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CMS Study: Correlation Between Staffing and Quality

A new report summarizes the findings of a phase II study conducted by the Centers for Medicare and Medicaid Services (CMS), which examined the relationship between nurse staffing and quality of care at more than 5,000 nursing facilities in 10 states. The study revealed that among long-term residents, nurse staffing levels below 4.1 hours per resident day (below 1.3 hours per resident day for licensed nurses and below 2.8 hours per resident day for nurse aides and assistants) could have adverse consequences. Similarly, among short-term residents, staffing levels below 3.55 hours per resident day (below 1.15 hours per resident day for licensed nurses and below 2.4 hours per resident day for nurse aides and assistants) were more likely to result in poor outcomes. Ninety-seven percent of nursing facilities in the United States in 2000 failed to meet at least one of the staffing thresholds recommended by the CMS and 52% failed to meet all of them.

The study used a simulation model to determine the number of direct-care staff members necessary to provide five important "care processes" to residents: facilitating independence in dressing and grooming, assisting with feeding, facilitating exercise, and providing incontinence care or toileting assistance with repositioning. Nursing facilities were

categorized as low-, medium-, or high-workload according to the level of resident need of direct-care nursing staff members. The minimum staffing requirement was found to be 2.8 hours per resident day at low-workload facilities, 3.0 hours per resident day at medium-workload facilities, and 3.2 hours per resident day at high-workload facilities. In 2000, 91% of U.S. nursing facilities had nurse staffing levels below these thresholds.

The severe shortages of all nursing personnel appeared to contribute to the high turnover rates among nursing staffs, resulting in compromised quality of care. According to the CMS's preliminary analysis, in order to meet the threshold staffing levels, facilities will need to increase wages of RNs by 2.5% to 7% and of nurse aides and assistants

A Look at Nursing Staff Turnover Rates

The nursing staff turnover at nursing facilities contributes to high vacancy rates and problems with quality of care. In 1999, the Centers for Medicare and Medicaid Services studied data from three states and found the following turnover:

Nursing staff	California	Kansas	Wisconsin
RNs	NA	54.7%	41.2%
LPNs	NA	57.2%	38.7%
Nurse aides and assistants	77.8%	100%	76.2%
All nursing staff	72.3%	84.8%	63.3%

NA = not available.

Source: U.S. Centers for Medicare and Medicaid Services. *Appropriateness of minimum nurse staffing ratios in nursing homes: phase II final report*. Cambridge (MA): Abt Associates; Winter 2001. <http://cms.hhs.gov/medicaid/reports/rp1201home.asp>.

FAST FACTS

- ▼ In order to meet the minimum staffing thresholds identified in the 2001 CMS report, nursing facilities nationwide would need to hire an additional 77,000 to 137,000 RNs, 22,000 to 27,000 LPNs, and 181,000 to 310,000 nurse aides and assistants.
- ▼ Among all nursing employment settings, RNs working in nursing homes in 2000 reported the lowest level of overall job satisfaction.
- ▼ Of all RNs employed in nursing in 2000, 6.9% worked in nursing homes and extended care facilities.
- ▼ Between 1996 and 2000, the number of nurses younger than 45 who were employed in nursing homes decreased by 18% and the number of nurses ages 45 to 54 who were so employed remained the same.

Sources: U.S. Centers for Medicare and Medicaid Services. *Appropriateness of minimum nurse staffing ratios in nursing homes: phase II final report*. Cambridge (MA): Abt Associates; Winter 2001. <http://cms.hhs.gov/medicaid/reports/rp1201home.asp>; *The registered nurse population: findings from the National Sample Survey of Registered Nurses*. Washington (DC): U.S. Department of Health and Human Services; 2002. <http://bhpr.hrsa.gov/healthworkforce/rnsurvey/rnss1.htm>.

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What Should Nurses Tell Consumers About Nursing Facilities?

Most people select nursing facilities during a time of crisis, such as when a loved one requires follow-up care after hospitalization. Often, decisions are made only a day or two before discharge, with little planning, and facilities are chosen according to proximity to the home or the homes of family members and friends without full consideration of the quality of care provided.

Direct-care nurses and discharge planners should check nurse staffing levels, which have been shown to be crucial to quality of care, when considering a nursing home, and they should advise patients' family members to consider this information as well. A CMS Web site, Nursing Home Compare (www.medicare.gov/Nhcompare/Home.asp), can be used to compare U.S. nursing facilities certified for Medicare, Medicaid, or both. Its database contains information on the characteristics of residents (such as the percentages of them who are bowel- or bladder-incontinent, or who have behavioral symptoms), facility characteristics and deficiencies (including those in nurse staffing levels), and inspection results.

Nurse staffing levels, as

expressed in hours per resident day, can be used not only to consider total nursing hours throughout facilities, but also to compare facilities' ratios of RN hours per resident to LPN and nurse aide or assistant hours per resident. Consumers should be advised to select the facilities with the highest staffing levels and the highest ratio of RNs in relation to other nursing personnel. However, because staffing data are reported to the CMS by facilities themselves, actual staffing levels and RN hours may be lower than indicated. Consumers and discharge planners should be encouraged to visit facilities, especially during evenings and weekends, and to ask the nursing staff how many residents are provided care during a shift. Optimally, a nurse aide or assistant on the day shift should provide care to no more than six to eight residents; on the evening shift, seven to eight residents; and on the night shift, 20 to 40 residents.—*Charlene Harrington*

Sources: U.S. Centers for Medicare and Medicaid Services. *Nursing home compare* [Web site] <http://www.medicare.gov/Nhcompare/home.asp>; U.S. Centers for Medicare and Medicaid Services. *Appropriateness of minimum nurse staffing ratios in nursing homes: phase II final report*. Cambridge (MA): Abt Associates; Winter 2001. <http://cms.hhs.gov/medicaid/reports/rp1201home.asp>.

by 10% to 22%. The cost of implementation of these increases is estimated at \$7.6 billion in 2001 dollars, an 8.4% overall increase in national expenditures for nursing facilities—one that the report characterizes as “substantial . . . but not so high as to preclude its feasibility.”

Despite the strong evidence of

the need for additional nursing staff demonstrated by the report, Secretary of Health and Human Services Tommy Thompson issued a statement to Congress asserting that the phase I and phase II studies “[did] not provide enough information to address . . . the appropriateness of establishing minimum ratios.” The Department of

RESEARCH BRIEF

Brannon and colleagues examined the wide range of turnover rates among nursing assistants at nursing facilities and found that factors related to high and low turnover differed. The authors examined the job, organizational, and environmental factors associated with nursing facilities that had either high or low nursing assistant turnover (64% to 300% in six months or less than 7% in six months, respectively). Two hundred eighty-eight directors of nursing at 360 facilities in eight states responded to the survey (80% response rate). The sample facilities were stratified by size, ownership, and rural versus urban location. Data were then merged with facility-level data from the 1995 On-Line Survey Certification of Automated Records, which was maintained by the Health Care Financing Administration (now CMS), and the appropriate county-level Area Resource Files, which describe health-related resources in a facility's surrounding environment.

Using multinomial logistic regression, the authors found that low nursing assistant turnover was significantly associated with facilities that had low RN turnover, supervisors trained in management, administrators with fewer middle managers to supervise, and union organizations for nursing assistants. High nursing assistant turnover was significantly associated with facilities that had high RN turnover, served as training sites, and operated for profit. These results indicate that in order to retain nursing assistants, nursing facilities need to address management-related and organizational conditions that affect the work environment.

Source: Brannon D, et al. An exploration of job, organizational, and environmental factors associated with high and low nursing assistant turnover. *Gerontologist* 2002;42(2):159-68.

Health and Human Services plans to continue to study the issue.—*Charlene Harrington*

Source: U.S. Centers for Medicare and Medicaid Services. *Appropriateness of minimum nurse staffing ratios in nursing homes: phase II final report*. Cambridge (MA): Abt Associates; Winter 2001. <http://cms.hhs.gov/medicaid/reports/rp1201home.asp>. ▼