse, or staff nurse.

The TEP members for the staffing study include:

Barbara Bowers, Ph.D., RN
School of Nursing
University of Wisconsin-Madison

John Nyman, Ph.D.
Professor, Division of Health Services Research and Policy
University of Minnesota

Charles Phillips, Ph.D.
Director and Senior Research Scientist
Myers Research Institute
Menorah Park Center for the Aging

Eric Tangalos, MD
Chair, Division of CIM & Professor of Medicine
The Mayo Clinic

The scope of work for the TEP included formal review and written comments on the design plans and outcomes for three of the major study analyses including: 1) the reliability and validity analysis of OSCAR and Medicaid Cost Report Data conducted by Abt Associates; 2) the staffing and outcomes analyses conducted by Andrew Kramer, M.D. and staff at the University of Colorado; and 3) the "time/motion" analysis for best care practices conducted by Jack Schnelle, Ph.D. at the University of California, Los Angeles.

The initial intent of the TEP was to minimize in-person meetings and rely instead on written comments and conference calls to conduct the work of the TEP. As such, after written

comments on all draft documents were submitted to Abt Associates by the TEP (and are, therefore, maintained as part of the formal study record), conference calls were conducted among the TEP, and staffs at HCFA, Abt Associates, and the University of Colorado to review and respond to TEP comments. Ultimately, in-person TEP meetings were not required as the written comments/conference call method of conducting the TEP business was very successful in obtaining thorough, thoughtful, and timely review of key study deliverables. As a final requirement for participation on the Panel, TEP members were required to keep confidential all study plans and results and were not allowed to disseminate study documents outside of the TEP. As noted above, the formal TEP was required to review and provide input into study plans and results of the study analyses. As such, written TEP comments served as the basis for conference call discussions between the TEP, and staff from Abt Associates, the University of Colorado, and HCFA. To the extent possible, TEP comments on design plans and draft reports were incorporated into the final reports submitted to HCFA. Where TEP comments or suggestions for revisions to the analyses could not be incorporated, a justification was provided for why the suggested change could not be made.

The TEP provided a thorough review of the design plan for development of the staffing measure that would ultimately be used as the basis for the staffing and outcomes analyses. The development of the staffing measure was based on a reliability and validity analysis of OSCAR and Medicaid Cost Report data to determine which source of staffing data was the most accurate. At the time of the TEP review, the analysis plan for development of the staffing measure centered mainly on tests of concurrent validity of OSCAR and Medicaid Cost Report data. However, shortly after the TEP review of this design plan, an opportunity to collect payroll data from a sample of nursing homes was operationalized, and the resulting data became the “gold standard” measure against which the reliability and validity of the OSCAR and Medicaid Cost Report data could be assessed. Therefore, TEP comments on the original design plan were immaterial. However, TEP members did agree with the purpose for utilizing payroll data and the methods for obtaining the data to assess the validity of the OSCAR and Medicaid staffing data.

The TEP commented on both the design report and the draft chapters of results from the analysis of outcomes and staffing (Chapters 9, 10, and 11). The design report contained discussion of the specific quality measures to be used, data sources, and analytic methods. The TEP supported the overall design, including conducting the analyses with the facility as the unit of analysis rather than an individual resident, and the proposed methods for determining associations between staffing and quality. The TEP suggested that certain potential quality measures that were included in the report were likely to be susceptible to coding inaccuracies (e.g., hospitalizations for drug reactions, which would be coded as poisoning), and were subsequently dropped from the analyses. The TEP supported the strategy of not controlling for facility characteristics that were strongly associated with staffing because these would diminish the relationships between staffing and quality. However, the TEP suggested another market-area covariate that should be included in the analysis -- health service area occupancy rates -- which was subsequently used in

the analysis. Finally, the TEP suggested that the analyses focus only on the best source of staffing data, Medicaid Cost Reports, rather than both sources, and by emphasizing the analyses for particular years and quality measures.

With respect to the results, the consensus among TEP members was that the study identified significant relationships between staffing levels and important markers of quality. For several quality measures, some of the TEP members argued that the final draft should more clearly show how quality might be attributable to these staffing levels. Other issues that could affect quality were raised by TEP members, including: facility staffing budgets/costs, amount of physician care, and the extent of competition among facilities due to market-area occupancy rates. When possible, these suggestions were addressed, however, in the analysis complete data on physician care and staffing costs which are likely to reflect nurse staffing levels were not available. TEP members also noted not all domains of quality were covered by the analyses and that the study was limited to three States, and therefore the results may not be fully generalizable. These issues were addressed in the final report chapters.

1.1.5.1 Stakeholders Input

In addition to the formal, organized TEP, Abt Associates utilized other methods for seeking and obtaining input from different stakeholders in the LTC staffing debate. These included official meetings with stakeholders and informal conversations with policy experts not formally included on the Abt TEP. Stakeholder meetings were conducted with representatives of: the American Health Care Association; the American Association of Homes and Services for the Aging; the National Citizens Coalition for Nursing Home Reform; the National Committee to Preserve Social Security and Medicare; the National Senior Citizens Law Center; the Direct Care Alliance/Paraprofessional Healthcare Institute; the Services Employees International Union; the American Federation of State, County, and Municipal Employees; and the Food and Allied Services Trade of the AFL-CIO. Informal conversations were periodically conducted with Charlene Harrington, Ph.D., University of California at San Francisco; David Zimmerman, Ph.D., University of Wisconsin at Madison; William Painter, then with the Alzheimer's Association of South Carolina; Genevieve Gipson, RN, MEd, Director of the Career Nurse Assistants' Program; and others.

1.2 Study Approach

1.2.1 Study Objectives

The study will determine: 1) if minimum nurse staffing ratios are appropriate; and, if appropriate; 2) the potential cost and budgetary implications of minimum ratio requirements; and 3) if there are nurse staffing ratios that strongly determine good or *optimal* resident outcomes. In this report, the phrase “nurse staffing” refers to all three categories of nurses:

Registered Nurses (RNs), Licensed Practical Nurses (LPNs), and Nurse Aides/Nursing Assistants.

These objectives are formulated to be responsive to the Congressional language requiring the study. As such, they appear reasonable and straight-forward. There are, however, some potential policy issues embedded in the objective of determining if there are *appropriate* minimum nurse staffing ratios. The policy perspectives defining “appropriate” has important implications for how the study questions are formulated and empirical analyses conducted.

1.2.2 Study Question: How Should Appropriateness be Defined?

Although the Congressional language requiring the study is clear, it is sparse and necessitates that we operationalize “appropriateness” so that we can formulate a study question open to empirical investigation. Consistent with this objective, the core analysis of this study presented in Chapters 9 through 12 have defined the key study question: *Is there some ratio of nurses to residents below which nursing home residents are at substantially increased risk of quality problems?* This key study question does not simply seek to determine if there is a generally positive relationship between staffing and quality outcomes. The questions ask if there is some critical nurse to resident staffing ratio, a *threshold*, below which residents are at substantially increased risk of quality problems. If strong evidence is found supporting the existing of these nurse staffing ratio thresholds, then this finding in turn seemingly provides support for a regulatory minimum ratio requirement. Of course, the appropriateness of establishing a new regulatory minimum would also have to assess the costs, feasibility of implementation, and other considerations which are the subject of a Phase 2 study and report to Congress (see discussion below). What is important to note here is that this conceptualization of appropriateness is what is expected from a regulatory agency; regulatory standards are typically *minimal* standards.

The “appropriateness” of minimum staffing ratios, however, could be defined as the staffing threshold required to attain good or optimal quality outcomes, as opposed to avoiding bad outcomes. This focus on optimal outcomes is analogous to how this question of appropriate ratios has emerged in education with respect to assessing the effect of classroom size reductions. Here the emphasis has been on determining the *optimal (not a minimum)* ratio of students to teachers which has been found to be somewhere around 15 students per teacher, at least for the lower grade levels.¹¹

Although the definition of appropriateness as minimal ratios, implicit in the analysis of Chapters 9 through 12, is consistent with normal regulatory standards, the alternative definition of

¹¹ See Eric A. Hanushek (1999). Some Findings From an Independent Investigation of the Tennessee STAR Experiment and From Other Investigations of Class Size Effects. *Educational Evaluation and Policy Analysis, Summer 1999, Vol. 21, No. 2, pp. 143-163.*

appropriateness as optimal ratios would seem consistent - even required - by current statutes and regulations. As discussed in greater detail in Chapter 4, The Omnibus Budget Reconciliation Act of 1987 (OBRA '87) provided amendments to the Social Security Act (SSA) for Skilled Nursing Facilities (SNF) and Nursing Facilities (NF). The statutory language throughout these amendments and regulations and guidelines promulgated under OBRA '87 placed emphasis upon providing the scope of care and services (including sufficient qualified staff) for a resident residing in a LTC facility to assure that each resident could attain and maintain his/her highest practicable physical, mental, and psychosocial well-being. Hence, it would appear that HCFA's *current* staffing regulations, particularly the general regulation requiring "... sufficient nursing staff to attain or maintain the highest practicable . . . well-being of each resident . . .," are intended to provide appropriate care conceptualized as an optimal standard, not a minimal standard. With respect to this conceptualization of appropriate as applied to nurse aide staffing, the analysis presented in Chapter 14 is consistent with identifying a minimum ratio for attaining optimal quality outcomes.

1.2.3 Staffing Question Not Addressed

It can be argued that the study question of appropriate nurse staffing ratios is not the right question for developing a more effective policy in this area. One of our TEP members, John Nyman, an economist, noted several analytic problems in this study with its focus on staffing ratios:

. . . An alternative approach that may be cheaper and better withstand scrutiny of opponents is to use the cost reports (or similar data) to determine the nursing costs associated with a certain minimal outcome/quality level. That is, the total nursing or nursing-like personnel costs could be obtained for a firm at an aggregated level. A number of sources could provide these data. Once these costs are determined, they could be used in a regression analysis to determine the marginal nursing cost of treating a patient (case-mix adjusted) in a nursing home that has achieved a certain minimum quality level as determined by the firm's history. Once this nursing cost is established, HCFA could require that nursing homes spend that much on nursing inputs.

Certain existing requirements for RN hours may be retained, and there may be an adjustment for the general level of nursing wages in the market in which the nursing home is located. Still, this approach is more doable than the former and allows the nursing home to respond to relative wage differences/changes in the market, whereas minimum staffing ratios would not. Moreover, it does not require that the analyst focus on those nursing homes at the tail of the staffing distribution, where outlier status, bad management, and data errors are virtually indistinguishable. Furthermore, by using the more aggregated cost figure, some of the differences in staffing due to variation in accounting conventions across firms, or due simply to errors in categorizing costs, would

be avoided.¹²

Apart from a number of analysis problems with identifying minimum nurse staffing thresholds, Nyman appears to maintain that a regulatory policy based on this analysis isn't economically efficient, even if staffing thresholds are identified. An analysis seeking to identify minimum costs/expenditures necessary for achieving a minimum level of quality would permit firms to respond to relative wage differences in the market and facilitate the most efficient allocation of inputs. Efficient allocation may include not only substitution between nursing categories (e.g., RN and LPN), but also between nursing and non-nursing staff. As discussed in Chapter 6, these other relevant non-nursing staff include dietary staff, housekeeping staff, social service staff, activities staff, and therapy staff. Although this alternative approach may have some advantages, it is not the question Congress asked us to address.

1.2.4 Isn't it Obvious that Low Staffing is Related to Quality Problems?

Although the link between low staffing levels and quality problems may seem intuitively obvious, there is no necessary connection. Of course, we know that if all the nursing staff were removed, residents would not miraculously return to good health and functioning. Clearly, at *some* ratio of nurse staffing substantially increased levels of quality problems would occur. But there is no apriori reason, apart from empirical evidence, to assume that any or a substantial portion of nursing homes actually staff at these critically low levels.

It should also be noted that nurse to resident staffing ratios are only one aspect of staffing. In addition to numbers of staff, there are other dimensions of staffing that may impact quality outcomes. These other factors, while outside the scope of this study, include wages/benefits, training, supervision (and respect), career ladders, allocation of staff, scheduling, and a host of staff organizational factors which are discussed in Chapter 6.

Finally, as noted above, the evidence from currently published research on the link between staffing and outcomes and *supportive of specific ratios* is fragmentary (see Chapter 6). Even the

¹² John A. Nyman, University of Minnesota. Comments on "Skilled Nursing Facility Staffing Study Design Plan for Development of the Staffing Measure," May 12, 1999.

Institute of Medicine's latest report was not prepared to recommend minimum ratios; hence, the need for this study.

1.2.5 Three Basic Research Strategies

1.2.5.1 Review of Research and Expert Consensus

We have identified three basic research strategies for addressing the key study question of appropriate minimum nurse staffing ratios. The first strategy critically reviewed selected research on the relationship between staffing and resident outcomes. This first strategy also considered the findings and recommendations of an expert panel. This panel, consisting of leading nurse researchers, educators and administrators in long-term care, consumer advocates, health economists, and health services researcher knowledgeable about nursing homes, were convened for a 1-day conference at the John A. Hartford Institute for Geriatric Nursing, Division of Nursing, at New York University in April 1998. A review of the conference and their recommendations are discussed in Chapter 6. Although we think this approach has merit, it also has some serious limitations, particularly given that the research upon which they based their recommendations is itself seriously limited.

1.2.5.2 Empirically Determining the Relationship Between Staffing and Quality Problems

This strategy consists of selecting a representative sample of nursing homes, generating measures of nurse staffing and quality outcome measures that are hypothesized to be linked to nursing inputs, and statistically determining the relationship between the two sets of measures while controlling for extraneous factors that could lead to spurious findings. Essentially this is a straight-forward multivariate statistical analysis. There are, however, some very difficult problems that must be addressed with this kind of analysis. Obtaining reasonably accurate measures of nurse staffing has proven a more difficult task than suggested by the simple counting of staff. A broad range of outcome measures that might reflect the impact of different kinds of nursing staff (e.g., Registered Nurses, Licensed Practical Nurses, and Nursing Assistants or Aides) is needed for this analysis. In addition, as a practical matter, it must be possible to generate reasonably accurate outcome measures from all ready existing (secondary) data.

The most difficult problem with this approach is the statistical modeling of the relationship between staffing and outcomes. A negative outcome alone is not an adequate measure; it is important to risk adjust so that there is confidence that a negative outcome can be attributed to care processes received in the nursing home, not a condition present upon admission or due to an unavoidable disease process. Adequate risk adjustment must also be accomplished within the limitations of the available data from claims and the Minimum Data Set (MDS). In addition, it is

important to control for the possibility that the most fragile and medically needy residents may be deliberately sent from the hospital to higher staffed nursing homes which have the ability to provide special services, such as intravenous care. These residents, however, because they are more vulnerable, are more likely to have an adverse outcome, independent of the care they receive in the nursing home. Hence, these circumstances could lead to the conclusion that the highest staffed facilities have the worse outcomes. It is important that the statistical analyses control for this possibility and avoid an erroneous conclusion.

1.2.5.3 Time-Motion Approach to Setting Nurse Staffing Standards

The approach, what we broadly characterize as a “time-motion” method, attempts to identify the time it takes to complete nursing tasks for nursing home residents. These times are (somehow) aggregated to the level of the facility and the nurse staffing required to provide this level of care is determined. The staffing algorithms derived from this method are adjusted for differences in the kind and intensity of care needed by residents with differing levels of acuity and functional limitations.

As a method of deriving appropriate nursing staffing standards, it is intuitively understandable, particularly to those who find the statistical modeling of the empirical approach to be too complex, or suspect. If what nursing staff actually do impacts on some important resident outcomes, an assumption that would be hard to reject, then it would seem reasonable to determine how much time it takes to perform these necessary nursing tasks and the consequent staffing implied by this allocation of time.

Determining the time required to perform nursing tasks is more difficult than it might seem at first glance. Residents with different medical conditions and functional limitations have different nursing needs. These needs can also change over time, as a resident enters the nursing home, very often from the hospital, and their stay can continue for several years.

1.3 Report to Congress Overview

1.3.1 Phase 1 and Phase 2 Report

It was recognized from the beginning of this study that not all the necessary analyses to provide a definitive answer to the three basic study objectives noted above could be addressed within the funding constraints of the current contract modification with Abt Associates. In particular, it has been recognized that a cost analysis could be required, and this possibility could not be assessed until we had some preliminary results indicating that low staffing ratios have a strong and consistent impact on resident quality outcomes. It also became clear that it was important to provide to Congress some response to this long-standing Congressional concerns with nursing home staffing. Accordingly, a decision has been made to divide the study and Report to

Congress into a Phase 1 and Phase 2 report. The Phase 1 analyses are reported here.

1.3.2 Phase 2 Analyses

As will be demonstrated in subsequent Chapters, the Phase 1 results indicate that there are (low) nurse to resident ratios strongly related to quality problems. These results would seem to support the “appropriateness” of a minimum ratio requirement. However, these results are tentative. Additional analyses need to be conducted before we can fully assess the appropriateness of specific minimum ratio requirements that adjust for the case mix of residents. Specifically, the Phase 2 analyses will conduct the following five basic analyses/tasks:

- Identification of Specific National Optimal Staffing Ratios

Even if *some* minimum ratio is appropriate, the analysis completed for the Phase 1 report is unable to identify *specific optimal* ratios. These ratios would have to be fully tested on more States, with more current data, with a sample that does not exclude Medicare-only facilities, and with more refined case mix classification methods than were tested in the Phase 1 report.

- Qualitative Case Studies

A number of important questions cannot be fully address with the largely quantitative analysis of secondary data found in the Phase 1 analysis. Needed case studies will consist of site visits to a sample of nursing homes in each of the targeted States to better understand the relationship between staffing and quality found in Phase 1 study. Although it is clear from the Phase 1 analyses that staffing numbers alone have an important impact on quality problems, there is research support that other staffing issues may also effect quality of care including: 1) turnover rates -- annual turnover rates in nursing homes are extremely high – in some cases exceeding 100 percent for aides and 60 percent for Directors of Nursing; 2) wages and benefits; 3) staff training; 3) career paths for nurse aides; and 4) management of staffing resources (e.g., allocation of staff across shifts and units). To the extent possible, these other aspects of staffing will be examined in the Phase 2 case studies.

- Cost Analyses

These analyses will detail the costs associated with various possible study recommendations for a regulatory requirement of minimum nurse staffing ratios. The cost analysis shall include an assessment of the impact of regulatory changes on providers and payers, including program costs to Medicare and Medicaid. It will also include offsetting cost savings that may result from reducing the rate of avoidable

hospitalizations.

- **Workforce Analysis**

Even if the inherent cost increases in higher staffing levels could be absorbed by providers and other payers, it may not be possible to secure the necessary nursing staff at realistic wage levels. There is a widespread recognition of a nurse staffing shortage for both nursing homes and hospitals. The nature and extent of this nursing shortage will be integrated in some fashion with the cost analyses.

- **Development of Accurate Staffing Data**

As will be shown in Chapter 3, the only ongoing source of uniform data on nursing home staffing throughout the U.S. is HCFA's On-Line Survey Certification and Reporting System (OSCAR) data. Unfortunately, the evidence presented in Chapter 7 indicates that these self-reported data are highly inaccurate. Yet, the accuracy of these data is important. First, HCFA is committed to provide this kind of information to consumers - staffing data should be placed on the Web. This reason alone warrants a new effort to report acceptably accurate nurse staffing data. Second, the results from one analysis in the Phase 1 Report indicates that relatively higher than average nurse aide staffing levels are a necessary condition for attaining good or optimal resident outcomes. Although it is unlikely that these higher levels would ever be established by HCFA as a minimum requirement, consumers arguably have the right to select homes with this standard in mind. Third, and most important, the preliminary results of the Phase 1 analysis indicate that a new minimum ratio requirement may be necessary for avoiding poor quality outcomes. Although costs would have to be considered (see above), the current inaccuracy of the OSCAR data precludes implementing a minimum nurse staffing requirement even if HCFA were to decide that it was appropriate. Under these circumstances, accurate staffing data will be necessary in order to monitor compliance with this new standard.

1.3.3 Phase 1 Chapters Overview

The 14 chapters to this Phase 1 report can be viewed as linked by three organizing principles: background, core outcomes analyses, and time-motion analyses. Although for any given chapter there are topics discussed in more detail, each chapter can be read as a stand-alone statement.

1.3.3.1 Background and Policy Context.

This first chapter and Chapters 2 through 6 provide a background and policy context for the study. Chapter 2 examines public policy and how it currently effects nurse staffing directly through quality regulations, including explicit nurse staffing standards, and indirectly through Medicare and Medicaid payment rates. Chapter 3 presents a detailed analysis of current levels and trends of nursing home staffing in the U.S. and examines three policy related issues in light of these staffing levels: the number of facilities that would be impacted if the Hartford recommended standards were imposed; a test of whether minimum staffing requirements have the unintended consequence of reducing the staffing levels in otherwise better staffed nursing homes; and, an examination of whether the nursing homes under chain ownership, particularly bankrupt chains which have filed to reorganize under the protection of the bankruptcy court, may have reduced their staffing levels in response to their financial vulnerability.

Chapter 4 and Chapter 5 provide additional background and policy relevant analyses. Any recommendation for or against a minimum nurse ratio requirement will make explicit or implicit assumptions about how HCFA's current non-ratio requirements are working in practice. One of the difficulties in setting a minimum ratio requirement is that no analysis conducted to date has been able to derive appropriate minimums that adjust for differences among facilities in the acuity and functional limitations in their resident populations. Given these circumstances, surveyors have difficulty in applying the current regulation for sufficient staff in which they must identify a failure to meet resident needs and determine if there is sufficient staff to meet those needs. Hence, it is important to assess whether surveyors can in fact make this difficult determination based on the application of the regulation as written. The purpose of the analysis in Chapter 4 is to determine through an examination of staffing citations how HCFA's current non-ratio nursing home nurse staffing requirements are being implemented and assessed. In addition, there is an assessment of how the implementation of these requirements may have been altered by recent State Operations Manual (SOM) revisions which incorporated an investigatory protocol related to nurse staffing.

Chapter 5 presents the results of focus groups discussions with direct care workers, Nurse Aides (NAs), and interviews with nursing facility management. Topics discussed include: staffing issues, including how staffing schedules are determined and the extent to which NAs have input into those schedules; their facility's processes for handling vacancies left when staff call out sick and dealing with absenteeism; the effects of short staffing on residents and on direct care workers; and ways in which facility management might be able to reduce absenteeism.

Chapter 6, the last "background" chapter, provides a transition to the outcome analyses. We critically reviewed selected research on the relationship between staffing and resident outcomes as well as the Hartford recommendations and other research on the impact of other non-ratio workforce factors on quality of care outcomes. There is also a review of research on the link between staffing and quality of life outcomes.

1.3.3.2 Core Outcomes Analyses

Chapters 7 through 12, in a sense the core analysis of this Phase 1 report, present all the analyses that constitute the empirical approach of the second research strategy discussed above. Chapter 6 presents the analysis assessing the validity and reliability of the OSCAR staffing data. Key to this analysis is a comparison for a sample of facilities, the reported OSCAR data with “gold standard” measures of nurse staffing independently collected from payroll records and invoices from the use of contracted agency services. Chapter 8 continues this analysis and assess whether the OSCAR data or staffing data from Medicaid cost reports are more accurate. The Medicaid Cost Report data are found to be superior and are utilized in the analyses presented in Chapters 9, 10, and 12.

Chapters 9 and 10, each present for the three study States (New York, Ohio, and Texas) a statistical analysis of the link between the Medicaid Cost Report staffing data and a different set of outcome measures derived from secondary data, namely claims and MDS data. The outcome measures for Chapter 9 utilize claims data and new nursing home admissions capture transfers from the nursing home to the hospital for congestive heart failure (CHF), electrolyte imbalance, respiratory infection, urinary tract infection (UTI), and sepsis. These diagnoses were chosen because of their prevalence and the potential for avoiding hospitalization in these areas with appropriate care.

Chapter 10 presents the effects of nurse staffing on selected quality measures for long term care nursing home residents derived from the MDS. In these analyses, three quality measures are utilized, two of which represented quality of care domains and one representing quality of life. These are: improvement in ability of perform activities of daily living, pressure ulcer incidence, and improvement in resisting assistance with activities of daily living which captures the degree to which residents are rushed or treated roughly, or have to wait for assistance.

Chapter 11 presents the results of an analysis linking OSCAR staffing data to quality outcome measures derived from primary data collected independently by the University of Colorado to assess quality of care in nursing homes. Trained nurse evaluators collected the data via chart reviews, direct observation, and staff interviews. The analysis focused on two of these measures, - inappropriate weight loss and resident cleanliness and grooming, that were most likely to be related to staffing and not independently measured in other data sources.

Chapter 12, the last chapter of this core outcomes analysis, draws on the analyses of the preceding chapters to address the following four questions: 1) Do nurse staffing ratios exist below which the likelihood of poor quality care is substantially increased?; 2) Do these analyses suggest certain levels than on average may be important to achieve?; 3) What attributes of case mix are important to take into consideration in determining staffing levels?; and 4) How might

case mix be taken into consideration when applying staffing requirements?

1.3.3.3 Time-Motion Analyses

Chapter 13 examines three time-motion methods for setting nurse staffing levels: the U.S. Army Workload Management System for Nursing (WMSN); William Thoms' "Management Minutes" system; and HCFA's Staff Time Measurement (STM) studies on nursing care in nursing homes performed from 1995 to 1997. We found all three of these particular efforts of little value for setting staffing standards. However, in spite of numerous problems, we think the time-motion approach has merit. A very inventive and entirely new analysis applying this time-motion approach is presented in the last chapter of the Report.

The analysis in Chapter 14 essentially asks how much nurse aide time is required to implement five specific, daily care processes that have been linked to (good) resident outcomes: repositioning and changing wet clothes, repositioning and toileting, exercise encouragement/assistance, feeding assistance, and Activities of Daily Living (ADL) independence enhancement (morning care). A simulation analysis estimates these times for six major categories of residents with different functional limitations and care needs that broadly define the nursing home population.

1.4 Attribution and Phase 1 Analyses

A footnote on the first page of each of the 14 chapters details the appropriate attribution and acknowledgments to often different individuals for all the analyses contained in the chapter. Although this is a HCFA Report for which it alone is responsible, each of the reports received from contractors and subcontractors has not been changed or altered in any way, other than minor editing.

CHAPTER 2.0 PUBLIC POLICY AND NURSING HOME NURSE STAFFING¹³

2.1 Introduction

In some very important respects, the nursing home market and characteristics of the nursing home population has changed considerably over the last several years. From 1987 to 1996 the number of nursing homes increased from 14,050 with a total of 1.48 million beds to 16,480 nursing homes and 1.76 million beds - about a 20% increase.¹⁴ Currently, the total nursing

¹³ Sections 2.2-2.5 of this chapter were written by Barbara B. Manard, Ph.D., of The Manard Company, Chevy Chase, Maryland under a consulting agreement with Abt Associates, the evaluation contractor for this study. Information and analyses in those sections rely in part on work supported by the Commonwealth Fund under grants to The Georgetown Institute for Health Care Policy and Research. Section 2.1 and some subsections were written by Marvin Feuerberg, HCFA. Sections 2.6-2.9 were written by Elaine Lew, HCFA, with preparation assistance from the following: Lori Owen-Smetanka, Ana Rivas-Beck, and Sarah Burger (National Citizens' Coalition for Nursing Home Reform), Barbara Frank and Mary Ann Wilner (Paraprofessional Healthcare Institute), Ingrid McDonald (Service Employees International Union, Health Care Division), Susan Harmuth and Lynda D. McDaniel (North Carolina Division of Facility Services), Jeni Gipson (Career Nurse Assistant's Programs, Incorporated), Martha Mohler (National Committee to Preserve Social Security and Medicare), and William Painter (Alzheimer's Association). Editorial assistance provided by Jeane Nitsch and Susan Joslin, HCFA.

¹⁴ Rhoades J.A., Krauss NA. Nursing home trends, 1987 and 1996. Rockville (MD): Agency for Health Care

home population in 1996 was approximately 1.56 million, a population with an increased level of functional disability. The percentage of residents needing help with three or more activities of daily living increased from 72% in 1987 to 83% in 1996. The nursing home market has remained largely proprietary with about 2/3 are for-profit nursing homes. Nearly 70% of these for-profit nursing homes are affiliated with a group or chain in contrast to less than 30% for nonprofit nursing homes. With the exception of State Certificate of Need policies that limit the nursing home bed supply in some States, most of these changes in the nursing home market and resident population appear to be outside the sphere of public policy decision making.

The proportion of nursing homes certified by both Medicare and Medicaid (dually certified) rose from 28% in 1987 to 73% in 1996. Meanwhile, the proportion certified by Medicaid-only fell from 50% in 1987 to only 17% in 1996. Although these proportions have changed, one important characteristic of the nursing home market has not changed: over 95% of all nursing homes are certified by Medicare, Medicaid, or dually certified. This near universality of

Policy and Research; 1999. MEPS Chartbook No. 3. AHCPR Pub. No. 99-0032. The estimates presented here are from the 1996 Medical Expenditure Panel Survey (MEPS) Nursing Home Component (NHC) and the 1987 National Medical Expenditure Survey (NMES) Institutional Population Component (IPC). These estimates presented here are from a sample survey, nationally representative of nursing homes and their residents. Another national survey employing a somewhat different broader definition of a nursing home, the 1997 National Nursing Home Survey conducted by the National Center for Health Statistics, produces somewhat different estimates.

certification has important public policy implications for nursing home staffing. Public policy impacts nurse staffing indirectly through payment rates by Medicare and by individual State Medicaid nursing home payment systems usually administered by a rate-setting component of the State Medicaid bureau. In addition, public policy decision making impacts nurse staffing directly through quality regulations, including explicit nurse staffing standards administered by the State Health Departments and State survey agencies. These two spheres of public policy are discussed below.

2.2 Nursing Home Payment Rates and Nurse Staffing: Overview of Key Issues and Trends

The amount of money that nursing homes have to spend on staffing and other necessities is heavily dependent on public payment systems. In 1998, Medicaid paid for the care of 68% of residents, and Medicare paid for the care of 9% of residents. Twenty-three percent of nursing home residents paid privately (including about 2% who have long-term care insurance).¹⁵

These averages understate the importance of public payment systems in a majority of nursing homes because they mask the fact that in most States, most of the private paying patients, who typically pay higher rates than Medicaid and sometimes Medicare, tend to be concentrated in relatively few homes. Concomitantly, Medicaid patients tend to be disproportionately concentrated in nursing homes that are more heavily dependent on Medicaid payments. For example, in Ohio in 1994, nearly 10% of Medicaid patient-days were in facilities that were almost entirely reimbursed by Medicaid, that is, in these homes, 95% to 100% of all patient days were paid for by Medicaid.¹⁶

¹⁵ The American Health Care Association, *Facts and Trends: The Nursing Facility Data Book, 1999*.

¹⁶ B. Manard, *Long-Term Care Reimbursement and Financing: Analysis of Selected Issues*, prepared for the Ohio Department of Human Services, 1999.

As seen in Table 2.1, growth in public spending on nursing homes declined from 1990 to 1998 and increased just 3.3% in 1998. This is the smallest increase since 1961 and is similar to the change that year in prices of items that nursing homes bought.¹⁷ Restrained growth of public spending reflects a confluence of factors including the reduced use of nursing homes and changes in public payment systems and rates. These factors are discussed in the sections below.

Table 2.1 National Expenditures on Nursing Homes: 1990 through 1998					
Year	Total (\$billions)	Public Funds		Percent Change Over Previous Year	
1990	50.9	25.9
1991	57.2	30.6	18.1	11.8	19.0
1992	62.3	34.4	12.4	52.6	9.8
1993	66.4	37.9	10.2	34.5	7.3

¹⁷ In 1998, nursing home inflation as measured by the DRI market basket index was 3.2 percent. The index measures changes in the price of a set of goods and services that nursing homes purchase, including increases in the wages of nursing staff. The measure, which was redesigned in 1998 (it now includes a capital portion), incorporates a set of weights based on the relative proportions of various types of goods and services used in nursing homes, based on 1992 data. Previous versions of the index used weights derived from a 1977 study. The index would understate inflationary pressures on nursing homes if, for example, homes substantially increased the number of nursing staff, such that the weights derived from the 1992 study were no longer representative of the actual proportion of expenditures attributable to nursing staff.

Table 2.1 National Expenditures on Nursing Homes: 1990 through 1998					
Year	Total (\$billions)	Public Funds		Percent Change Over Previous Year	
1994	71.1	41.4	9.2	41.0	5.6
1995	75.5	44.4	7.2	25.5	3.8
1996	80.2	48.1	8.3	21.7	6.8
1997	84.7	51.3	6.7	14.3	5.3
1998	87.8	53.0	3.3	8.3	1.8

Source: HCFA, Office of the Actuary, National Health Statistics Group; January 10, 2000.

2.3 Declining Nursing Home Demand and Occupancy Levels

Nursing homes are facing difficult marketplace issues that challenge their ability to provide sufficient staffing. The most widely discussed issue is the difficulty in attracting and retaining staff, given the increased competition for low-wage workers in a strong economy with low unemployment. Perhaps equally important is the changing demand for nursing home care.

As seen in Table 2.2, nursing home occupancy nationwide has declined substantially over the last decade. In 1998, just 81% of beds were occupied; median facility occupancy was 90%, down from 93% five years earlier.

Year	National Average (Total Residents/ Total Beds) %	Occupancy Rate of the Median and Mean Facility (50% of facilities have a lower occupancy rate than the median facility) %	
1973/74	91.4
1977	92.9
1985	91.8
1993	...	93	...
1994	...	93	...
1995	87.5	92	...
1996	..	91	...
1997	...	91	...
1998	81.0	90	84

Sources: Data on national averages (2nd column) except for 1998 are from the National Nursing Homes Survey for applicable years. All other data are from the OSCAR data file as reported in the American Health Care Association, *Facts and Trends: The Nursing Facility Data Book, 1999*. Other sources report slightly different numbers due to such things as different approaches to handling duplicates and computing annual totals. See Chapter 7.

While occupancy levels are declining in most States, there is considerable variation across the country. For example:

- New York has had a decade of high and virtually stable occupancy: occupancy was 98.7% in 1988¹⁸ and 96% in 1998.¹⁹

¹⁸ B. Manard, et. al, *Analysis of the New York State Capital Cost Reimbursement System for Residential Health Care Facilities*, prepared for the New York Department of Health, Office of Health Systems Management, 1990.

¹⁹ The American Health Care Association, *Facts and Trends: The Nursing Facility Data Book, 1999*, p. 35.

- In Ohio, reflecting a common pattern among the States, nursing facility occupancy has declined about 1% per year since the early 1990s. In 1994, statewide occupancy for the year was 92 percent. By 1998, nursing home resident occupancy rates declined to eighty-eight percent.²⁰

²⁰ Personal communication with Stephen Plock, Ohio Department of Human Services, Division of Rate Setting.

- In Texas, nursing home resident occupancy has consistently been among the lowest in the nation. Occupancy was approximately 80% in 1994 and dropped to approximately 71% in 1998.²¹
- The decline in nursing facility occupancy rates reflects lower demand for nursing home care, particularly for longer stays. It is generally thought that this reduced demand reflects the increasing availability of assisted living and home care, although improved health and wealth among the elderly may also be factors reducing nursing home use as residential care facilities.

In some States (Texas is a good example), there has been relatively little change in the number of beds, despite reduced demand. In other States, a combination of market factors and explicit State policy has led to reductions in the bed supply. Minnesota, for example, had 2,064 fewer beds in 1997, compared to 1987. Even with this reduction, statewide occupancy in Minnesota still declined slightly over the same period.²²

Reduced demand for nursing home care affects the financial health of the industry in multiple ways. First, nursing homes' ability to serve larger proportions of higher paying private patients is optimized under conditions of high demand and constrained supply. In general, private demand is virtually always filled, though research shows that private pay residents are in fact price sensitive, limiting homes ability to raise private pay prices. As general demand declines, even when new bed development is constrained (i.e., occupancy declines), nursing homes become more dependent on public payment systems.

Second, declining demand impedes efforts to build facilities, which further impedes nursing homes' ability to compete with newer, attractive assisted living facilities for private pay residents. New construction is restricted in most States either by moratoria on certification and/or by Certificate of Need rules that tie bed supply to various indicators of demand and need.

Additionally, it is more difficult to attract private capital where use rates are declining. Turmoil in the publicly traded nursing home markets since the implementation of the new Medicare Perspective Payment System (PPS) for skilled nursing facilities (SNFs) has made raising private capital on Wall Street particularly difficult. However, long-term trends, such as declining demand and uncertainty regarding public rates, erode the ability of even well established,

²¹ Personal communication with Steve Lorenzen, Director of the Rate Analysis Department, Texas Department of Human Services.

²² Minnesota Department of Human Services, *Study of Nursing Facility Conversion: Recommendations for Capacity Reduction*, 1998.

community-based nursing homes to raise money for renovations or new buildings.

Third, declining occupancy rates in nursing homes increase per diem expenditures as fixed costs of care are spread across fewer residents. A nursing home's ability to recoup these increased per diem costs from Medicaid and Medicare is substantially constrained. As discussed below, nearly all Medicaid payment systems have design features that limit or prohibit receiving per diem rate increases to cover the cost of declining occupancy. Medicare rates are virtually insensitive to changes in individual facilities' costs, other than those recognized by changes in case-mix or allowed national inflation adjustments.

2.4 Medicaid Rates

2.4.1 Key Factors in the Link Between Rates and Staffing

The degree to which Medicaid rates restrict (or enhance) nursing homes' ability *and* incentive to spend adequate sums of money for sufficient staff is a function of two key aspects of each State's rate-setting system: the level of payments and the level of detailed design features that define how closely rates are linked to actual costs.

Obviously, if a State sets Medicaid nursing home rates at \$25 per day where the average cost of providing adequate care was \$100 per day, nursing homes would not be able to care for Medicaid patients appropriately. However, it does not necessarily follow that if the State raised Medicaid rates to \$100 per day, all nursing homes could and would spend the money to improve staffing ratios and/or wages. In some States, there is virtually no link between what an individual facility spends and the rate it receives. Thus, higher rates might be taken in as profit or spent on capital improvements rather than on staffing. In most States, however, there is some relationship between the amount of money a facility spends and the rate it receives. In those States, there are stronger incentives for nursing homes to actually spend reimbursement money from Medicaid (or Medicare), rather than to hold expenditures down and increase profits, but there are numerous details of States' rate-setting systems that determine the precise incentives.

2.4.2 Variation Among States in Approaches to Medicaid Nursing Home Rate Setting

In every State, there is a wide range among nursing homes in total expenditures per patient day. For example, in Ohio in 1998, the least costly home spent just \$58.82 per patient day, while the most expensive spent \$641.78 per patient day; the average was \$121.25.²³ In Ohio, as

²³ Personal communication with Stephen Plonck, Ohio Department of Human Services, Division of Rate Setting. Researchers have found that about 75% of the variation among nursing home costs in Ohio and other places are accounted for by a relatively small set of measurable factors: case-mix (the care needs of patients), facility occupancy, facility ownership (not-for-profit and government-owned homes spend more

elsewhere, the Medicaid rate setting system sets limits on the amount of nursing home costs that are reimbursed.

The strongest incentives for restraining the growing costs are found in payment systems that pay a price for care, regardless of individual facility expenditures. Such systems are called “flat rate” or “pricing systems.” The new Medicare SNF payment system is an example. Flat rate systems encourage facilities to reduce expenditures because they can profit from the difference between the payment rate and expenditures, but reductions in expenditures can reflect either improved efficiency or reduced quality (e.g., spending less on food and nursing care that patients actually need). Flat rate systems also raise issues regarding accountability, since homes that receive an increase are not required to spend it.

To achieve a balance between both cost containment and quality objectives, nearly all States use prospective payment systems and base payments in part on individual facility expenditures but use various limits to restrain cost.²⁴ Many States during the late 1980s and throughout the 1990s implemented rate-setting systems that placed stronger cost-containment incentives (e.g., paid flat rates) on the portion of rates less directly related to resident care (e.g., administration) and weaker cost-containment incentives (e.g., by limiting profit) on the portion of rates most directly related to care (e.g., nursing). In general, this continues to be a popular method. For example, each one of the four States (South Dakota, Maine, Mississippi, and Kansas) that implemented its first Medicaid case-mix system as part of the National Case-Mix and Quality Demonstration employed such “modified” cost-related case-mix strategies. In these and other States (e.g., Ohio, Nebraska, Pennsylvania), the RUGs case-mix measurement system as well as individual facility costs are used to determine key aspects of the relative discrepancy among rates for different types of patients.²⁵

than for profit homes), facility type (nursing homes that are part of a hospital report higher costs than freestanding homes, even after taking other factors such as case mix into account), facility location (e.g., urban homes are more expensive than others, reflecting differential wages among other things), and facility size (small homes and large homes tend to have higher costs per day than those in the mid range, all else being equal). States differ in the degree to which these factors are taken into account by Medicaid nursing home rates.

²⁴ Virtually all States use prospective systems to establish basic rates. That is, States prospectively establish rates for a coming year (e.g., 2001); homes that subsequently spend more than the rate paid are not reimbursed for the excess; homes that spend less than the rate paid are not required to repay the State. Prospective rates are designed to constrain costs and reduce the appeals and administrative burden associated with “settling up” retrospectively adjusted rates.

²⁵ Approximately 60% of States now use some type of case-mix approach to setting Medicaid nursing home rates. In contrast to the way Medicare uses RUGs, to understand how case-mix measures are typically used by States it is helpful to first understand a simplified Medicaid rate-setting approach that does not take case-mix into account. The simplest model is a non-component-based, facility-specific, “cost-to-a-limit” model. To set rates under such a system for a rate year beginning January 1, 2001, and ending December 31, 2001, the steps would be as follows: (1) Calculate allowable per diem costs for each facility for a base year (e.g.,

January 1, 1999, through December 31, 1999). (2) Trend those costs forward using an inflation factor to the midpoint of the prospective rate year. (3) Array the per diem costs from high to low. (4) Identify the point on the array specified in law or regulation as the “limit” (i.e., the highest reimbursable cost). For example, the limit might be set at the 60th percentile or the median plus eight percent. (5) Pay each facility the lower of its allowable (trended) per diem costs or the limit.

In this non-case-mix rate setting example, per diem costs at each facility are calculated simply by dividing total allowable costs by total Medicaid days. This approach does not explicitly take into account the fact that some patients are more costly to care for than others, and thus, it penalizes facilities above the limits whose higher per diem costs are due to heavier care patients. To take case-mix into account, many States use both facility costs and RUGs to set rates. Each of the RUGs classes has an associated “relative resource use” weight. Heavier care patients have higher weights, reflecting the greater amount of nursing staff time required for these patients compared to an average patient.

To simplify a rate-setting example, assume a case-mix measurement system with just two classes of patients: “Heavy Care” (with a weight of 2.0) and “Light Care” (with a weight of 1.0). In this example, Heavy Care patients are considered twice as costly to care for as Light Care patients. Consider two facilities. Facility X had total nursing expenditures of \$3,650,000 and 36,500 patient days; its nursing costs per patient day were thus \$100 per day. Facility Y had total nursing expenditures of \$5,475,000 and 36,000 patients days; thus, its per diem nursing costs (\$150) were 1.5 times higher than that of Facility X. If the higher costs at Facility Y were due to inefficiency, a State would not want to pay those costs, but if the higher costs were due to heavier care patients, the State likely would not want to penalize Facility Y. To take case-mix into account, States typically *weigh* patient days before computing per diem costs and limits.

Assume that Facility Y has *only* Heavy Care patients and Facility X has *only* Light Care patients. Facility Y would have 72,000 weighted patient days (2.0 X 36,000) and Facility X would have 36,500 (1.0 X 36,500) weighted patient days. Dividing each facility’s nursing costs by weighted patient days removes differences in case mix between the facilities. Thus, Facility X has case-mix adjusted per diem nursing costs of \$100 per weighted day; Facility Y has case-mix adjusted per diem nursing costs of \$75/weighted day ($\$5,475,000 / [2.0 \times 36,000]$). States use these facility-specific, case-mix adjusted costs to create an array of costs to which limits are applied. In the example, if the State paid patient-specific rates and both Facility X and Facility Y were below the State’s limits, then, without adjustments for inflation, Facility X would get a rate of \$100 per day for every Light Care patient it took and twice that (\$200 per day) for every Heavy care patient it took. Facility Y would get \$75 per day for every Light Care patient and \$150 per day for every Heavy Care patient.

In contrast, if the State set case-mix rates using a pricing system (i.e., it ignored differences among facilities in actual spending), the rates may be set at somewhat like an average. For example, Facility X and Facility Y may each receive \$87.50 per day for a Light Care patient and \$175 per day for a Heavy Care patient. The arguments against using a case-mix measurement system to set prices, ignoring differences in spending among facilities, include (1) concerns about creating incentives for underspending and (2) concerns that even the best case-mix measurement system is insufficiently precise to capture variations among patients and facilities regarding the cost of caring for different types of patients.

One objection to finely tuned, component-based, modified cost-related systems is that they limit a provider’s discretion with regard to how to spend rate money. However, this approach to targeting spending on nursing is less directive, and arguably less administratively complex than tying rate increases specifically to a particular aspect of spending, such as requiring providers to demonstrate that they increased nurse aide wages.

Only six States rely heavily on a nearly pure flat rate (pricing) system. Texas (until the coming changes discussed below) and California have the purest and longest standing examples. Oklahoma, Louisiana, Oregon, and Nevada also have systems that are typically classified as flat rates. In each of these six, however, there are special features that make the State system more cost-related than the Medicare system. In some, certain portions of the rates (e.g., capital and/or ancillaries) are paid on a facility or patient-specific, cost-related basis. All provide for special exceptions and payments more reflective of costs for a limited number of patients with atypical needs. For example, although Texas has 11 different rates, one for each of its 11 different case-mix classes, it also has a small program for ventilator-dependent patients and a provision for paying for high-cost, out-of-state specialty care in exceptional cases.

2.4.3 The Effect of the Repeal of the Boren Amendment on Medicaid Rates

Medicaid is a joint Federal-State program. For most of the program’s history, State payments for nursing homes have been subject to Federal requirements that reflect efforts to balance State flexibility and Federal oversight. In 1997, Congress determined that States needed greater flexibility and repealed the so-called “Boren Amendment,” a section of the Social Security Act governing Medicaid rates for nursing homes and hospitals.

2.4.3.1 Background and Issues

In the early years of Medicaid, States nearly had a free hand regarding nursing home rate setting, limited primarily by the Federal requirement that the rates paid could not *exceed* those that would be paid using Medicare’s “reasonable cost” principles.²⁶ Many States developed rates purely as a budgetary exercise. To calculate the rate that was paid, the State divided the amount of money they had to spend by the estimated number of days of care that would be required. There was little information about how much nursing home care cost and how much homes were actually spending, regardless of the rate levels. Medicare, but not Medicaid, required uniform cost reports.²⁷ Concerns arose regarding the appropriateness of States’ Medicaid rates. The U.S.

²⁶ Portions of this section draw from a detailed analysis of the Boren Amendment and its predecessors found in: B. Manard, *Repeal of the Boren Amendment: Background, Implications, and Next Steps*; Washington DC, Georgetown University Institute for Health Care Research and Policy, 1997.

²⁷ The Boren Amendment required that States develop uniform cost reporting systems for nursing homes, but this requirement was eliminated when Boren was repealed.

Senate held widely publicized hearings focusing on low rates, poor quality, and profiteering.

In response to concerns that States were underpaying for care in some cases and overpaying in others, the Social Security Amendments of 1972 required that Medicaid base nursing home reimbursement on “a reasonable cost-related basis.” The regulations defined reasonable cost as “the level which the State reasonably expects would be adequate to reimburse in full any such allowable costs of a facility that is efficiently and economically operated.” In response, a number of States simply adopted Medicare principles in an effort to comply with the new rules.

The Medicaid statute was amended again in 1980 for nursing homes and a year later for hospital payments. The goal was to afford States greater flexibility because it was believed that the Medicare principles of nursing home payment, which retrospectively reimbursed costs with little restraint, were inherently inflationary. The new law, commonly known as “The Boren Amendment” after Senator David Boren, was amended again in 1990 to include a section, shown in italics below, reflecting the passage of the Nursing Home Reform Act (OBRA ’87). The Law required the following:

“[A State plan for medical assistance must] provide for payment of nursing facility services...through the use of rates which take into account the costs (*including the costs of services required to attain or maintain the highest practical physical, mental and psychosocial well-being of each [Medicaid resident]*)...which the State finds and makes assurances satisfactory to the Secretary, are reasonable and adequate to meet the costs that must be incurred by efficiently and economically operated facilities in order to provide care and services in conformity with applicable State and Federal quality and safety standards....” (Section 1902(a)(13)(A)).

Significantly, the Boren Amendment set forth both substantive and procedural standards for State rate-setters. Substantively, States were required to set rates sufficiently high to pay “efficiently and economically operated” facilities for providing appropriate care. In terms of procedure, States were required to “find” that rates were adequate.

Although there had been litigation over the adequacy of Medicaid rates since the inception of the program, controversy and litigation skyrocketed in the early 1990s spurred by a combination of factors. First, serious recession led to painful belt-tightening in many States. Since Medicaid payments constituted the single largest item in many States’ budgets, these payments were subject to close scrutiny during difficult economic times. Second, double-digit inflation in the cost of nursing staff made providers particularly sensitive to rate constraints.²⁸ Third, increasing

²⁸ Increasing nursing costs in the early 1990s appear to have been largely driven by two factors. First, there was a temporary increase in difficulty of finding nursing staff (this abated somewhat before the current shortage). Second, and perhaps related to the first, there was a proliferation of contract (“rent-a-nurse”) agencies whose charges to nursing homes are higher than the costs of on-staff nurses.

acuity of nursing facility patients (resulting in part from shorter hospital stays) and implementation of new quality standards gave credence to providers' assertions of increasing cost pressures. Additionally, a set of important court cases fired a litigation explosion, with a preponderance of early wins going to providers. This set the scene for the States' ultimately successful efforts to have the Boren Amendment repealed.

In 1990, the Supreme Court settled in *Wilder v. the Virginia Hospital Association* a long-standing controversy by ruling that providers did have enforceable rights to sue States in Federal court over Medicaid rates.²⁹ The Supreme Court also importantly held that providers had separately enforceable substantive and procedural rights under the Boren Amendment.³⁰ Where judges might be reluctant to second-guess a State regarding the adequacy of rates given the difficulty of making that determination, cases relying heavily on procedural issues were more easily won. Two years after the *Wilder* decision, at least 20 cases challenging State Medicaid rates for nursing homes were filed, with the majority that went to court ultimately decided in favor of the providers.

States were more likely to win cases where they could show that rates had been set using established, technical formulae related to detailed analysis of cost report information, that at least half of facilities had had Medicaid rates covering 100% of allowable per diem costs, and that rates had kept pace with established indicators of nursing home inflation.

“Budget-driven” rate reductions made State systems particularly vulnerable because providers could point to Congress' intent when passing the Boren Amendment “that a State not develop rates under this section solely on the basis of budgetary appropriations.”³¹ Similarly, cases involving contested inflation factors were common. Providers noted that Congress had specified at Boren's passage that “the flexibility given the States is not intended to encourage arbitrary reductions in payments that would adversely affect the quality of care”³² and that rates must take

²⁹ *Wilder v. Virginia Hospital Association*, 496 U.S. 498 (1990).

³⁰ Just prior to the Supreme Court case, the 10th Circuit ruled against a State in an influential case—*AMISUB (PLS), Inc. v. Colorado Department of Health and Human Services*. The case involved a challenge to Colorado's Medicaid reimbursement system for hospitals. Medicaid reimbursed hospitals at a DRG-adjusted rate set at 88% of the Medicare rate. This rate was further adjusted by what the State called a “budget adjustment factor” (BAF), which multiplied the DRG rate by 54% to arrive at the final Medicaid rate. The Court decided in favor of the plaintiffs' argument that by using a budget-driven rate-adjustment factor, the State had failed to meet the procedural requirements of the Boren amendment to make ‘findings’ which identified and determined efficiently and economically operated facilities and their necessary costs of operation. The Court found that under the Colorado system “no Colorado hospital recovered] its actual costs” even though “some...[were] efficiently and economically operated.”

³¹ H. Conference Report No. 99-1479.

³² Senate Report No. 96-471.

into account “economic trends and conditions” during the period for which rates were set.”³³

By Boren’s repeal in 1997, the tide turned as States increasingly, though not entirely, prevailed in court. States had learned to develop explicit “findings” to document the rationale for their systems and to avoid changes in the rate system that raised flags. For example, rather than implementing across the board cuts, which could appear to a legislature the fairest and/or most politically feasible way to deal with a budget shortfall, States, mindful of Boren, could reduce the limits or profit factor, arguing that neither affected care at “efficient and economical”

³³ Senate Committee on Finance, 96th Congress, 2nd Session, *Spending Reductions: Recommendations of the Committee on Finance* at 44-45 Comm. Print, 1980.

facilities. Additionally, more courts had applied less stringent procedural and substantive standards as States refined their arguments.³⁴

Although States increasingly prevailed in Court, providers strongly believed that the Boren

³⁴ For example, in 1994, providers challenged New Jersey over a reimbursement system that resulted in less than 15% of facilities receiving Medicaid rates that covered allowable costs, but the State prevailed. This case, *New Jersey Health Care Association v. Gibbs*, is the only case that tested the OBRA quality standard added to the Boren Amendment in 1990. The law specified that rates must account for facilities' necessary costs "including costs of services required to attain or maintain the highest practicable physical, mental, and psychosocial well-being of each resident." Providers argued that "highest practicable" meant more than minimum licensure and certification standards and cited a New Jersey Health Department document that recommended, but did not require, that State's Medicaid rates could pay for higher staffing levels. The Court disagreed, concluding that "...the 'highest practicable' language does not impose any obligations beyond compliance with the requirements of OBRA '87... when Congress included the 'highest practicable' language as part of a series of miscellaneous technical amendments..., Congress anticipated that the 1990 amendments relating to the Medicaid program would 'reduce Medicaid program outlays'.... [T]he Court interprets the 'highest practicable' language to be the equivalent of, or a restatement of, the level of care and services required by applicable State and Federal standards...."

Amendment provided needed protection for reasonable rates. Further, they argued that it was inappropriate for Congress to retain Federal quality standards but not Federal support for adequate rates.

2.4.3.2 *Preliminary Findings Regarding the Effect of Boren's Repeal*

In 1997, as part of the Balanced Budget Act, Congress repealed the Boren Amendment, although efforts to eliminate completely providers' ability to sue States in Federal court over rates were rebuffed.³⁵ Despite providers' fears that this change might lead to wholesale cuts in nursing home rates, States did not respond in this way. Nevertheless, the majority of States and State provider associations across the country believe that Boren's repeal contributed to downward pressure on the growth of Medicaid rates.

When Congress repealed the Boren Amendment, it also mandated a study, due in 2001, of the

³⁵ After Boren's repeal, the remaining Federal substantive standard that governed states' responsibilities for appropriate rates is found in the so-called "equal access provision" (Section 1902(a)(30)(A)). This provision specifies in part that payments be "consistent with efficiency, economy, and quality of care and are sufficient to enlist enough providers so that care and services are available...at least to the extent that [they] are available to the general population in the geographic area."

effect of its action. One part of the ongoing study involves interviews with Medicaid officials and State affiliates of the American Health Care Association in all States.³⁶ Preliminary results to date indicate the following:

- In approximately 25% to 30% of States, both State officials and provider representatives have reported that Boren's repeal has had no apparent effect on rates or the rate-setting process;
- In approximately 10% to 15% of States, there is strong evidence that Boren's repeal has been a factor affecting Medicaid rate developments, as acknowledged by all parties. For example, in Oregon, the Governor has cited specifically Boren's repeal in support of a proposal to increase rates by 2%, rather than by the 8% increase that would have occurred if a planned rebasing (5% increase) and an established inflation factor (2% increase) were used to compute new rates. Similarly, Nevada deferred a previously planned rate increase from 1999 to 2000 and Boren's repeal was part of the discussion.
- In the remaining States, roughly 60%, at least one of the parties has reported that Boren's repeal had reduced at a minimum providers' negotiating strength and could have been a factor in rates' inability to keep pace with cost increases. In slightly over half the States, both parties agreed that Boren's repeal was a factor, though not necessarily a definitive one.

Strong economies in nearly all States have reduced pressure to squeeze rates, but competing

³⁶ The congressionally mandated study, under the direction of Christine Bishop of Brandeis University, is funded in part by the Commonwealth Fund and involves multiples ways of examining Boren's repeal including national econometrics analyses and interviews. As of April 2000, one round of interviews with State officials and AHCA affiliates has been completed in all but two States. Those interviews and additional ones to follow-up on States where key legislation was pending are currently underway. The completed report of the interview study, led by Barbara Manard, is forthcoming in mid-2000.

State priorities (e.g., education) and State fiscal policies restrain a nursing home's ability to obtain rate increases concomitant with growth in State revenues, according to many respondents in the State survey.

For example, in Washington, "Initiative 601" limits growth in State spending to the combined effect of changes in the Consumer Price Index and population growth. State Medicaid officials have reported that this Initiative is the key factor driving budget decisions, but Boren's repeal possibly has had a minor, subtle effect on rate developments. Provider representatives view the effect as more substantial, but they agree that the relationship between rate developments and Boren's repeal could be subject to dispute. Washington was in the process of designing a new case-mix payment system when Boren was repealed. According to some, the absence of Boren has resulted in a more parsimonious system. In addition, as a legislative decision, rate increases in Washington, which uses 1996 costs as a base, have averaged around two percent. According to provider representatives, this is less than actual cost increases.

2.4.4 Study States: Ohio and Texas

Recent developments in Ohio and Texas further illustrate the range of changes in Medicaid payments that have occurred since Boren's repeal in the States where there has been an arguable, but not definitive, effect.

2.4.4.1 Ohio

Ohio was one of the earliest States to adopt a case-mix system and one of the last to switch from retrospective to prospective rates. In 1993, implementing prospective rates and adopting a version of RUGs as its case-mix measurement system, Ohio changed both features of its rate setting system, which replaced an older approach to varying payments with patient acuity. Nursing homes are now paid facility-specific rates, annually rebased with quarterly adjustment for any change in case-mix. Lower spending homes can profit on the difference between costs and the limits on property and, to a limited extent, on indirect costs. Homes below the limit that spend less on case-mix adjusted nursing costs in one year have lower rates in the following year.

After the first six months of the new system, a detailed analysis found that case-mix acuity and nursing expenditures increased more than spending in other areas, as intended.³⁷ At that time, nearly 55% of facilities received Medicaid rates that covered 100% of per diem costs. This is referred to as "55% cost coverage."

³⁷ B. Manard and K. Coleman, *An Analysis of the Ohio Department of Human Services' Medicaid Reimbursement system for NFs and ICFs-MR*, prepared for The Ohio Department of Human Services, 1996.

Five years later, however, the State found that per diem costs increased faster than the rates: cost coverage for 1996 slipped to 37%. Further analysis, however, revealed that the slippage was largely due to declining occupancy and that the greater a home's reliance on Medicaid, the more likely Medicaid rates covered costs fully.³⁸ Stated differently, Medicaid rates generally covered reported costs substantially, except for homes with low occupancy or a substantial proportion of private paying clients.³⁹ Thus, the State arguably would have prevailed had the Boren Amendment been in place and providers had sued for higher rates. On the other hand, there are cases from the early 1990s where providers did prevail in contesting similar cost coverage slippage.

Ohio recently implemented an updated version of the RUGs system but otherwise has made no major changes to the system. Provider groups have focused efforts on trying to obtain relief in two areas: occupancy minimums and disallowances for costs related to the use of contract nursing staff. In Ohio, as in most States, the State does not use providers' actual occupancy in computing per diem costs for all rate components. Rather, it typically applies an "imputed occupancy factor" to the calculation of per diem fixed costs (capital) and sometimes to variable costs such as staffing. In these cases, it uses the greater of a home's actual patient days or the number of days equivalent to a specific level of occupancy (e.g., 90%) to compute per diem costs in rate-setting analyses. The rationale for these imputed occupancy factors is that homes with low occupancy are not economically efficient. In addition, a home with low occupancy could be a home with quality problems that potential customers are avoiding. Providers in Ohio and other States have contended that previously set occupancy factors are too low in light of changing market conditions. To date, Ohio has not changed the minimum imputed occupancy but is

³⁸ B. Manard, *Long-Term Care Reimbursement and Financing: Analysis of Selected Issues*, prepared for the Ohio department of Human Services, 1999.

³⁹ Homes with large proportions of private-paying clients spend more and charge private payers more to cover the higher costs; many homes subsidize Medicaid clients with higher rates for private payers. In two States (Minnesota and North Dakota), State laws prohibit charging private payers more than Medicaid rates.

considering to relax disallowances for the costs of contracting nursing staff.

2.4.4.2 Texas

As noted above, Texas has long been one of the few States that paid “flat rates.” That is, rates are set based on analyses of all facilities’ costs, but every provider receives the same rate for each of 11 case-mix classes, regardless of what that facility spent. In 1990, contesting the level of flat rates (i.e., how much money each home received), providers prevailed in a Boren suit against the State.

Over the years, some in Texas have argued for abandoning the flat rate system to afford greater accountability for spending. Those who successfully opposed implementing a modified cost-related system argued that it would be inflationary and that higher spending facilities, disproportionate nursing homes with fewer Medicaid recipients and disproportionate not-for-profit homes, were less efficient and thus should not be rewarded with higher rates reflecting their higher costs. Although the State found that, in theory, it could implement a modified cost-related system on a budget neutral basis, doing so would mean reducing the profits of lower spending facilities to cover the costs of higher spending facilities.

Over the last few years, however, key members of the State Legislature have grown more interested in quality issues and in the relationship between rates and quality. This changed circumstance was an important factor in the recent passage of legislation that will tie a substantial portion of scheduled rate increases to staffing ratios.

Rules for the new system are still being refined.⁴⁰ As of April 2000, the key features of the new system would work as follows:⁴¹

⁴⁰ A hearing on proposed rules was held in early March 2000.

⁴¹ Personal communication with Steve Lorenzen, Director of the Rate Analysis Department, Texas Department of Human Services.

- The State has a fixed budget earmarked for the nurse staffing enhancement program.⁴² The budget is sufficient to pay for roughly 10-15 minutes per resident day of LPN time (or the equivalent cost of RNs or aides) for each nursing home, should all apply.⁴³ The funds will be evenly allocated among those requesting participation up to the maximum in the budget. That is, funds will not be allocated based on detailed analysis of “need,” in part because the legislature has required exceptionally fast implementation of this potentially complex program.
- Participation in the program is voluntary.
- Providers that choose *not* to participate will receive just a 1.6% increase in rates at the start of the new rate year in September.
- Any provider, regardless of current nurse staffing, may submit a request for funds for nurse staffing enhancements during the upcoming open-enrollment period.
- Homes will not be asked initially to submit documentation regarding current staffing.
- At the end of six months, participating homes will submit documentation regarding nurse staffing. At that time, the nursing homes’ staffing will be compared to a case-mix adjusted standard which the State has determined to be equivalent to the amount covered by the regular case-mix rate, discounted somewhat. The State has currently set that standard at a point approximately 6% below statewide average staffing, adjusted for case-mix.
- Homes whose staffing at six months falls below the sum of the standard plus the additional staffing covered by the extra payment received will be required to return money to the State.
- Homes whose staffing already substantially exceeds the State standard will be able to receive supplemental staffing funds and keep them, regardless of whether or not expenditures on staff are increased. In these cases, it is argued that the new system is more fairly recognizing the higher staffed nursing homes’ on-going efforts.
- In addition, all homes, whether or not they participate in the new program, will be

⁴² Roughly \$50 million was carved essentially out of money that would have been spent on across-the-board, non-targeted rate increases, had the State simply applied its previous rate methodology.

⁴³ In other words, the budget can provide sufficiently for approximately one RN or three aides at an average home, should all apply.

required to actually spend at least 85% of the direct care rate.

The new approach represents a substantial departure from Texas' long-standing flat rate approach in that a portion of the rates are tied to facility-specific spending on nursing. In effect, there is a new facility-specific, case-mix adjusted floor that could promote increased spending for nurse staffing among previously low-spending facilities.

Notably, the Texas approach is *explicitly* budget-driven. Although many factors have contributed to Texas' decision to change its system, adopting an explicitly budget-driven system would have risked litigation prior to Boren's repeal. Boren's repeal in Texas appears to have contributed to real changes the legislature might not have been willing to make (i.e., tying rates in part to facility spending) if it had not been able to explicitly tie most of the "inflation" adjustment to an explicit legislative program and budget.

2.5 Medicare Payments

On average, Medicare payment rates appear less important to nursing home finances than Medicaid because only about 9% of patients on any one day nationwide have care paid for by Medicare, compared to about 69% for whom Medicaid is the primary payer. However, Medicare payments are more important than it appears from these averages. First, in some cases where Medicaid rates were low, Medicare payments have covered some of the shortfall.⁴⁴ Second, prior to the implementation of the new Medicare payment system in 1998, a substantial proportion of facilities and national chains had aggressively pursued Medicare patients. Thus, some "subacute care" facilities, specializing in shorter stay and Medicare patients, have been affected considerably more than others by changes in Medicare's payment policies for nursing homes. As with Medicaid, two key factors about Medicare payments are important to staffing issues: the *amount* of the payments and the *structure* of the payment system.

With regard to the amount of payments, provider associations, citing the fact that companies owning approximately 10% of the nation's nursing homes have filed for bankruptcy protection since the new system was implemented, have argued that Medicare's new case-mix payment

⁴⁴ Although Medicare rates generally have been higher than Medicaid rates, it is difficult to determine whether Medicare has subsidized Medicaid or vice versa. This likely varies by facility and State. The difficulty arises because prior to 1998 Medicare rates were based on *average* costs; however, as shown by considerable research, Medicare patients are generally more costly to care for than others.

system sets rates too low.⁴⁵ Others, including the General Accounting Office, have contended that Medicare's new payment system is just one reason for the bankruptcies and that management decisions, including debt-financed fast-growth strategies fueled by profit opportunities under the previous Medicare payment system, are also important factors. Regardless of its cause, the current turmoil in nursing home markets has raised concerns about the effect on quality and staffing. These issues are discussed in a subsequent chapter.

⁴⁵ See, for an example of provider concerns: Tracey Blankenheim, "Bankruptcies Make Future of Subacute Care Uncertain," *McKnight's Long-Term Care News*, March 27, 2000, p. 23.

In addition to issues regarding the level of Medicare payments, the structure of the payment system has implications for staffing. Medicare's new payment system is more like a pure "pricing" system than virtually any State Medicaid system or Medicare hospital payment system.⁴⁶ This structural feature raises three key issues with regard to rates and staffing. First, it is difficult to be assured that rates paid are actually appropriate for the care needs of patients (i.e., neither too low or too high) when much depends on the precise accuracy of the RUGs case-mix measurement system.⁴⁷ Second, the system has strong incentives for providers to reduce spending, including that on nursing staff. Third, some policy makers have expressed concerns regarding system accountability. For example, at a recent congressional hearing on nursing home staffing, Representative Pete Stark noted, "...while Medicare is now paying for adequate staffing on an acuity basis, there is no requirement for facilities to actually *provide* that level of staffing."⁴⁸ He further noted an intent to introduce legislation that would specifically tie Medicare payments to actual staffing, reflecting the same concerns that led the Texas legislature to change its Medicaid pricing system.⁴⁹

2.6 State Licensure Minimum Nurse Staffing Requirements

As discussed in Chapter 1, all nursing homes that are certified to receive payment under Medicare or Medicaid must meet minimum Federal nurse staffing requirements.⁵⁰ However, this Federal minimum does not preclude individual States from waiving the Federal standard or imposing more specific requirements under their licensing authority.⁵¹ Thus, a number of States

⁴⁶ For example, the hospital payment system includes provision for outlier payments, while the SNF payment system does not.

⁴⁷ Questions have been raised about (1) the degree to which the basic RUGs system appropriately explains variations in resource use among the full range of patient types, given the relatively small samples of Medicare patients on which RUGs is based, and (2) the degree to which the *payment* system appropriately accounts for variations among patients in the specific costs of non-therapy ancillaries. Studies of these issues have been completed. As of April 2000, an updated SNF payment rule is pending.

⁴⁸ Committee on Aging, November 3, 1999; emphasis in the original.

⁴⁹ Specifically, Representative Stark said, "In the near future, I will introduce legislation to make Medicare-reimbursed skilled nursing facilities accountable for periodically reporting nursing staff data...in a similar manner as is done for cost reports. In cases where staffing levels are found to be out of step with the case-mix of the facility's residents, then Federal payments would be adjusted" (Committee on Aging, November 3, 1999).

⁵⁰ The current Federal nursing home nurse staffing requirements are detailed in Chapter 4.

⁵¹ There is a perception by many that HCFA's current (non-ratio) minimum nurse staffing requirements are often waived. Although HCFA regulations still permit the 8 hr. RN and 24 hr. licensed coverage per day to be waived (see ref chap. 4), very few nursing homes, almost negligible, currently receive a waiver. As of March 11, 2000, the current surveys in OSCAR indicate that only 27 facilities throughout the United States

have outlined their own provisions for nurse staffing. In addition, some States have recently enacted or have pending legislative efforts directed towards staffing in nursing homes as well as home health care.

The purpose of this section is to describe: 1) variability of nursing home nurse staffing requirements under State licensure; 2) the specific State licensure requirements for the study States - Ohio, New York, Texas; and 3) current and/or pending State legislation in this area.

2.6.1 General Description of State Licensure Requirements

have received a waiver of either the RN or LPN coverage requirements. Twenty-three of these 27 waivers come from just two states, Minnesota and Oklahoma. In addition, even for the very few nursing homes that receive a waiver, they do not have the entire coverage requirements waived. For example, for those that have received a RN waiver, the average number of hours waived is 21.5 hrs. per week.

As described in Chapter 1, Federal regulations⁵² assert that long-term care facilities under Medicaid/Medicare must have “sufficient nursing staff to provide nursing and related services to attain or maintain the highest practicable physical, mental, and psychosocial well-being of each resident, as determined by resident assessments and individual plans of care.” Recent changes to the State Operations Manual⁵³ (SOM) provide further guidance to surveyors for determining whether a facility meets Federal nurse staffing standards. Since Federal regulations and manual instructions neither specify nor operationalize what constitutes “sufficient nursing staff,” some surveyors state they have difficulty defending a staffing citation because of this lack of specificity. However, it appears that providers, payers, and surveyors have some latitude as to how this general requirement is applied.

In conjunction with the National Committee to Preserve Social Security and Medicare and with support from the Service Employees International Union (SEIU), the National Citizens Coalition for Nursing Home Reform (NCCNHR) has prepared an ongoing state-by-state compilation of the minimum staffing requirements as of October 1999 (See Appendix A1). The report found 14 States have not imposed any additional criterion to the Federal standard. For instance, Kentucky’s Division of Licensing and Regulation has stated that a minimum staff requirement would become the maximum, ratios could not be predicted because of the unpredictability of acuity levels, and ratios would hinder the survey process. Thirty-seven States have passed laws and regulations that impose more specific requirements to the Federal standard. These State requirements are extremely varied and are based upon one or more of the following: number of beds, number of hours per patient per day, care and service needs, and shifts. In Table 2.3, we provide a brief comparison of known State requirements, as stated in regulation or law. However, we did not take into account the actual interpretation and implementation of these standards. In this summary table, it should be noted that even for States that require only the Federal minimum, this does not preclude facilities from exceeding that minimum, sometimes going beyond the minimum. Hence, States that require only the Federal minimum may possibly have an actual average staffing ratio that exceeds that of other States that impose additional State

⁵² 42 CFR 483.30

⁵³ State Operations Manual, Appendix P, pages 51-52, Task 5C

minimum requirements⁵⁴.

Table 2.3 Comparison of State Staffing Requirements (Stated in Regulation or Law) to Federal Standards. This table is derived from NCCNHR's compilation of State staffing standards (Appendix A1).		
No State Regulation/Law*	Less Demanding State Standards**	More Demanding State Standards***
Alabama	Alaska	Arkansas
Arizona	Colorado	California
District of Columbia	Connecticut	Florida
Kentucky	Delaware	Georgia
Missouri	Hawaii	Idaho
Nebraska	Indiana	Illinois
New Hampshire	Iowa	Maine
New Mexico	Kansas	Massachusetts
New York	Louisiana	Michigan
North Dakota	Maryland	Mississippi
South Dakota	Minnesota	Nevada
Vermont	Montana	New Jersey
Virginia	North Carolina	Pennsylvania
Utah	Ohio	South Carolina
	Oklahoma	Wisconsin
	Oregon	
	Rhode Island	
	Tennessee	
	Texas	
	Washington	
	West Virginia	
	Wyoming	

* These States do not specify any additional nurse staffing requirements to the Federal standard.

** These States have specified nurse staffing requirements through law and/or regulation, in addition to the Federal requirement. See the following note.

*** States categorized in this column require more than 2.25 hour per resident day or more than one staff member to nine residents in the day shift, 13 residents in the evening shift, and 22 residents in the night shift.

⁵⁴ This is further discussed in Chapter 3.

Though the majority of States have established nurse staffing requirements, they vary considerably. Twenty-eight States have expressed their requirements as the hours of nursing care per patient per day, while 11 States have expressed their requirements as a ratio of staff members to residents. Besides having general staffing ratios or required nursing hours, States have established other policies related to staffing. For instance, in 7 States, a facility must have a RN present 24-hours per day, 7 days per week in 7 States. Twenty-one States allow waivers⁵⁵ of nursing requirements for Medicare and/or Medicaid facilities.

An examination of the Appendix A reveals the variability in State standards that further define Federal standards. For example, Hawaii's regulations (See Appendix A1, page 10) requires at least one RN, 24 hours per day, 7 days per week in a SNF. West Virginia's requirements (See Appendix A1, page 30-32), on the other hand, are much more complicated and detailed. Based upon the number of residents, West Virginia's ratios depend on the number of licensed/non-licensed personnel per resident.

2.6.2 Specific State Licensing Requirements for the Study States

The diversity in State regulations and statutes for nursing home nurse staffing is exemplified in the three States in our study. New York follows Federal regulations without any further State specifications. Texas, on the other hand, requires that at a minimum, each facility must maintain a ratio of one licensed nursing staff person for every 20 residents or a minimum of 0.4 licensed-care hours per resident day. Of the three study States, Ohio appears to hold the most detailed requirements. In Ohio, each nursing home must have:

- at least one attendant on duty for every 15 residents at all times and one other person on duty at all times.
- at least one person working 40 hours per week for every 4 residents.
- with ten or fewer residents, one nurse on duty at least 8 hours per day between 6:00 AM and 5:00 PM and a nurse on call at all other times.
- with 11 to 25 residents, one nurse on duty at least 16 hours per day between 6:00 AM and 12:00 AM and a nurse on call at all other times.
- with 26 to 50 residents, one nurse on duty at all times.
- with 51 to 75 residents, two nurses on duty at all times, provided that at least one nurse

⁵⁵ Many perceive that HCFA's current (nonratio) minimum nurse staffing requirements are often waived. Although HCFA regulations still permit the 8-hour RN and 24-hour licensed coverage per day to be waived (see chapter 4), very few nursing homes, almost negligible, currently receive a waiver. As of March 11, 2000, the current surveys in OSCAR indicate that only 27 facilities throughout the United States have received a waiver of either the RN or LPN coverage requirements. Twenty-three of these 27 waivers come from just two States, Minnesota and Oklahoma. In addition, even for the few nursing homes that receive a waiver, they do not have the entire coverage requirements waived. For example, for those that have received a RN waiver, the average number of hours waived is 21.5 hours per week.

- shall be an RN on duty not less than eight hours between 6:00 AM and 5:00 PM.
- with 76 to 100 residents, at least two nurses. The RN shall be on duty not less than eight hours between 6:00 AM and 5:00 PM.
- with more than 100 residents, an RN on duty at all times and an additional nurse on duty at all times for every 50 residents.

Although both Ohio and Texas have additional minimum ratio requirements, the required ratios in Ohio depend upon resident-specific characteristics. Since the distribution of these other characteristics differs between the two States, it is difficult to determine if the net effect of Ohio's more complicated requirements results in a higher State average nurse staffing ratio.

2.6.3 State Legislation Activities in 1999 Related to Nurse Staffing

Nurse staffing in long-term care has caught the attention of lawmakers across the nation (See Appendix A2). Recently, Arkansas, California, South Carolina, and Wisconsin have adopted new laws to increase minimum requirements for nurse staffing. As of November 1999, legislative proposals in this area have been introduced or are being considered in 19 States. Of these 19, two proposals have passed through committee⁵⁶, two are pending⁵⁷, and one has passed the State legislature⁵⁸. Three States⁵⁹ have considered or are considering changing nurse staffing requirements through regulations. In addition, task forces have formed in some of the States, and they have taken a significant role in proposing legislation.

⁵⁶ New Jersey and New York

⁵⁷ Maine and Michigan

⁵⁸ New Mexico

⁵⁹ District of Columbia, Mississippi, and Pennsylvania

Other States are seeking methods to attract a larger labor pool by increasing wages. The North Carolina Division of Facility Services (NCDFS) reported in September 1999 that seven States had minimum wage rates that were above Federal standards⁶⁰ (Appendix A3). A recent trend has been the implementation of a “pass-through” wage increase where all or a portion of an increase in provider reimbursement is allocated exclusively for nurse staffing salaries and/or benefit. As explained by NCDFS, ten States⁶¹ have implemented Medicaid wage pass-throughs based on a set dollar amount for workers per hour or patient day. The amounts of these pass-throughs range from \$0.50 per hour to \$2.14 per hour and \$4.93 per patient day. Six States⁶² have established wage pass-throughs as a percentage of the increased reimbursement rate. Three States⁶³ have implemented a wage pass-through for all of long-term care. Nine States⁶⁴ have passed a wage pass-through specifically for home care workers and four States⁶⁵ for nursing home CNAs. Furthermore, other States are attracting nurse aides by other means that include offering financial incentives to enhance standards, raising State reimbursement rates for shift differentials, requiring transportation reimbursement, establishing nurse aide career ladders, and placing emphasis on training.

For Ohio, New York, and Texas, State legislatures have considered more stringent requirements, which are outlined in Appendix A4. In Texas, nurse aide ratios were proposed in House Bill 1225, which would have required nurse aide ratios of 1:8 (day), 1:10 (afternoon), and 1:14 (night). The Ohio bill calls for more specific and stringent ratios for nurses and nurse aides. Lastly, New York’s bill, which has been introduced in both the State Assembly and Senate, pushes a number of provisions, including rigorous staffing standards for RNs, licensed personnel, and CNAs based upon shift. These proposed legislative changes were not passed and implemented for the study period discussed in several chapters of this Report. However, it is possible that the general concern with staffing that led to proposed legislative changes noted here and throughout the nation may have impacted staffing levels prior to any newly implemented policies.

2.7 Conclusions

⁶⁰ The current Federal minimum wage is \$5.15 per hour.

⁶¹ Arkansas, Colorado, Massachusetts, Missouri, Oregon, Rhode Island, South Carolina, Texas, Virginia, and Washington

⁶² California, Illinois, Maine, Michigan, Minnesota, and Montana

⁶³ Minnesota, Montana, and Virginia

⁶⁴ Colorado, Illinois, Massachusetts, Missouri, Oregon, Rhode Island, South Carolina, Texas, and Washington

⁶⁵ Arkansas, California, Maine, and Michigan

The sections above demonstrate that there has been increased concern across the country regarding adequate staffing in nursing homes among both those responsible for licensure standards and rate-setters. At least 36 States and the District of Columbia have imposed new, more stringent staffing requirements under their State licensure authority and 19 States have introduced State legislation in this area. Further, at least 10 States now explicitly tie some portion of rates to staff levels or wages and there has been some discussion of adding some feature like that to Medicare payments.

Despite considerable variation among State Medicaid payment systems and between Medicare and Medicaid, all of the nation's public payments for nursing homes are fundamentally driven by historical spending patterns.⁶⁶ Thus, in general, if nursing homes have been historically understaffed, then some public payments could require adjustments if policy makers choose to require substantially different staffing patterns. If adjustments to Medicare's payments were considered, policy makers would need to consider both the level of payments and the advantages and disadvantages of payments that are more closely tied to actual spending on staffing than the current system. These structural features of payment, as noted above, are important to both a system's incentives and its overall cost.

⁶⁶ While independent of any one facility's spending on nursing home care, Medicare's case-mix rates are in substantial part a function of what nursing homes were spending in the 1995 base year trended forward by various inflation factors. Thus, even if the staff times embedded in the RUGs system represent optimal staffing levels, payment rates still could be too high or too low because rates were set using historical costs. For example, it has been argued that the cost reports used to set Medicare SNF rates were inadequately audited and hence, rates may be too high relative to actual allowable spending. In addition, one might ask whether facilities were optimally staffed in the base year.

CHAPTER 3.0 NURSE STAFFING IN U.S. NURSING HOMES⁶⁷

3.1 Introduction

The purpose of this background chapter is to provide an updated portrait of nursing home staffing and examine three policy related issues in light of these staffing levels. To this end, the chapter is divided into four major sections. The first section provides a very general overview of how nursing home nurse staffing in other countries compares to the United States. The reported U.S. staffing levels in this overview are from published literature and there is no attempt to assess the adequacy of the data sources utilized and possibly more accurate alternatives. The second section focuses exclusively on the U.S. and offers an assessment of the three data sources that can provide national estimates of staffing in the United States. All three are found to have limitations, the most serious is that the staffing levels are all self-reported by the facilities themselves and their accuracy is unknown. Nevertheless, in Chapter 7 we have assessed the validity of the OSCAR data and have developed a number of decision rules for arraying the data to improve its reliability. Applying these decisions rules permits the construction of an

⁶⁷ The bulk of this chapter, section 3.4 with the description of nurse staffing, was completed for the Health Care Financing Administration (Contract #500-95-0062-T.O.3) by Alan White of Abt Associates. Abt thanks Elaine Lew and Ed Mortimore, both of HCFA, who shared data and SAS programs with Abt for these analyses. The research depended on 1998 OSCAR data generously provide by Mick Cowles, of Cowles Research Group. In addition, Abt gratefully acknowledges the assistance of Christine Kovner, New York University School of Nursing and Andy Kramer, Center on Aging and Division of Geriatric Medicine, University of Colorado Health Sciences Center. Marvin Feuerberg, HCFA Project Officer, developed the analysis plan for this chapter and wrote several subsections throughout the chapter. The international comparison in section 3.2 was written by Elaine Lew and edited by Jeane Nitsch, both of HCFA. The assessment of data sources, section 3.3, was prepared by Judy Sangl, Agency for Health Care Research and Quality (AHRQ). Editorial assistance provided by Ed Mortimore and Susan Joslin, HCFA.

improved, more accurate OSCAR file for the third section of this chapter: an examination of the current levels and trends of nursing home staffing throughout the United States.

The fourth section examines three policy-related issues in light of the staffing levels presented in the previous section. First, we simulate with these data how many facilities would be affected if the proposed standard recommended by a conference of experts were to be adopted. The conference was convened in April 1998 by the John A. Hartford Institute for Geriatric Nursing, Division of Nursing, at New York (Harrington et. al., 2000).⁶⁸ We also examine how much these affected facilities would have to increase their nurse staffing to meet this proposed standard. Second, we examine whether some facilities might *decrease* staffing in response to a minimum staffing standard, empirically testing the often claimed assumption underlying the opposition to setting or raising minimum staffing requirements. Specifically, we test whether minimum staffing requirements have the unintended consequence of reducing the staffing levels in otherwise better staffed nursing homes, or whether, in short, raising the floor lowers the ceiling. Finally, there is an examination of whether the nursing homes under chain ownership, particularly bankrupt chains, may have reduced their staffing levels in response to their financial vulnerability.

3.2 Nursing Home Nurse Staffing in Other Countries

3.2.1 Diversity of Policies and Approaches

To understand the differences in nurse staffing among foreign countries, one must realize that each country has a unique system for long-term care. Several factors contribute to this diversity. Some countries have held the elderly population in high regard and have viewed the care of the aged population as a priority. Other countries have moved away from institutionalized care in nursing homes and hospitals and have placed a greater emphasis on home care. The payment of health services by private insurers and individuals rather than by the government has also given rise to more varied long-term care structures.

All of these differences in long-term care add to the difficulty in contrasting nurse staffing among countries. Few researchers in the United States have studied staffing in nursing homes

⁶⁸ The Hartford proposal built upon a prior and widely disseminated minimum staffing standards proposed by the National Citizens Coalition for Nursing Home Reform (NCCNHR).

outside the U.S., much less analyzed the relationship between staffing and the quality of care of the residents. Most comparable studies are dated, and their present day applicability is questionable. Adding to the problem of evaluating long-term care abroad is the fact that not only do nursing home services differ from country to country, but each area has a unique definition for a nurse's role and education level. Taking these factors into consideration, the following literature review examines the qualitative and quantitative features of nurse staffing.

Holding true for all countries, pressures on the labor force from the government and the industry can ultimately have an impact on nurse staffing. Denmark⁶⁹, for example, bases many of its social policies on the notion of guarding an individual's right to benefits and services. Encouraging workers to hold the same ideals, this principle sustains a high level of market participation in the health care and social services industries, which, in turn, sustains the tax base that finances these programs and increases investment in services for the elderly.

⁶⁹ Royal Commission on Long Term Care. (1999) *With Respect to Old Age: Long Term Care Rights and Responsibilities*. London: Stationary Office(Cm 4192-1).

In Australia⁷⁰, new funding arrangements have attracted qualified nurse staff to long-term care. However, many nursing homes have eliminated nursing positions and increased the proportion of unlicensed workers, since they are cheaper and more flexible and their scope of practice is unlimited due to the lack of regulatory oversight. A national push has sought to develop competencies and an educational framework that encourages career progression by, for example, funding studies and workshops to detect and investigate problems in these areas. Reforms have reportedly resulted in improvement in the quality of life in residents in the past 14 years.

Similarly, staffing has troubled Great Britain. Nazarko⁷¹ reports that because nursing homes are under-funded, continuously understaffed, and have inappropriate skills-mix, the quality of care of the residents has been compromised. Reports have shown that even non-profit homes are reducing the number of registered nurses to balance their budgets. Nurses view nursing homes as places with unrewarding, backbreaking workloads and little job satisfaction. The worst homes do not offer job security or prospects for promotion. Staff members are also wary that profits will be prioritized over patient care. In addition, Smith and Seccombe⁷² have reported that there is an increasing shortage of fully trained nurses.

⁷⁰ Nay, R., Garratt, S., & Koch, S. (1999). Challenges for Australian nursing in the International Year of Older Persons. *Geriatric Nursing*, 20(1), 14-17.

⁷¹ Nazarko, L. (June 1997) Staffing the homes. *Nursing Management*, 4(3), 22-23.

⁷² Smith, G. & Seccombe, I. (1998) *Changing times: a survey of registered nurses in 1998*. London: Institute for Employment Studies. In Bowman, C. et al. Geriatric care in the United Kingdom: aligning services to needs. *British Medical Journal*. 319:1119-1122, 1999.

3.2.2 Nurse Staffing Levels

Besides working through the labor force, some governments have implemented regulations that establish staffing standards in long-term care. In a geriatric health facility in Japan⁷³ (the equivalent to an American skilled nursing facility), it is required that eight nurses and 20 nurse aides be present per 100 beds. Great Britain's *A Better Home Life*⁷⁴ and *Fit for the Future? National Required Standards for Residential and Nursing Homes for Older People*⁷⁵ have provided residential and nursing home inspectors and providers guidance in determining the sufficiency of nurse staffing.

Nurse staffing standards include:

- Homes must employ an adequate number of qualified and competent staff who have the right balance of skills and experience to meet the needs of residents.
- The National Association of Health Authorities and Trusts' handbook is used by the registration authority to determine staff-mix and levels, since the needs and circumstances of the residents differ from home to home.
- A "first-level nurse" should be on duty throughout the day.
- There must be a minimum of two care staff on duty at all times by day and by night.
- Staff to resident ratios must be as follows:
 - 1:5 in the day, 1:7 in the evening, and 1:10 at night (minimum 2 awake).
- Additional staff must be on duty at peak times of activity.
- Apart from the person in charge--who must be a first-level RN--a third of staff must be registered nurses. Of the remaining care staff, there must be a minimum of 50% qualified members of staff to 50% unqualified by the year 2005.
- Ancillary staff members must be calculated on the basis of the following:
 - 3.5 hours per resident per week for laundry and domestic staff;
 - 2.5 hours per resident per week for catering staff.
- The nursing home owner must be able to provide sufficient evidence that the right level of staffing with appropriate competency and training will be provided.

⁷³ Maeda, Nobuo. (1989). Long-term care for the elderly in Japan. In T. Schwab (Ed.), *Caring for an aging world: International models for long-term care, financing, and delivery* (pp. 254-255). New York: McGraw-Hill Information Services Co.

⁷⁴ Center for Policy on Aging. (1996). *A better home life: A code of good practice for residential and nursing home care*. London.

⁷⁵ Department of Health. (1999). *Fit for the future? National required standards for residential and nursing homes for older people*. London.

In addition to examining the socioeconomic atmosphere and national policies concerning nurse staffing, it is important to consider how the staff delivers care to the residents. Evans⁷⁶, in a tour of long-term care facilities in four European countries, found some interesting features in Swedish nursing homes, which house primarily physically-impaired residents⁷⁷. Finding Swedish nursing homes to have a homelike environment, Evans observed that the resident's preferences is prioritized in all aspects of daily living, for the staff pay attention to each resident's habits and desires.

⁷⁶ Evans, L.K. (1997) Trends in aging care in Scotland and Scandinavia. *Journal of Gerontological Nursing*, 23(9), 32-36.

⁷⁷ Because of the idea of placing the elderly with the mentally impaired violates good care and humanity, old-age homes, which can be equated to U.S. nursing facilities, and psychogeriatric facilities were made distinct and separate. In the U.S., a large number of nursing home residents have mental disorders.

In the Netherlands, Ribbe⁷⁸ describes nursing homes as centered more on the patients' total functioning and well-being, rather than being primarily disease-focused. Table 3.1 shows that in addition to nurses, nurse aides, and physicians on staff, the paramedic staff is valued just as well in a Dutch nursing home and helps ensure healthy aging and an adequate living environment for residents.

Table 3.1. Staff per 100 Occupied Beds in Dutch Nursing Homes in 1986 (Absolute Numbers) ^{79,80}			
	Nursing homes for the physically-impaired	Psychogeriatric nursing homes	Mixed nursing homes
Total staff ⁸¹	114	108	114
Total nursing staff ⁸²	73	73	75
Total paramedic staff ⁸³	8	8	9

⁷⁸ Ribbe, M.W. (1993) Care for the elderly: the role of the nursing home in the Dutch health care system. *International Psychogeriatrics*, 5(2), 213-222.

⁷⁹ Assuming the mean 74 staff members refers to full time equivalents (FTEs) and an FTE is equal to 40 hours per week, the reported staffing for 100 occupied beds, as indicated in the table, converts to 4.23 nursing hours per resident day (and 3.7 hours per resident day is an FTE equal to 35 hours per week).

⁸⁰ Ribbe, M.W. Care for the elderly: the role of the nursing home in the Dutch health care system. *International Psychogeriatrics*. 5(2): 213-222, 1993.

⁸¹ Includes nurses, nurses-in-training, nurse aides, paramedical staff, and physicians.

⁸² Includes nurses, nurses-in-training, and nurse aides.

⁸³ Includes physiotherapists, occupational therapists, speech therapists, activity/recreational

Mean nurse staffing for all nursing homes: 74

therapists, psychologists, dieticians, and social workers.

In comparison, Swiss nursing homes have a different mix of staff members. As reported in an informal correspondence with Dr. Alfred J. Gebert⁸⁴ from the Association for Quality Assurance in Health, the following statistics reflect the average FTEs per 140 residents:

Physician	0.70
Aide to physician and in charge of medication	1.45
Physiotherapist	1.05
Ergotherapist	2.40
RN	35.39
LPN	26.11
Certified Aide	11.00
Aide	18.08
Administration	4.80
Cleaning	10.74
Kitchen	12.59
Laundry	4.07
Cafeteria	3.69
Technical services (caretaker)	2.80
Total	134.87

Assuming that an FTE is 42 hours per week, total nursing care hours are 3.9 hours per resident per day (hprd), with the following distribution:

RN	1.52 hprd
LPN	1.12 hprd
Certified Aide	0.47 hprd
Aide	0.77 hprd

According to Dr. Gebert, a Swiss health policy expert, nurses in Switzerland have a significant amount of training- RNs undergo four years of education, LPNs go through three years, registered aides go through one year, and nurse aides go through four weeks. In contrast, 58% of the RNs in the United States do not have a 4-year degree and nurse aides are required to have only 75 hours of training.

⁸⁴ A.J. Gebert, (personal communication, December 30, 1999).

In addition to the Netherlands, we have found one study that compared the nurse staffing levels of several European countries. In general, it appears that these countries have more staff in nursing homes compared to the United States. With a focus on resource allocation and Resource Utilization Groups version III (RUG-III) in nursing homes, Carpenter et al.⁸⁵ conducted a study of the relationship between direct care time and patient characteristics in Sweden, the United States, Japan, Spain, and Britain. Table 3.2 includes data from this study.

⁸⁵ Carpenter, G.I., Ikegami, N., Ljunggren, G., Carrillo, E., & Fries, B. (1997) RUG-III and resource allocation: comparing the relationship of direct care time with patient characteristics in five countries. *Age and Ageing*, 26-S, 61-65.

Table 3.2. Direct care time in nursing home residents across five countries ⁸⁶ .					
	Japan	Sweden	England and Wales	Spain	United States ⁸⁷

⁸⁶ Ibid.

⁸⁷ We assume from the number of reported cases (7648) that the nursing time reported here is derived from HCFA's 1990 Staff Time Measurement (STM) studies (see Chapter 13). These staff times appear quite differently from subsequent STM studies conducted by HCFA in 1995 and 1997 (see Chapter 13, Table 13.2), which report total mean resident specific time of 149 minutes (and 250 minutes of combined resident specific and nonspecific resident staff time) per resident day. We are not sure what accounts for these different estimates. The table from which this table was derived does not explicitly label the staff time as "direct care time," although this would seem to be a reasonable inference given the title of the article and the reported levels would be extremely low if they referred to total nursing time. Another possible reason for the different time estimates is that the 1995 and 1997 studies placed an emphasis upon selecting facilities and units within facilities that had high Medicare volume and provided a high percentage of rehabilitative care. The selection of these facilities and units increases the reported staff times. Finally, a

Total number of cases	873	405	1120	822	7648
Average nursing time in minutes per patient per case (Standard Deviation)	84.4 (49.6)	133.7 (78.9)	155.5 (85.8)	127.3 (78.3)	118.3 (68.5)

3.2.3 Conclusion: Nursing Home Nurse Staffing in Other Countries

From the limited information reviewed above, it is difficult to derive exact staffing comparisons between the U.S. and other countries. The research reviewed was conducted on different long-term care systems and based on different definitions of nursing categories, FTEs, and training. In addition, staffing was not the main focus of most of the articles. Although exact comparisons are not possible, a pattern emerges with respect to *relative* differences: nursing homes in the U.S. staff at much lower levels than in the other countries. In addition, the distribution of nursing hours in other countries is toward higher skilled staff (e.g., registered nurses) than is typically found in the U.S. where about 60% of total nursing hours are provided by the least skilled staff (i.e., nurse aides), as will be shown later in this chapter.

3.3 General Assessment of National Nurse Staffing Data Sources

3.3.1 Introduction

variety of adjustments to the reported times may have been made in order to develop a “clinically smoothed” set of RUG categories and time estimates.

There are three sources of uniform national data on nurse staffing in nursing homes.⁸⁸ Two of these sources are national sample surveys, neither of which was designed to provide State-level estimates. The third source is data from the Health Care Financing Administration's (HCFA) On-Line Survey, Certification and Reporting (OSCAR) system which is an administrative database for all health care providers certified under the Medicare and Medicaid programs. In addition to standard descriptive information for all providers, OSCAR contains information from the State surveys of all certified nursing facilities. Each of these three sources has employed somewhat different definitions of a facility, staffing and resident counts and used different data collection procedures. On this basis alone, one would expect some differences in computed nursing hours per resident day. In the following sections there is a description of each of the data sources, attached documentation on staffing questions, and a summary of limitations .

3.3.2 Medical Expenditure Panel Survey (MEPS)

The first sample survey is the 1996 Nursing Home Component (NHC) of the Medical Expenditure Panel Survey (MEPS) which is a national, year long, panel survey of nursing homes and their residents. It is part of a series of surveys sponsored by the Agency for Healthcare Research and Quality (formerly Agency for Health Care Policy and Research) to collect information on health care utilization and expenditures. In addition to providing an estimate of use, expenses and sources of payment for nursing home services and health care for nursing home residents, the MEPS/NHC survey permits estimates for nursing home facilities of: services routinely provided, staffing, numbers of beds and residents and facility structure, type of ownership, expenses and revenue. A nursing home was defined as: a facility or a distinct part of a facility certified by Medicare or Medicaid or licensed as a nursing home with three or more beds that provides onsite supervision by an RN or LPN 24 hours a day (Potter, 1998). The survey used a stratified two-stage systematic sample in which the first stage was for selecting facilities and the second stage was for selection of persons in the facilities (Potter, 1998).

⁸⁸ Medicaid cost reports provide nursing home nurse staffing data for Medicaid-certified nursing homes. Unfortunately, these data do not provide staffing information for Medicare-only facilities. More importantly, the reported data use different definitions and do not provide uniform data across the States. However, in some respects the staffing data are superior. See Chapter 8 for an analysis of these data.

A screener/recruitment round was conducted by telephone with scripted materials to: (1) verify the facility's name and address; (2) eliminate facilities that were definitely ineligible; and (3) recruit their participation and schedule an appointment for Round 1. Advance letters were sent to nursing homes prior to this screener round. In the first Round, an interviewer visited the facility to administer the Facility Questionnaire using Computer Assisted Person Interview (CAPI) technology, distribute and collect the paper copy of the Round 1 Self-Administered Questionnaire (SAQ) and collect the facility's printed rate schedule. The SAQ is given to the facility administrator (or designee) during the administration of the Round 1 Facility Questionnaire. The SAQ collects information that a pretest demonstrated could not be easily collected by in-person interviewing such as staffing information (Potter, 1998). After the SAQ was shown to the respondent, the interviewer would indicate if: (1) the SAQ was completed; (2) the SAQ was left with the respondent to pick up later in the interview day; (3) appointment was made for phone follow up for completion if it could not be completed that same interview day; or (4) it was referred to someone else for completion. A SAQ with staffing data is also administered in Round 3. The interviewer had to determine the status of the SAQ before leaving the facility; the survey data processing contractor would not accept any nursing home interview if the SAQ status item was not completed (Potter, 2000).

In the 1996 MEPS/NHC, nursing home staffing (RN, LPN and aides) is counted for the second full week in the January 1996 and the second full week in December. For MEPS the respondent is asked to record the number of FTE and part-time nurses for both employees and contract nursing staff hired by the nursing home from an agency. No distinction is made for administrative nurses. They would be included in the count. Full time is defined as at least 35 hours per week while part time is less than 35 hours per week. The Round 3 instrument also collects information on the staff hired during the time period January 1 and December 31, 1996. The questionnaire gives further clarification on work week definition and that the staffing questions are only for certified or licensed nursing facility beds. There are no instructions for calculating FTE employees.

The response rate for the Round 1 facility questionnaire was 85%; of those, 91% completed the Round 1 SAQ, yielding a round 1 response rate of 77%. The response rate for the Round 3 SAQ was 66% (Potter, 2000).

The 1996 MEPS/NHC also collected data on nursing home residents as of: January 1, 1996, and the night prior to the Round 1 interview, for those admitted during the year, those discharged during the year, and who used a nursing home any time during the year. It is possible to make estimates for the number of admissions to the nursing home and the number of discharges from the nursing home. A public use file (PUF) on the MEPS nursing home data has been released

and data have been published on residents and some facility characteristics. However, as of April 2000, there has been nothing published on staffing and it is not included in the PUF released to date.

3.3.3 National Nursing Home Survey (NNHS)

The 1997 National Nursing Home Survey is the fifth in a series of nursing home surveys sponsored by the National Center for Health Statistics. For the purposes of the 1997 NNHS, a nursing home was defined as a facility with three or more beds that routinely provide nursing care services. The facility could be certified by Medicare or Medicaid, or not certified but licensed by the State as a nursing home. The NNHS used a stratified two-stage probability sample design (Gabrel, 2000).

A letter was sent to the sampled nursing home informing them of the purpose and content of the survey. The letter was followed by a phone call within 10 days to discuss the survey and make an appointment with the administrator or designee for an in-person interview by a Census interviewer. The survey consists of a facility, a current resident and a discharged resident questionnaires. The overall response rate for the survey was 94.5 percent.

The facility questionnaire requests separate FTE employee information on staff, including RN, LPN and licensed vocational nurses (LVN), nurse aides and orderlies. A flashcard with 12 specific categories of employees (plus other category) is given to the person being interviewed. The Census interviewers are instructed to allow each facility to use its own definition of the number of hours they consider as full-time to reduce respondent burden (Sirrocco, 2000). If the respondent cannot provide FTE information, the interviewer collects information on the number of full time and part time employees for each category. They do not ask about temporary pool employees. There were no separate instructions regarding administrative nurses. The reference period for staffing data is the day of the interview (Sirrocco, 2000).

The survey asks for the total number of current residents on the rolls of the facility as of midnight of the day prior to the interview. This question is preceded by a question on the total number of currently available beds for residents, whether or not they are in use at the present. Discharges are defined as residents who were discharged from the facility during a designated month between October 1996 and September 1997. Deaths were included as part of discharges.

Facility data on staffing, current residents and discharges are reported in the overview of the 1997 NNHS (Gabrel, 2000).

3.3.4 On-Line Survey, Certification and Reporting (OSCAR) System

If a nursing home facility wishes to be certified for the Medicare and Medicaid programs, it must have an initial survey and periodic surveys thereafter to establish that it complies with all Federal regulatory requirements. On average, nursing homes are surveyed every twelve months but not less often than every 15 months. The surveys are conducted by State agencies under contract with HCFA. In 1997, about 4% of all nursing home facilities and less than 3% of all beds were not certified by either the Medicare or Medicaid programs (Gabrel, 2000). The OSCAR system contains three types of information for all certified nursing homes: (1) provider information, including facility characteristics and staffing data; (2) health survey information such as facility-level summary information regarding resident characteristics; and (3) survey deficiencies. Harrington et al (1999) reports that OSCAR data are collected in 2 different ways. First, the nursing home completes a standardized form on facility and resident characteristics and staffing levels at the beginning of each survey, and certifies that the information provided is accurate. Then, as part of the survey process, the State surveyors check the data provided by comparing the facility report with residents' and staffing records and observations of residents. After this review, the surveyor staff enter this data from the written forms into the computerized OSCAR system. Second, the surveyors make decisions about whether the facility has met a series of standards; if a facility does not meet a particular standard, the surveyor reports a deficiency; i.e., the standard was not met. These decisions are also entered into the OSCAR system.

The Long Term Care Facility Application for Medicare and Medicaid (HCFA-671) is the form used to collect the information for the OSCAR system. HCFA regulations require nursing facilities to meet minimum staffing standards. However, waivers may be granted under certain conditions where there is a personnel shortage and where there is no threat to the health and safety of residents. The form asks if the facility has a staffing waiver either for the seven day RN requirement or the 24-hour licensed nursing requirement. If there is a waiver, the facility is asked the number of hours waived per week.⁸⁹

As part of facility staffing information, the form requests data on seven categories of nursing services: a) RN Director of Nurses, b) nurses with administrative duties, c) RNs, d) LPNs/LVNs,

⁸⁹ As was noted in Chapter 2, current HCFA staffing regulations permit the granting of waiver to nurse staffing requirements; however, hardly any are in fact granted.

e) certified nurse aides, f) nurse aides in training, and g) medication aids/technicians. The form asks for the specific number of hours worked providing these services by full time, part time and contract staff separately. The reference period is for the most recent complete pay period (if longer than two weeks, the period is the last 14 days). If individuals provide service in more than one category, the instructions say to separate out hours performed in each service. Full time is defined as 35 or more hours worked per week and part time is anything less than 35 hours per week. Contract staff are defined both as individuals under contract and organizations under contract (an agency to provide nurses).

Similarly, data on the numbers of residents are captured on form HCFA-672 (Resident Census and Conditions of Residents). It is important to note that there are also ambiguities on this form that may lead to undercounting or overcounting residents. Specifically, the facility is asked to report the “total number of residents in certified beds for whom a bed is maintained, on the day the survey begins.” This count explicitly includes residents who are temporarily in the hospital or away from the facility but are expected to return.

The State survey staff enter the data for each nursing home survey within 45 days of the survey. There are only a very limited number of “front-end edit” checks to identify entry errors. In addition, HCFA regional offices conduct reviews of their OSCAR data from each State survey.

3.3.5 Summary: National Data Sources for Nurse Staffing

All three of the nurse staffing data sources use slightly different definitions of nursing homes, different data collection procedures, different reference periods, and collect different data on nursing home staff. They also use different definitions for resident counts - a difference which impacts the key variable in this entire study, the number of hours (or FTEs) *per resident day*. In a sense, a nursing home’s total reported nurse staffing is not helpful unless we also know how many residents, and their acuity levels, are provided care by these staff. Both the 1996 MEPS and 1997 NNHS nursing home data on nurse staffing are self-report, although the first is primarily self-administered and the latter is administered by in-person interview. FTE hours are clearly defined in MEPS but defined by each facility in the NNHS. Most importantly, none of the staffing data provided are independently validated against another source such as payroll records.

With the OSCAR staffing data, however, there would appear to be a possibility of some checks of the State surveyor with records available at the facility at the time of the survey. In addition, the OSCAR data are essentially an ongoing census of the 95% of nursing homes that are certified. As such, State-level staffing estimates can be generated. These State-level estimates

are not possible with the sample surveys of the MEPS and the NNHS. Hence, we have employed the OSCAR data for the analysis of nurse staffing in U.S. nursing homes, described in the following sections of this chapter. We have recognized, however, the limitations of the OSCAR data that are addressed below and in Chapter 7.

3.4 Trends and Current Staffing in U.S. Nursing Homes: 1996-1999

A primary purpose of this section is to understand the impact of potential minimum staffing requirements. Understanding the impact of alternative staffing requirements requires analysis of mean staffing levels in U.S. nursing homes (overall, stratified based on facility characteristics, and by State), and how these staffing levels have changed over time, but, more importantly, requires analysis of the *distribution* of staffing across facilities, which is emphasized in these analyses.

3.4.1 Data Sources

The Health Care Financing Administration's Online Survey Certification and Reporting System (OSCAR) database contains information on every nursing home in the United States that is certified by Medicare and/or Medicaid. The data source and the decision rules used to determine which facilities to exclude from the analyses are described in Chapter 7. These decision rules resulted in the exclusion from these analyses of facilities that report: zero residents; more than 12 hours or less than an 0.5 hours per resident day; more total residents than total beds; zero RN hours and more than 60 beds; and large changes in staffing or resident levels across time.

National OSCAR data for 1996-1999 were used in the descriptive analysis, though data for 1999 included only assessments through June 30, 1999, as these were the only 1999 data available at the time that our analytic file was created. The sample included data for 18,861 facilities, with the following number of facilities in each year:

- 1996: 16,208
- 1997: 16,107
- 1998: 15,354
- 1999: 8,142

After applying the exclusion criteria, the number of facilities (and percent of original sample) included in the sample was:

- 1996: 14,335 (88.4%)
- 1997: 13,598 (84.4%)
- 1998: 13,005 (84.7%)
- 1999: 7,019 (86.2%)

3.4.2 Staffing Levels in U.S. Nursing Homes: 1996-1999

Change in staffing levels across time. Mean staffing levels were relatively constant between 1996 and 1999. Total hours per resident day (excluding Directors of Nursing) increased from 3.18 to 3.25 between 1996 and 1997 (an increase of about 2.2%), but there was little change between 1997 and 1999 (Figure 3.1, also see Appendix B1, Table B.1a). The overall distribution of staffing by category was also relatively constant during this period⁹⁰.

- Average RN hours per resident day increased from 0.48 to 0.53, accounting for about 50% of the 1996-1997 increase in total hours per resident day, and changed very little between 1997-1999.
- LPN hours remained constant across the study period, ranging from a low of 0.71 hours per resident day in 1996 to 0.72 hours for 1999.
- There was little change in nurse aide hours, which were between 1.99 and 2.01 hours per resident day across all four years.

Distribution of staffing levels. For purposes of understanding the potential impact of minimum staffing requirements, it is important to focus on the distribution of staffing across facilities rather than on mean staffing levels. Because the distribution of staffing, like the mean, was

⁹⁰ Note that RN Director of Nursing hours are not included in these figures, but this information is included in Appendix B, which includes additional detail on changes in staffing levels across time. Mean RN Director of Nursing hours was 0.11 for all four years. Although nurse staffing levels have been relatively constant over the recent period, it has increased substantially if a longer period is examined. OSCAR staffing data is not readily available from the 1980s, but the 1985 and 1997 National Nursing Home Survey provides estimates for a much longer period. From the 1985 data, we have calculated the RN, LPN, and Aide FTEs per 100 residents as 5.6, 8.0, and 33.6, respectively. In 1997, the rates were 8.8, 11.9, and 38.3 respectively. This means that over a 13 year period, the RN rate has increased 57% and the LPN rate has increased 49 percent. In contrast, the Aide rate increased a much lower 14% - not surprising, given that the OBRA regulations implemented in October of 1990 provided minimum requirements for licensed staff. Of course, these figures do not take into consideration possible changes in acuity and occupancy rates which are much lower now.

stable across time, we present analyses of the distribution of staffing for 1998, the most recent complete year for which OSCAR data were available.

- Total hours per resident day followed a normal (i.e., bell-shaped) distribution, with a long tail reflecting the small number of facilities with very high staffing levels (Figure 3.2 and Appendix B.3a). Rounding to the nearest .05 hours per resident day, the most common level of total hours per resident day was 2.8 hours (448 facilities, or 3.4%); 68% of facilities had between 2.25 and 4 hours. There were very few facilities with fewer than 1.5 or more than 4.5 total hours per resident day.
- There was less variance across facilities in RN hours per resident day (Figure 3.3 and Appendix B.3b). Twenty-four percent of facilities had between 0.2 and 0.3 RN hours. Fewer than 20% of facilities had more than 0.6 RN hours, and only 10% of facilities used more than 1 RN hour per resident day.
- The most common values of total RN+LPN hours were 0.80 and 0.85, and 75% of facilities used between 0.6 and 1.3 RN+LPN hours (Figure 3.4, Appendix B.3c). This distribution had a long tail, as 10% of facilities had more than 2.0 hours, including a small number that had more than 5.0 RN+LPN hours.
- Nurses aide hours followed an approximately normal distribution, with a small spike at zero, and a long tail for the small number of facilities that used more than 4 nurses aide hours per resident day (Figure 3.5, Appendix B.3d). Nearly 40% of facilities had nurses aide staffing levels in the 1.7 to 2.15 range, and only 10% of facilities reported fewer than 1.25 nurses aide hours. More than 6% of facilities used more than 3 nurses aide hours per resident day.

Staffing levels for hospital-based and freestanding facilities. Mean staffing levels were much higher at hospital-based facilities than at freestanding facilities. In 1998, for example, mean total hours per resident day were 5.36 at hospital-based facilities compared to 2.95 for free-standing facilities (Figure 3.6). A similar difference was observed for 1999. Staffing levels for each labor category were considerably higher at hospital-based facilities, but the differences were especially large for RNs:

- In 1999, mean RN hours per resident day were nearly 4 times higher in hospital-based facilities (1.68 hours compared to 0.35 hours).

- LPN hours per resident day were nearly twice as high at hospital-based facilities (1.26 hours for 1999) than at freestanding nursing homes, which averaged 0.65 LPN hours in 1999.
- Nurses aide hours were about 25% higher in hospital-based facilities.

Separate from the much higher mean staffing levels for hospital-based facilities, the distribution of staffing was quite different for the two types of facilities. Reflecting the fact that 87% of facilities were freestanding, the distribution of total hours per resident day for freestanding facilities (Figure 3.7) was quite similar to the distribution across all facilities shown in Figure 3.2. There was a great deal of variance in staffing levels for hospital-based facilities (Figure 3.8). The most common level was in the 3.15 to 3.55 range, but more than 50% of facilities reported more than 5 hours per resident day, and more than 10% used more than 8 hours per resident day. Almost no freestanding facilities reported staffing levels this high.

Mean staffing levels for non-profit, for-profit and government facilities. Mean staffing levels were consistently higher for non-profit facilities than either for-profit or government-owned facilities. For example, in 1998, mean total hours per resident day were 3.88 at non-profit facilities compared to 3.79 at governmental facilities, and 2.93 across for-profit facilities (Figure 3.9).

Staffing levels for all three staff types were higher in non-profit than in for-profit facilities, but the difference in use of RNs was especially large. In both 1998 and 1999, mean RN hours per resident day were more than twice as high at non-profit facilities than at for-profits. LPN hours were 0.14 (about 15%) lower among for-profits than at non-profits. Nurses aide hours were very similar for non-profit and government facilities, and were about 20% higher at these facilities than at for-profit facilities.

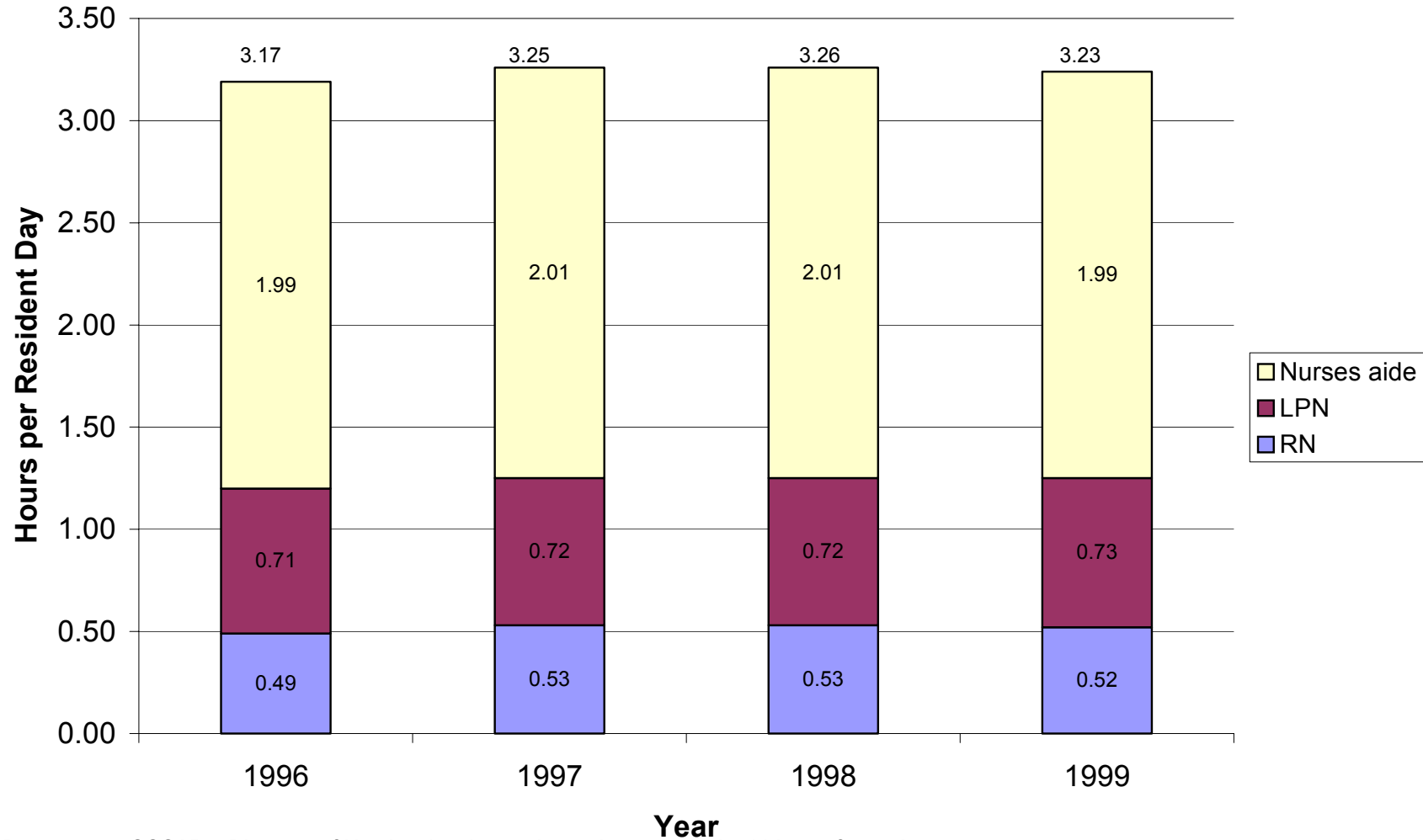
Mean staffing levels based on proportion of Medicare resident. Staffing levels were much higher for facilities with at least 15% Medicare residents than for facilities with a lower proportion of Medicare residents. In 1998, total hours per resident day increased from 2.83 - 3.00 for facilities with less than 15% Medicare residents to 4.81 for facilities with more than 15% Medicare residents (Figure 3.10). Much of the difference was due to the greater use of RNs at facilities with at least 15% Medicare residents. In 1999, mean RN hours were 1.37 in these facilities, compared to 0.32 to 0.37 for facilities with lower percentages of Medicare residents.

A disproportionate share of hospital-based facilities had at least 15% Medicare residents, and this accounted for part of the difference in hours for high-Medicare facilities. Forty-four percent

of facilities in the high-Medicare category were hospital-based (compared to about 6% of facilities in the lower Medicare categories). The difference in staffing levels based on the proportion of Medicare residents remained, however, even when the two types of facilities were examined separately.

- For hospital-based facilities, total hours per resident day were 3.7 for facilities with less than 15% Medicare residents compared to 6.2 for facilities with at least 15% Medicare residents
- RN hours at hospital-based facilities were 2.3, compared to 0.54 at other hospital-based facilities.
- For freestanding facilities, mean total hours were around 2.85 for facilities with less than 15% Medicare residents, and 3.6 for facilities with 15% or more Medicare residents.

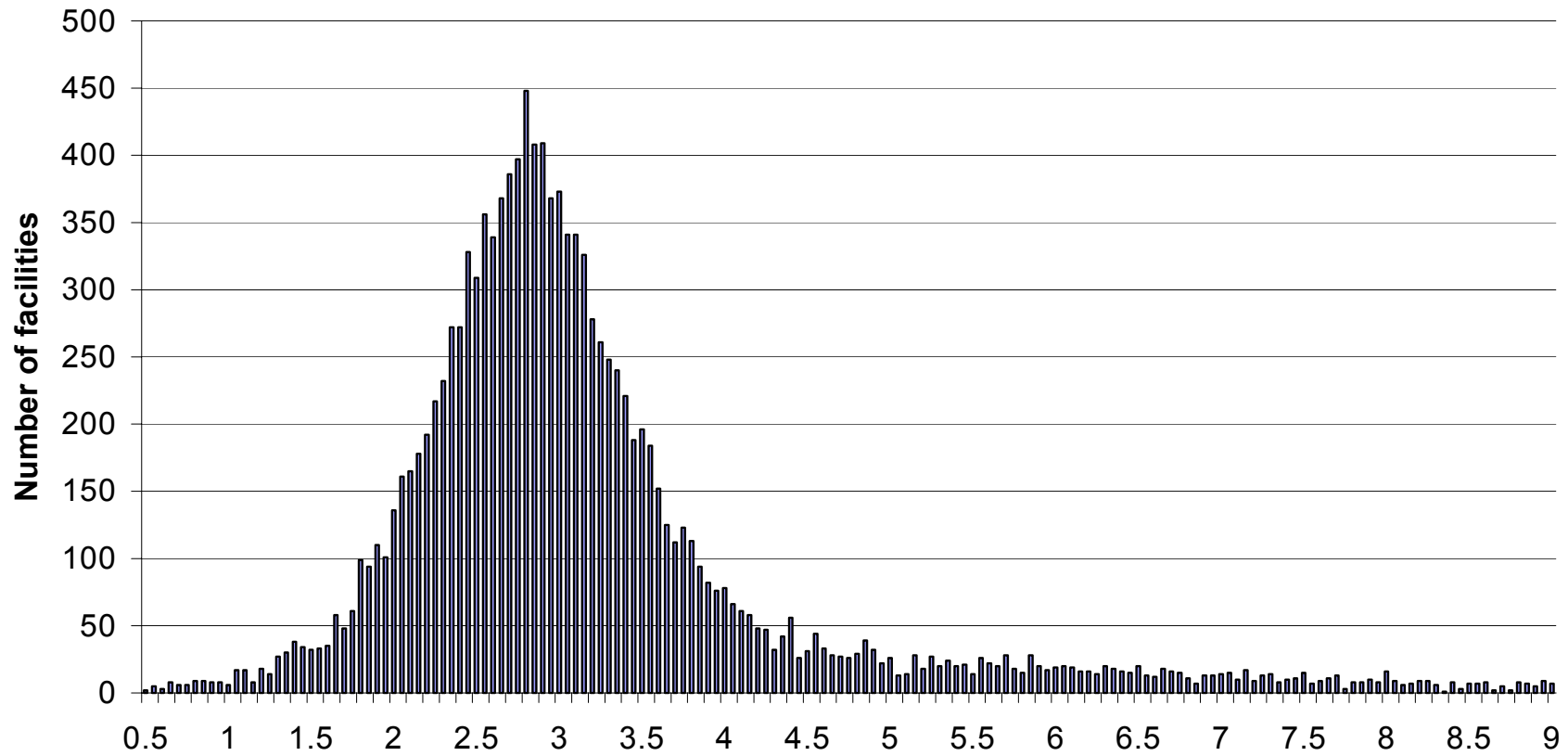
Figure 3.1: Staffing Levels in U.S. Nursing Homes: 1996-1999



Data source: OSCAR; Directors of Nursing time is not shown, but averaged 0.11 hours for each year.

N=14,335 for 1996, 13,598 for 1997, 13,005 for 1998, 7,019 for 1999 (includes assessments completed prior to July 1, 1999 only).

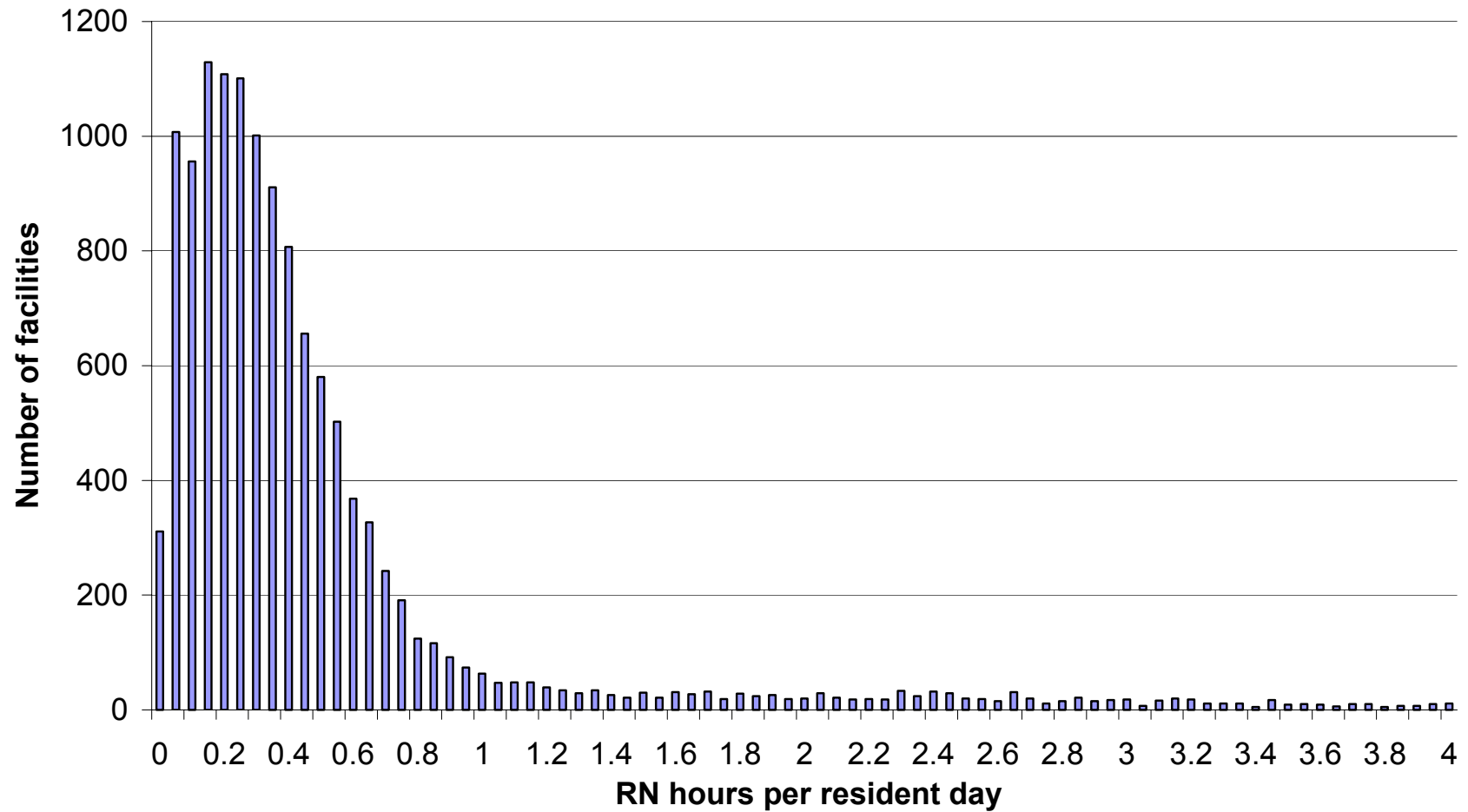
**Figure 3.2: Staffing Levels in U.S. Nursing Homes:
Distribution of Total Hours per Resident Day, 1998**



Data Source: OSCAR; N=13,005

Note that the 1 percent of facilities reporting more than 9 total hours per resident day have been omitted from the chart.

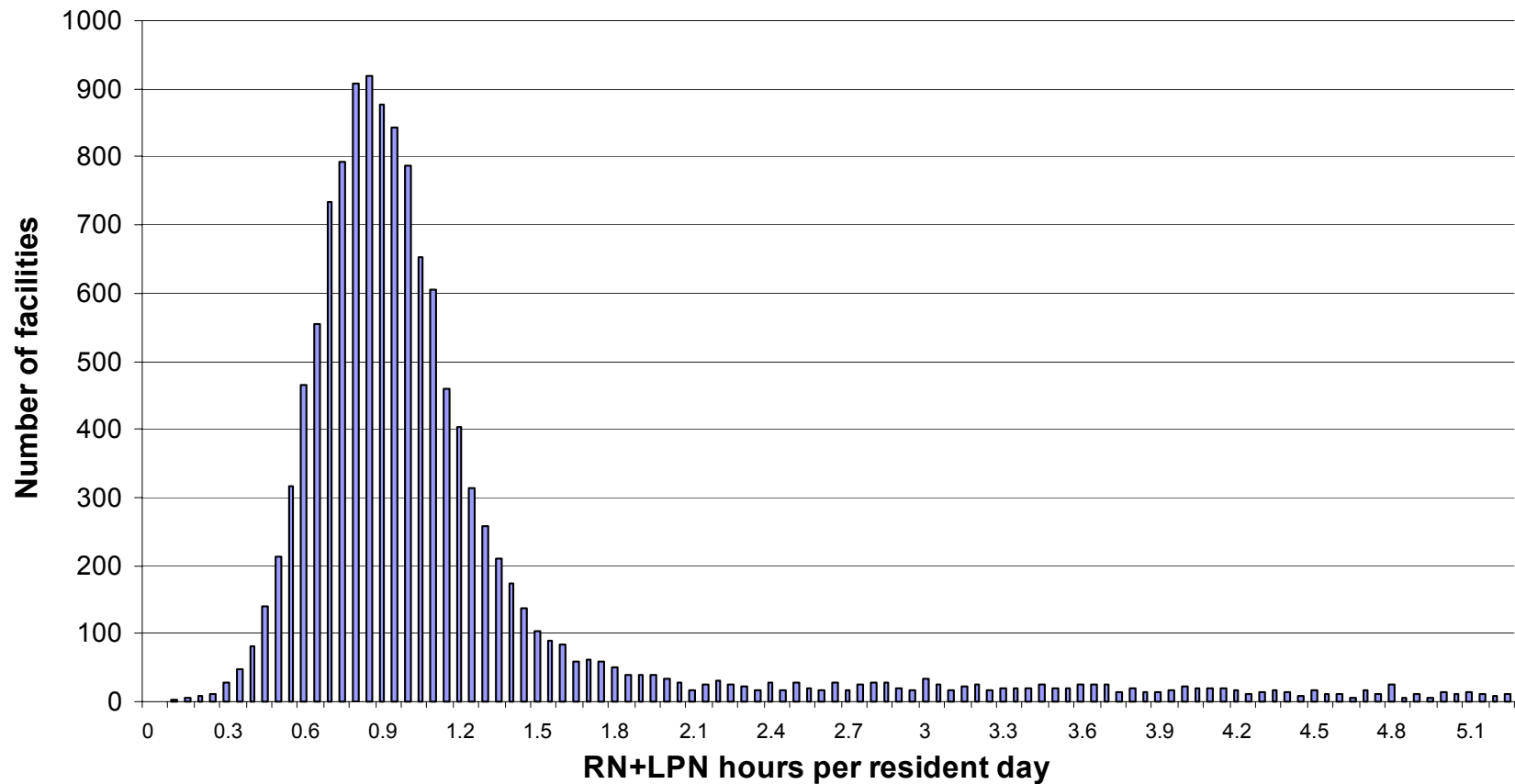
**Figure 3.3: Staffing Levels in U.S. Nursing Homes:
Distribution of RN Hours per Resident Day, 1998**



Data source: OSCAR; N=13,005

Note that the 0.8 percent of facilities reporting more than 4 RN hours per resident day have been omitted from the chart.

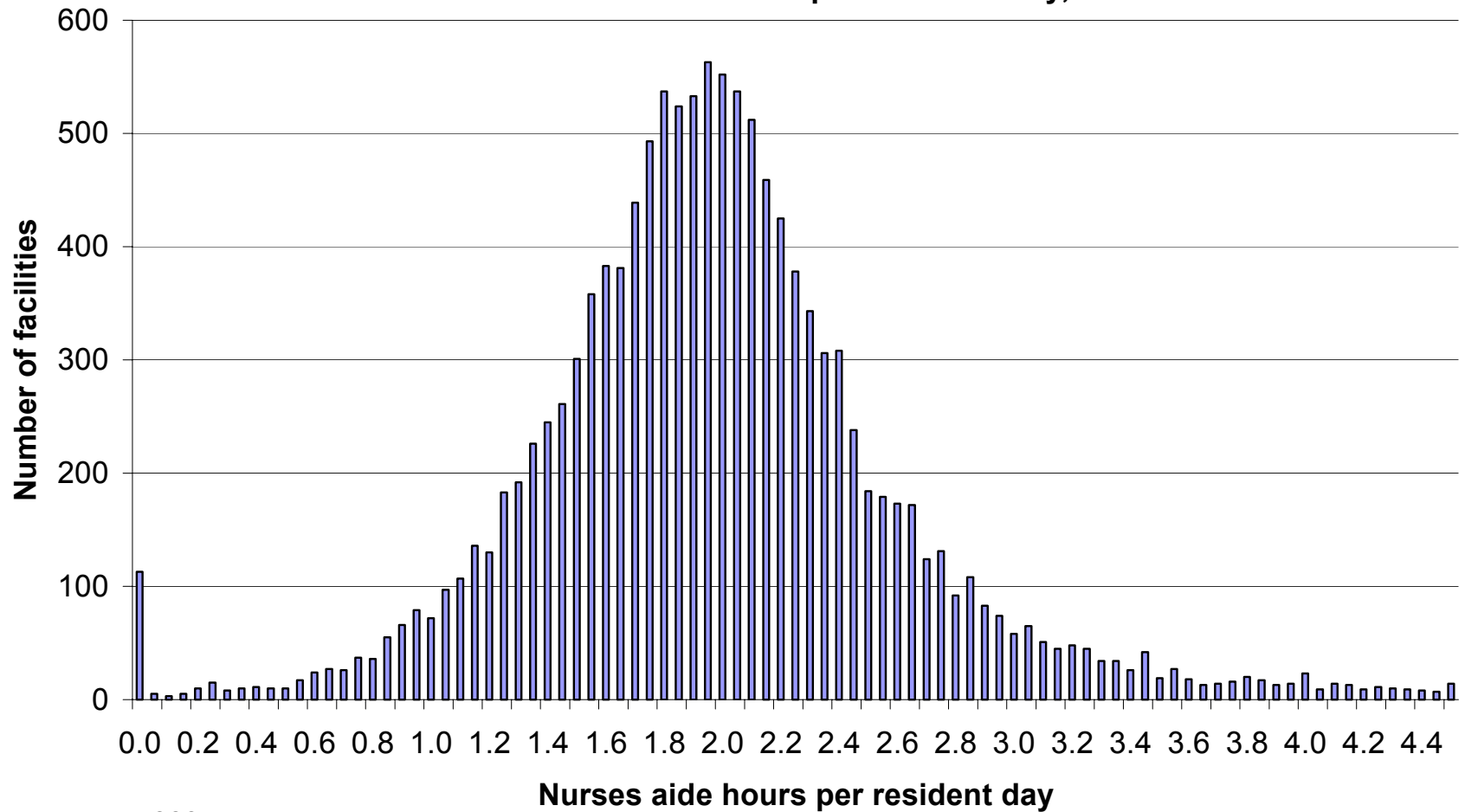
**Figure 3.4: Staffing Levels in U.S. Nursing Homes:
Distribution of RN and LPN Hours per Resident Day, 1998**



Data source: OSCAR; N=13,006

Note that the 1 percent of facilities reporting more than 5.25 RN+LPN hours per resident day have been omitted from the chart.

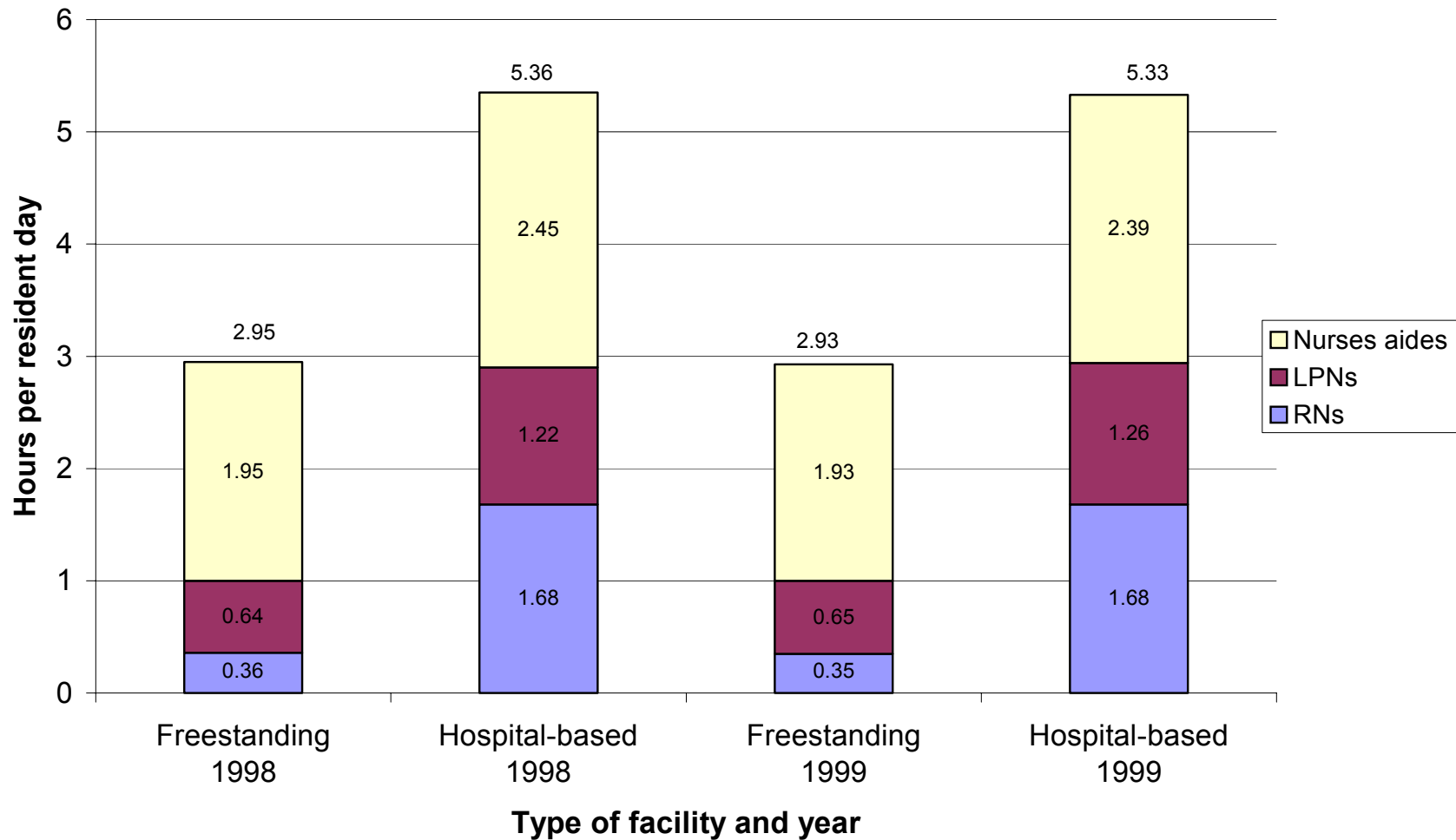
**Figure 3.5: Staffing Levels in U.S. Nursing Homes:
Distribution of Nurses Aide Hours per Resident Day, 1998**



Data source: OSCAR; N=13,005

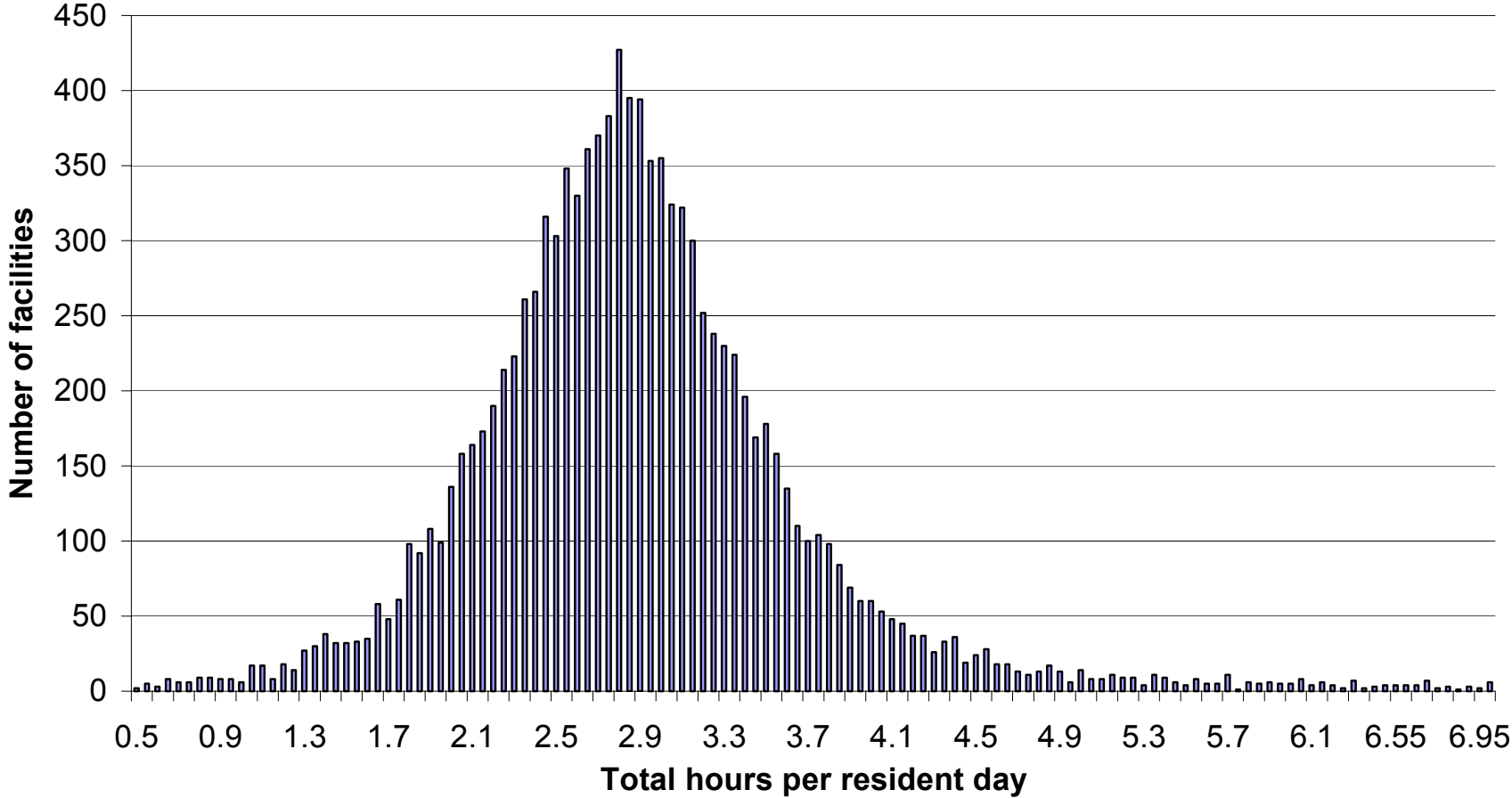
Note that the 1 percent of facilities reporting more than 4.5 nurses aide hours per resident day have been omitted from the chart.

**Figure 3.6: Staffing levels in U.S Nursing Homes:
Freestanding and Hospital-Based Facilities: 1998-1999**



Data source: OSCAR; Directors of Nursing time is not shown, but averaged 0.11 hours for each year.
N=13,005 for 1998, 7,019 for 1999 (includes assessments completed prior to July 1, 1999 only).

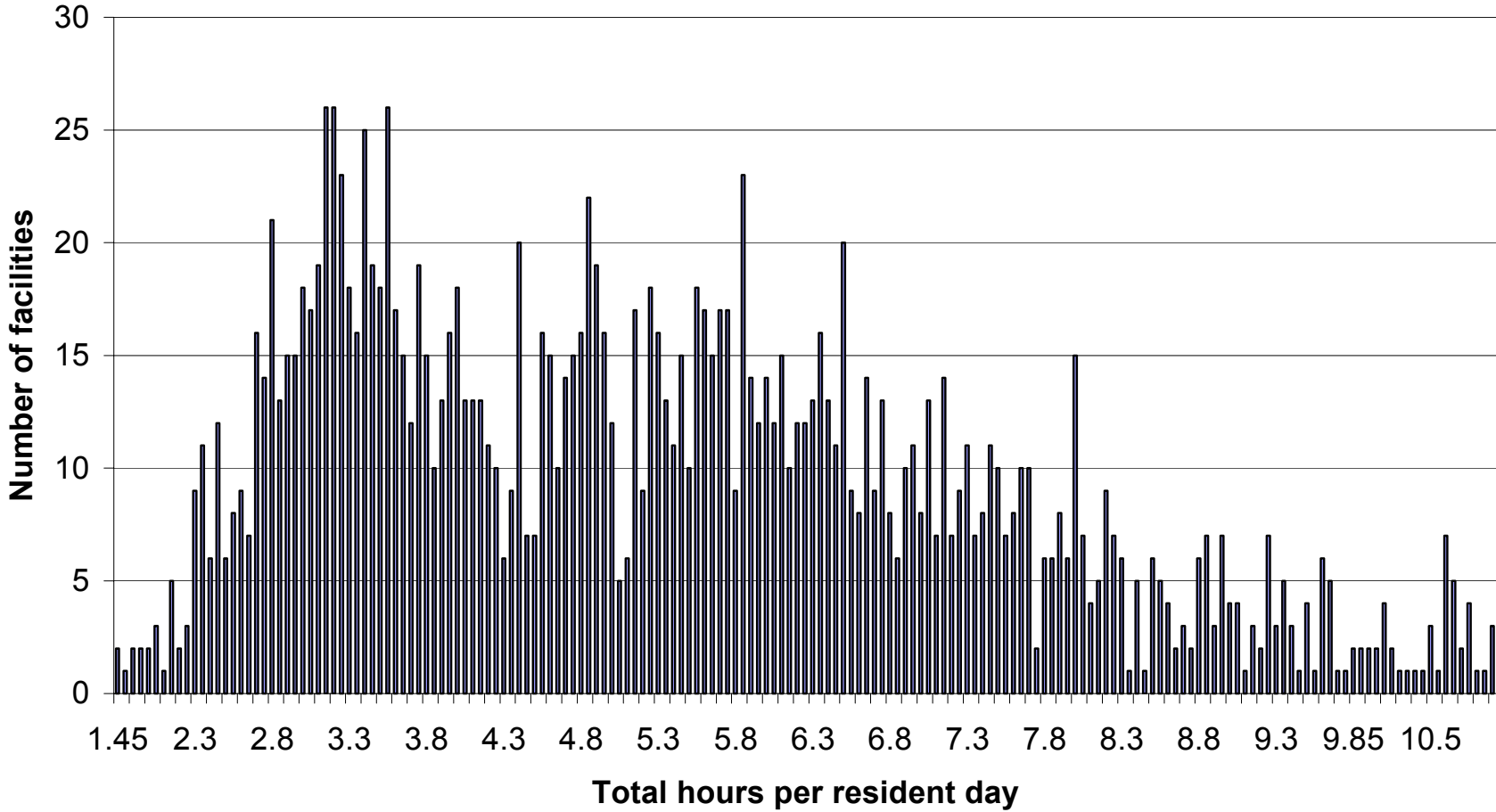
Figure 3.7: Staffing Levels in U.S. Nursing Homes: Distribution of Total Hours per Resident Day for Freestanding Facilities, 1998



Data Source: OSCAR; N=11,295

Note that the 1 percent of facilities reporting more than 7 total hours per resident day have been omitted from the chart.

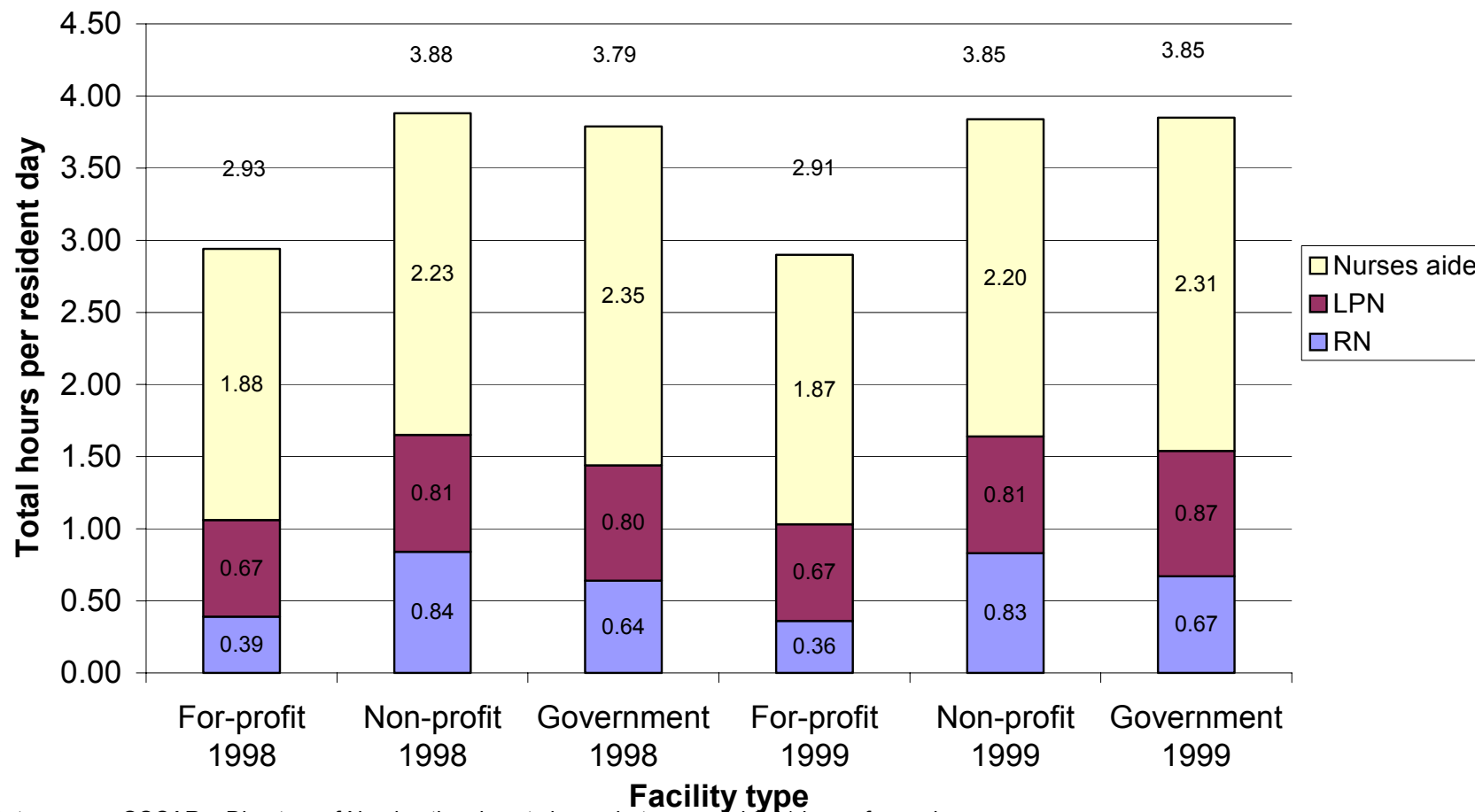
Figure 3.8: Staffing Levels in U.S. Nursing Homes: Distribution of Total Hours per Resident Day for Hospital-Based Facilities, 1998



Data Source: OSCAR; N=1,710

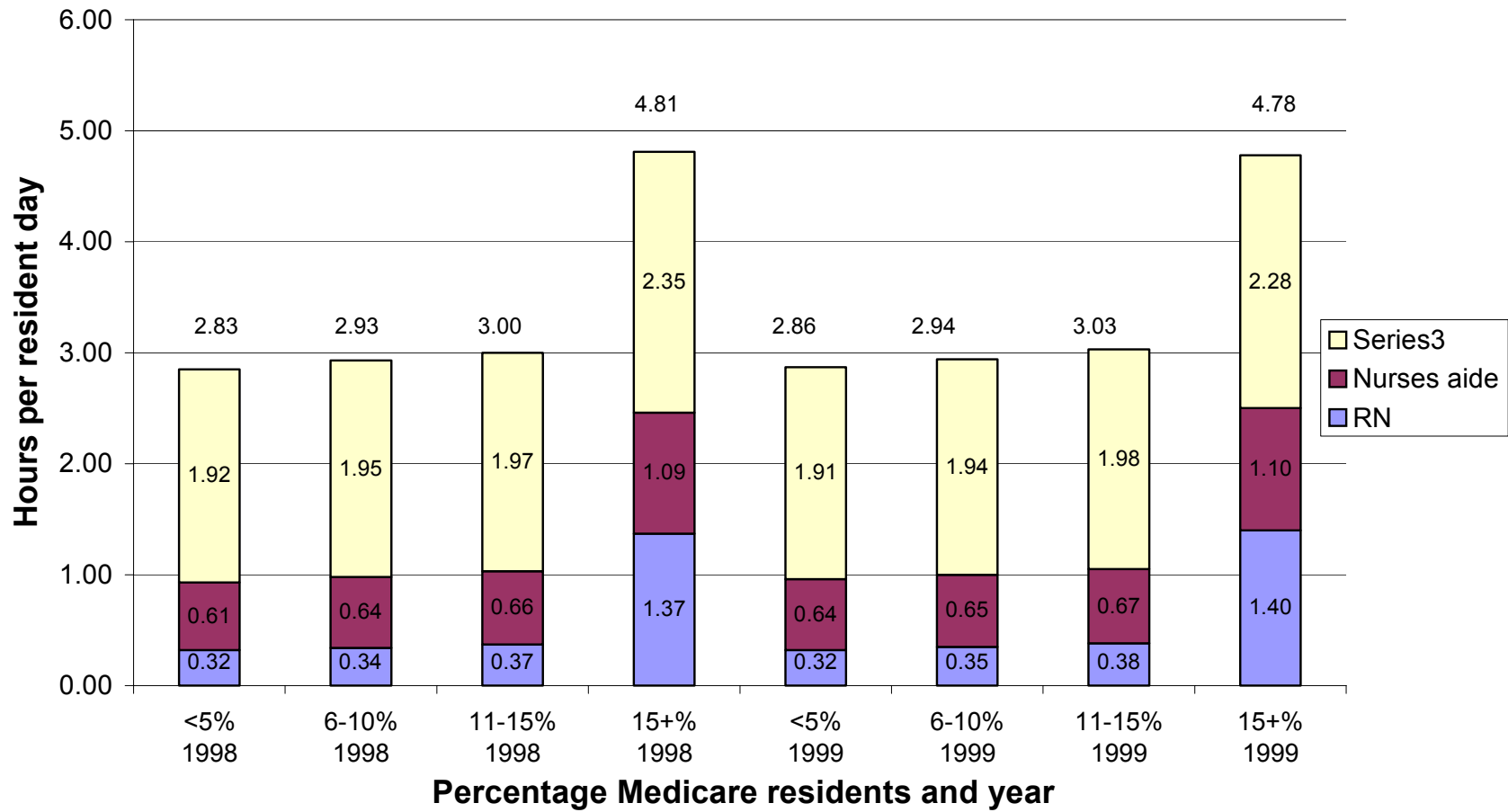
Note that the 0.5 percent of facilities reporting more than 11 total hours per resident day have been omitted from the chart.

**Figure 3.9: Staffing Levels in U.S. Nursing Homes:
For-Profit, Non-Profit and Government Facilities, 1998-1999**



Data source: OSCAR; Directors of Nursing time is not shown, but averaged 0.11 hours for each year.

**Figure 3.10: Staffing Levels in U.S. Nursing Homes:
By proportion of Medicare residents, 1998-1999**



Data source: OSCAR; Directors of Nursing time is not shown, but averaged 0.11 hours for each year.
N=13,005 for 1998, 7,019 for 1999 (includes assessments completed prior to July 1, 1999 only).

3.4.3 Mean Staffing Levels by State

There was considerable variation in staffing levels by State, which in 1998 ranged from 2.61 total hours per resident day for Oklahoma facilities to more than 4 hours per resident day in 4 States (Alaska, Delaware, Hawaii, and Idaho) (Figures 3.11 - 3.14; also see Appendix B.2 for detail on State-level staffing by type). Among States with at least 100 facilities, Maine had the highest total staffing level (3.86 hours). Staffing levels tended to be higher for Western States and lower for States in the Midwest.

There was also considerable variance in the mix of staffing used across States:

- The majority of States used 0.4 - 0.5 RN hours, but some States, including Arizona and Pennsylvania had much higher RN levels. Mean RN hours in several Southern and Western States--including Alabama, Arizona, Georgia, Louisiana, and Oklahoma--were 0.3 or less. With the exception of Oklahoma, these States had above-average levels of LPN staffing, suggesting that there was some substitution of LPNs, perhaps due to RN workforce shortages in some parts of the country.
- All States in the Northeast had mean aide hours of 2.0 or higher, and all States in the West had at least 1.94 aide hours, but mean aide hours for two-thirds of States in the Midwest were less than 2.0. Mean aide hours for Indiana facilities were only 1.57, second lowest in the country behind Oklahoma.

We did not attempt to analyze the sources of State-to-State variation in staffing levels, but this could be due to differences in resident case mix, Medicaid reimbursement levels, labor market conditions (wage rates and availability of staff), differences in practice patterns (e.g., the use of non-nursing staff), differences in State staffing requirements (see discussion below), or differences in the quality of care.

Change in staffing across time: State staffing levels tended to remain relatively constant across time⁹¹. Alaska, Idaho, Delaware, and Hawaii consistently had the highest staffing levels, while Oklahoma, Kansas, Iowa, Nevada, and South Dakota consistently had fewer than 3 total hours (Table 3.4).

⁹¹ Note that due to the different set of exclusion criteria used in this report, these figures differ somewhat from State-level figures based on OSCAR data that are published elsewhere.

- Between 1996 and 1997, the States with the largest increase in staffing were Oklahoma (14%), Alaska (10%), and West Virginia (10%). Most States had staffing increases between 1996 and 1997, but total staffing decreased in Nevada and Wyoming (from Table 3.3)
- Total hours for Delaware facilities increased by 16% between 1997 and 1998. Other States with large increases included Utah (a 5% increase) and Tennessee (6%). Between 1997 and 1998, total hours decreased by more than 9% for West Virginia facilities and by 5% in New Mexico.
- Between 1998 and 1999, total hours decreased by 13% for Arizona facilities. Delaware, New Mexico, Montana, and Maine also experienced decreases of 4% or more during this period. Total hours for Nevada facilities increased by more than 20%, and total hours for facilities in Utah, Idaho, North Dakota, and Idaho increased noticeably.

(Appendix B.2a presents the change in staffing by type and by State for 1996-1999).

Figure 3.11: Staffing Levels in U.S. Nursing Homes: Northeast Region, 1998

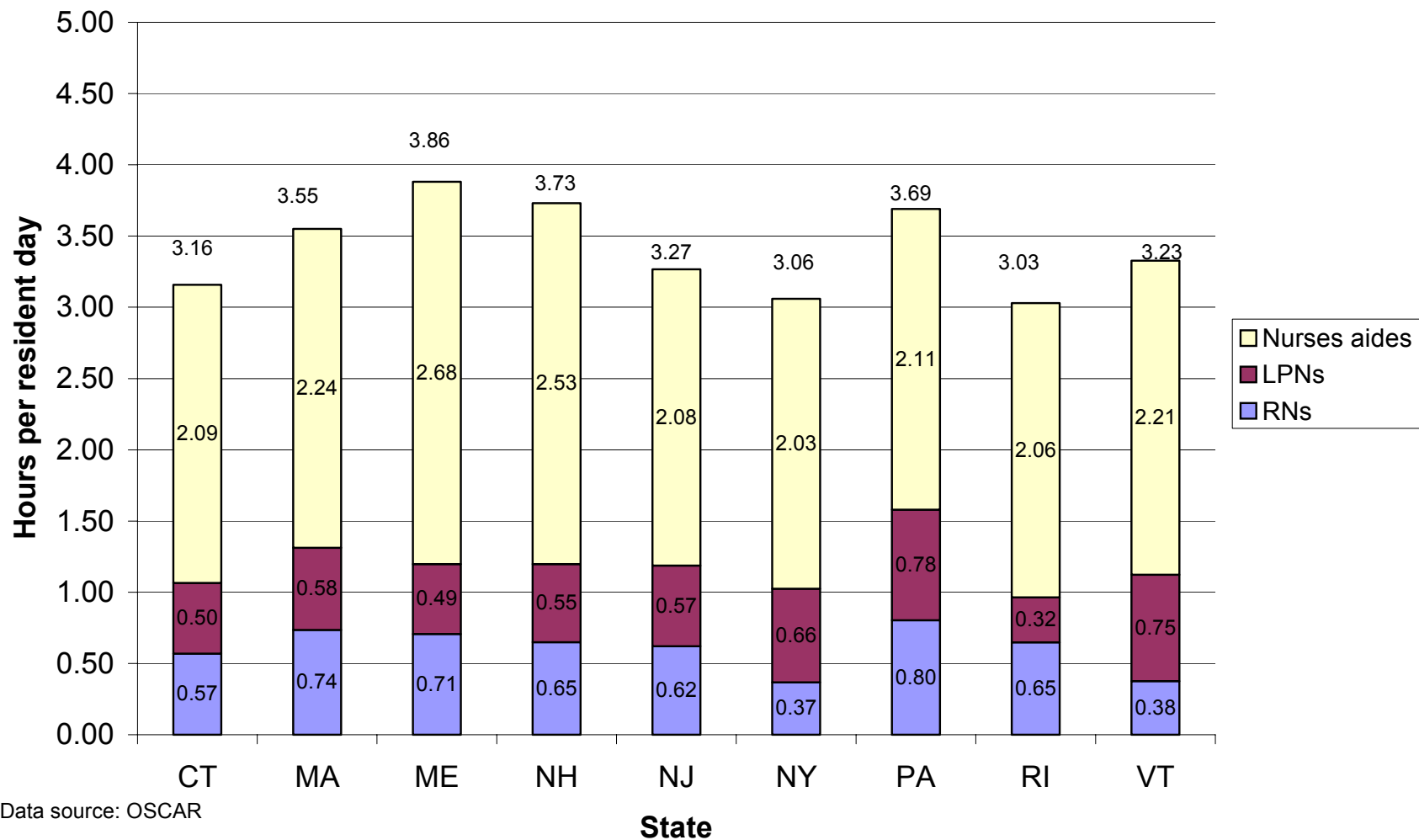
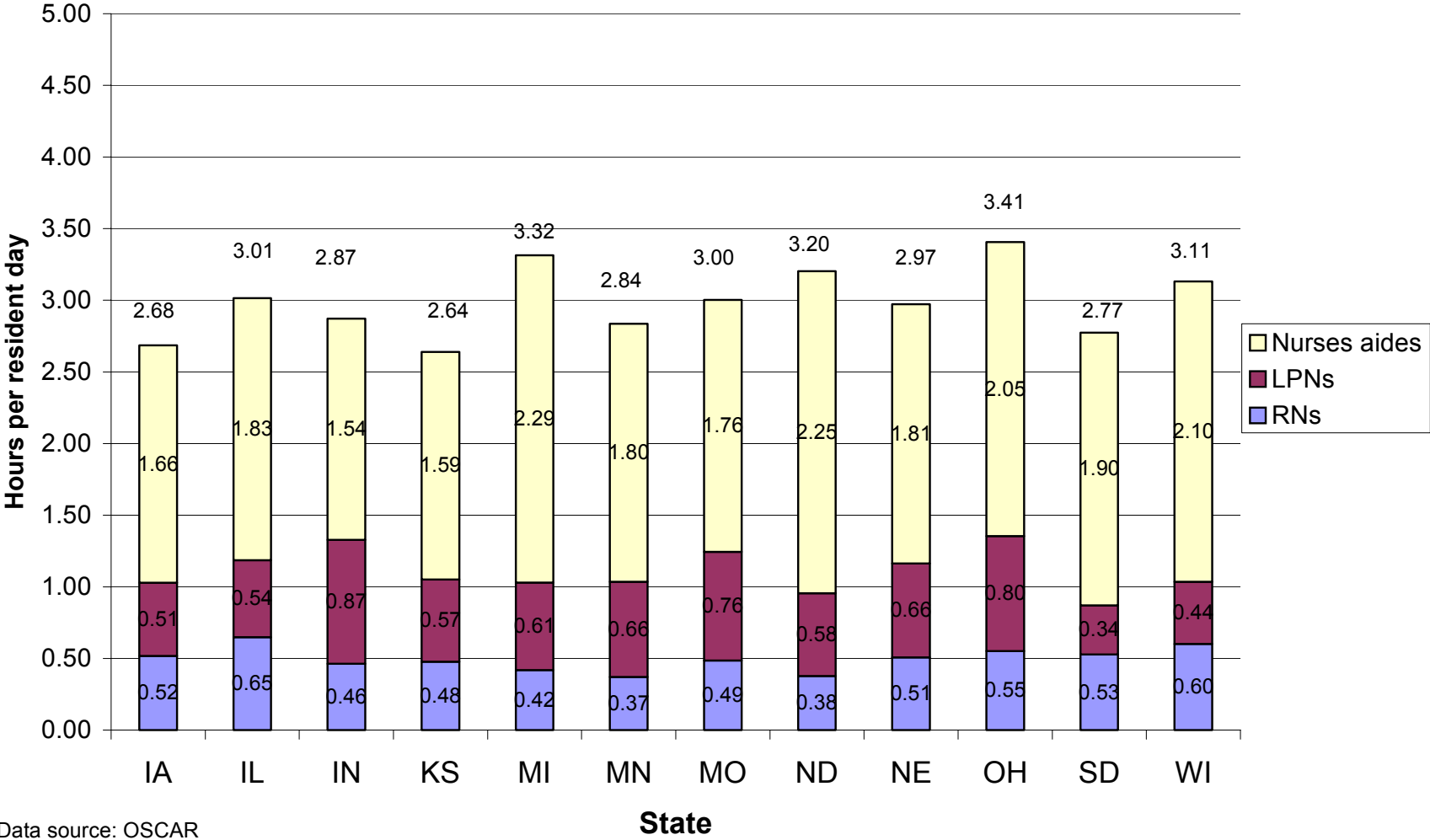
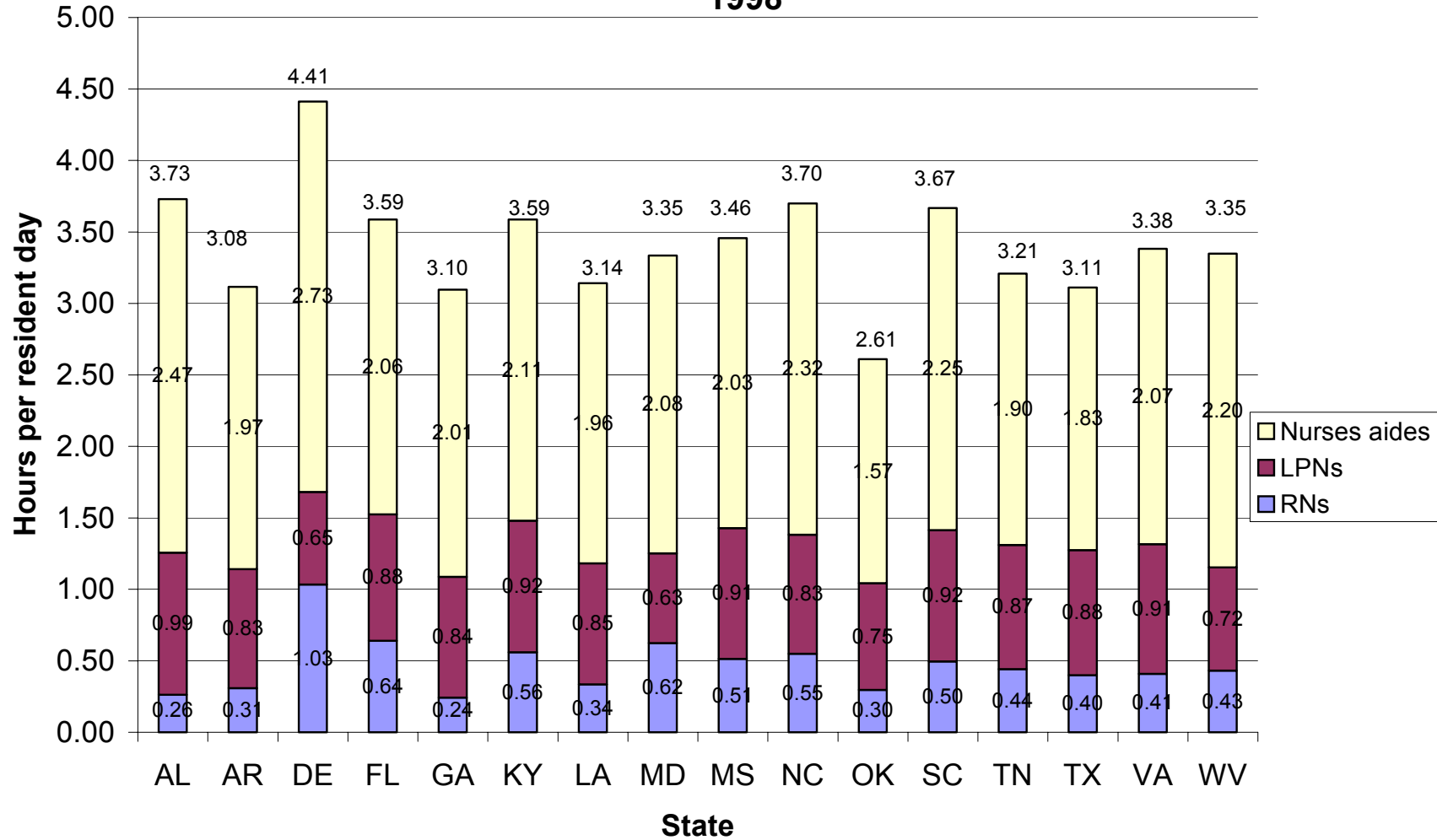


Figure 3.12: Staffing Levels in U.S. Nursing Homes: Midwest Region, 1998



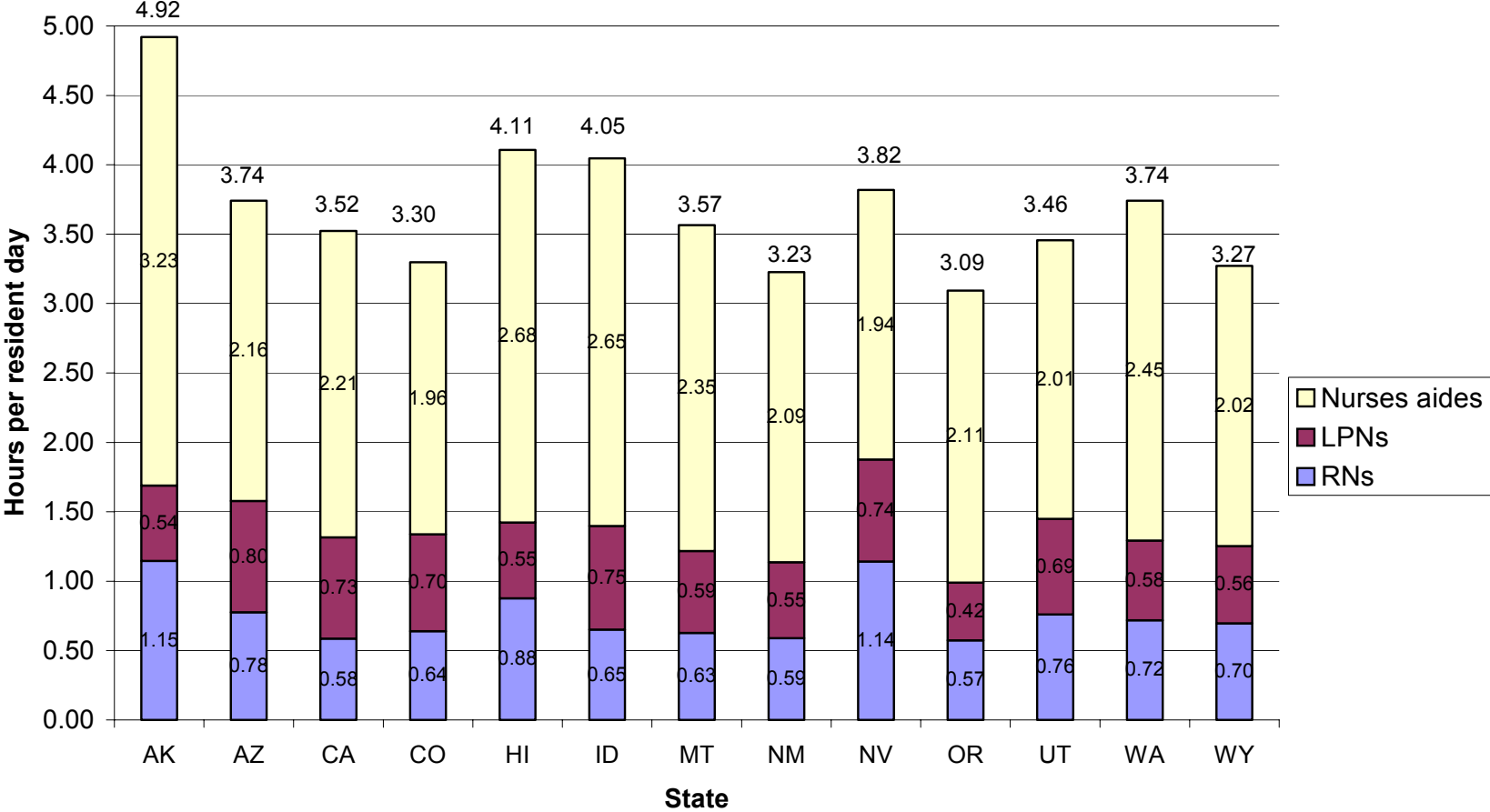
Data source: OSCAR

Figure 3.13: Staffing Levels in U.S. Nursing Homes: South Region, 1998



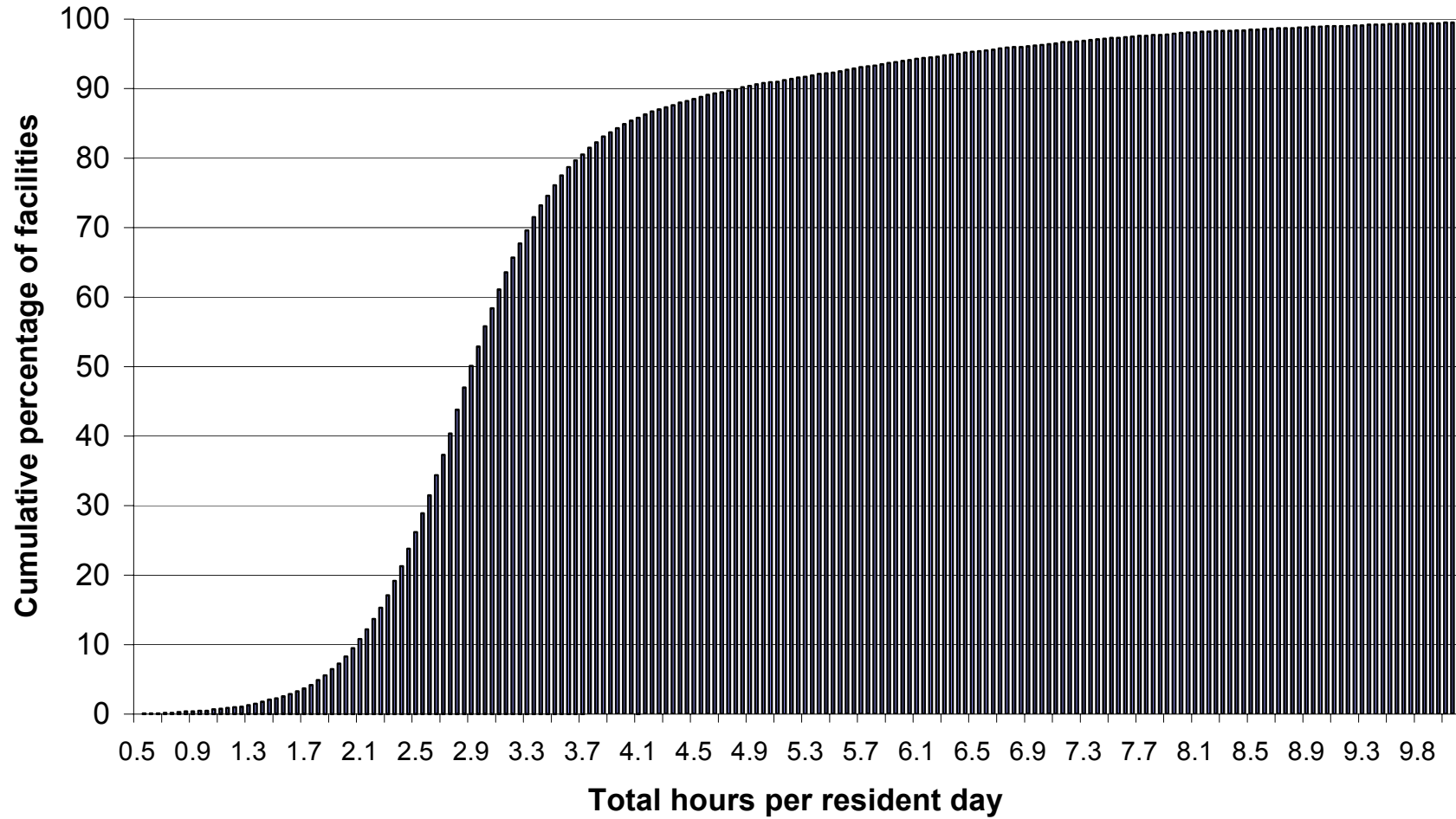
Data source: OSCAR

Figure 3.14: Staffing Levels in U.S. Nursing Homes: West Region 1998



Data source: OSCAR

**Figure 3.15: Staffing Levels in U.S. Nursing Homes:
Cumulative Distribution of Total Hours per Resident Day, 1998**



Data Source: OSCAR

Table 3.3: Staffing Levels in U.S. Nursing Homes: Total Hours per Resident Day by State, 1996-1999								
State	1996		1997		1998		1999	
	Number	Mean	Number	Mean	Number	Mean	Number	Mean
AK	15	4.96	11	5.49	11	4.92	7	4.74
AL	188	3.54	166	3.56	185	3.73	91	3.59
AR	217	2.77	218	3.03	195	3.12	106	3.19
AZ	117	3.52	91	3.71	102	3.74	36	3.25
CA	1099	3.51	1026	3.57	938	3.52	478	3.41
CO	190	3.26	186	3.39	162	3.30	97	3.23
CT	214	3.00	211	3.10	190	3.16	121	3.15
DE	31	3.73	32	3.81	24	4.41	17	3.88
FL	520	3.60	492	3.64	481	3.59	306	3.49
GA	315	3.03	291	3.10	286	3.10	148	3.06
HI	31	3.92	34	4.13	32	4.11	19	3.83
IA	414	2.68	393	2.64	396	2.69	192	2.74
ID	74	3.97	58	4.27	55	4.05	30	4.28
IL	754	2.86	713	2.93	707	3.01	389	3.10
IN	491	2.80	458	2.83	455	2.87	248	2.94
KS	361	2.56	363	2.62	353	2.64	200	2.69
KY	256	3.51	222	3.71	246	3.59	128	3.60
LA	267	3.08	259	3.21	248	3.14	140	3.14
MA	486	3.46	461	3.46	441	3.55	278	3.45
MD	191	3.07	185	3.20	159	3.34	49	3.42
ME	115	3.62	113	3.73	103	3.88	58	3.69
MI	390	3.20	365	3.33	350	3.32	166	3.32
MN	366	2.84	361	2.86	371	2.84	187	2.82
MO	473	3.06	461	3.05	431	3.00	227	3.09
MS	172	3.31	171	3.52	153	3.46	72	3.28
MT	85	3.51	89	3.47	82	3.57	49	3.40
NC	348	3.46	343	3.64	340	3.70	161	3.58
ND	82	3.24	76	3.28	79	3.20	40	3.52
NE	213	2.83	210	2.93	197	2.97	109	3.05

Table 3.3: Staffing Levels in U.S. Nursing Homes: Total Hours per Resident Day by State, 1996-1999								
State	1996		1997		1998		1999_	
	Number	Mean	Number	Mean	Number	Mean	Number	Mean
NH	71	3.49	72	3.61	62	3.73	34	3.83
NJ	299	3.16	285	3.18	278	3.27	107	3.37
NM	70	3.26	67	3.41	55	3.23	36	3.03
NV	37	3.90	27	3.70	35	3.82	15	4.73
NY	549	3.00	516	2.99	504	3.06	279	3.06
OH	895	3.43	795	3.48	775	3.41	381	3.52
OK	316	2.30	325	2.64	256	2.61	163	2.46
OR	141	3.19	135	3.14	129	3.09	63	3.06
PA	685	3.43	691	3.58	688	3.69	364	3.58
RI	77	2.87	68	3.00	69	3.03	38	3.11
SC	148	3.56	150	3.65	126	3.67	72	3.65
SD	97	2.65	86	2.72	81	2.77	45	2.66
TN	286	2.93	277	3.02	276	3.21	128	3.06
TX	1060	3.14	1015	3.21	914	3.11	536	3.01
UT	78	3.22	77	3.28	67	3.46	35	3.83
VA	243	3.21	217	3.31	207	3.38	125	3.41
VT	34	3.30	32	3.32	29	3.33	25	3.34
WA	240	3.56	224	3.80	218	3.74	120	3.73
WI	383	3.03	362	3.18	356	3.13	199	2.99
WV	97	3.37	66	3.70	65	3.35	79	3.41
WY	34	3.53	32	3.25	31	3.27	18	3.24

_: 1999 data were available only for assessments completed before July 1, 1999
Source: OSCAR

3.4.4 Selected Policy Issues

3.4.4.1 Impact Analysis of Proposed Minimum Staffing Requirement

We analyzed the proportion of facilities that would be affected by the 4.55 total hours per resident day recommended by a conference of experts that was convened by the John A. Hartford Institute for Geriatric Nursing, Division of Nursing, New York University in April 1998 (Harrington et. al., 2000). This conference included nurse researchers, educators, and administrators in long term care, consumer advocates, health economists, and health services researchers with knowledge of nursing homes. We refer to this recommendation as the ‘Hartford’ proposal.⁹² We used 1998 OSCAR data to analyze the proportion of facilities that would have to increase staffing to be in compliance, and also the distribution of staffing increases that would be required. So that the impact of other potential minimum staffing levels could be examined, we also analyzed the cumulative distribution of staffing measures. The cumulative distributions allow one to measure the impact of any potential minimum staffing level (as long as it can be expressed in terms of nursing hours per resident day).

Analysis of the Hartford proposal. The Hartford requirement would require nearly 90% of facilities to increase staffing levels, and would require large staffing increases for some facilities (Table 3.4)⁹³. The impact of the requirement would be much larger on freestanding facilities than on hospital-based nursing home, and would also fall more heavily on for-profit nursing homes than on non-profit or government facilities. Without increased reimbursement rates, the proposal does not appear to be practical. Given the tight labor market conditions under which many facilities currently operate, some facilities likely would not be able to reach the Hartford standard even if they tried to (given the current wages paid to nurses aides).

- More than 56% of facilities would have to increase total staffing by 50% or more, including 15% that would need to increase staffing by at least 100 percent. Even if all

⁹² See Chapter 6 for a more detailed discussion and analysis of the Hartford nurse staffing standards.

⁹³ Since the Hartford proposal of 4.55 total hours per resident day includes all administrative and direct care hours and our estimates of total hours exclude hours of the Director of Nursing, our estimates would differ somewhat if our file did not have this exclusion. But the differences are negligible. Table 3.4 indicates that 88.6% of facilities had less than 4.55 nursing hours; without the exclusion 87.1% of facilities had less than 4.55 total nursing hours per resident day.

facilities increased staffing by 20%, only 18% of facilities would have at least 4.55 total hours.

- More than 95% of freestanding facilities used less than 4.55 total hours in 1998. If the Hartford standard were enacted, 45% of facilities would need to increase staffing by 50-99% and 18% would need to increase staffing by 100% or more. Only 41% of hospital-based facilities had less than 4.55 total hours.
- The impact of the Hartford standard would be greater on for-profit facilities, which have lower mean staffing levels than non-profit or government facilities. Nearly 95% of for-profits used fewer than 4.55 total hours, and 47% would have to increase staffing by 50-99% to be at the Hartford recommended level. Seventy-seven percent of non-profit facilities and 81% of government facilities used fewer than 4.55 hours.
- While the majority of facilities in all States used fewer than 4.55 hours, the potential impact of the Hartford requirement varied by State. In Oklahoma, which had the lowest staffing level, 56% of facilities would need to increase staffing by 100% or more to reach the 4.55 level (Table 3.5). For virtually all States, the Hartford proposal would require at least 30% of facilities to increase total staffing by at least 50 percent.

Analysis of cumulative distribution of staffing levels. It is not possible to anticipate what type of minimum staffing levels might be proposed in the future. So that this chapter could be used to analyze the impact of other requirements, we analyzed the cumulative distribution of hours per resident day. These are presented in Figures 3.15 - 3.19. Additional detail on these cumulative distributions can also be found in Appendix B.3.

**Table 3.4: Staffing Levels in U.S. Nursing Homes:
Impact of Hartford Proposal (4.55 hours per resident day), 1998**

Facilities	% affected by requirement	Distribution of required increase:						
		≤10%	11-20%	21-30%	31-40%	41-50%	50-99%	≥100%
All	88.6	2.7	4.2	6.3	8.7	10.5	40.9	15.3
Freestanding	95.9	2.3	4.0	6.4	9.1	11.3	45.4	17.4
Hospital-based	40.2	5.1	5.7	5.8	5.8	5.6	10.8	1.3
For-profit	94.8	1.6	3.0	5.1	7.7	10.4	47.7	19.3
Non-profit	76.7	4.4	6.1	8.3	10.8	10.5	28.4	8.4
Government	79.9	5.0	8.0	9.7	9.6	11.9	29.2	6.3

Note: The Hartford standard is 4.55 hours per resident day (see Harrington et. al., 2000).

Source: OSCAR

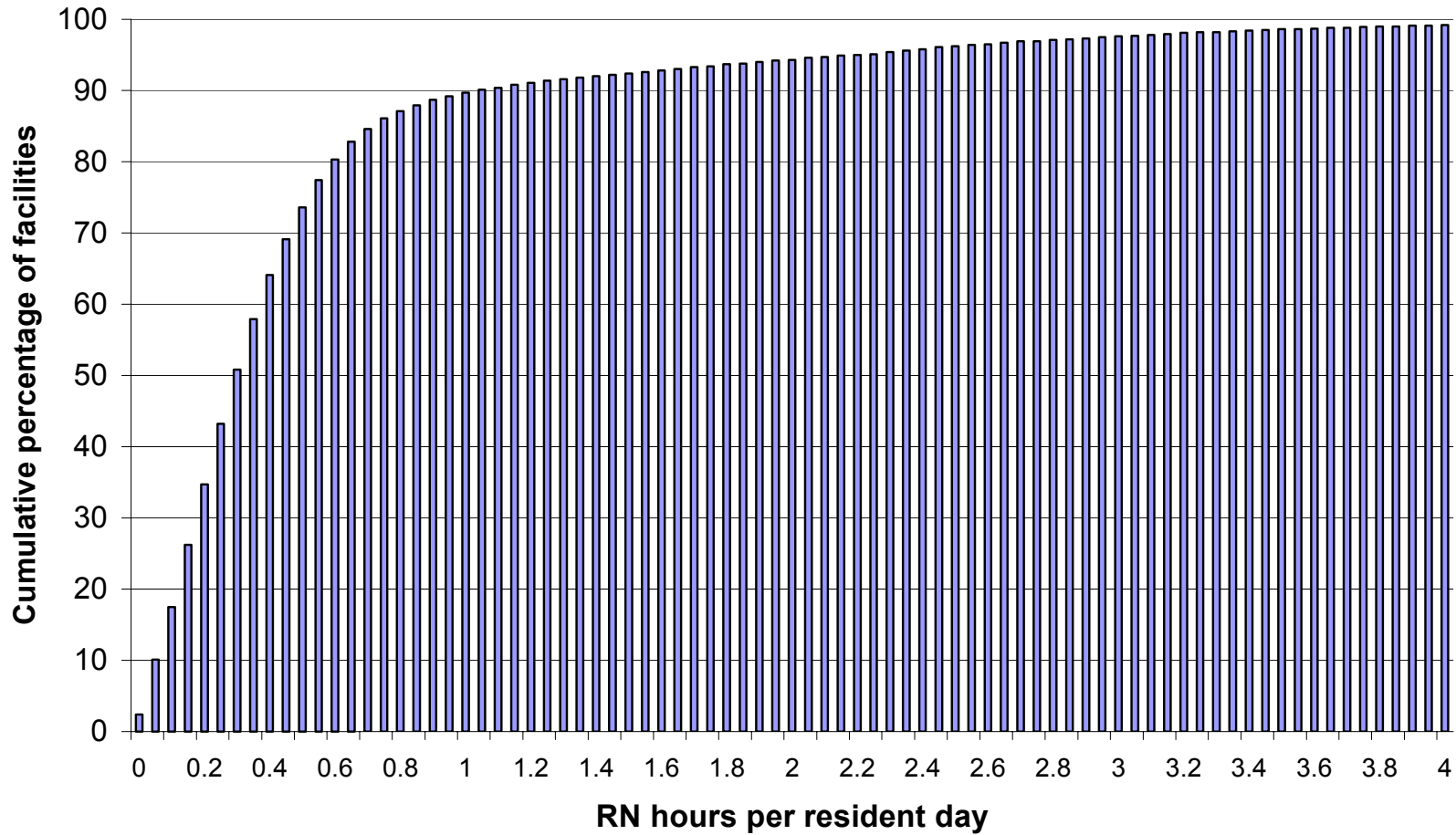
Table 3.5: Staffing Levels in U.S. Nursing Homes: Impact of Hartford Proposal (4.55 hours per resident day), By State, 1998								
State	% affected by requirement	Distribution of staffing increase required for facilities not in compliance						
		≤10%	11-20%	21-30%	31-40%	41-50%	51-99%	≥100%
AK	55	27	18	0	0	9	0	0
AL	90	12	16	19	16	11	17	0
AR	89	1	1	3	4	5	60	16
AZ	76	2	3	6	4	12	44	6
CA	84	2	4	7	8	12	45	7
CO	91	4	4	6	9	12	51	6
CT	97	5	10	12	15	16	26	14
DE	67	4	4	13	0	8	38	0
FL	84	3	4	7	11	12	42	5
GA	94	2	2	3	10	12	59	6
HI	78	9	3	6	25	13	22	0
IA	92	1	1	2	3	3	42	41
ID	69	9	5	13	13	9	18	2
IL	86	1	2	2	4	6	36	36
IN	91	0	2	2	3	4	49	30
KS	92	1	1	1	2	5	39	44
KY	82	4	3	4	4	12	46	9
LA	89	2	0	2	1	2	72	10
MA	89	3	9	13	20	14	27	3
MD	86	1	3	6	4	14	50	8
ME	84	8	9	22	21	13	11	1
MI	95	2	8	11	13	16	42	3
MN	98	2	2	5	9	13	53	14
MO	86	1	2	2	3	4	33	41
MS	86	1	2	5	32	15	45	9
MT	85	1	11	10	6	21	35	1
NC	86	6	9	12	14	10	34	1
ND	96	4	5	9	11	20	42	5
NE	91	3	2	3	5	3	48	28

Table 3.5: Staffing Levels in U.S. Nursing Homes: Impact of Hartford Proposal (4.55 hours per resident day), By State, 1998								
State	% affected by requirement	Distribution of staffing increase required for facilities not in compliance						
		≤10%	11-20%	21-30%	31-40%	41-50%	51-99%	≥100%
NH	87	5	11	5	21	15	26	5
NJ	93	2	4	8	9	17	49	4
NM	87	5	2	0	5	4	56	15
NV	74	11	3	0	6	0	43	11
NY	97	2	8	11	17	14	32	13
OH	89	4	5	9	13	13	40	5
OK	90	0	0	0	1	2	30	56
OR	93	4	4	5	10	12	46	12
PA	83	4	5	8	14	17	33	2
RI	96	1	9	12	7	13	29	25
SC	83	2	3	11	11	16	40	1
SD	100	0	4	6	4	14	58	15
TN	87	1	0	3	7	9	49	18
TX	87	2	2	2	3	4	42	31
UT	82	3	0	6	7	9	39	18
VA	86	3	7	3	9	9	51	4
VT	100	17	7	14	14	28	10	10
WA	86	7	15	17	13	15	16	3
WI	96	2	6	5	12	17	53	2
WV	88	5	6	2	12	12	57	0
WY	90	0	6	6	13	16	35	13

Note: The Hartford standard is 4.55 hours per resident day (see Harrington et. al., 2000)

Source: OSCAR

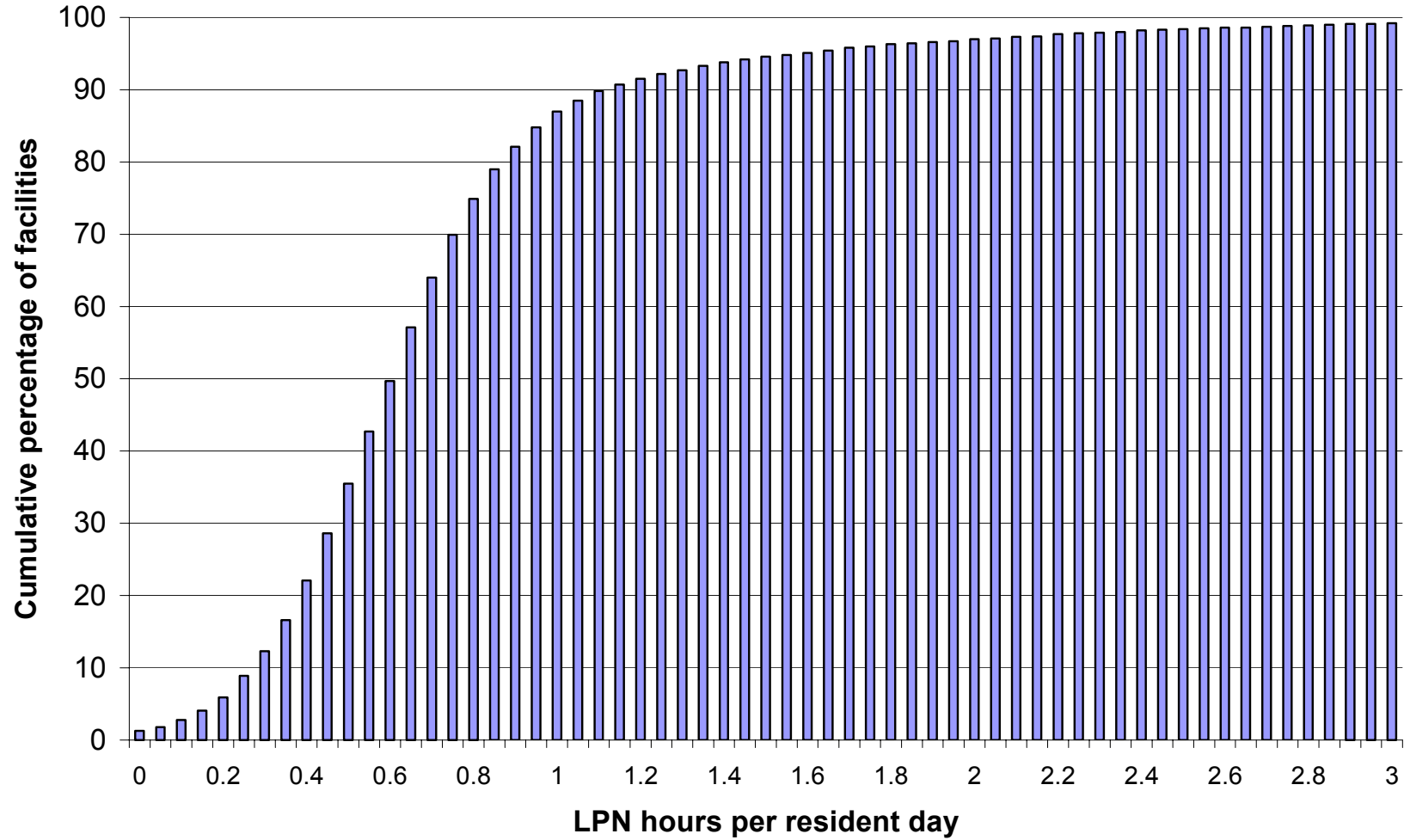
**Figure 3.16: Staffing Levels in U.S. Nursing Homes:
Cumulative Distribution of RN Hours per Resident Day, 1998**



Data Source: OSCAR

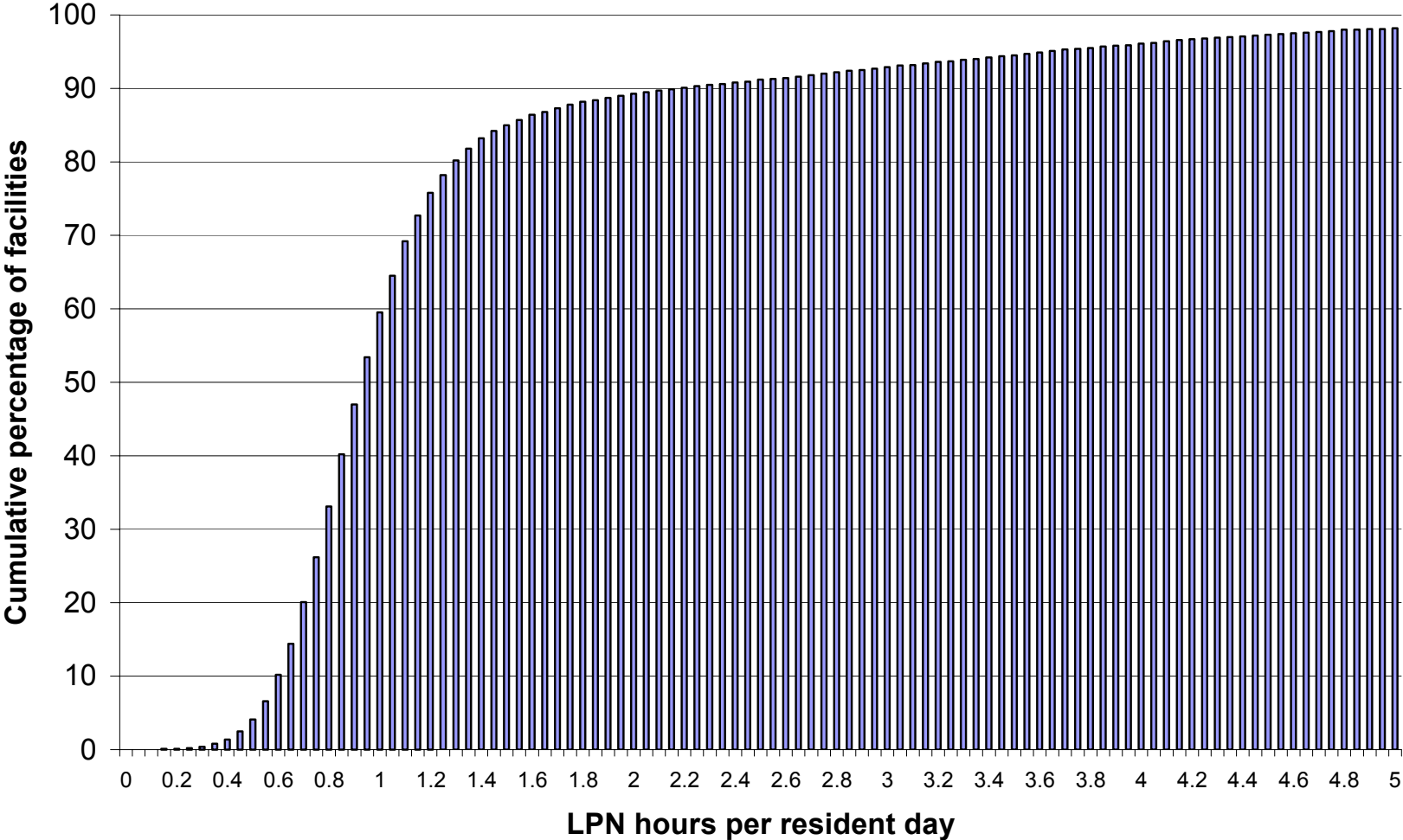
Appropriateness of Minimum Nurse Staffing Ratios in Nursing Homes
Report to Congress

**Figure 3.17: Staffing Levels in U.S. Nursing Homes:
Cumulative Distribution of LPN Hours per Resident Day, 1998**



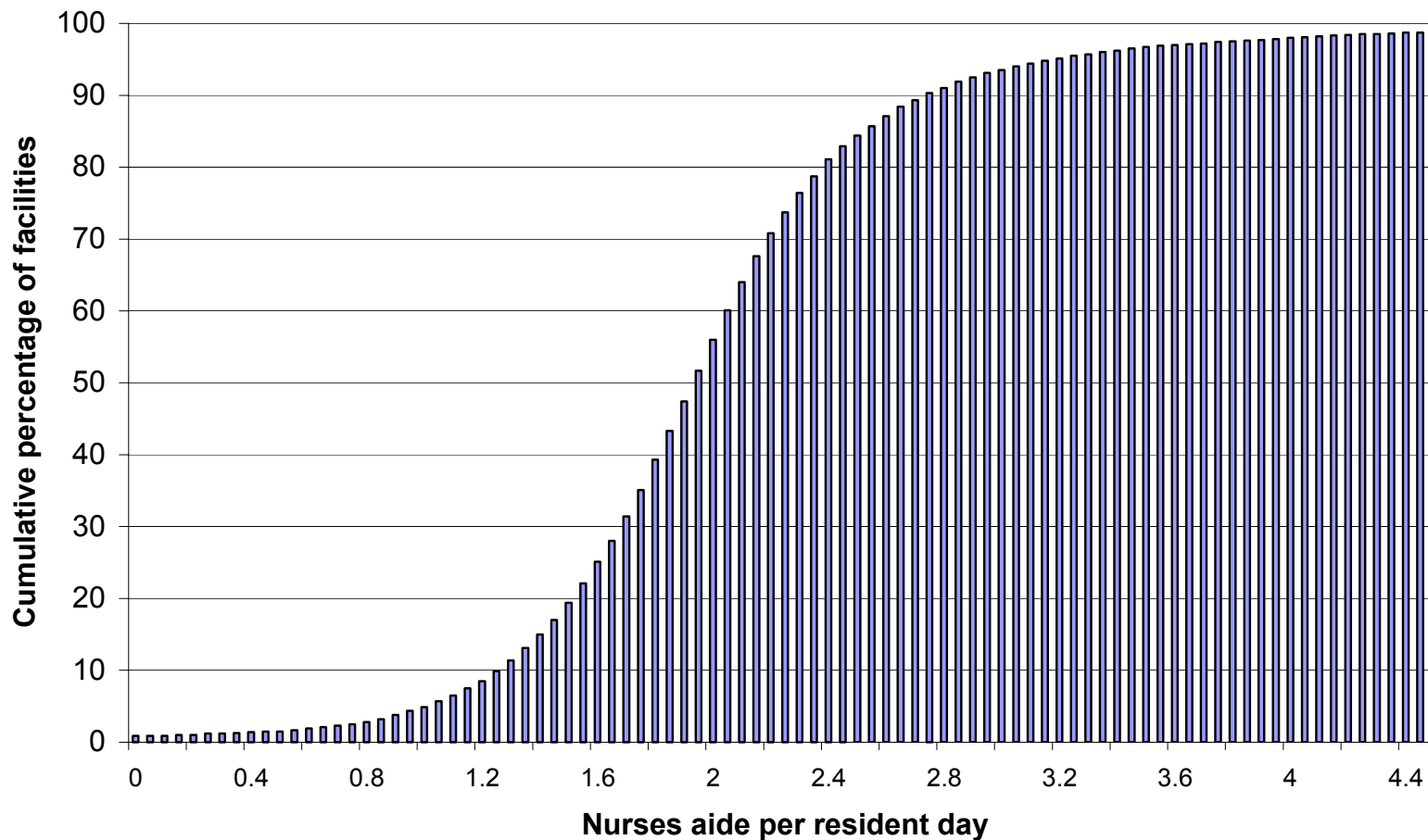
Data Source: OSCAR

**Figure 3.18: Staffing Levels in U.S. Nursing Homes:
Cumulative Distribution of RN+LPN Hours per Resident Day, 1998**



Data Source: OSCAR

**Figure 3.19: Staffing Levels in U.S. Nursing Homes:
Cumulative Distribution of Nurses Aide Hours per Resident Day, 1998**



Data Source: OSCAR

3.4.4.2 Analysis of the hypothesis that staffing floors become ceilings

The previous section showed the increases in staffing that would be required under one minimum staffing proposal. Another potential response to setting or raising minimum staffing requirements is that some higher staffed facilities *reduce* their staffing level. This could happen, for example, if facilities that would otherwise have higher staffing levels decrease staffing because they come to view the minimum required level as the normative standard. Absent the standard, these facilities would not have reduced their staffing levels. Any reductions in staffing that occur in response to a minimum requirement should be considered in evaluating the impact of potential staffing requirements on improved resident outcomes.

All nursing homes that are certified to receive payment under Medicare or Medicaid must meet minimum Federal nurse staffing requirements, but some States have imposed more specific requirements under their licensure authority, outlining their own provisions for nurse staffing (see Chapter 2).

3.4.4.2.1 Methodology

One way to test whether “staffing floors become staffing ceilings” is to compare the *variance* of staffing levels across States based on State staffing requirements. For this analysis, States were classified into one of three categories based on the strictness of their staffing requirement: States with no State regulation/law; those with less demanding State standards (we refer to these as ‘low standard’ States), and those with more demanding State standards (‘high standard States’). The classification of States into these categories is described in Chapter 2.

We compared a variety of measures of the State-level distribution of staffing across the three categories of States, aggregating OSCAR data to create State-level figures. Analyses were weighted based on the number of facilities in the State. We focused on total hours and RN hours, the two categories most likely to have a mandated minimum staffing level. To determine the consistency of any patterns that were observed, this analysis included data from 1997-1999.

There is no single variable that adequately summarizes the distribution of staffing levels across the three groups of States. (Summary measures such as the standard deviation measure the overall variance, but do not identify whether any differences are due to less variance for low-staffed facilities (which must increase staffing to be in compliance in States with staffing requirements) or to less variance among high-staffed facilities (i.e., if the ‘floors as ceilings’ hypothesis is accurate.) We examined the a variety of measures:

- Mean staffing level
- Measures of overall variance in staffing: Standard deviation of the mean, interquartile range (difference between 25th and 75th percentile), interdecile range (difference between 10th and 90th percentile)
- Measures of variance in staffing for low-staffed facilities: Difference between 25th percentile and mean, difference between 10th percentile and mean
- Measures of variance in staffing for high-staffed facilities: Difference between 75th percentile and mean, difference between 90th percentile and mean (to test distribution of staffing for high-staffed facilities)

The analysis was intended to be purely descriptive—lacking data on the date that staffing requirements became effective and State’s specific staffing requirements, we were not able to determine whether any differences in the distribution of staffing levels are due to State staffing requirements or other factors. There are three major limitations of the analyses described in this section:

- The categorization of States based on whether they have no regulation, less demanding standards, or more demanding standards was crude (see Chapter 2 for further details on this process). These standards encompass a number of factors related to staffing, and some States could easily have been placed in other categories.
- Some States may have been placed into the wrong category if there were delays between the passage of legislation related to nursing home staffing and when the legislation became effective. We did not have data on when State standards were implemented or phased-in.
- Because we did not have data on when staffing requirements became effective, we were not able to analyze how the distribution of staffing levels changed in response to changes in staffing requirements.

3.4.4.2.2 *Mean staffing levels.*

For all three years that we analyzed (1997-1999), mean total hours were higher in States with high staffing requirements than in the other two groups of States. In 1998, mean total hours per resident day were 3.22 in States with no requirement, 3.10 in States with a low requirement, and 3.41 in States with the highest requirement. RN staffing levels were considerably higher in

States with the highest standard than either of the other two groups (Tables 3.6 - 3.8). For 1998, mean RN hours per resident day were 0.60 in States with the highest standard, compared to 0.47 in States with some requirement and 0.45 in States with no staffing requirement.

3.4.4.2.3 *Variance in staffing levels*

For all three years, there was less variance in total staffing in States with some type of minimum staffing requirement than in States with no requirement, based on the standard deviation of the mean, the interquartile range and the interdecile range. Consistent with the presence of a minimum staffing level that caused some facilities to increase staffing levels, there was considerably less variance among low-staffed facilities in States with additional staffing requirements:

- For all three years, the difference in total hours between the 25th percentile and the mean was lowest for States with a high standard and highest for States with no standard (Tables 3.6 - 3.8). In 1998, for example, the difference in total hours between the 25th percentile and the mean was 0.36 in States with no requirement, 0.34 in States with a low standard, and 0.32 for States with a high standard (Table 3.7).
- Similarly, the difference in total hours between the 10th percentile and the mean was considerably smaller for States with some standard than States with no minimum staffing requirement. This difference was smaller for States with a high standard than for those with a low standard. In 1998, the difference between the 10th percentile and the mean was 0.77 for States with no requirement, 0.65 for States with a low standard, and 0.60 for States with a high standard.
- There was no consistent pattern in the variance of RN hours for low-staffed facilities (Tables 3.6 - 3.8). The difference between either the 10th or 25th percentile and mean RN hours was consistently lower for States with a low standard than for States with no standard. Across all three years, however, these differences were largest in States with a high standard.

Some of the measures of variance in total staffing for high-staffed facilities suggested less variance in staffing among high-staffed facilities in States with some type of staffing requirement, consistent with the ‘staffing floors as staffing ceilings’ hypothesis, although the evidence was mixed. Among high staffed facilities, there was consistently greater variance in RN hours for States with high staffing requirements.

- For all three years, the difference between the 75th percentile and mean total hours was smallest in States with a low standard, but was also lower for States with a high standard than for facilities in States with no requirement. In 1998, this difference was 0.56 for facilities with no requirement, 0.46 for States with a low standard, and 0.53 for States with a high standard.
- Among very high staffed facilities, there was little evidence in support of the floors-as-ceilings hypothesis, and an inconsistent relationship between variance in total hours and State staffing requirements. In 1997, the difference between the 90th percentile and mean total hours was smallest in States with no staffing requirement. In 1998 and 1999 this difference was smaller in States with a low standard than in States with no requirement, but was highest in States with a high standard.

The variance in RN hours, across both the low and high ends of the distribution, was highest for States with the highest staffing requirements and lowest for States with a low standard. This suggests that State staffing requirements had little impact on the distribution of RN hours, although the larger variance in States with the highest standard may be related to the higher levels of RN staffing in those States. It may also be that States staffing requirements tended not to specify minimum RN levels.

- In 1998, the interquartile range (difference between the 25th and 75th percentiles) was 0.28 in States with no requirement, 0.26 in states with a low standard, and 0.35 in states with a high standard. A similar pattern was observed for 1997 and 1999.
- The difference between mean RN hours and the 25th percentile was consistently smallest for states with a low requirement and largest for states with a high standard. In 1999, for example, the difference between the mean RN hours and the 25th percentile was 0.11 for states with no requirement, 0.1 for states with a low standard, and 0.13 for states with a high standard.
- There was a similar pattern among facilities with high levels of RN staffing. The variance in RN staffing was highest in states with a high staffing requirement and lowest for states with a low standard.

Mean staffing levels were higher for states with more demanding standards, and, among low staffed facilities, the variance in staffing was lower for facilities in states with state standards. Both of these were anticipated effects of minimum staffing requirements. The evidence was

mixed and inconclusive as to whether minimum staffing requirements reduce the variance in staffing for higher staffed facilities.

The analyses in this section were intended to be purely descriptive, and we did not attempt to examine other potential sources of state-level differences in the distribution of staffing levels, such as differences in resident case mix, Medicaid reimbursement levels, or heterogeneity in staffing practices (e.g., differences in the use of non-nursing staff) across states in the three groups. We did not have data on the specific staffing requirements of states (other than their grouping into the three categories that we used), so we could not examine the variance in staffing levels around some specified level. Future research should also examine the changes in the distribution of staffing levels for states that recently enacted (or changed) staffing requirements.

Table 3.6: Staffing Levels in U.S. Nursing Homes: Distribution of Total Hours per Resident Day, Based on Type of Staffing Requirement in State, 1997

Measure	Type of staffing requirement in State		
	No State Regulation/Law*	Less Demanding State Standards**	More Demanding State Standards***
Total hours per resident day			
Mean total	3.19	3.09	3.39
Standard deviation of the mean	0.095	0.072	0.067
Interquartile range (difference between 25 th and 75 th percentiles)	0.933	0.813	0.827
Interdecile range (10 th and 90 th percentiles)	2.63	2.51	2.60
Difference between 25 th percentile and mean	0.375	0.333	0.319
Difference between 10 th percentile and mean	0.795	0.645	0.596
Difference between 75 th percentile and mean	0.558	0.479	0.508
Difference between 90 th percentile and mean	1.837	1.869	2.006
RN hours per resident day			
Mean total	0.457	0.463	0.589
Standard deviation of the mean	0.042	0.035	0.035
Interquartile range (difference between 25 th and 75 th percentiles)	0.291	0.262	0.341
Interdecile range (10 th and 90 th percentiles)	0.898	0.873	1.167
Difference between 25 th percentile and mean	0.108	0.096	0.127
Difference between 10 th percentile and mean	0.179	0.164	0.215
Difference between 75 th percentile and mean	0.183	0.166	0.215
Difference between 90 th percentile and mean	0.719	0.710	0.95
Note: Figures weighted based on number of facilities in State.			
* These States do not specify any additional nurse staffing requirements to the Federal standard.			
** These States have specified nurse staffing requirements through law and/or regulation, in addition to the Federal requirement. See the following note.			
*** States categorized in this column require more than 2.25 hprd or more than 1 staff member to 9 residents in the day shift, 13			

residents in the evening shift, and 22 residents in the night shift.
(See Chapter 2 for further details on how States were classified into these three groups)
Source: OSCAR

Table 3.7: Staffing Levels in U.S. Nursing Homes: Distribution of Total Hours per Resident Day, Based on Type of Staffing Requirement in State, 1998

Measure	Type of staffing requirement in State		
	No State Regulation/Law*	Less Demanding State Standards**	More Demanding State Standards***
Total hours per resident day			
Mean total	3.22	3.10	3.41
Standard deviation of the mean	0.091	0.074	0.069
Interquartile range (difference between 25 th and 75 th percentiles)	0.919	0.804	0.852
Interdecile range (10 th and 90 th percentiles)	2.722	2.478	2.67
Difference between 25 th percentile and mean	0.360	0.340	0.323
Difference between 10 th percentile and mean	0.768	0.653	0.597
Difference between 75 th percentile and mean	0.560	0.464	0.528
Difference between 90 th percentile and mean	1.953	1.824	2.071
RN hours per resident day			
Mean total	0.453	0.472	0.603
Standard deviation of the mean	0.039	0.038	0.038
Interquartile range (difference between 25 th and 75 th percentiles)	0.282	0.256	0.353
Interdecile range (10 th and 90 th percentiles)	0.902	0.810	1.253
Difference between 25 th percentile and mean	0.107	0.099	0.132
Difference between 10 th percentile and mean	0.185	0.164	0.221
Difference between 75 th percentile and mean	0.174	0.157	0.221
Difference between 90 th percentile and mean	0.717	0.646	1.032

Note: Figures weighted based on number of facilities in State.

* These States do not specify any additional nurse staffing requirements to the Federal standard.

** These States have specified nurse staffing requirements through law and/or regulation, in addition to the Federal requirement. See the following note.

*** States categorized in this column require more than 2.25 hprd or more than 1 staff member to 9 residents in the day shift, 13 residents in the evening shift, and 22 residents in the night shift.

(See Chapter 2 for further details on how States were classified into these three groups)

Source: OSCAR

Table 3.8: Staffing Levels in U.S. Nursing Homes: Distribution of Total Hours per Resident Day, Based on Type of Staffing Requirement in State, 1999

Measure	Type of staffing requirement in State		
	No State Regulation/Law*	Less Demanding State Standards**	More Demanding State Standards***
Total hours per resident day			
Mean total	3.218	3.07	3.37
Standard deviation of the mean	0.122	0.098	0.090
Interquartile range (difference between 25 th and 75 th percentiles)	0.909	0.813	0.846
Interdecile range (10 th and 90 th percentiles)	2.613	2.383	2.587
Difference between 25 th percentile and mean	0.374	0.351	0.335
Difference between 10 th percentile and mean	0.796	0.677	0.600
Difference between 75 th percentile and mean	0.534	0.463	0.512
Difference between 90 th percentile and mean	1.817	1.706	1.987
RN hours per resident day			
Mean total	0.458	0.454	0.587
Standard deviation of the mean	0.053	0.049	0.049
Interquartile range (difference between 25 th and 75 th percentiles)	0.292	0.253	0.337
Interdecile range (10 th and 90 th percentiles)	0.848	0.717	1.120
Difference between 25 th percentile and mean	0.111	0.099	0.131
Difference between 10 th percentile and mean	0.194	0.154	0.221
Difference between 75 th percentile and mean	0.181	0.171	0.207
Difference between 90 th percentile and mean	0.655	0.546	0.899
Note: Figures weighted based on number of facilities in State.			
* These States do not specify any additional nurse staffing requirements to the Federal standard.			
** These States have specified nurse staffing requirements through law and/or regulation, in addition to the Federal requirement. See the following note.			
*** States categorized in this column require more than 2.25 hprd or more than 1 staff member to 9 residents in the day shift, 13			

residents in the evening shift, and 22 residents in the night shift.
(See Chapter 2 for further details on how States were classified into these three groups)
Source: OSCAR

3.4.4.2.4 *Comparison of staffing levels for large nursing home chains to other facilities*

Recently, many large chains have struggled financially, possibly due to changes in reimbursement that were implemented as part of the Balanced Budget Act of 1997. These facilities may attempt to contain costs by reducing staff levels or substituting some care provided by RNs to less expensive staff such as nurses aides. We compared changes in staffing levels for three groups of facilities: those associated with one of four large chains that filed for Chapter 11 bankruptcy protection in 1999 or 2000 (Sun Healthcare, Vencor, Integrated Health Services, Mariner Post-Acute Services), those associated with other large chains (Beverly Enterprises, Genesis Health Ventures, Complete Healthcare, Extencicare, HCR Manorcare, Lifecare Centers of America), and all other facilities (for simplicity, we refer to this group as non-chains even though it includes many smaller chains; also for simplicity, we refer to the first group which has filed for bankruptcy protection as “bankrupt chains”).

Facilities were placed into one of these three categories based on a list of provider numbers compiled by a HCFA contractor. This list reflects chain affiliation as of October 1999, a limitation of this analysis given the fluctuation in chain designation across time. If this measurement error tends to be distributed randomly, it will tend to bias the regression coefficients associated with chain status towards zero.

Change in staffing over time. We analyzed total staffing, by quarter, for the three groups of facilities from 1996-1999. Because each facility has only one OSCAR assessment each year, the composition of facilities is different for each quarter. Figures for the first quarter of 1997, for example, are based on all facilities that completed OSCAR assessments between January and March of 1997. Figures for the second quarter were based on a completely different sample of facilities— those for which OSCAR assessments were completed between April and June 1997.

Between 1996-1999, total hours per resident day were consistently higher for non-chains than for either group of chains (Figure 3.19). Beginning with the first quarter of 1997, staffing levels for the large chains that did not ultimately declare bankruptcy were somewhat higher than for the bankrupt chains, although the differences were very small in 1998 and in the first two quarters of 1999 (the only 1999 data available for this study).

There was some evidence that staffing trends were different for large chains (including bankrupt chains) than for other facilities. Staffing levels for non-chains increased in 1997 and 1998. Total hours per resident day increased from 3.16 to 3.3 between the first quarter of 1996 and the last quarter of 1997. Total hours for (non-bankrupt) large chains decreased from 3.04 to 2.90 between the first quarters of 1997 and 1998, and to 2.81 by the second quarter of 1999. Staffing levels for facilities associated with bankrupt chains decreased somewhat in both quarters of 1999.

The pattern for RN staffing levels was similar to that of total hours. RN hours were considerably higher for non-chains than either of the two chain groups (Figure 3.21). While RN hours increased from 1996-1998 for non-chains, the level of RNs was stable for bankrupt chains and decreased somewhat for other large chains.

3.4.4.2.5 *Regression analysis of changes in staffing levels*

We estimated a series of regression models to capture differences in how staffing levels changed across time for the three groups of facilities. The independent variables in the regression models included the lagged dependent variable (i.e., the staffing measure for the previous year), the total number of residents (to capture potential economies of scale), the proportion of Medicare residents, an indicator for whether the facility is hospital-based, and indicators for whether the facility is part of a bankrupt chain or affiliated with another large chain. Because the model included staffing measures from the previous period, the chain affiliation variable measures the *change* in staffing for bankrupt and other large chains relative to the omitted category, non-chains.

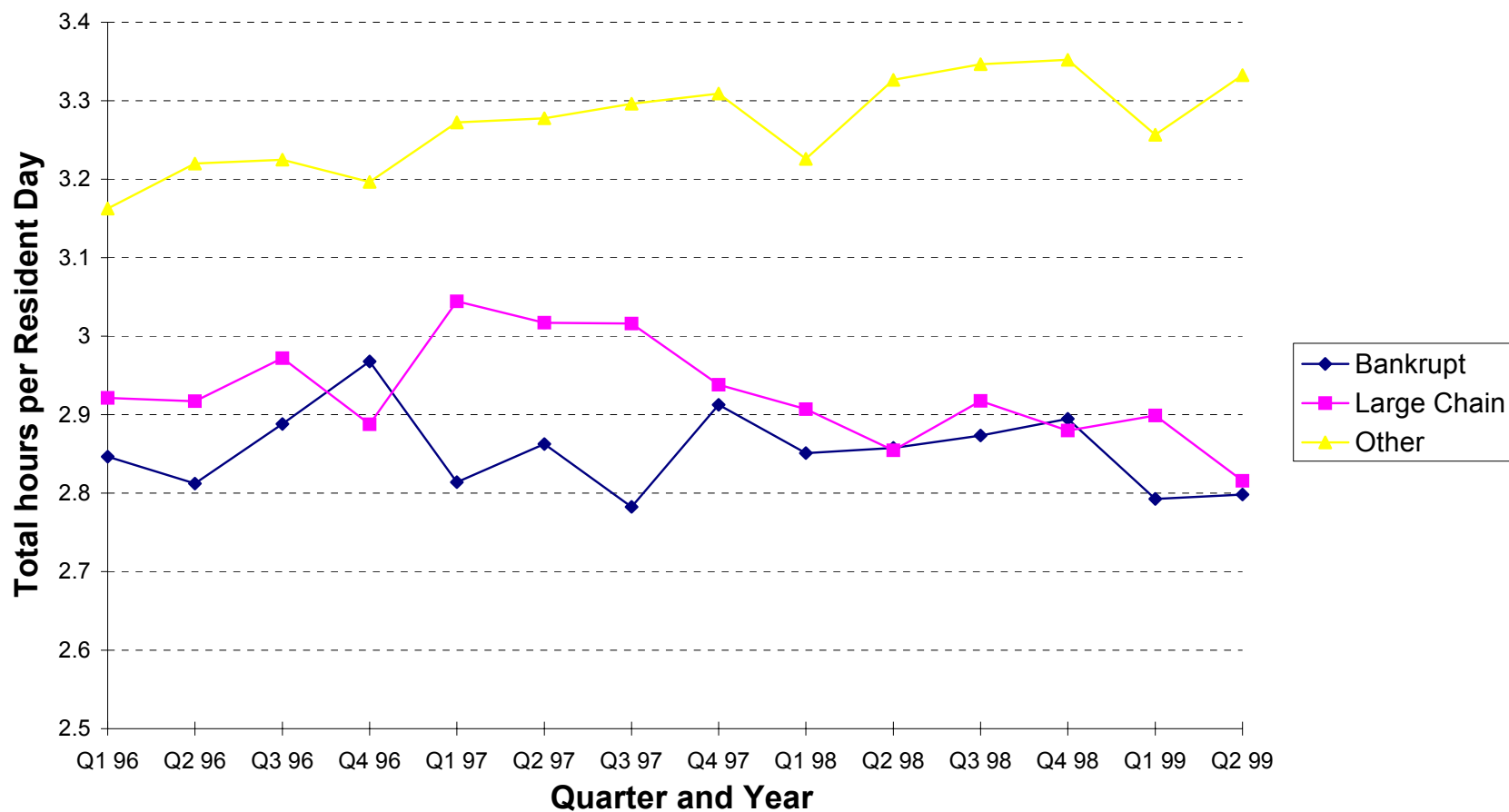
For both 1998 and 1999, facilities associated with large chains (including bankrupt chains) reduced total hours and RN hours relative to non-chains. The 1999 change in total hours was larger for bankrupt chains than for other chains. The decrease in staffing, while not large in magnitude, was statistically significant.

- In 1998, total hours decreased by 2.3% for facilities affiliated with bankrupt chains and 2.8% for other large chains, relative to non-chains (Table 3.9). Both changes were statistically significant.
- Through the first two quarters of 1999, total hours for facilities associated with bankrupt chains decreased by 3.6% relative to non-chains. This difference was statistically significant at the 1% level. The change in staffing for other large chains was not significantly different than that of non-chains.

- In both 1998 and 1999, there were decreases in RN hours for both bankrupt chains and other large chains, relative to non-chains. In 1998, RN hours decreased by about 4% for facilities affiliated with bankrupt chains and decreased by a similar amount for other large chains (although the coefficient for other large chains was not statistically significant) (Table 3.10). The decrease in RN staffing for 1999 was somewhat larger than in 1998. Relative to the change in staffing for non-chain facilities, RN hours decreased by about 5% for facilities affiliated with either a large chain or a bankrupt chain. Both coefficients were significant at the 10% level.

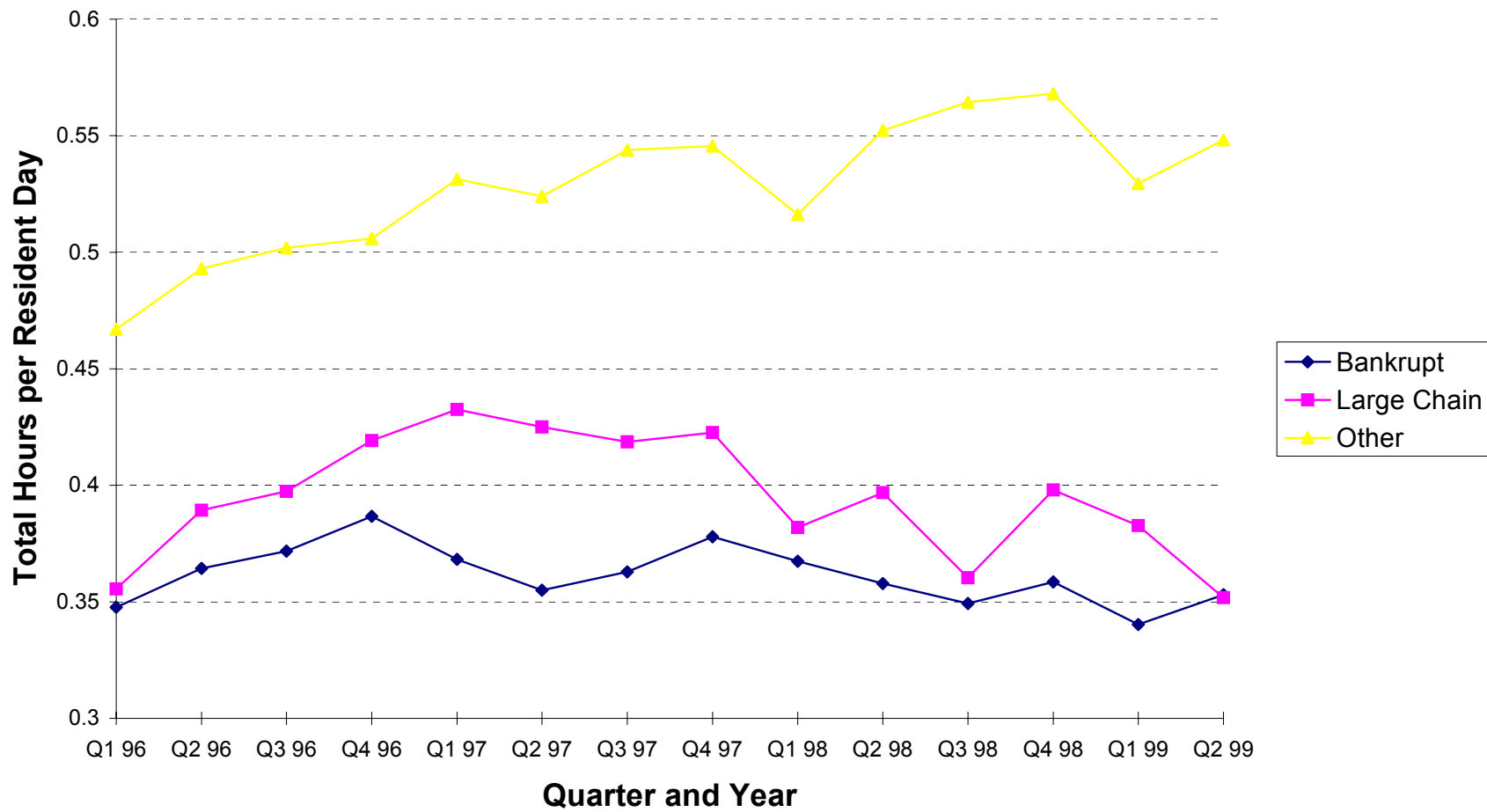
While the regression models do not permit one to analyze the cause of reductions in total and RN hours that were observed for facilities associated with large chains, particularly bankrupt chains, these findings are consistent with these facilities using staff cutbacks as one way to reduce costs. The fact that the regression coefficients for the bankrupt chain indicator was consistently negative and significant, particularly in light of the error with which chain status was measured, suggests that there were important differences in staffing patterns for these facilities in 1998 and the first two quarters of 1999. This analysis should be repeated using data from the last two quarters of 1999 when these data become available. Given the relationship between staffing and outcomes described in Chapters 9-12 and 14, these findings suggested that the recent financial difficulties experienced by the long-term care industry may have quality-of-care implications.

Figure 3.20: Total Hours per Resident Day for Bankrupt Chains, Other Large Chains, and Other Facilities, 1998



Note that quarterly figures are based on facilities that completed OSCAR assessments during the indicated quarter.
 Data Source: OSCAR

Figure 3.21: RN Hours per Resident Day for Bankrupt Chains, Other Large Chains, and Other Facilities, 1998



Note that quarterly figures are based on facilities that completed OSCAR assessments during the indicated quarter.

Table 3.9:
Staffing Levels in U.S. Nursing Homes: Multi-variate Analysis of Total Hours per Resident Day, 1998 and 1999

Variable	1998 Total hours per resident day		1999 Total hours per resident day	
	Parameter estimate (standard error)	% impact at mean	Parameter estimate (standard error)	% impact at mean
Intercept	0.852*** (0.024)	---	0.764*** (0.034)	---
Total hours per resident day in previous year	0.700*** (0.007)	+21.8%	0.723*** (0.010)	+22.7%
Total residents	-0.0003** (0.0001)	-0.1%	-0.0002 (0.0001)	-0.1%
Percentage of Medicare residents	0.869*** (0.046)	+27.1%	0.871*** (0.065)	+27.3%
Facility is hospital-based	0.336*** (0.027)	+10.5%	0.301*** (0.039)	+9.4%
Facility is part of a bankrupt chain	-0.074*** (0.026)	-2.3%	-0.114*** (0.036)	-3.6%
Facility is part of a large nursing home chain (excluding bankrupt chains)	-0.089*** (0.025)	-2.8%	-0.049 (0.035)	-1.5%
Mean of dependent variable	3.21		3.19	
R-squared	0.746		0.758	

***: Coefficient is statistically significant at the 1 percent level.

** : Coefficient is statistically significant at the 5 percent level.

N= 10,360 for 1998, 4,986 for 1999.

Source: OSCAR

Table 3.10:
Staffing Levels in U.S. Nursing Homes: Multi-variate Analysis of RN Hours per Resident Day, 1998 and 1999

Variable	1998 Total hours per resident day		1999 Total hours per resident day	
	Parameter estimate (standard error)	% impact at mean	Parameter estimate (standard error)	% impact at mean
Intercept	0.071*** (0.007)	---	0.065*** (0.009)	---
Total hours per resident day in previous year	0.740*** (0.007)	+146.0%	0.749*** (0.010)	+149.2%
Total residents	-0.0002*** (0.00005)	-0.04%	-0.0002** (0.000)	+4.0%
Percentage of Medicare residents	0.523*** (0.022)	+103.1%	0.541*** (0.031)	+107.8%
Facility is hospital-based	0.139*** (0.012)	+27.4%	0.118*** (0.017)	+23.5%
Facility is part of a bankrupt chain	-0.020* (0.001)	-3.9%	-0.027* (0.016)	-5.4%
Facility is part of a large nursing home chain (excluding bankrupt chains)	-0.021* (0.011)	-4.1%	-0.026* (0.015)	-5.2%
Mean of dependent variable	0.507		0.502	
R-squared	0.811		0.824	

***: Coefficient is statistically significant at the 1 percent level.

** : Coefficient is statistically significant at the 5 percent level.

N= 10,360 for 1998, 4,986 for 1999.

Source: OSCAR

3.5 Conclusion

This background chapter has provided an updated portrait of nursing home staffing. The first section presented a very general overview of how nursing home nurse staffing in other countries compares to the U.S. The reported U.S. staffing levels in this overview are from published literature and there is no attempt to assess the adequacy of the data sources utilized and possibly find more accurate alternatives. Although different definitions and data collection preclude making very precise comparisons, it was found that a pattern emerges with respect to *relative* differences: nursing homes in the U.S. staff at much lower levels than in the other countries. In addition, the distribution of nursing hours in other countries is toward higher skilled staff (e.g., registered nurses) than is typically found in the U.S. where about 60% of total nursing hours are provided by the least skilled staff (i.e., nurse aides).

The second section focused exclusively on the U.S. and an assessment of the three data sources that collect uniform data and can provide national estimates of staffing in the U.S.: 1996 Nursing Home Component (NHC) of the Medical Expenditure Panel Survey (MEPS); 1997 National Nursing Home Survey (NNHS); HCFA's On-Line Survey, Certification and Reporting (OSCAR) System. All three of the nurse staffing data sources use slightly different definitions of nursing homes, different data collection procedures, different reference periods, and collect different data on nursing home staff. They also use different definitions for resident counts - a difference which impacts the key variable in this entire study, the number of hours (or FTEs) *per resident day*. Most importantly, none of the staffing data provided are independently validated against another source such as payroll records.

However, the OSCAR data provide a very important advantage over the other two national data sources. The OSCAR data are essentially an ongoing census of the 95% of nursing homes that are certified. As such, State-level staffing estimates can be generated. These State-level estimates are not possible with the sample surveys of the MEPS and the NNHS. Hence, we have employed the OSCAR data for the analysis of current levels and trends of nurse staffing in U.S. nursing homes and have used these data to examine three policy related issues in light of these staffing levels. We have recognized, however, the limitations of the OSCAR data. In Chapter 7 we have assessed validity of the OSCAR data and have developed a number of decision rules for arraying the data which improves its reliability. Applying these decision rules permits the construction of an improved, more accurate OSCAR file that were employed in the analysis presented in this chapter.

Mean staffing levels were relatively constant between 1996 and 1999, and were virtually unchanged between 1997 and 1999. Hospital-based facilities had much higher staffing levels

than freestanding facilities, and staffing was much higher for non-profit and government facilities than for-profit facilities. The distribution of total hours was close to a normal (i.e., bell-shaped) distribution, with a long tail reflecting the small number of facilities with very high staffing levels.

We analyzed the proportion of facilities that would be affected by the 4.55 minimum total hours per resident day recommended by the Hartford Conference, a recommendation that built upon a prior standard recommended by the National Citizens Coalition for Nursing Home Reform (NCCNHR). The Hartford proposal would require most facilities to increase staffing levels. Only about 11% of facilities had more than 4.55 total hours in 1998, and many facilities would have to increase staffing by 50% or more to be in compliance with these proposed requirements. Some facilities would have to more than double staffing.

The intent of minimum staffing regulatory requirements is to raise the nurse staffing floor and thereby raise the general level of staffing. That objective appears to have succeeded. We compared a variety of measures of the State-level distribution of staffing across three groups of States— those with no requirement, those with a less demanding standard, and those with the most demanding standard. Mean staffing levels were found to be higher for States with more demanding standards, and, among low staffed facilities, the variance was lower for facilities in States with State standards. However, it is possible that some facilities with high staffing levels reduce staffing in response to a minimum requirement. The evidence was mixed and inconclusive as to whether minimum staffing requirements reduce the variance in staffing for higher staffed facilities. Further research is needed to test the extent to which staffing floors become ceilings.

Many large nursing home chains have experienced financial difficulties in the past few years, and there is concern that facilities associated with these chains may reduce staffing levels as part of efforts to control costs. For both 1998 and 1999, total nursing hours for both bankrupt chains and other large chains decreased relative to other facilities. Relative to other facilities, total nursing hours for facilities associated with bankrupt chains decreased by 2% for 1998 and 3.5% in 1999. While it was not possible to investigate the cause of these reductions, these findings suggest that the recent financial difficulties of the long-term care industry may have quality-of-care implications, especially when considered in light of the relationships between staffing and outcomes described in Chapters 9 through 12 and 14.

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CHAPTER 4.0 THE EFFECTIVENESS OF HCFA'S CURRENT NURSING HOME

NON-RATIO NURSE STAFFING REQUIREMENTS⁹⁴

4.1 Introduction

Apart from the results of the quantitative analysis presented in Chapters 9 through 12, any recommendation regarding a minimum nurse ratio requirement will make explicit or implicit assumptions about how HCFA's current nursing home nurse staffing (non-ratio) requirements are working in practice. As will be discussed in greater detail in Chapter 6, one of the difficulties in setting a minimum ratio requirement is that no analysis conducted to date has been able to derive appropriate minimums that adjust for differences among facilities in the acuity and functional limitations in their resident populations. Given these circumstances, surveyors have difficulty in applying the current regulation for sufficient staff in which they must identify a failure to meet resident needs and determine if there is sufficient staff to meet those needs. As we shall see below, this is a very difficult judgement for surveyors. This difficulty may be due in part to the need for in-depth reviews, the cumbersome survey process, and limited time to complete the survey.

The purpose of this chapter is to determine how the current non-ratio requirements are being implemented and assessed. Recent July 1, 1999, State Operations Manual (SOM) revisions incorporated an investigatory protocol related to nurse staffing. This analysis will also address the impact that the SOM revisions may have had on the implementation of staffing requirements by surveyors.

Although the current staffing requirements will be discussed in more detail below, as noted in Chapter 1, the Social Security Act (The Act) mandates certain nurse staffing requirements in long term care (LTC) facilities. The *general* requirement is that staffing must be sufficient to meet the needs of nursing home residents. Many professionals view this general requirement, when implemented in practice, as too vague to serve as an adequate Federal standard. There are also specific *minimum* requirements of 8-hours registered nurse and 24-hours licensed nurse coverage per day. However, since this minimum is the same for all facilities (e.g., the same for a 60 bed facility or a 600 bed facility) many professionals also view this requirement as inadequate; they argue for a required minimum nurse staffing to resident *ratio*. In addition, many professionals recommend minimum nurse staffing ratios that would be adjusted upward for nursing homes with residents who have greater care needs, such as patients who suffer from Alzheimer's Disease and others with fragile medical conditions. In response to this concern, an

⁹⁴ This chapter was completed by current and former HCFA staff including Beverly Cullen, Rosemary Dunn, Marvin Feuerberg, Kathryn Hagerman, Ed Mortimore, and Ray Wedgeworth. Additional editorial assistance was provided by Sally Jo Wieling and Jeane Nitsch, both from HCFA.

increasing number of States are mandating higher levels of nurse staffing under their State licensing authority (see Chapter 2).

The analysis in this chapter will be largely descriptive of the current system with a before/after design to determine the impact, if any, of the recent changes to the SOM survey guidelines in this area. The first section will initially review the State Survey Process. It will then discuss statutory and regulatory requirements and the “Guidance to Surveyors - Long Term Care Facilities” (The Guidelines). Following this background discussion, the results of two analyses will be presented: 1) an analysis of nurse staffing citations, before and after the SOM changes; 2) an analysis of HCFA Form 2567, “Statement of Deficiencies and Plan of Correction” as they relate to the reporting of staffing deficiencies, including an assessment of the content of the citations in relation to the regulatory language; additionally, the analysis of 2567 forms will provide some limited attention to the potential impact of the recent SOM changes.

4.2 Survey Types and Process

The State Agency (SA) overseeing licensing and certification of facilities is required to conduct annual unannounced surveys at LTC Facilities to determine compliance with Federal regulations. The Code of Federal Regulations (CFR) at 42 CFR 488.301 defines the type of surveys that SAs conduct, such as Standard, Abbreviated Standard Surveys, Extended, and Partial Extended Surveys. These survey types are as follows:

- 1) The survey conducted by the SA annually begins as a resident-centered, outcome-oriented Standard Survey. This survey gathers information about the quality of services furnished and whether the facility complies with participation requirements to meet the needs of each resident.
- 2) An Abbreviated Standard Survey, which may be conducted as a result of complaints received, or as a result of change in ownership, management or director of nursing focuses on a particular area of concern(s).
- 3) If during the course of either of these two types of surveys, the surveyors identify substandard quality of care, the survey agency must conduct an Extended or Partial Extended Survey. During an Extended or Partial Extended Survey, in addition to other requirements, nurse staffing must be reviewed.

The statute and regulations require that a survey be conducted by a multidisciplinary group of health professionals such as dietitians, pharmacists, and nurses. The survey team is required to include at least one registered professional nurse. Depending upon the survey findings, complexity of the facility services and structure, distance and travel time, a survey with three to four surveyors for a 100 bed facility, on average, is scheduled to be completed in four days.

Surveyors must identify the potential for negative outcomes, actual negative outcomes, and the facility's culpability. If the surveyor identifies an actual or potential negative outcome of a resident(s), emphasis is placed on identifying the specific requirement in the areas of quality of care or quality of life where the facility is deficient.

A survey provides a relatively small window of opportunity to complete the tasks required to evaluate a facility for compliance with the regulations. The standard survey process requires surveyors to conduct both comprehensive and focused reviews of a specific number of residents based on the size of the facility. There are numerous tasks which surveyors must complete in this short period of time. They must gather required information including observation of delivery of care; evaluation of quality of life; nutritional needs, and medication administration, in addition to assessing environmental safety and accommodation of residents' specific needs. Surveyors must also conduct resident council and staff interviews. Surveyors conduct record reviews to determine whether staff evaluated the resident's needs and/or recognized, evaluated and intervened when a resident experienced a change in condition. This process is complex and includes a need to clarify information by talking with facility staff, residents, and/or their families or representatives. Prior to the end of the survey, the team must also review and evaluate their own findings to determine the facility's compliance or non-compliance with the requirements for long term care facilities.

4.3 Applicable Requirements

This section will provide an overview of the current Federal requirements on nurse staffing for Long Term Care (LTC) Facilities. The Survey Agency surveys LTC facilities to determine compliance with these standards.

4.3.1 Statutory Requirements

The Omnibus Budget Reconciliation Act of 1987 provided amendments to The Act for Skilled Nursing Facilities (SNF) and Nursing Facilities (NF). The statutory language throughout The Act places emphasis upon providing the scope of care and services, including *sufficient* qualified staff for a resident residing in a LTC facility to assure that each resident can attain and maintain his/her *highest practicable* physical, mental, and psychosocial well-being. The law does not define "sufficient" or "highest practicable" (See Appendix C2 for excerpt from The Act).

Federal regulations regarding sufficient staffing were written to reflect the statutory requirements of The Act.

4.3.2 Current Regulations

4.3.2.1 Sufficient Staff Regulations

Currently, the CFR requires the following provision of “sufficient staff” (which includes nursing assistants) to meet the needs of the residents: the provision of 24-hour licensed staff; the designation of a charge nurse per shift; the requirement for a registered nurse (RN) eight hours a day, seven days a week; and the designation of a Director of Nurses. The requirements are not based on size of facility or the acuity levels of the residents. The requirements for LTC facilities do not mandate a specific ratio of nursing staff to residents. The following is an excerpt from the CFR:

42 CFR 483.30: Nursing Services:

The facility must have sufficient nursing staff to provide nursing and related services to attain or maintain the highest practicable physical, mental and psychosocial well-being of each resident, as determined by resident assessments and individual plans of care.

(a) Sufficient staff

(1) The facility must provide services by sufficient numbers of each of the following types of personnel on a 24-hour basis to provide nursing care to all residents in accordance with resident care plans:

(i) Except when waived under paragraph (c) of this section, licensed nurses; and

(ii) other nursing personnel.

(2) Except when waived under paragraph (c) of this section, the facility must designate a licensed nurse to serve as a charge nurse on each tour of duty.

4.3.2.2 Intent of Sufficient Staff Regulations

The intent of the requirement as described in The Guidance to Surveyors at tag F353 (sufficient staff) is as follows:

...to assure that sufficient qualified nursing staff are available on a daily basis to meet residents’ needs for nursing care in a manner and in an environment which promotes each resident’s physical, mental and psychosocial well-being, thus enhancing their quality of life...At a minimum, ‘staff’ is defined as licensed nurses (RNs and/or LPNs/LVNs), and

nurse aides. ...the determining factor in sufficiency of staff (including both numbers of staff and their qualifications) will be the ability of the facility to provide needed care for residents. A deficiency concerning staffing should ordinarily provide examples of care deficits caused by insufficient quantity and quality of staff. If, however, inadequate staff (either the number or category) presents a clear threat to residents reaching their highest practicable level of well-being, cite this as a deficiency. Provide specific documentation of the threat.

Thus, the burden is on the surveyors to determine if the facility has appropriately provided care and services to facilitate the residents maintenance or achievement of his/her highest practicable level of functioning. If residents' needs are not being met, the surveyor must determine whether this is because of a lack of sufficient staff. The surveyor must also determine whether the facility provides for 24-hour licensed coverage and whether a charge nurse is designated per shift.

4.3.3 Registered Nurse Regulations

Current Federal regulations mandate a minimum level of RN coverage. The regulations also provide limited circumstances defining when a waiver of those minimums may be granted. The following is an excerpt from the CFR explaining the minimum level:

42 CFR 483.30

(b) Registered Nurse.

(1) Except when waived under paragraph (c) or (d) of this section, the facility must use the services of a registered nurse for at least 8 consecutive hours a day, 7 days a week.

(2) Except when waived under paragraph (c) or (d) of this section, the facility must designate a registered nurse to serve as the director of nursing on a full time basis.

(3) The director of nursing may serve as a charge nurse only when the facility has an average daily occupancy of 60 or fewer residents.

42 CFR 483.30 paragraphs (c) and (d) provide specific criteria that must be met prior to the HCFA or State approval of a waiver request.

4.3.3.1 Explanation of Registered Nurse Regulations

In a facility with an average daily occupancy of 60 or fewer residents, one RN could fulfill multiple aspects of the staffing requirements. For example, a full-time RN (a single RN or two RNs job-sharing to fill a full-time RN position) could work as the Director of Nurses (DON) and the charge nurse on the floor. In doing so, the RN could meet the requirement for a Director of Nursing, the requirement for a charge nurse, the requirement for provision of eight hours registered nurse staffing (five days of the seven days required) and a portion of the provision of the 24-hour a day licensed nurse coverage.

One RN in a 200 bed facility could, theoretically, also fulfill multiple aspects of the staffing requirements. Although the DON cannot function as a charge nurse in a facility with an average daily occupancy of more than 60 residents, the DON could meet the requirement to provide RN coverage eight hours a day, five of the required seven days. In this scenario, a licensed nurse would have to be designated as charge nurse on each shift. Since the licensed nurse coverage (24-hours a day) in the regulation does not specify that an RN must be on duty 24-hours a day, a licensed practical/vocational nurse (LPN/LVN) may be used.

4.3.4 State Requirements

As described in more detail in Chapter 2, some States have mandated baseline staffing ratios and/or acuity based case-mix staffing requirements. If the survey is a dual survey (State licensing and Federal Certification), State surveyors are required to calculate the staffing based on State licensing requirements during the course of their survey. Surveyors have reported repeatedly throughout the past few years, that it is easier to calculate State specified staffing hours or ratios to identify deficits in numbers of staff, than to substantiate the Federally defined lack of adequate staffing based upon lack of care.

4.4 The State Operations Manual

4.4.1 Survey Process Prior to the July 1999 Changes to the State Operations Manual

Prior to July 1, 1999, the survey process did not specifically require a review of staffing. Instead, the survey process included a list of 20 requirements (including requirements for nurse staffing) from which the survey team was required to select two for review during the survey. Hence, a review of staffing during a standard survey was optional and would have been based upon the survey team's decision to include the staffing requirements as one of the two optional required reviews. Surveyors were provided guidance that suggested selection of the areas for review should be based upon findings during the survey; however, the survey process did not require that staffing schedules, sign in sheets, and time cards be routinely reviewed for

consistency, accuracy, or for compliance with the requirement for licensed staff coverage.⁹⁵ Surveyors were always instructed that they could investigate any area in which they believed the facility may not be meeting a requirement. If substandard quality of care was identified, the survey team was required to conduct an extended survey which requires a review of staffing.

4.4.2 Survey Process Changes to the State Operations Manual, Appendix P on July 1, 1999

The Senate Special Committee on Aging held hearings in July 1998 to address the issues of abuse, neglect of care, pressure sores, dehydration and weight loss which were identified as problems in some of the nation's nursing homes. In response to these issues and in conjunction with HCFA's own plans to continually enhance the survey process, HCFA implemented several survey process changes in July 1, 1999. The survey process was revised to include defined investigative protocols. In addition to the protocols developed for assessing resident care outcomes, an investigative protocol was developed to review nursing staffing to determine if identified care deficiencies were caused by a lack of sufficient nursing staff in the facility.

Another survey change involved requiring surveyors to determine if sufficient licensed nurses were present in the facility when the surveyors first arrived at the facility, unless the facility had a nursing staff waiver in place. The survey process now includes a request for a copy of the staffing schedule for licensed staff upon the surveyors entering a facility. This is done to assure that the requirement for licensed staff 24 hours a day is met and in place upon entry into the facility. As the surveyors tour the building, they are to determine if the nurses scheduled are

⁹⁵ The staffing schedule refers to a means by which facility documents the date, shift or time and location staff are to report for work. As the needs of the facility and its residents and staff change, the schedule can be changed. Employees on the schedule are usually delineated by their profession, e.g., Registered Nurse, Licensed Practical/Vocational Nurse or Nurse Aide. In addition, the schedule usually has notations when employees are not working due to illness, vacations, holidays and other reasons for absence and the names of the agency or other individuals or employees substituting for the absent employee.

present and in the building, or in the case of illness or other absences, that the facility has made appropriate adjustments to assure that licensed staff is present.

These changes to the survey process in the form of SOM directives, were implemented on July 1, 1999, and training was provided at four sessions held around the nation in the Spring of 1999 for State and Federal Survey Agencies and provider organizations. These survey changes have also been added to the Long Term Care Basic Surveyor Training course. In addition, each of the ten HCFA Regional Offices conducts Federal Oversight and Support Surveys to audit the Survey Agencies' implementation of the survey process, including the use of the staffing protocol as discussed below in further detail.

4.4.3 The Investigative Protocol

The objectives of the Investigative Protocol for Nursing Services/Sufficient Staff are to determine if the facility has sufficient nursing staff available to meet the residents' needs and to determine if the facility has licensed registered nurses and licensed nursing staff available to provide and monitor the delivery of resident care. There are specific instructions for when the protocol is to be used. The protocol is not required during the standard survey, unless it is triggered by care concerns, complaints, or identified problems. It is required to be completed for an extended survey. (See Appendix C-3 for text from the investigative protocol.) The investigative protocol, which defines procedures to be used for determining sufficiency of staff, is triggered when problems with the quality of care such as the following have been identified: Residents are not receiving the care and services to prevent pressure sore/ulcer(s), to prevent unintended weight loss or dehydration, or to prevent declines in their functional status such as: bathing, dressing, grooming, transferring, ambulating, toileting, and eating; complaints have been received from residents, families, or other resident representatives concerning services such as: care not being provided, call lights not being answered in a timely fashion, and residents not being assisted to eat; or residents have not received the interventions defined in their care plans.

Instructions to surveyors on how to determine compliance are also provided in the protocol. The protocol states, "Meeting the State mandated staffing ratio, if any, does not preclude a deficiency of sufficient staff if the facility is not providing needed care and services to residents. Compliance with 42 CFR 483.30(a), F353, Sufficient Staff: The facility is compliant with this requirement if the facility has provided a sufficient number of licensed nurses and other nursing personnel to meet the needs of the residents on a twenty-four hour basis. If not, cite F353."

4.5 Factors Influencing Review of Staffing During Survey

Several factors, both objective and perceptual (those reported without objective substantiation), have had a significant impact upon the review of staffing and subsequent identification of staffing deficiencies despite the implementation of the investigative protocol. Surveyors have

repeatedly recounted instances where administrative staff are performing direct care in contrast with their usual job responsibilities or per diem agency staff or staff from a sister facility are being brought in to supplement the regular staff during the survey. Surveyors have reported to HCFA Central Office staff that when they did review schedules or question coverage by licensed staff, the facility would assert that some of the licensed staff and/or corporate staff were present but were salaried and would not appear on the schedule or have a time card. Surveyors relate feedback from residents, family and some staff about the unusual number or attentiveness of staff during the survey. An example of this practice documented in a deficiency is as follows:

“Although additional staff were added to the shifts when surveyors were present, cares were not provided as needed for all residents... The surveyor staff entered the facility at 1:30 p.m.. The administrator and director of nurses were asked to provide the surveyors with the staff that was scheduled to work the evening shift. Surveyors also requested and received the master schedule... Facility staff reported that there was one licensed practical nurse (LPN) and four CNAs {Certified Nursing Assistants} scheduled to work on one station... During observations of resident care for this evening shift it was noted that the scheduled one LPN and four CNAs were all on duty providing resident care. In addition to these staff the director of nurses, administrator, nursing administrator, a LPN from day shift, and an unscheduled CNA were also providing care to the residents on the one station during the entire evening of observation. [The next day] at 5:00 p.m. when the surveyors entered the facility, the following staff were on duty on the station, one registered nurse (RN) and four CNAs. Within 30 minutes after the surveyors arrived, the following unscheduled staff had arrived and began assisting residents on the north station: the administrator, a LPN, and three CNAs.”

Surveyors also indicate that residents and families report a fear of retaliation from staff or other residents if issues of staffing or care are discussed with surveyors. Staff have also voiced the fear of losing their jobs if they discuss staffing issues with the survey team.

All of the following have had an impact upon the identification and citation of sufficient staffing by surveyors: this perceived increase in staff during the survey; the focus of the survey protocol in relation to resident care, services and outcomes; the limited amount of time available to complete the survey tasks, determine compliance and document the deficient practices; and the lack of definitive guidance about how to review for sufficient staffing.

Because the regulatory language does not provide for determining sufficient staff based on an acuity based case-mix level, or a minimum staffing ratio, (except for the RN and licensed nurse coverage), the surveyor must be able to correlate negative findings based on the observations, interviews and record reviews with a determination that insufficient staffing led to a resident(s) not having received appropriate care or treatment.

4.6 Quantitative Analysis of Staffing Deficiencies

4.6.1 Purpose

This descriptive analysis will look at the pattern of citation for staffing deficiencies. It will attempt to determine if the July 1, 1999, SOM changes have had an impact on the rate and pattern of staffing citations.

There are several reasons to hypothesize an increase in the rate of staffing deficiencies by surveyors. First, the widespread news coverage of alleged staffing problems in nursing homes, including a November 3, 1999, Senate Special Committee on Aging forum, might have sensitized some surveyors to cite staffing when they might not have otherwise. Second, the July 1, 1999, SOM changes, described above, would have *required* surveyors to employ a new investigatory protocol for potential staffing problems when quality of care problems are identified; previously, this type of investigation was not required.

Apart from any expected increase in the rate of staffing deficiencies, we would also hypothesize that the SOM changes would have led to better documentation and support for staffing deficiencies. Hence, we would expect an increase in the scope and severity of staffing citations, apart from any increase in the rate.

4.6.2 Data Sources - OSCAR

The source of data for this analysis of staffing deficiencies is HCFA's Online Survey and Certification Reporting system (OSCAR), an administrative data set. This system has information from the State surveys of all certified nursing facilities in the U.S. Although we have good reason to suspect the accuracy of the OSCAR reported staffing levels (see Chapter 7), there is no reason to doubt that the official surveyor findings, apart from any consideration of justification, are reported accurately.

There are two components to this analysis. The first examines staffing deficiencies cited prior to the July 1, 1999, SOM changes related to staffing. (These survey guideline changes are discussed above.) For this analysis of staffing citations made prior to SOM changes, all current surveys before July 1, 1999, were included in the sample. Ninety-eight and a half percent of these surveys were conducted during the 12 months period between July 1, 1998, and July 1, 1999. The second component examines the pattern of staffing citations after the official July 1, 1999, implementation of the SOM changes, although it should be noted that data for surveys conducted after HCFA made changes to the SOM are limited. (A few States did not implement the SOM changes until around October 1, 1999.) OSCAR data available for this analysis was collected from October 1 through December 31, 1999. Although this 3-month period is too brief

an interval with too few surveys to indicate potential changes at the State level, it should be sufficient to indicate any national change that may be due to the SOM changes. Fortunately, we have no reason to believe that there is any seasonal pattern to citation rates or patterns.

4.6.3 Analysis Questions

The analysis addresses several questions about nurse staffing citations:

1. What is the citation rate for staffing? Are there major differences in this rate among the States?
2. Has the citation rate for staffing increased since the SOM changes were implemented?
3. Has the scope and severity of staffing citations changed when comparing citations made prior to and following the implementation of SOM changes?

4.6.3.1 Nurse Staffing Citation Rates Made Prior to July 1, 1999, SOM Changes

The staffing citation rate is considered to be the rate at which either deficiency F353 (sufficient staff) or F354 (registered nurse), or both, is cited. Tag F354 is rarely cited without tag F353 being cited, and the number of F354s cited in each State is small. An analysis of current Standard Surveys conducted before July 1, 1999, (Prior to SOM changes) revealed that 7.2% of facilities were cited for staffing deficiencies at F353 or F354 (see table 4.1). There is large variation in the rate at which States cite facilities for staffing deficiencies. Florida, for example, cited 15.4% of the 619 facilities surveyed during this period while Pennsylvania cited only 1.6% of the 640 surveyed facilities. Across the States, citation rates range from 0 to 15.4 percent.

Table 4.1 Pre-SOM Analysis of Staffing Citation 353 and 354

State	All Facilities	Staffing Citation 353	Staffing Citation 354	Staffing Citation ¹	% Staffing Citation
AK	12	0	0		0.00%
AL	206	21	0	21	10.19%
AR	257	10	2	12	4.67%
AZ	153	6	2	8	5.23%
CA	1347	86	12	98	7.28%
CO	160	1	1	2	1.25%
CT	212	0	0		0.00%
DC	19	1	0	1	5.26%
DE	39	4	0	4	10.26%
FL	619	91	4	95	15.35%
GA	289	21	0	21	7.27%
GU	1	0	0		0.00%
HI	41	1	0	1	2.44%
IA	391	23	1	24	6.14%
ID	68	4	1	5	7.35%
IL	777	48	11	59	7.59%
IN	501	51	12	68	13.57%
KS	319	14	9	23	7.21%
KY	262	21	0	21	8.02%
LA	224	4	8	12	5.36%
MA	327	7	1	8	2.45%
MD	156	3	0	3	1.92%
ME	101	6	1	7	6.93%
MI	428	48	5	53	12.38%
MN	312	17	13	30	9.62%
MO	433	44	3	47	10.85%
MS	163	10	1	11	6.75%
MT	84	6	0	6	7.14%
NC	309	21	0	21	6.80%
ND	79	4	0	4	5.06%
NE	169	3	2	5	2.96%
NH	48	5	0	5	10.42%
NJ	193	3	0	3	1.55%
NM	59	8	1	9	15.25%
NV	42	4	0	4	9.52%
NY	429	1	0	1	0.23%
OH	779	59	16	75	9.63%
OK	300	8	18	26	8.67%
OR	126	11	0	11	8.73%
PA	640	10	0	10	1.56%
PR	7	1	0	1	14.29%
RI	78	0	0		0.00%
SC	163	8	3	10	6.13%
SD	98	6	0	6	6.12%
TN	282	12	5	17	6.03%
TX	990	66	19	85	8.59%
UT	68	3	0	3	4.41%
VA	196	9	0	9	4.59%
VI	1	0	0		0.00%
VT	22	1	1	2	9.09%
WA	262	17	0	17	6.49%
WI	330	18	0	18	5.45%
WV	116	0	1	1	0.86%
WY	34	3	0	3	8.82%
Totals	13721	829	153	986	7.19%

4.6.3.2 Nurse Staffing Citation Rates After SOM Changes--Has the Rate Changed Since the Changes in the SOM Were Promulgated?

An analysis of current standard surveys conducted after October 1, 1999, (after SOM changes) revealed that 7.5% of facilities received a citation for a staffing deficiency (see table 4.2). This is a modest increase from the Pre-SOM changes rate of 7.2%. Due to the small number of standard surveys captured in the Post-SOM changes, a State by State analysis is not meaningful for comparison to the Pre-SOM change period, but we do notice once again that there is large variation between States.

Table 4.2 Pre-SOM and Post-SOM Staffing Citation Rates By State						
State	PRE-SOM ¹			POST-SOM ²		
	All Facilities	Staffing Citation ³	% Staffing Citation	All Facilities	Staffing Citation ³	% Staffing Citation
AK	12		0.00%	6		0.00%
AL	206	21	10.19%	39	8	20.51%
AR	257	12	4.67%	20		0.00%
AZ	153	8	5.23%	10		0.00%
CA	1347	98	7.28%	178	15	8.43%
CO	160	2	1.25%	37		0.00%
CT	212		0.00%	43	1	2.33%
DC	19	1	5.26%			
DE	39	4	10.26%	3		0.00%
FL	619	95	15.35%	145	17	11.72%
GA	289	21	7.27%	48		0.00%
GU	1		0.00%			
HI	41	1	2.44%	7	1	14.29%
IA	391	24	6.14%	43	2	4.65%
ID	68	5	7.35%	13	6	46.15%
IL	777	59	7.59%	147	15	10.20%
IN	501	68	13.57%	105	11	10.48%
KS	319	23	7.21%	44		0.00%
KY	262	21	8.02%	65	3	4.62%
LA	224	12	5.36%	66	4	6.06%
MA	327	8	2.45%	47	4	8.51%
MD	156	3	1.92%	3		0.00%
ME	101	7	6.93%	23		0.00%
MI	428	53	12.38%	98	13	13.27%
MN	312	30	9.62%	68	5	7.35%
MO	433	47	10.85%	62	5	8.06%
MS	163	11	6.75%	33	7	21.21%
MT	84	6	7.14%	23	1	4.35%
NC	309	21	6.80%	74	5	6.76%
ND	79	4	5.06%	21		0.00%
NE	169	5	2.96%	39		0.00%
NH	48	5	10.42%	12		0.00%
NJ	193	3	1.55%			
NM	59	9	15.25%	20		0.00%
NV	42	4	9.52%	5		0.00%
NY	429	1	0.23%	44		0.00%
OH	779	75	9.63%	139	6	4.32%
OK	300	26	8.67%	1		0.00%
OR	126	11	8.73%	28	3	10.71%
PA	640	10	1.56%	26	2	7.69%
PR	7	1	14.29%			
RI	78		0.00%	11		0.00%
SC	163	10	6.13%	18		0.00%
SD	98	6	6.12%	10	1	10.00%
TN	282	17	6.03%	57	3	5.26%
TX	990	85	8.59%	161	14	8.70%
UT	68	3	4.41%	17	1	5.88%
VA	196	9	4.59%	24	1	4.17%
VI	1		0.00%			
VT	22	2	9.09%	10	1	10.00%
WA	262	17	6.49%	52	6	11.54%
WI	330	18	5.45%	23	3	13.04%
WV	116	1	0.86%	18	1	5.56%
WY	34	3	8.82%	8		0.00%
Totals	13721	986	7.19%	2194	165	7.52%

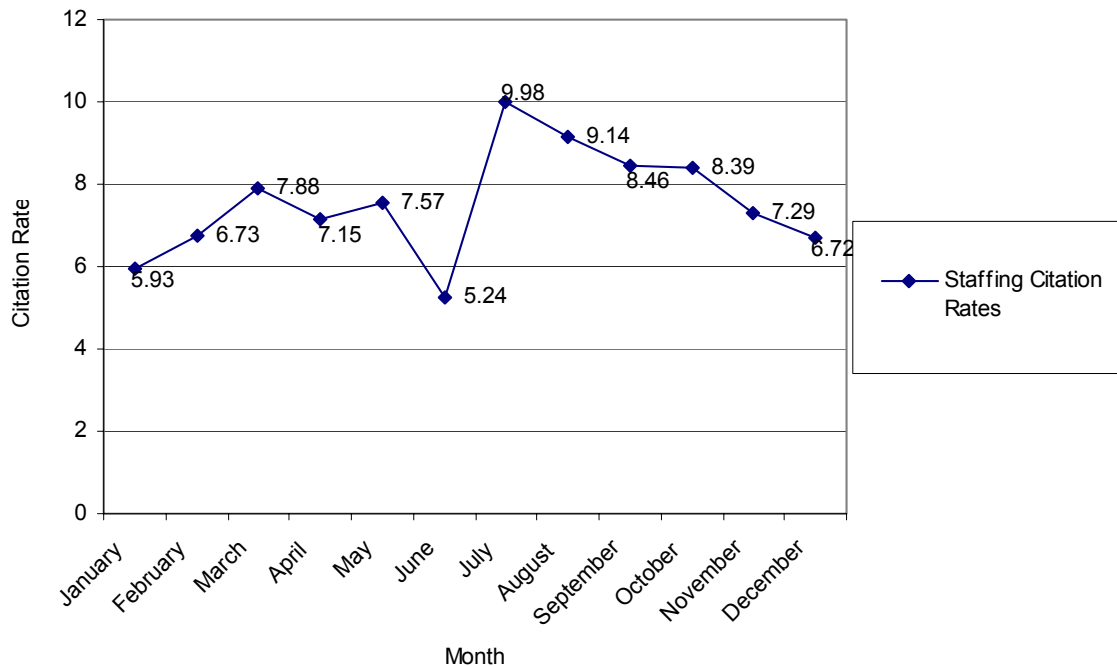
¹Pre-SOM analysis contains most current surveys before July 1, 1999.

Appropriateness of Minimum Nurse Staffing Ratios in Nursing Homes
 Report to Congress

³Staffing Citation is all facilities that received a 353 or 354 citation

It is difficult to see any trends during 1999 in the rate at which nursing homes were cited for staffing (see figure 4.1). The staffing citation rate peaked in July at 10% (the same month the SOM was released) and then decreased in the remaining months of 1999. This rise might be attributed to the change in the SOM. It might also be due to increased scrutiny of surveyor actions, or might be due to changes in the SOM other than those directed at scrutiny of nursing home staffing. Nevertheless, subsequent survey findings reflect a decreased rate of citation, so

Figure 4.1 Staffing (353 and 354 combined) Citation Rates By Month



any effect of the change in the SOM, if it does exist, appears to be transient.

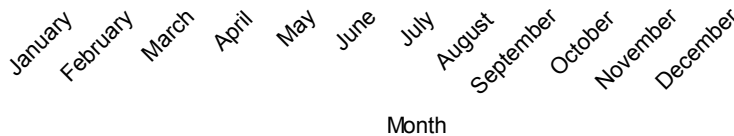
Further analysis of monthly citation rates reveals that staffing citations tend to follow the same trend as all other deficiencies (see figure 4.2). For figure 4.2, total staffing deficiencies were standardized to the same scale as total health deficiencies (all deficiencies other than F353 or F354) in order to compare trends. The distance between the two lines gives some indication of the ratio of staffing deficiencies to all other deficiencies. After July, it appears that the ratio of staffing deficiencies to total deficiencies is larger (see figure 4.2).

Table 4.3 COMPARISON OF GROUP1 AND GROUP2 PRE AND POST-SOM ON SCOPE AND SEVERITY

Scope and Severity	PRE-SOM				POST-SOM			
	% Group1	Cumulative % Group1	% Group2	Cumulative % Group2	% Group1	Cumulative % Group1	% Group2	Cumulative % Group2
A	0	0	0	0	0	0	0	0
B	9.4	9.4	14.5	14.5	8.6	8.6	10.2	10.2
C	9.5	19	10.5	24.9	11.7	20.4	10.8	21
D	40.3	59.3	45.5	70.3	46.9	67.3	49	70
E	25.3	82.6	19.4	89.6	19.8	87	21.2	91.2
F	1.8	84.4	2.1	91.7	2.5	89.5	2	93.2
G	11.6	96	7.7	99.4	8.6	98.1	6.3	99.5
H	2.8	98.8	0.4	99.8	0.6	98.8	0.3	99.8
I	0	99.4	0	99.9	0	99.4	0	99.9
J	0.6	99.4	0.1	99.9	0	99.4	0.1	100
K	0.6	100	0.1	100	0.6	99.4	0.1	100
L	0	100	0	100	0.6	100	0	100

GROUP1: Only facilities with a 353 staffing deficiency

GROUP2: Facilities that have a health deficiency, but do not have a 353 staffing deficiency



4.6.3.3 Has the Scope and Severity Levels of Staffing Citations Changed?

In order to see if increased emphasis on staffing evaluation in the July revision to the SOM brought about changes in scope and severity of cited deficiencies, we compared the scope and severity levels for facilities in two groups: those with a F353 (sufficient staffing) staffing deficiency (Group 1) and those facilities without a F353 staffing deficiency (Group 2). We compared scope and severity levels in these two groups during two periods of time: before and after changes to the SOM were put forth (see table 4.3). In order to simplify the findings, we compared the proportion of deficiencies cited at G level (actual harm to an individual or isolated group) or above in scope and severity. Before changes to the SOM, 15.6% of the deficiencies cited in Group 1 facilities were at G level or above in scope and severity, while 8.3% of the deficiencies cited in Group 2 facilities were at G level or above in scope and severity. After changes to the SOM, 10.5% of the deficiencies cited in Group 1 facilities were at a G level or above in scope and severity, while 6.8% of the deficiencies cited in Group 2 facilities were at G level or above in scope and severity. The differences between the pre- and post-SOM change scope and severity distributions was statistically significant, using the Kolmogorov-Smirnov two-sample test, for both Group 1 ($p < .0001$) and Group 2 ($P < .0001$) facilities.

In summary, a higher proportion of deficiencies in Group 1 facilities (those cited for staffing)

were placed at G level or above than in Group 2 facilities. Both groups experienced a statistically significant decrease in the proportion of deficiencies placed at G level or above after changes in the SOM, but the rate of decrease is actually higher among Group 1 facilities than among Group 2 facilities.⁹⁶

4.7 Qualitative Analysis of Staffing Deficiencies

4.7.1 Sample Selection for Content Analysis of HCFA Form 2567

Although the quantitative analysis of deficiencies provides one measure of surveyor performance, it does not provide direct information regarding the reasons why surveyors cite or do not cite staffing deficiencies. The purpose of this qualitative analysis is to analyze the reasons and documentation that surveyors provide when citing staffing and completing HCFA Form 2567. Of course, direct questioning of surveyors would have provided an important complement to this analysis. Interviews with surveyors could not only ask why they cite, but could explore perhaps a more important question that cannot be examined with the 2567s - their reasons and circumstances for not citing staffing when it might appear appropriate. Unfortunately, interviews with surveyors were not feasible for this Phase 1 Report.

⁹⁶ Staffing deficiencies also can be generated by complaint survey. The On-line Survey Certification And Reporting (OSCAR) system was queried regarding complaint surveys resulting in citation of staffing deficiencies between July 1, 1998, and June 30, 1999. A very limited review of a sample of information available regarding the staffing deficiencies cited during those complaint surveys reflects that approximately 63% of the deficiencies were cited as posing a potential for more than minimal harm and 26% were cited as having been actual harm to the residents. In 46% of the complaint surveys reporting staffing deficiencies, the facilities were also cited for staffing deficiencies during their annual Standard Survey. The content of the citations resulting from the complaint surveys was not reviewed.

The data base in OSCAR indicated that a total of 127,902 deficiencies were cited during the standard surveys of the 17,175 Medicare/Medicaid participating LTC facilities and that less than 1% (0.8%) of the deficiencies represented non-compliance with the staffing requirements. Of this total of all regulatory cites, there were only 978 staffing deficiencies, of which 829 were cited at 42 CFR 483.30 (a) (1)(i)(ii) and (2) (F353, sufficient staff) and 149 were cited at 42 CFR 483.30 (b)(1)(2)&(3) (F354, registered nurse.)

To obtain a sample of HCFA 2567 forms for review, a file listing of standard surveys was extracted from OSCAR on July 15, 1999. (These standard surveys were conducted by the SAs. The SAs are geographically assigned to one of ten HCFA Regional Offices located across the country). The data set was limited to staffing deficiencies, cited between June 1998 and June 1999 for 42 CFR 483.30 (a) (1)(i)(ii) and (2) (F353: sufficient staff) and 42 CFR 483.30 (b)(1)(2)&(3) (F354: registered nurse).

Using the following criteria, six 2567 forms were requested per each of the ten HCFA Regional Offices (n=60):

1. Deficiencies with the highest scope and severity.
2. The most current survey.

A total of thirty-nine HCFA 2567 forms were received: four from Region 1, three from Region 2, four from Region 3, six from Region 4, six from Region 5, one from Region 6, three from Region 7, three from Region 8, six from Region 9, and three from Region 10. Since this number of 2567's was sufficient to conduct the analysis, no further requests were made to the Regions for additional 2567 forms.⁹⁷

⁹⁷ Some States have established a minimum for staffing ratios and/or acuity based case mix staffing requirements. Surveyors may have issued a lack of sufficient nursing staff only under the State authority, rather than utilizing the Federal requirements for staffing. Thus, there could have been more issues and/or concerns with staffing on surveys conducted during that time period of sampled deficiencies, however, the Federal data system would have no way to capture such information.

4.7.2 Review Process and Criteria Used to Review Deficiencies

A sample of deficiencies written regarding lack of sufficient staff or lack of registered nurse staff, was reviewed to compare the regulatory language with the content of the deficiencies as written to determine what types and extent of evidence were used to cite deficient practices and to determine if the provider's corrective action plan addressed the sufficiency of staff or scheduling of RN staff. Criteria were developed for review of the individual citations as well as review of the facility's plan of correction (POC) responding to the deficiencies. After criteria about the nature and effectiveness of the information contained in the 2567 form were developed, the review was conducted by two HCFA RNs with significant background in the LTC survey field.⁹⁸ In an attempt to assure inter-rater reliability for determinations about the nature of the information contained on the 2567 forms, the two RNs discussed the interpretation of the criteria and together reviewed 25 of the 39 HCFA 2567 forms with staffing deficiencies. Each of the two RNs independently reviewed 14 of the 2567 forms. They then compared their findings for those fourteen 2567 forms and achieved consensus. Thirty-four of the 2567 forms contained deficiencies cited at F353 regarding sufficiency of staff. Six of the 2567 forms contained deficiencies cited at F354 regarding lack of RN staff. (One of the 2567 forms contained a citation at both F353 and F354).

Criteria used to review the content of the citation included:

- Sources used to determine that staffing was insufficient or not adequate (F353); or Sources used to determine that RN staffing was not adequate (F354).
- Whether the 2567 form provided documentation of negative resident outcomes.
- Whether the 2567 form identified the facility staffing level as related to the resident census and care needs.

Criterion used to review the content of the POC included:

- What corrective actions were planned/provided to correct the deficiency

4.7.3 Documentation of Nurse Staffing Deficiencies at F353: Sufficient Staffing

⁹⁸ Both nurses have had previous experience in long term care settings, and both were previously employed in State survey agencies as surveyors of long term care facilities for 11 years and 13 years respectively. In addition, one of the nurses was a State Survey Supervisor for more than seven years with the responsibility of reviewing deficiencies.

Of the 34 deficiencies reviewed at this citation, 13 identified the care needs of the residents, identified aspects of the care that were not provided, and that the lack of care was because of a lack of sufficient staff to provide the care as corroborated by observations and interviews with residents/family and staff. About 60% of the 2567 forms left it to the reviewer to conclude that negative outcomes had occurred as a result of insufficient staff.

4.7.3.1 Sources Used to Identify a Deficient Practice

The findings recorded in the 34 deficiencies of sufficient staffing contained either one or a combination of the following sources: direct observations of care provided or care needed and not provided, record review noting a resident's decline or failure to improve or services not provided, interviews with residents, family, resident council and staff or reviews of the staffing schedules.

The following example of a deficiency illustrates that the surveyors were able to acquire an extensive amount of information, but evidence to this extent frequently will not be available and not all sources or this extent of information are required to substantiate a deficiency:

I. Resident characteristics:

During an interview with the day Registered Nurse (RN) Supervisor on ... at 2:05 p.m, she stated there were 25 residents on 2nd floor and 24 residents on 3rd floor. The RN Supervisor was responsible for care of the residents on...(both) floors and supervision of all floor staff. There were 9 residents on 2nd floor on ventilator life support full time and an additional resident on ventilator life support only at night. There were 17 residents on 3rd floor with diagnoses of persistent vegetative state. She stated there were 22 residents on 2nd floor [who] received nutrition by gastrostomy tube (g-tube) feeding and 4 on 3rd floor receiving nutrition by g-tube. There were 5 residents on 2nd floor and 1 resident on 3rd floor receiving intravenous antibiotics that could only be administered by a RN.

II. Resident interviews: (Note: Deficiency documentation revealed that six residents were interviewed, however, only three examples are provided for this excerpt.)

1. Resident....was interviewed at 2:35 p.m. in his room on 3rd floor. The resident stated he needed a 2-person transfer to get out of bed and into his wheelchair. The resident stated sometimes there weren't enough staff to help him transfer. The resident stated he had waited as long as 20-30 minutes to get the assistance he needed to

transfer from bed to his wheelchair. The resident stated that when this happened, he would be late for meals and therapy. Therapy was very important to him, "I'm very annoyed when I don't get therapy. Therapy is paramount to me." The resident stated he lets staff know when he is annoyed. The resident went on to say there was a "chronic staff shortage of nurses and CNAs (certified nursing assistants). [The] nurses have to help the CNAs and everyone does a job they aren't hired for." The resident stated there were usually 2 CNAs on the floor, but often times at evening and night, there is "only 1". The resident stated there was 1 nurse to give medications and he could get his medications as late as a "couple of hours." The resident stated he liked his morning medications 1 to 1½ hours before he gets up "so I am not jumping out of my chair [wheelchair] with muscle spasms. I need my muscle relaxants" before getting out of bed...

2. Resident ...had a tracheostomy and was on a ventilator, but could answer yes/no questions by head shakes and nods and could mouth words. Resident...was interviewed on ...at 9:25 a.m. in her room on 2nd floor. Resident ... indicated she would sometimes lay wet in bed for sometimes an hour, 2 hours and/or 3 hours once or twice a day. When asked if staff come in and check on her, she made a face and shook her head. When asked if she would like them to look in on her, she nodded her head. When asked if staff come quickly when she turned on her call light she shook her head no. The resident indicated it could take up to one hour, but never 2 hours for the call light to be answered. The resident indicated the staff will come in, turn off her call light, tell her they will be back and then not come back. Resident ... indicated she did not always get her medication on time. She indicated her medication was usually late in the evening and night, but not during the day...

3. Interviewable resident ...was interviewed...at 1:10 p.m. in his room on 2nd floor. Resident...has quadriplegia and is ventilator dependent. He stated there was "no help." He stated evenings were bad but nights were worse, and the people they do have they 'work them to death." He stated he did not get his medication on time 4-5 times a week and he would get muscle spasms if his medication was not given on time. Resident... said it was "scary at night". He stated he didn't "know if they are going to have enough help to answer call lights or your alarms. I timed them one night and it took them (staff) 28 minutes to answer my call light." He stated that he used his "call light at night" when he needed suctioning. "two minutes not being able to breathe is scary", resident ... told the surveyor. He stated Saturday and Sunday were the worst days for the facility not having enough staff...

III. Family interviews: (Deficiency documentation contained 5 interviews with family, however for this excerpt, only 3 are included.)

1. The family of resident ...asked to speak to the surveyor and an interview was conducted on ...at 4:30 P.M. The family member (stated) she visited the resident daily. She stated that 4-5 times a week she would find the resident's incontinent pads "very saturated" with urine. She also stated the pillows used for positioning were not being consistently used. The family member stated she bathed the resident daily. The family member stated she was concerned about the positioning pillows because she did not want the resident to develop pressure sores. The family member stated sometimes in the evening the facility had 1 RN, 2 Licensed Practical Nurses (LPN) and 2 CNAs. 1 CNA orienting the 2nd CNA. The family member stated if she wasn't at the facility, the resident would not get care. The family member questioned why she had to provide care when the facility got paid to provide care.

2. An interview with the family of a sample resident was held on ...at 12:00 noon. The family member stated the staffing was "horrendous" on the weekends. The family member stated that members of the family visited the resident on a daily basis. The family member stated the first weekend the resident was in the facility, the family found the resident to be lying in urine and feces. The family member stated the resident's perineal area was "red with rash, just like a baby has". The family continued that the area was still red on ... and was bleeding from the rash three weeks prior. The family member stated "I figured out right off, I had to tell staff when to change [the resident]. The family member stated family had to tell staff when to get the resident up, reposition the resident and when to check the resident's pads for incontinent episodes. From ...the family found on four weekends the resident was without positioning devices for the extremities. The family member stated the family performed range of motion on the resident's feet because staff "won't do it." The family member stated the family begged staff to perform range of motion on the resident's feet, "I tell them I'll pay them" to perform the range of motion. The family member stated "staff never reposition [the resident] in chair [wheelchair], I do." The family member stated staff, "never come in and roll the resident from side to side." Occupational Therapy did an up-down schedule for the resident in the room and they have never followed it, never, not once. The family member stated the weekend of ..., the family member found the resident to be lying in feces in bed when the family arrived for the visit at about 11:30 a.m. The family member asked how many patients the licensed nursing staff had to take care of, [and] the licensed nursing staff stated 28. The family member stated that during the second weekend of ..., family asked a staff person to change the resident and the staff person told the family member [he/she] was too busy. The family stated the family had taken their complaints to the Nursing Home Administrator (NHA) and had been told by the NHA to tell the staff they have to do it. The family interview was confirmed by record review.

3. An interview was conducted with the family of a sample resident on ... at 10:30

a.m. The family member stated the facility was understaffed most of the time. The family member stated that family members have been in the facility everyday. The family member stated the resident had been outside the facility with the family and when the family brought the resident back inside, the bandages on the resident's wounds were dripping and were wet with pus. The family could not remember the exact date, but stated she asked the licensed staff to change the bandages. The licensed staff told the family [he/she] couldn't change the dressing because [he/she] had to pass medications. A family member stated on ... at 3:30 p.m., that "I have to ask to have it done" referring to wound care on weekends....The family member stated the resident did not get mouth care if it was not provided by the family. The family member stated, "a couple of weeks ago, a CNA told the family "we didn't have time to clean [the resident's] mouth. ...

IV. Staff interviews: (Deficiency documentation revealed 7 interviews, for this excerpt only 4 interviews were included.)

1. An employee who worked the night shift (11 p.m. - 7:00 a.m.) stated she had worked as the only CNA on the night shift on 2nd floor 10-12 times since..... The CNA stated she had been the only CNA in the building when other assigned CNAs had not come to work. She stated that when that happened, "I just do the best I can." When asked if she could change and reposition people every two hours by herself, she stated, "we can't do it every two hours - no way..."
2. An interview with the day RN supervisor was conducted.....She confirmed that on occasions when she came in to work at 6:30 a.m., there would be only 1 CNA on the night shift for the entire facility. She said it usually happened on the weekends.
3. (An interview with day nursing staff on the 2nd floor).....The nurse stated wound care was a problem, that the pressure sores weren't healing, they were increasing in size and the stage level was increasing...
4. (Interview with the evening charge nurse on the 3rd floor) When asked about the frequency of pressure sores, "I've seen a few have been added on". She added she felt the increases "were because they weren't being turned." The nurse went on to say regarding resident....."when he came in they said he had what was an abrasion. Now it looks like it is rotting. It's quite a bit bigger. I think it is because he isn't turned."

V. Observations: (observations were dispersed throughout the deficiency including care observations and observations of staff present in relation to staff scheduled.) Examples of staffing observations are as follows:

Documentation in the deficiency revealed the use of “corporate staff” who were “answering call lights and doing wound treatment as well as repositioning residents”. It was documented that facility “Staff were overheard to say they had not had the opportunity to take their scheduled breaks even with increased assistance with additional agency LPNs and 2 corporate RNS.” “Interviews with multiple nursing staff revealed corporate RNs were “never” onsite during the weekends.

VI. Record Review:

Documentation in the deficiency revealed information regarding staff scheduled, a review of time sheets and a roster of agency staff utilized. The documentation included interviews with the director of nursing regarding the numbers of staff routinely scheduled to meet the needs of the residents. The documentation also included records indicating the times when this amount of staff was not in the facility, and when there were not sufficient numbers and/or licensed nurses in the facility.

Although the above deficiency is substantiated by an exhaustive amount of evidence utilizing an extensive number of sources, there is no minimum number of sources required to substantiate a deficiency. Surveyors are instructed to incorporate into their documentation a variety, if possible, of data sources necessary to clearly demonstrate how the facility failed to meet the requirement. In some cases, information found at other tags provides additional evidence of insufficient staff. The following examples demonstrate the use of these methods:

“Based on review of staffing records, observation, and staff and family interview, it was determined that the facility failed to provide sufficient staff and nursing to meet the resident needs. ...Findings include:

1. On ... and ... records showed that there was only one licensed nurse and one nurse aide on duty for the entire night shift, to care for 41 and 45 residents respectively. This was confirmed by interview with administrative staff on the afternoon of ... Administrative, professional and unlicensed staff, at various times throughout the survey days of ... stated that choices in care had to be made as there was not sufficient staff to do everything the residents needed.
2. Family and random resident interviews conducted on ... and ... revealed that resident needs were not being met as evidenced by lack of sufficient bathing to prevent body odor, shaving not being done regularly, therapy treatments not being provided as ordered, and general lack of staff ability to provide care in a timely manner. It was further stated that restorative and bath personnel were often taken away from assigned duties due to lack of adequate staff to provide care. Refer to F311 and F312 as they relate to the facility’s failure to provide appropriate treatment and services and necessary care to maintain grooming and hygiene.”

An excerpt of the deficiency at F312 contained the following information that linked the lack of provision of care to the lack of staffing:

“Review of medical records revealed that prior to ..., care plans routinely stated “give shower/bath as scheduled two times weekly.” Further review showed that Residents ... were not given baths or showers two times weekly as care planned. After ... the bathing schedule was changed to read “baths will be given as scheduled.” Review of the current bath schedule revealed that baths were now planned for once a week. The revision was not based on individual need, but appeared to be an attempt to make sure that the number of baths given matched the care plan. In an interview with administrative staff on the morning of ..., the staff stated that care choices had to be made because of lack of staffing. Staff indicated that when there was insufficient staff for both bathing and feeding residents, baths were not given. On both days of the survey, additional staff members confirmed in informal statements that there was often not enough staff to get everything done as it was supposed to be done.

Another excerpt of a deficiency at F353 reviewed provided information obtained from another source, the Resident Group Interview. For example:

“During the Resident Group Interview, 4 of 7 alert and oriented residents voiced statements regarding the facility being short staffed. One member of the group stated, “When we call for help, we are told we have to wait for the next shift of CNA’s to come in because they are short handed.” Another member of the group stated, “on Sundays there is not enough help, call lights aren’t answered.” Another member of the group stated, “You have to talk loud to get someone’s attention. Call lights aren’t answered.” Another member of the group stated she, “Wet in her pants because not enough nurses.” The residents at the group meeting expressed their concerns and fears at the repeated statements made by the nurse aides regarding the lack of staff and their inability to provide care in a timely manner. The residents stated they were frustrated that they were made to wait for staff assistance and told they had to “Be patient because they were short handed.”

Table 4.4 reflects the number of sources identified on the 2567 forms as providing evidence of insufficient staff. Surveyors may have used one or more of these sources in a particular deficiency.

Table 4.4 Sources providing evidence of insufficient staff.	
<i>Source</i>	<i>Number of 2567s out of 34 reviewed</i>
Resident Council Group	11

Table 4.4 Sources providing evidence of insufficient staff.	
<i>Source</i>	<i>Number of 2567s out of 34 reviewed</i>
interview	
Individual Resident interview	11
Family interview	10
Record review	3
Staff interview	15
Observation	11
Staff working schedule	15
Resident census	6

4.7.3.2 Sequelae Documented as a Result of Insufficient Staffing

The regulatory requirement addresses sufficiency of staff in terms of meeting the residents' needs. In some of the HCFA 2567 forms, the impact of insufficient staffing upon residents was documented at the specific requirements to provide care or at the requirements addressing the outcomes of care. In some of the 2567 forms, the care outcomes were reported within the deficiency cited at F353 regarding staffing. Frequently surveyors seem to find it easier to document negative sequelae in the area of physical care rather than in the areas of psychosocial functioning and quality of life, as noted in the array of outcomes documented or associated with the citations reviewed.

Table 4.5 indicates the number of 2567 forms documenting negative outcomes or services not provided as identified either at F353 or as a deficiency cited at a specific care requirement.

Table 4.5 Number of 2567 forms documenting services not provided or negative outcomes identified either at F353 or as a deficiency cited at a specific care requirement	
<i>Service not provided or negative outcome</i>	<i>Number of 2567s out of 34 reviewed</i>
Failure to maintain or attain highest practicable functional abilities in Activities of Daily	8

Table 4.5 Number of 2567 forms documenting services not provided or negative outcomes identified either at F353 or as a deficiency cited at a specific care requirement	
<i>Service not provided or negative outcome</i>	<i>Number of 2567s out of 34 reviewed</i>
Living(ADLs)	
Lack of assistance or supervision to maintain grooming and hygiene	14
Development of pressure ulcers	11
Residents observed or complaints of soiling themselves or being incontinent	16
Lack of assistance to eat or be fed	16
Lack of timely response to call bells	20
Lack of protection from accidents	6
Lack of supervision to prevent wandering into rooms of other residents or outside the building	9
Late administration of medications/treatments/poor technique	7
Up too early in the morning/left in bed for extended periods of time/put to bed too early in the evening (lack of resident choice)	6
Lack of hydration	3
Lack of repositioning/range of motion (ROM)	8

4.7.3.3 Determination Of The Level Of Staffing And That Staffing Was Inadequate

The deficiency review revealed that the level of staffing the facility provided was not always compared to the residents' needs or care required. When staffing numbers were addressed, the documentation revealed the use of several sources including a review of the facility's working schedule and staff interviews to determine what staff were provided. In 15 of the 34 deficiencies reviewed, the documentation of the determination of the level of staffing included evidence of a review of the facility's working staffing schedule for the nursing department; in the majority of reviewed deficiencies this evidence was not provided.

In 19 of the 34 deficiencies reviewed, staffing levels were not discussed in the deficiency findings, and the numbers of staff present, shift or time of day evaluated were not identified. In addition, the deficiency did not reflect the deployment of staff to a particular area or assignments of the licensed nurse(s) and/or nursing assistants. The findings did not correlate the numbers of staff assigned to the effect upon meeting the residents' needs or provision of care.

In two 2567 forms, the documentation reflected utilization of State mandated ratios of staff to residents as a determination for sufficient staff. As some States have licensing rules relating to a minimum ratio or acuity based case mix ratio, the documentation on some deficiencies reflected that the facility did not provide a certain number of staff, based on the State's licensing ratio. The Federal regulations do not require a specific ratio of staff to residents or an acuity based case mix ratio.

4.7.3.4 Facility Plan of Correction (POC) to Address Deficiency

There were no POCs available for review for ten of the thirty-four 2567 forms reviewed for tag F353 (sufficient staffing). Of the remaining 24, only 11 POCs identified that the facility would hire or add more staff. In 16 of the 24 deficiencies with a POC reviewed, the facility indicated that education for staff in meeting residents needs would be provided, and that staff monitoring would be provided to assure that the needs of the residents were met.

Following are two examples of POCs which did not include increased staffing levels as a corrective action:

Example #1:

1. The Director of Nursing and the Assistant Director of Nursing will ensure facility is staffed to meet the residents' needs.
2. Nursing will interview residents to determine how we can better meet their needs.
3. Night shift is to assist the residents who desire to get up early. Inservice nursing to communicate findings and ensure residents' needs are being met.
4. Monitored by DON & ADON.

Example #2:

“The facility does provide sufficient nursing staff to provide nursing and related care. There were no specific residents to be found affected by the deficient practice. Other residents who could be affected will be identified by the director of nursing or designee to be present at the newly formed monthly nursing/resident meeting for a round table discussion as referenced to in tag F241. At the monthly resident council meeting a patient satisfaction survey will be conducted so that facility staff may obtain timely feedback regarding resident satisfaction with

various services particularly those mentioned in tag F353".

Table 4.6 reflects corrective actions identified by the facility in response to the staffing deficiency

Table 4.6 Corrective actions identified by the facility in response to the staffing deficiency (Plans of correction were available for review only 24 of the deficiencies involving insufficient staff)	
<i>Corrective action</i>	<i>Number of plans of correction out of 24 reviewed</i>
Increased staffing	11
Monitoring/supervising of staff	16
Inservice training	16
Periodic review of resident satisfaction	6
Reallocation/redeployment of staff	8
Rebuttal/denial of lack of staffing	8

The analysis for this chapter did not include a review of subsequent information to determine that the deficiencies were corrected.

4.7.3.5 Determination of Scope and Severity

In a review of the 34 deficiencies cited at F353 (sufficient staff), two of the deficiencies were identified as an “isolated” scope (limited area of the facility affected), 22 of the deficiencies were identified as “pattern”, indicating more than one area of the facility was involved, and 10 of the deficiencies identified the lack of staffing as widespread affecting the entire facility. In addition, 6 of the 34 deficiencies were identified in the severity level of “immediate jeopardy”. These deficiencies identified that there was such insufficient staff that it placed the residents in serious threat to their health and safety. Four of the six deficiencies in the area of immediate jeopardy were at a scope of “pattern” affecting more than one area in the facility and the other two deficiencies were at a scope of widespread affecting the entire facility.

4.7.3.6 Conclusion for F353 (Sufficient Staff)

In conclusion, the analysis of the deficiencies cited at F353 (sufficient staff), revealed that in order to substantiate insufficient staff, a surveyor must conduct an extensive investigation to

determine that deficits in the delivery of care or in the failure to maintain or achieve the highest practicable level of functioning are directly attributable to insufficient staff. This involves utilizing multiple sources to provide supporting information for the determination of non-compliance. This type of investigation is required during a survey process where time constraints are in place, and where the decision of citing the sufficient staff tag is left to the judgement of each surveyor/team.

4.7.4 Documentation of Nurse Staffing Deficiencies Sited at F354: Registered Nurse

This analysis is for 42 CFR 483.30(b)(1)(2)(3) (F354: Registered Nurse.) The regulation is specific as to numbers of RN staff required. (There are provisions for a waiver.)

In reviewing the six deficiencies cited at F354, the documentation in the 2567 forms revealed that determinations were made through a review of the staffing schedule and through interview with administrative staff (Administrator or DON or Assistant Director of Nursing (ADON)). Documentation indicates that the surveyors based their findings on a review of staffing schedules which varied from 14 to 76 days. There is no required amount of time to review for RN staffing, therefore, it is left to the discretion of the survey team based on findings that RN staffing was not or had not been provided. One 2567 form reflected a deficiency for failure to meet the conditions of the waiver for DON coverage. The remaining five deficiencies documented failure to provide eight consecutive hours of RN coverage seven days a week.

For one 2567, the plan of correction was not available for review. For the remaining five POCs, the following corrective actions were identified: three facilities plan to hire additional RN's full or part-time; one facility plans to schedule a RN at least eight consecutive hours a day, seven days a week with administrative and Quality Assurance oversight; and the facility with a waiver planned to have the DON assume the position full time.

In conclusion, the determination of compliance with the requirements for Registered Nurse at tag F354 can be easily determined by surveyors. The citation is clearly defined due to the clarity and the interpretation of the regulation. In reviewing staffing records/schedules one can readily extract the information necessary to determine compliance. Although a schedule reflects compliance with the RN requirement, there is still a need to ascertain whether the presence of a "RN at least eight consecutive hours a day, seven days a week," is adequate. Although the specified minimum RN staffing requirements are met, based on the needs of the residents, additional RN staffing may be required.

4.7.5 Qualitative Analysis of Deficiencies Issued After SOM Changes

4.7.5.1 Documentation of F353 (Sufficient Staff)

A cursory review of a sample of deficiencies issued after the survey process changes in July 1, 1999, for F353 (sufficient staff) was conducted. As there were no regulatory changes made, the review of the deficiencies revealed that the documentation was similar to the previous review of deficiencies. Although training had been provided throughout the nation, and the survey process was enhanced to include an investigative protocol, there does not appear to have been a significant increase in the deficiency citations. At this time it is too early to make a determination of the effectiveness of the changes in the survey process.

4.7.5.2 Review of Plans of Correction

The citing of a deficiency for sufficient staffing doesn't necessarily indicate that facilities will increase staffing. A sample of deficiencies for tag F353 was collected for surveys conducted after October 1, 1999. Of the 33 deficiencies reviewed for sufficient staffing, only 22 of the facility plans of correction were available for review. Of the 22 plans of correction, only nine revealed that the facility planned to add staff to come into compliance with the staffing requirement. Of the remaining 13 plans of correction, the facility plan was not to add staff, but to address the staffing issues by methods such as monitoring staff performance, or revising care delivery schedules.

4.8 Conclusion

Apart from the results of the quantitative analysis presented in Chapters 9 through 12, any recommendation regarding a minimum nurse ratio requirement will make explicit or implicit assumptions about how HCFA's current nursing home nurse staffing (non-ratio) requirements are working in practice. As will be discussed in greater detail in Chapter 6, one of the difficulties in setting a minimum ratio requirement is that no analysis conducted to date has been able to derive appropriate minimums that adjust for differences among facilities in the acuity and functional limitations of their resident populations. Despite the absence of an accepted minimum nurse staffing ratio standard, surveyors must take residents' needs into consideration when determining whether staffing is sufficient. Hence, it is important to assess how surveyors actually make this difficult determination based on the application of the regulation as written.

The evidence presented in this chapter raises serious doubts as to whether surveyors can in fact make what appears to be a very difficult judgement - a judgement with a high burden of documentation which must be generated under demanding time constraints.

The purpose of this analysis was to determine how the current non-ratio requirements are being

implemented and assessed. This analysis has also assessed the impact the July 1999 State Operations Manual (SOM) revisions which incorporated a staffing investigatory protocol may have had on the implementation of staffing requirements. To this end, the results of two analyses were presented: 1) an analysis of nurse staffing citations before and after the SOM changes; 2) an analysis of HCFA Form 2567, "Statement of Deficiencies and Plan of Correction" as they relate to the reporting of staffing deficiencies with some limited attention to the potential impact of the recent SOM changes.

The results of the analysis of nurse staffing citations are clear and unambiguous. The rate of staffing citations did not increase substantially after the July 1, 1999, SOM revision. The rate of citations before the SOM changes was 7.2% and increased slightly to 7.5% in the Post-SOM change period. However, the month-by-month rates in the Post-SOM change period indicate that the increase may have been due to transitory awareness of staffing issues in the first month following the release of the SOM change.

Although the rate of nurse staffing citations may not have changed, the scope and severity levels of the cited deficiencies potentially would have increased. This would seem to be a reasonable expectation given that the new SOM investigatory protocol mandates extensive surveyor investigation of staffing when quality of care problems have been identified. However, the analysis found that the percentage of staffing deficiencies cited at G level and above actually declined from 15.6% Pre-SOM change to 10.5% Post-SOM change, a decrease of 33 percent. It is important to note that the scope and severity level of non-staffing deficiencies also declined - from 8.3% cited at a G level or above Pre-SOM change to 6.8% Post-SOM change. Clearly, the data for the three month period following the full implementation of the new SOM investigatory protocol indicates that the protocol has had no impact on either the rate or scope and severity of nurse staffing deficiencies.

Although the quantitative analysis of deficiencies provides one measure of surveyor performance, it does not provide any direct information about the thought processes of surveyors in citing or not citing staffing. The qualitative analysis of a sample of HCFA 2567 forms revealed the type of documentation that surveyors provide when citing staffing. Although staffing may appear to be easy for surveyors to cite when there are real staffing problems, a close reading of HCFA's regulations and guidelines to surveyors reveals that surveyors must meet a very demanding criteria. To cite appropriately, surveyors must demonstrate that nursing care has not been provided to residents or lack of sufficient staff has resulted in failure to identify, implement and coordinate needed services. And all this must be documented during a relatively brief survey when surveyors have many other competing duties.

The analysis of the sample 2567 forms indicate the following:

- There has not been an emphasis on the review of staffing in the survey process, prior to

July 1, 1999. Additional training on surveying for staffing is needed, particularly if HCFA does not mandate a minimum nurse staffing ratio.

- The regulatory language at F353 (sufficient staff) is very general and subjective and does not provide specificity for evaluating the requirement.
- Because the regulatory language for sufficient staff is directly related to the provision of care and services needed by residents, the investigation of staffing usually occurs toward the end of a survey after quality of care issues are identified. This places limitations on the investigation due to time constraints in completing the survey.
- Of the 34 deficiencies reviewed at F353 (sufficient staff), 13 identified the care needs of the residents, identified aspects of the care that were not provided, and corroborated by observations and interviews with residents/family and staff that the lack of care was because of a lack of sufficient staff to provide the needed care. About 60% of the 2567 forms left it to the reviewer to conclude that negative outcomes had occurred as a result of insufficient staff.
- It is true that F353 “sufficient staff regulations” refers to both numbers of staff and their qualifications. A deficiency concerning staffing should ordinarily provide examples of care deficits caused by insufficient quantity and quality of staff. (The identification of care problems need not be cited directly at F353 tag/requirement; but, could be incorporated into the evidence by having the documentation refer the reader to those tags at which deficiencies are cited about the care problems which could be resulting from lack of staff.) In general, this was not provided in the majority of 2567 forms reviewed.
- Facility Plans of Correction do not always provide for increased staffing. These plans often appear to be a declaration of good intentions rather than an effective plan. This fact, together with all the evidence presented throughout this Report of inadequate numbers of staff, does not yield confidence that the deficiencies would be corrected by the POC’s in which less than half require increased staffing. For this study, we collected no evidence for this analysis that bears on the question of whether these Plan of Corrections, real or otherwise, are indeed implemented.

In summary, this analysis of staffing citations and HCFA 2567 forms, both before and after the July 1, 1999, SOM changes incorporating the implementation of an investigative protocol, has yielded no evidence that surveyors typically meet the considerable burden of documentation required to determine compliance with the *general* requirement of sufficiency of nurse staffing based on the regulatory language at F353 (sufficient staff). The added efforts to provide further guidance and training to surveyors with a mandatory investigatory protocol has had no effect. There are, however, some important qualifications to this conclusion. Although the quantitative

analysis of staffing citations was based on all citations incurred during the specified time period, the analysis of the content of staffing citations on the HCFA 2567 forms was based on a comparatively small sample of 34 deficiencies for F353 prior to July 1, 1999, and 33 deficiencies after July 1, 1999. In addition, the representativeness of these small samples is unknown, although we tried to get some regional distribution. Also, the limited project time to examine the Post SOM change forms only permitted a very cursory review, as was noted in the chapter. For all these reasons, the conclusion *from the examination of the HCFA 2567 forms* that surveyors typically do not meet the burden of documentation to appropriately cite the general requirement of sufficiency of nurse staffing is based on evidence that is tentative and far from certain. In contrast, there is much stronger evidence based on *all staffing deficiencies* supporting the conclusion that the staffing citations rate as well as the scope and severity levels have not changed as a result of the SOM changes. It is important to note that although 21 of the 34 deficiencies cited at F353 (sufficient staff) that were examined (62%) did not provide convincing evidence of a deficiency, 38% did meet the required high burden of documentation.

Any conclusion that a particular staffing citation is or is not justified must be based on the documented evidence provided for that given instance; no inference should be drawn from this study of a small number of HCFA 2567 forms. Indeed, given the evidence presented in Chapters 9 through 12 and Chapter 14 that many quality of care problems may be due to low nurse staffing, it can be argued that the current staffing citation rate of around 7% may be far too low. That is, the problem may be not one of inappropriate staffing citations, but failure to cite when in fact a citation on sufficient staffing may have been justified. Finally, the more important conclusion is that for a number of reasons, it is difficult for surveyors to determine compliance with the sufficiency requirement; hence, there may be a need for a specific minimum *ratio* requirement, adjusted for the acuity and functional limitations of the resident population that surveyors could assess in a manner similar to how they currently assess compliance with the current specific *nonratio* RN and licensed staffing minimum requirements. In contrast to the difficulty in determining compliance with the sufficiency requirement, the analysis conducted for this chapter indicates that when surveyors have a very *specific* requirement to enforce (e.g., the eight hours per day RN coverage), the determination of compliance is appropriate and less burdensome for surveyors.

CHAPTER 5.0 STAKEHOLDER PERCEPTIONS OF APPROPRIATE NURSING HOME MINIMUM STAFFING: REPORT ON FOCUS GROUPS WITH NURSE AIDES⁹⁹

5.1 Background, Objectives, and Brief Overview of Results

In an effort to discuss staffing issues with direct care workers and nursing facility management, HCFA funded a series of activities to obtain information and input directly from different types of stakeholders in long term care. The information obtained through these activities was intended to be utilized in conjunction with the quantitative analysis of staffing and outcomes and to help interpret the results of those analysis.

To this end, a series of eight focus groups were conducted among Nurse Aides (NAs) currently working in long term care facilities to discuss staffing in their nursing facilities. The main topics discussed included how staffing schedules are determined and the extent to which NAs have

⁹⁹ The report for this chapter was completed for HCFA by Abt Associates Inc. (contract # 500-95-0062-T.O.3; (Contract #500-95-0062-T.O.3; Allison Walker, Abt Associates Project Director; Marvin Feuerberg, HCFA Project Officer). Current and/or former Abt contributors are Allison Walker, Karen Toll, Ruta Kadonoff, Karen Reilly, and Donna Hurd. Additional editorial assistance was provided by Jeane Nitsch and Susan Joslin, HCFA.

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input into those schedules, their facility's processes for handling sick calls and dealing with absenteeism, the effects of staffing shortages on residents and on direct care workers, and ways in which facility management might be able to reduce absenteeism. Additional topics included changes in resident's acuity, the relationship between NAs and licensed nursing staff (e.g., RNS, LPNs), and the processes and staffing for meal times. Two focus groups each were conducted in Washington, DC; Baltimore, Maryland; Boston, Massachusetts; and Philadelphia, Pennsylvania. A total of 74 NAs participated in the groups, representing 33 different long term care (LTC) facilities.

In addition, telephone interviews were conducted with nursing facility staff to examine the mechanics of staffing in nursing facilities. The objectives of these interviews was to learn how schedules are made, who does the scheduling of licensed and unlicensed staff, whether direct care staff have any input into the schedules, and what happens when staff call in sick or don't show up for an assigned shift (i.e., how those empty slots are filled to ensure adequate staffing throughout the facility). The investigators were specifically interested in examining the issue of absenteeism among NAs, including how pervasive it is in facilities and what efforts the facility management employs to reduce it. The interviews also contained questions about the adequacy of current staffing levels, ideal staffing ratios, and recruitment and retention of staff. In the majority of cases, the Director of Nursing (DON) was interviewed. In several facilities, however, the Administrator completed the interview, usually with DON input. A total of 11 interviews were completed.

Results of the focus groups show that scheduling is generally conducted by the facility DON or a staffing scheduler, and NAs have very little input into the schedules, other than to request leave. NAs are hired for a particular shift, many have permanent assignments, and most like the stability of permanent assignments. Most NAs reported that absenteeism, either in the form of calling out sick or not showing up to work a scheduled shift, is a pervasive problem that leads to staffing shortages. Reasons for absenteeism varied; however, reasons centered mostly on NAs being overburdened and burned out, in addition to being underappreciated by other facility staff. Processes for handling staff shortages caused by staff calling out sick (or no call/no shows) varied also. Practices to fill the vacant slot include tapping into existing facility staff, either through staff who are off duty or by asking for overtime, is the first, and often preferred option to fill the vacant slot. Per diem or agency staff were usually the second and third choice to fill the vacant slot. When asked about ways to reduce absenteeism, the NAs suggested employee appreciation programs, being treated with respect by other facility staff, monetary incentives, proper staffing (staffing to an adequate level) and scheduling incentives (more choice of days off, assignments, etc.).

The workload of the NA participants varied by facility and by shift, but on average, the staff ratio on the 7:00 AM to 3:00 PM shift was between 1:8 and 1:10 NAs to residents. The NAs also reported working short fairly frequently, up to about 80% of the time in some facilities.

When asked about the consequences of short staffing, the NAs reported resident's quality of care is impacted in such ways as bed sores, incontinence, and decreased range of motion. NAs also reported staff shortages impacted residents in quality of life areas such as not being able to spend time talking to residents or being able to provide basic grooming assistance. Participants also reported an increase in NA injuries as a result of staffing shortages. When working under-staffed, focus group participants reported that showers are often not provided, meal times are hurried resulting in some residents going without food, and NAs do not have enough time to get residents water when they need it. This is a concern since dehydration is a problem among nursing home residents. Many participants noted that resident acuity has been increasing over the last three to five years, but that staffing levels have stayed the same or even decreased, making their workload even heavier.

The NAs participating in the focus groups were asked about the relationship between the NAs and the licensed staff (e.g., RNS and LPNs). While some NAs reported having good working relationships with the licensed staff, many felt that the RNS, LPNs, and NAs did not function as a team, and in fact, the relationships were often reported as tenuous and counterproductive. One of the goals of the focus groups was to try to determine whether NAs have adequate time and support to conduct some basic, daily routines, such as feeding, ambulating or toileting residents. However, due to the two hour time limit on the focus group, this discussion centered on feeding and meal times only, and did not include discussion of other daily activities. Overwhelmingly, focus group participants noted that the time allocated for meals was generally inadequate to meet the needs of the residents, particularly those residents who need assistance with feeding. Most NA participants did not have a set amount of time to assist residents with meals, but noted that if too much time was spent assisting residents during meal times, the remainder of the day's workload would be negatively impacted. Few NAs reported that their facilities utilized other staff, such as meal aides or volunteers, to help residents at meal times.

The concluding topic for the focus group discussions centered on describing the most positive and most negative aspects of being a NA. Overwhelmingly, most participants noted they are in the field because of the residents, and felt that the strong bond between residents and NAs is a very positive aspect of their job, even in the face of staffing shortages and being overworked.

Results of the facility staff interviews show that in most cases, the DON is responsible for scheduling facility staff, and typically spends about 50% of his/her time working on staffing-related issues. Absenteeism (i.e., sick calls, or no call-no shows) is problematic, and frequently results in staff "working short." Recruitment and retention, particularly of nurse aides, is the biggest staffing-related problem for most of the interview participants. As a result, many interviewees noted that their current staffing level is lower than their ideal level. Many participants also noted that the current (short) staffing situation in facilities is due to low unemployment rates and a shortage of available labor.

Most of the facility staff interviewed reported that their facilities routinely staffed above the State minimum staffing standards that were typically viewed as inadequate. The large majority of interviewees reported that their own staffing levels are adequate, although some noted that this would not be true if their census was higher.

The labor shortage was mentioned repeatedly as a major barrier to maintaining high staffing levels. Not only is it difficult for facilities to find adequate numbers of employees in an economy of low unemployment, but not being able to hire a full staff means that existing staff work “short-handed” much of the time, which in turn leads to high absenteeism and low retention rates. Another problem facility staff noted is a poor work ethic among employees, especially younger employees and those in welfare-to-work programs. One of the most common complaints among the interviewees was that staff morale is low, which may be a problem that some facilities are interpreting as a poor work ethic. Several interviewees noted that they try to include nursing staff when making scheduling decisions, allowing for preferences in terms of which days to work or which residents to care for. Yet even in facilities with a pleasant work environment where staff have a voice in scheduling, there is still difficulty in hiring and retaining nursing staff because of low wages, low unemployment, and competition from less physically demanding and less stressful job possibilities.

5.2 Methodologies for the Nurse Aide Focus Groups and the Facility Staff Interviews

5.2.1 Focus Group Methodology

A moderator’s guide was drafted and pilot tested during two focus groups conducted at the annual meeting of the National Citizen’s Coalition for Nursing Home Reform (NCCNHR) in November 1999. These two initial focus groups included a total of 22 Nurse Aides from around the country, representing LTC facilities in eight different states. After some revisions as a result of these focus groups, the guide was disseminated for review and comment to representatives from the Alzheimer’s Association of South Carolina, the Service Employees International Union (SEIU), the Paraprofessional Healthcare Institute, the American Federation of State, County, and Municipal Employees (AFSCME), and the Career Nurse Assistants’ Program. Comments from these groups were incorporated into the final version of the moderator’s guide, which can be found in Appendix D.

Since funding was not available for use of a professional recruiting firm to secure focus group participants, Abt staff were responsible for recruiting NAs for the groups. To this end, the investigators sought input and recommendations from various stakeholders for either NAs to participate directly in the groups or individual nursing facilities whose staff (usually Administrators or DONs) might be willing to help recruit participants and coordinate the groups.

In the end, in addition to the two groups conducted at the NCCNHR meeting, two groups were conducted in the Baltimore, Maryland area, with representation from five different LTC

facilities, two groups were conducted in the Boston, Massachusetts area, with representation from six LTC facilities, one group was held in a facility in Lansdale, Pennsylvania, and the final group was conducted at a training and education center in center city Philadelphia, and included NAs representing six area facilities. Table 5.1 shows the location of the eight focus groups and the composition of each group, including the number of NAs per group, the years of NA experience per participant, and the shift currently being worked by each focus group participant.

Table 5.1 Composition of Focus Groups		
Focus Group Location	Participant Experience as a Nurse Aide	Participant Shift
Washington, DC #1 11 participants representing 7 facilities	8 years 11 years 9 years 12 years 5 years 20 years 1 year, 3 months 10 years 16 years 19 years 31 years	3-11, 11-7 7-3, 3-11, 11-7 7-3 7-3 7-3 11-7 7-3 7-3 3-11 4-12 7-3
Washington, DC #2 13 participants representing 8 facilities	15 years 2 years 14 years 8 years 6.5 years 26 years 3 years Leaving the profession 21 years 23 years 11 years 12 years 15 years	7-3 3-11 7-3 7-3 7-3 7-3 3-11 7-3 11-7 11-7 7-3 7-3 11-7
Baltimore #1 7 participants representing 3 facilities	3 years 20 years 5 years 5 years 2.5 years 2.5 years 34 years	7-11 3-11 7-3 3-11 7-3 7-3 and 3-11 7-3 and 8-5
Baltimore #2	1.5 years 12 years	3-11 and 11-7 3-11 and 11-7

Table 5.1 Composition of Focus Groups		
Focus Group Location	Participant Experience as a Nurse Aide	Participant Shift
10 participants representing 2 facilities	15 years 6 years 14 years 16 years 11 years 11 years 2 years 1 year	7-3 7-3 7-3 7-3 7-3 and 3-11 7-3 and 3-11 7-3 7-3
Boston #1 9 participants representing 3 facilities	20 years 5 years 7.5 years 4.5 years 5 years 7 years 4 years 6 months 6 years	7-3 7-3 7-3 and 3-11 3-11 and 7-3 3-11 11-7 7-3 7-3 and 3-11 3-11
Boston #2 5 participants representing 3 facilities	19 years 5 years 7 years 19 years 8 months	6-2:30 7-3 7-3 6-2:30 7-3
Philadelphia #1 9 participants representing 1 facility	1.5 years 3 years at current facility 9 years 4 years 9 years 5 years 3 years 4 years 7 months	7-3 7-3 7-3 7-3 7-3 7-3 7-3 7-3 7-3
Philadelphia #2 10 participants representing 6 facilities	8 months 10 years 6 years 6 years 12 years 8 years 15 years 10 years 12 years 13 years	7-3 7-3 8-4 11-7 6:30-2:30 7-3:30 7-3 7-3 11-7 7-3

5.2.2 Methodology for the Facility Staff Interviews

The facility staff interview guide was developed by Abt Associates' staff with experience in long term care; a former DON with many recent years experience as an RN in long term care facilities lead the design of the interview guide. In addition, the draft interview guide was reviewed by staff at Survey Solutions, Inc., who also have extensive long term care and DON experience.

The final version of the interview guide can be found in Appendix D.

Because the scope of this activity was limited to approximately ten interviews, the investigators did not randomly select facilities and staff to participate. Instead, the investigators sought recommendations for potential participants from colleagues at the National Citizens' Coalition for Nursing Home Reform, the American Health Care Association, the Service Employees International Union, and Survey Solutions, Inc. The investigators asked for facilities and staff that would be likely to participate in a 30-45 minute telephone interview, and the investigators requested a range of facilities by size, location, ownership, and profit-status. The investigators also asked for facilities with a range of staffing levels, rather than targeting just well or poorly staffed facilities.

The investigators obtained recommendations for 20 facilities to be included in this activity. The investigators then contacted the Administrator and/or DON at each facility to determine their willingness to participate in the interviews, and to schedule an interview date and time. Eleven interviews were conducted. Table 5.2 shows the characteristics of the facilities included in the interviews.

Facility	Location	Urban/Rural	Size (beds)	Profit Status	Chain/Indep
1	Florida	Urban	179	For-profit	Chain
2	Wisconsin	Suburban	122	For-profit	Chain
3	Maryland	Suburban	162	For-profit	Chain
4	Connecticut	Suburban	90	For-profit	Chain
5	Maryland	Urban	150	For-profit	Chain
6	Ohio	Rural	150	For-profit	Chain
7	Washington	Urban	215	Non-profit	Chain
8	Pennsylvania	Suburban	181	For-profit	Independent

Facility	Location	Urban/Rural	Size (beds)	Profit Status	Chain/Indep
9	Louisiana	Urban	202	Non-profit	Government
10	Ohio	Urban	101	For-profit	Independent
11	Louisiana	Urban	119	Non-profit	Independent

5.3 Detailed Focus Group Findings

The following sections present the major findings from the eight focus group discussions. While the moderator’s guide (in Appendix D) divided the focus group discussion into specific topic areas, many of the actual discussions did not following the guide topic-by-topic. Instead, because of the inter-related nature of the topics, many of the discussions moved from one topic to another and back again as navigated by the respondents and necessitated by the nature of the discussions, rather than as commanded by the moderator’s guide. As such, the discussion findings are presented in the manner in which they were reported in most of the focus groups, rather than in the manner they were organized in the moderator’s guide. The general categories of findings include: 1) staffing schedule determinations; 2) sick calls and absenteeism; 3) workload and outcomes of short staffing; 4) relationships between NAs and licensed staff; 5) processes for meal times; and 6) positive and negative aspects of being a NA.

5.3.1 Staffing Schedule Determinations

Focus group participants were asked to describe the process of developing staffing schedules in their facilities and to comment on the adequacy of those processes. Participants noted that much of the scheduling in their facilities was conducted by a staffing coordinator or scheduler who generally worked full time in this capacity. In some facilities, development of the staffing schedules was done by the Director of Nursing (DON), while in other facilities, the scheduler was a clerical person who worked in the administrative offices of the facility. Most schedules were developed on a two-week basis, although some facilities developed their schedules monthly.

NAs reported selecting the shift they would work (i.e., usually 7:00 AM. to 3:00 PM, 3:00 PM to 11:00 PM, or 11:00 PM to 7:00 AM) at the time of hire, and reported very little additional input into the schedule, other than to request leave or vacation. There was some flexibility in assignments to a particular unit or floor, although most NAs reported (and desired) fairly permanent assignments. The exception being when a unit/floor was under-staffed and NAs would have to be shifted around to cover the under-staffed unit/floor. Some participants noted that they worked the same days each week, while others reported working variable days. For

those who work variable days each week, many do not know which days they are assigned to work until the schedule is complete and is disseminated to the NAs.

“It’s usually pretty flexible if you have to leave. My dad has been very sick. If I get a call, I call my supervisor and let her know. They’re usually pretty good about that.”

“We can float on any different floor any given day. If you come in the morning and some other floor is short, they will float you to another floor.”

“You make up a schedule when you first come in. You choose the shift you want to work. After that you have no input into the schedule. They schedule the work. You don’t have set days off. They try to work with you last minute to give you set days off, but you can be off Tuesday of one week and work Tuesday the next week.”

A few NAs reported that their facilities give them the freedom to work out the schedule among themselves, by posting a blank schedule in the nurses station and allowing staff to fill in the days they want to work. Priority is given to full time staff, starting with highest seniority, with lower seniority and part-time staff to fill in the vacant slots. This model, however, was only found in a few facilities; most facilities do not afford very much freedom to NAs in developing staffing schedules.

In general, NAs reported very little input into the scheduling process, although most did not view this as too problematic. The schedulers were generally amenable to making changes (if possible) to the schedules. In many facilities, NAs could either request that the staffing coordinator make a needed change in the schedule or could coordinate a change among themselves as long as the slot was filled.

“If a CNA [Certified Nursing Assistant] wants time off, we have a sheet you must fill out two weeks before the schedule comes out and the coordinator will work it out. If not, you have to find someone to work for you.”

5.3.2 Absenteeism

The focus groups included a thorough discussion of absenteeism, including staff who call out sick and no call/no shows. Participants were also asked about the reasons for absenteeism, facility processes for handling sick calls and other staff vacancies, and ways that facility management might be able to reduce absenteeism. Later topics in the focus groups explored the extent of absenteeism in facilities and the consequences of absenteeism on residents and on direct care staff.

5.3.2.1 Reasons for Absenteeism

The main reasons behind the absenteeism cited by the NAs are that the aides are tired, frustrated, aggravated, and burned out. Many participants noted that they are overworked on a daily basis, which leads to call outs because they need time to rest.

“I work all day taking care of 12 or 13 people, running around, with maybe 15 minutes for lunch ... how much will the body let you do? I can’t take it.”

“It’s stressful. If you work with five CNAs, four of them are going to have eight people and the fifth person is going to have nine. Some people just get pissed off, especially on a day where you have five people (CNAs) and you know you’re going to have five people because you did the schedule. Some of them might say they’re not coming tomorrow because they did enough work for two days. They don’t look at it like, ‘I’m hurting my coworkers,’ they look at it like, ‘I’m doing something to the supervisor.’ But she could care less.”

“People are burned out. If you work short for five days, you’re not going to go in because you’re tired. It becomes a rotation. It’s not that you don’t want to come to work. Your body is tired.”

Some NAs said they called out sick because they felt their hard work was unappreciated, and that they weren’t treated with respect by their supervisors and colleagues. The aides who had to work when others called in sick were particularly frustrated because their extra work on short days was not recognized.

“Absenteeism causes an absence of feeling that the nursing staff care about what’s happening. We work short and no one appreciates it. I get work done through other aides. Somehow you need to make them appreciated. I take time off just to relieve stress for me. I’ll stay home one day just to recharge. It’s not the aides being irresponsible. Management needs to create an environment to make people want to come. Nurses should care what happens to aides and patients.”

“You couldn’t go any faster if you wanted to. You’re behind already when you get on. And you’re underappreciated. Instead of saying thanks for what we did today, they say why isn’t this done?”

In addition to their work being unappreciated by others, some NAs expressed difficulty feeling

good about their work, particularly when they work short staffed and struggle to get everything done.

“I am working so hard to do what I am doing. You want to leave and feel a sense of completion, that you’re doing a job good and can feel good about it. You don’t, though.”

“How can anyone give quality care under this kind of stress? It’s impossible under these circumstances.”

Often NAs attributed call outs to co-workers being lazy or trying to get back at their supervising nurses. But other participants argued that it is the co-workers who bear the brunt of the call outs, not the nurses. Many NAs said that they would come in on their days off just to help their co-workers who would be working short that day.

“A lot of it is knowing who your coworkers are. They should take the time to see who they’re hiring because some people are lazy so we have to do all the work. They don’t understand the team concept.”

“I look at the schedule to see who I’m working with and I dread it.”

“I had to come in sick because there was no one to come in and they would’ve had to work with only 2 people (CNAs).”

5.3.2.2 Processes for Handling Shortages Due to Staff Calling Out Sick

Facility procedures for handling sick-calls varied, but usually required that NAs call one to four hours in advance to give the facility time to replace the staff. Some participants said their facilities called aides at home, used part-time staff, or agency staff as replacements. Other participants said their facilities offered monetary incentives to entice staff to cover sick calls. Most of the NAs noted that they generally worked short when other aides called in sick.

“They try to call staff that are off, or the part-timers to give them extra hours. I think they try to work with the part-timers first because they don’t have the week full already. Then if they can’t get the part-timer, they’ll go for the full-timer who had the day off. I think on occasion they have called the agency when they can’t get anybody. Sometimes even the agency can’t help us and we have no choice, we work short.”

“It depends on how much time they have to call anybody. A lot of people object to being called in the middle of the night.”

“We have bonuses on top of overtime to bring in extra help. Especially on weekends. \$20 an hour bonus.”

“We have a policy that they have to call everyone before they can require overtime. Have to have union and management agree that it’s an emergency. Usually we are just short.”

A few NAs said their facilities had systems in place to prepare for call-outs, such as a list of aides who want to be called on short notice or an aide designated to stay if someone doesn’t come in.

“They ask you to put your name in to be called to come in for an emergency any time during the night. If you don’t want that, they won’t bother you. They’ll say I know you’re off today, but can you come in?”

“We have a star system. If someone doesn’t come in and we don’t have another area to pull from, the star person has to stay. You know in advance you might have to stay. Extenuating circumstances are different. We check to see who might want to stay to get overtime.”

Many NAs said their facilities would pull Aides from other floors to compensate, thereby leaving the other floors short staffed as well. Some aides commented that there are often times when the facility can not find a replacement, in which case the aides are forced to work short staffed. Other aides noted that facility management rarely even tries to replace sick calls.

“They try to replace when they call in sick. If they can’t, you just have to manage. Lately, and it’s a big difference from when I first started, they try to find help and if they can’t then you just do what you can.”

“If they don’t have anyone from another floor you have to work as is.”

“In my facility, they don’t even try to substitute.”

“If no one stays from a prior shift you’re stuck.”

“They ask us to call in two hours before the start of the shift, but we don’t get coverage so what does it matter?”

5.3.2.3 Ways to Reduce Absenteeism

The NAs had various suggestions for reducing absenteeism in their facilities. Many of the ideas

centered on recognition for their work and respect from their supervisors and colleagues.

“Put your foot forward trying to communicate. It makes people want to work.
Treat people with respect.”

“They talk to us like we’re little kids. We’re all adults. Talk to us on an adult
level and we can accomplish a lot.”

“They should encourage us. Something as simple as a thank you.”

“Instead of making incentives to get people to work, there should be recognition
for being there.”

A few NAs mentioned specific recognition programs, such as employee of the month, as a way to acknowledge their hard work. Other aides commented that their facilities have employee appreciation programs but they are rarely utilized properly.

“They should have employee appreciation once a month.”

“I’ve been on the Employee Recognition Team for about four years now. Since we’ve started the team we haven’t recognized one employee. Instead we plan parties and trips.”

Monetary incentives were mentioned as a way to reduce absenteeism, such as bonuses for perfect attendance.

“For perfect attendance, there is a \$50 bonus, if you show up on time and don’t call out.”

“If you work three months without a call out, you get \$100. If the whole unit does it, you get \$125 each.”

Several participants suggested that proper staffing and scheduling would help reduce absenteeism because the NAs would work short staffed less often. Suggestions included bringing in extra staff for the busiest times of day, scheduling an extra aide in anticipation of call outs, and ensuring that the schedules are accurate and the staffing levels sufficient.

“If they added an extra aide to anticipate call-ins, it would help.”

“There should be someone to come in from the busiest time of 5-9 to help us feed and put to bed.”

“Sometimes they schedule you even if you’re taking vacation or not an employee anymore just to make the schedule look full.”

“Sometimes the same CNA is on (the schedule) more than once.”

“Sometimes I think I could do the staffing better than [my supervisor]. She makes a schedule and she schedules four people for a Saturday [when there should be five scheduled]. She knows not to wait until Saturday to try to find help. If you only schedule four people, it’s not fair.”

“The least they should do is schedule six people for every day. If somebody calls in it’s no problem because six people are scheduled. If we have only five people scheduled, what do you expect [when someone calls out sick]?”

“Besides call outs, we need staff. We need enough people scheduled.”

“We don’t even have a full staff before call outs. We don’t have enough people to work.”

“When we’re fully staffed, we’re short staffed.”

5.3.3 Workload and the Outcomes of Short Staffing

Following the discussion of absenteeism, the dialogue moved to the topic of workload, both standard (or anticipated) workload (i.e., when the facility is fully staffed and all staff report to work), and typical workload which in many cases was different from the anticipated workload. The moderator asked the participants to state how many residents staff would be expected to care for if their unit/floor was fully staffed, how often they work short because of sick calls or absenteeism, and the effects of under-staffing on residents and direct care staff.

5.3.3.1 Typical Workload

The focus group moderator asked participants to identify what shift they normally worked (typically either 7:00 AM to 3:00 PM, 3:00 PM to 11:00 PM, or 11:00 PM to 7:00 AM, although there was some variation to those standard shifts) and how many residents they would typically have to care for if their unit/floor was fully staffed and everyone reported to work as scheduled.

This exercise was conducted in order to obtain an understanding of the usual workload of NAs and to provide a frame of reference for the discussion on the extent of short staffing in facilities.

As noted in Appendix D, the majority of focus group participants worked the 7:00 AM to 3:00

PM shift, although there was representation from both the 3:00 PM to 11:00 PM and 11:00 PM to 7:00 AM shifts. For those who worked the 7:00 AM to 3:00 PM shift, 28% of respondents stated that their typical workload was 1:7 NAs to residents. Slightly more than 48% of respondents stated that their typical workload ranged from between 1:8 to 1:10 NAs to residents, and 24% of respondents stated their typical workload was 1:10 NAs to residents. The responses ranged from as high as 1:5 NAs to residents to as low as 1:13 NAs to residents.

While there were fewer focus group participants who worked the 3:00 PM to 11:00 PM and 11:00 PM to 7:00 AM shifts, the average across respondents for those shifts was 1:11 NAs to residents on the 3:00 PM to 11:00 PM shift and 1:18 NAs to residents on the 11:00 PM to 7:00 AM shift.¹⁰⁰

5.3.3.2 How Often Staff Work Short-Handed

Once the typical workload was established, the moderator turned the discussion to the extent of short staffing in facilities, by asking participants how often they work understaffed. Responses ranged from “sometimes” to “almost always,” although across all eight focus groups, most respondents reported working short staffed at least occasionally, with the majority reporting that they worked short staffed constantly. Many participants talked about being asked to work overtime or come in on their day off to fill a vacant slot on a particular shift/unit, only to find out that the shift/unit was still short staffed even with their additional assistance. Some participants even noted that they volunteered to be called for overtime, but that they rarely were called when the facility was short staffed.

¹⁰⁰ In the aggregate, the typical workload as reported by the NAs in this study is typical of that found throughout the United States. If the investigators assume that the NAs average ratio across the three shifts was about 1:9, 1:11, and 1:18, the average across the three shifts is 1:12.7. This 12.7 is equivalent to 4.72 NA minutes per hour or 113.38 minutes per day or 1.89 hours per resident day - very close to the median time reported across the U.S. Forty-seven percent of nursing homes report 1.9 NA hours or less per resident day. See Chapter 3, Appendix B.4.

“We work short most of the time when a staff member calls in sick.”

“We are short every day and weekends are the worst. People are sick or they don’t schedule enough people. Sometimes the same CNA is on twice. Sometimes they schedule you even if you’re taking vacation or you’re not an employee anymore just to make the schedule look full.”

“Today is Tuesday. I worked short Sunday and Monday. Usually I work short once a week.”

“We have a lot of work and we’re always working short. The assignments are heavy.”

“It’s easier to count how many times we’re fully staffed.”

“I’d say we’re short 80% of the time.”

“At my facility, we’re short 30% to 40% of the time. There’s a new Administration and DON so it just started happening. It used to be 100% full.”

“We work short almost every day. Weekends are really bad. We had new people trained but they didn’t show up to work. Sometimes they have to book us short because there are not enough people. It’s not fair to make people come in on their days off. People are getting burned out.”

“We are still responsible for everything. There was one day I was working ... they asked me to do the 11:00 PM shift because they were short. I made the fourth person. I hate when they do that because I hate to say I’ll work overtime when they’re still short even with my help. And they don’t usually say it until after I already commit to it.”

“Many times I offered to come in if short, but no one calls, even though they are short.”

5.3.3.3 Affects of Short Staffing on Residents and Direct Care Workers

Focus group participants were asked to describe the effects of short staffing not only on residents, but on direct care staff as well. Most frequently, participants mentioned injuries as the biggest impact of short staffing on NAs, followed by a lack of satisfaction and sense of accomplishment with their jobs. NAs noted that they wanted to feel good about their work, but

when they couldn't work to the best of their ability, the sense of failure had a big impact on their emotional outlook. Participants very easily identified quality of care and quality of life outcomes effected residents as a result of short staffing, including pressure sores, incontinence, and diminished emotional well being.

“Staff gets injuries due to overload or work. Back injuries. The ratio is going up of those on compensation and disability.”

“Quality of care suffers because care is lacking. You get more skin breakdowns.”

“Emotionally it takes a toll. They feel bad because they think I don't want to spend time with them. They get mad at me for not brushing their hair or doing their lipstick. It's not that I don't love them or care, but I don't have time.”

“People can tell by your face and attitude when we're short. It's getting them as mad as we are. It's not our fault and it's not their's.”

“Having conversations with alert residents suffers. When we have time, I love to talk to the residents.”

5.3.3.4 What is Done Differently when Working Short-Handed

Focus group participants were also asked about the types of activities that might not get done when staff is short handed, and the workload is high. Overwhelmingly, NAs noted that showering and basic grooming were usually the first activities to be skipped when staff were short on time. Vital activities, such as eating/meal times and passing water are also impacted by short staffing.

“Don't just say you want a job done, give me the tools to do it. I can give 100% care to 6 patients in 72 hours. You up that, then I do the best I can, and that's all I can give.”

“Showers are the first thing to go. Eating is also affected. Food is put in front of sleeping residents and taken away before it's eaten. Residents are also left in urine and feces for a long period of time. Range of motion is not done.”

“One of the first things to go is showers. Two times a week they're supposed to get showers. Might get one once a month.”

“They might get their face washed. If it looks clean, they might not.”

“First thing that goes when we’re short is the bath. We have two people to give showers. If we’re short, the showers go first. After showers goes food.”

“Baths, ice water don’t get given out. If we have constant ringers, a whole lot doesn’t get done.”

5.3.3.5 Changes in Resident Acuity and Staffing

Following the discussions on workload and short staffing, the focus groups naturally progressed to a discussion of acuity and how this relates to current staffing. Most of the NAs agreed that resident acuity has gotten higher over the years while the staffing ratios have remained the same or have decreased. Some nurse aides attributed the lack of adequate staffing relative to acuity to financial issues. In addition, several participants felt that NAs are not properly trained to adequately care for higher acuity residents.

“Residents need more care now. Nursing homes are receiving money for that care but are not giving staff money to take care of them. Two CNAs should be doing some patients in order to give proper care. Nurses used to be at your side turning, but not anymore. We’re not trained for tubes and ventilators but we’re working with them. Sometimes we need two CNAs but don’t have the staff.”

“Ten years ago, little old ladies would come in with their suitcase and talk to you. Now they come in on a stretcher and are really sick.”

“We’re getting a lot sicker patients who require more care. Tracheotomies, hand holding, therapeutic touch needed. Not change really in staffing though.”

“There’s a mixture of people – drug addicts, homeless, sick elderly. We can’t care for them. It’s one extreme to the other. We’re not qualified for it.”

“The biggest is the state code of residents per aide – it was set 25-30 years ago when we didn’t have the same acuity. Mostly psych in my facility, very violent with g-tubes [gastrostomy feeding tube] and IVs, too. We play referee all day, and are short most days. 1:10 is perfect for them, but mostly we’re 1:15. They don’t see that acuity has changed. We can’t do it anymore in that time. We need more time.”

“At our place, we used to call the fourth floor the penthouse. Those people could walk. Most of them were just either supervised or they needed minimal assists. Now on the fourth floor, they have lifts and they have people who need to be fed. It used to be like assisted living. Now you can see they’re getting in people who are sicker and need more and more care. They really are much sicker residents

coming in.”

5.3.3.6 Unique Staffing Practices to Stretch Existing Staff

The final topic in the section on workload and short staffing centered on unique staffing practices to help “stretch” existing NA staff. While some facilities had implemented practices to aid overburdened staff, these practices were not widely reported by the focus group participants.

Ways to stretch staff included use of meal aides, bed makers, and shower aides, although very few facilities represented by the focus group participants had instituted these practices. In addition, a few participants mentioned the use of volunteers to help with meal times and activities, for example, although this practice was not widely pervasive. Finally, some NAs mentioned that RNS and LPNs sometimes help with meals when the NA staff are working short staffed, although again, this practice was not pervasive throughout the groups.

5.3.4 Relationships Between Licensed and Non-Licensed Staff

The focus group participants spent a fair amount of time discussing the relationship between the licensed (e.g., RNS and LPNs) and non-licensed staff, since much of the NA’s job relies on interacting with licensed staff and functioning in a team environment. Particular issues discussed included how NAs interact with the RNS and LPNs, and whether and how licensed staff help NAs when they are short staffed. It was noted by NAs that a short staffing situation could be made better or worse depending on the relationship between the NAs and the licensed staff. However, more often than not, NAs complained of poor relationships with licensed staff.

The relationship between the nurses and the nurse aides varied considerably depending on the people involved. Many of the NAs felt they weren’t respected by the nurses they work with, and others thought the nurses did not contribute enough to their overwhelming workload. Yet other nurse aides thought the nurses they work with were very helpful and understanding.

“We really need an exchange of respect, teamwork, understanding. We need to understand her [the nurse’s] tasks too.”

“The nurses are so overwhelmed with their own work that they can’t help.”

“You get those nurses that won’t do anything, but others will do anything for you.”

“We have a wonderful charge nurse at night. She’s there if we need her. I’ll help her when she’s backed up too. That’s how we get along.”

“They help us turn residents, even change the diapers.”

“We’re pretty lucky up at my place in regards to the nurses, because we have some nurses help us. If somebody is ringing for the bathroom or a bedpan, they’ll put them on the bedpan and tell us so we know to listen for them ringing again soon.”

“In most cases, LPNs are fine. RNS are different. LPNs do meds, treatments. RNS run the floor. They are supposed to be much smarter.”

“Nurses don’t have time to help. Many say, I already did my time, I don’t do that.”

“A nurse would rather find me to put someone on the bedpan instead of just doing it themselves.”

“We have a lot of new ones out of school. They go by the book instead of hands on. They think they’re better than us. They only want to push meds and jump on the phone.”

“It’s like a class system. No real interaction between the types of nurses. Only when something goes wrong do they all come together. I never see the nurse.”

“We had three nurses and two CNAs one night. The nurses won’t help us, though.”

“We’re older than some of the nurses yet they talk to us like we’re beneath them. It’s about respect. They need to give respect.”

“The nurses don’t help. They’re there to assist us and they don’t ever assist us. They can be there and if a resident says I want a glass of water or I want the bedpan, they’re going to find you. Which is taking more time than if they would have gotten it themselves.”

“They call me to give a glass of water. They have water right there on the nurses’ cart. If someone is asking for water, they’ll look to see which CNA has that person and go find the CNA to tell them so and so wants water. You’re looking at them to see if they have two hands or what. You have water right there on your cart. Give them some water.”

“Like today for instance. I was giving my showers and one of my residents made a mess in her room. And the nurse called me from my shower to tell me she made

a mess in her room. Clean it up, I said, and I closed the shower door. Because they can do it too. They're going to let somebody stay in that mess? I'm already in the shower. I'm not going to drag them out of there. Safety comes first. You can't leave somebody in the shower to go take care of somebody else. It's one at a time."

"Sometimes you can say to a nurse, I see a red pressure area on somebody's heel. She might just say 'okay.' Then two weeks later, it's open and they're saying why didn't someone report this to the nurse? They blame everything on CNAs."

"We were short. They had an admission coming in. I don't see why the nurse can't weigh that admission, take vital signs on that admission, see how tall they are. I had ten people already and a new admission comes in. I had to take care of the new admission. And with the new admission, because of their age and condition, they're agitated. They're fighting you and you don't have time to go take care of the other ten people you have. The nurse tells you all the things she needs so she can leave by 11:00 PM, and says I'm not going to get in trouble so you'd better do this. You're like my god, which way can I go? You have to get it done or the nurse can write you up for it. It can make you quit if you're short.

They're really trying to get better. I see them trying to hire more staff. The nurses need to help when our staff is short. I know they have their papers to write and stuff but me too, two hours out of the morning time they're sitting there talking to each other. From 12:00 PM to 1:00 PM they pass meds and from 1:00 PM to 3:00 PM they don't do anything but sit there and talk to each other. They should help when we're short. We had a nurse manager who would roll up her sleeves and help. They should pitch in. There's no way someone should take care of ten people, especially on the 7:00 AM to 3:00 PM shift. You have to get people up, washed, dressed. With ten trays to pass."

5.3.5 Time it Takes to Feed Residents

Focus group participants were asked to discuss the meal time processes in their facilities. Specific questions centered on the typical workload during meals (i.e., how many residents needed some assistance with feeding, how many required total assistance with feeding, etc.), how much time they have to feed residents and whether that time is adequate, and facility practices to aid meal times.

5.3.5.1 Workload at Meal Times

The meal time workload varied considerably across the facilities represented by the focus group participants. Almost all focus group participants had some residents who required total

assistance with feeding, some who required minimal assistance with feeding, and others who were totally independent in feeding.

5.3.5.2 Time Allowed for Meals

What did vary less, however, was the time NAs were allocated to feed the residents on their unit/assignment. Some NAs noted that they have as much time as they need to feed residents, while other NAs noted that they only have a specified time period within which to feed all their residents, regardless of the resident's ability to feed themselves or even participate minimally in their feeding. However, many of the NAs who had as much time as they needed to feed residents commented that taking too much time to feed residents would impact their schedule for the remainder of their shift. Outcomes of hurried meal times were frequently included in the discussions about the time allowed for feeding.

“We have 45 minutes for lunch, with 13 total feeds and three assists out of 30 residents. While we're passing trays to some residents, we have other residents digging through trays. Two residents are on liquid diets, which takes ten seconds each. Pretty easy. A couple are slow feeds. They forget to swallow. It takes a long time to feed these residents, but we don't have a long time. I save the longest feeds for last, and often they don't finish their meal. That's where dehydration and malnutrition come in.”