

# The Relationship between Staffing and Quality in Long-Term Care Facilities: Exploring the Views of Nurse Aides

Research on staffing and quality of care in long-term care facilities confirms that adequate staffing levels are important to ensuring quality but few studies have examined *how* the two are linked. The research reported in this article used participant observation and indepth interviewing to explore how nurse aides (NAs) understand the link between staffing and quality. The findings show that NAs deem their relationships with residents to be the central determinant of quality of care as well as an important outcome in itself. Adequate staffing is essential to allowing NAs to nurture these relationships. Key words: *long-term care, nurse aides, nursing homes, quality of care, residents, staffing*

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## INTRODUCTION

In the 1980s, the connection between staffing and quality in long-term care (LTC) facilities became a focus of attention for policymakers and researchers. After an Institute of Medicine (IOM) report explicitly tied staffing to quality,<sup>1</sup> Congress mandated that the Department of Health and Human Services (DHHS) study and report “on the appropriateness of establishing minimum caregiver to resident ratios”<sup>2(p.231)</sup> and make specific recommendations about such ratios. The move to set minimum staff-to-resident ratios met with support from some stakeholders and dissension from others. Supporters believed that minimum levels, if set high enough, could improve quality of care. Dissenters, however, expressed concerns about the cost of increased staffing.<sup>3</sup>

Such arguments prompted the authors of one article to note that “staffing is at the crux of the tradeoff between cost and quality.”<sup>4(p. 43)</sup> In 1996, an IOM committee charged with examining the adequacy of nurse staffing in hospitals and nursing homes found sufficient research evidence to demonstrate “a positive relationship between nursing staff

levels and quality of care”<sup>5(p.13)</sup> in LTC facilities. Before policy recommendations about specific staffing levels could be made, however, the committee, which was highly sensitive to issues of cost, concluded that more research was needed to “refine the relationships between staffing and resident outcomes.”<sup>5 (p.155)</sup>

This article contributes to the ongoing discussion about the relationship between quality and staffing by examining the insights of a group whose voices have not been heard often in this debate: the nurse aides (NAs) who provide the majority of direct care in nursing homes. Not surprisingly, those who are the frontlines of caregiving support the view that staffing ratios are central to the quality of care. Their explanations of how staffing relates to quality add to an overall understanding of both the determinants of quality care and the impact of staffing on quality. This study, however, suggests that NAs conceptualize both quality of care and staffing—as well as the relationship between the two—differently than do the experts whose views have dominated this area of research.

### Literature review

The research cited by the IOM Committee on the Adequacy of Nurse Staffing in Hospitals and Nursing Homes includes two decades’ worth of studies on the quality of care in LTC facilities. These studies often have looked to Donabedian’s structure/process/outcome model to conceptualize quality.<sup>6</sup> Staffing has been used both as an indicator of quality<sup>7</sup> and as an independent variable in models of the relationship between structure and process variables and the dependent variable of quality as measured by clinical outcomes.<sup>4,8-12</sup> While the first use simply assumes that higher levels of staffing indicate higher quality care, the latter use

seeks to validate that assumption and to elucidate the characteristics of staffing—e.g., level as defined by staff-to-patient ratios, mix as defined by numbers of registered nurses (RNs), licensed practical nurses (LPNs), and NAs, training, and turnover rate among all staff—that affect quality.

In general, studies of staffing and quality of care support the contention that both the level of staffing and the mix of staff are related to quality. Linn et al.<sup>8</sup> reported that a higher ratio of RN to resident hours was related to positive resident outcomes. Munroe<sup>9</sup> found that nursing homes in California with higher ratios of RN to licensed vocational nurse hours showed fewer deficiencies on state-assessed Medicare/Medicaid standards. Cherry<sup>10</sup> found that lower levels of RN and LPN staffing were associated with poor care in skilled nursing facilities. Spector and Takada<sup>11</sup> found that quality was affected positively by both higher levels of staffing and lower rates of RN turnover. Similarly, Johnson-Pawlson and Infeld<sup>4</sup> reported that nursing home quality was related to both total nursing staff/resident ratios and to the ratio of RNs to residents. Feuerberg et al.,<sup>12</sup> however, found no association between quality and staffing levels for RNs, LPNs, or NAs. This anomalous result has been attributed both to poor quality staffing data, to limitations in the measure used to assess quality of care,<sup>13</sup> and to using studies in which levels of staffing are so inadequate as to make comparisons among them meaningless.<sup>14</sup>

There are many ways to understand and measure quality. In fact, in each of the studies described, quality is conceptualized differently. Feuerberg et al.<sup>12</sup> used an index composed of 15 quality indicators derived from the minimum data set. These indicators focused on clinical elements of care such as incontinence without the presence of a toileting plan, catheterization, and prevalence of tube feeding. Johnson-Pawlson

and Infeld<sup>4</sup> developed a measure of quality using 78 items from the 1991 Long Term Care Survey. Its dimensions included resident rights, resident behavior, quality of life, resident assessment, and quality of care. Spector and Takada<sup>11</sup> chose three resident outcomes to indicate quality: death, decline, and improvement. Their work was modeled on that of Linn et al.,<sup>8</sup> who used a similar measure that included death, improvement or deterioration, and location (discharged, rehospitalized, or still in nursing home). Cherry<sup>10</sup> developed a measure designed to assess poor nursing care. It included four indicators: decubitus ulcers, use of catheters, urinary tract infections, and antibiotic use. Munroe,<sup>9</sup> as noted, used Medicare/Medicaid standard deficiencies as her measure of quality. Although researchers continue to conceptualize quality in different ways, the trend has been to use outcomes measures—in particular those assessed by the MDS—as the primary measure of quality.

As Barbara Braun noted, “the use of outcome measures as quality indicators has an intrinsic appeal.”<sup>15(p.329)</sup> If the ultimate goal of providing good quality care is to ensure good patient outcomes, it makes sense to look to outcomes when assessing whether quality improvement efforts have been successful. Donabedian, however, issued a caveat to this approach: “outcomes not known to be a consequence of antecedent care cannot be used to assess the quality of care.”<sup>16(p.177)</sup> Studies that model staffing as an antecedent to quality assume that quality is a consequence of staffing, but they do little to elucidate *how* the two are related. (An exception is a participant observation study by Kayser-Jones and Schell,<sup>17</sup> which described the specific ways in which inadequate staffing can cause or exacerbate eating problems among nursing home residents.) How does nurse staffing (level, mix, training, and so forth) affect the development of decu-

bitus ulcers or other adverse clinical outcomes? Are the same processes involved in every outcome? The many definitions of quality further complicate the picture. What are the best outcomes to use when assessing quality? Exploration of such questions is necessary to “refine,” as the IOM suggests, knowledge of the relationship between staffing and quality in order to determine the staffing level that will maximize the chances for residents to receive high-quality care.

### Methods

This study is part of a larger research project designed to explore caregiving practices and perceptions of quality across a range of LTC settings. The six nursing homes participating in the project were located in three Midwestern cities—one small, one moderately sized, and one large. Included were a private-pay facility that served a high-income population, four facilities that accepted payment from both Medicare and Medicaid, and one facility that served a Medicaid-only population. Facility size ranged from 80 to 146 beds.

The findings reported here are based on a combination of indepth interviews with individual staff at all six facilities and participant observation in four of the facilities. A total of 38 NAs were interviewed during a period of two years. When participants agreed to be interviewed, informed consent procedures were carried out and interviews were tape recorded and transcribed. (If participants did not want to be recorded, interviewers took notes during the interviews.) Researchers engaged in participant observation for two to six weeks in each setting and collected detailed field notes.

Data were collected and analyzed using the grounded theory method.<sup>18,19</sup> The data were coded using Schatzman’s dimensional analysis, a line-by-line analytic process that facilitates identification and mapping of the

logic of participants' accounts.<sup>18,20,21</sup> Dimensional analysis is similar to open and axial coding, differing primarily in level of detail and in openness to analytic categories other than those specified by the grounded theory method.<sup>19,20,22</sup>

Consistent with the grounded theory method, early interviews were analyzed in detail prior to recruiting and interviewing new participants. Ongoing analysis guided theoretical sampling decisions throughout the study. Theoretical sampling and comparative analysis were accomplished by making sampling choices and by constructing interview questions that facilitated comparison across dimensions. For example, when early interviews seemed to indicate the importance of consistency in resident assignments for quality, participants who had experienced assignment variation were sought for interviews. At the same time, interview questions were constructed to explore the impact of consistency and variation in assignment, thus allowing for comparison.

## FINDINGS

The NAs who participated in this study recognized the importance of staffing to quality and were able to specify the pathways, or processes, through which staffing level variation affected quality. They described the link between staffing and quality in this way: adequate and consistent staffing facilitates the development of relationships between NAs and residents. With relationships comes familiarity. This familiarity increases the chances that care will be provided in a way that the resident prefers and is more comfortable with, thus leading to better outcomes.

The excerpts included below are quotations from the nurse aide interview data, and are intended to demonstrate nurse aides' perspectives in their own words.

## NAs define quality

When questioned about quality of care, NAs focused primarily on the quality of the relationship between the resident and the staff and on how care was delivered rather than on specific clinical outcomes such as those found on the MDS. They deemed relationships the central determinant of both quality of care and quality of life. Although experts may acknowledge the importance of caregiving (and other) relationships to quality of life, they generally do not consider them part of quality of care. The NAs in this study, however, did not distinguish between quality of life and quality of care. Interviews with NAs suggested that the detrimental impact of short staffing falls most heavily on relationships and by eroding them, erodes both quality of life and quality of care.

For these NAs, delivering high-quality care meant developing relationships with residents and then using those relationships to enhance the quality of residents' lives. In interviews, NAs discussed the nature and consistency of their relationships with residents. They described how long relationships took to develop, how important intimate, personal knowledge was to providing high-quality care, how long it took to learn how to individualize care for residents, and how important reciprocity was to nurturing relationships. They talked about how it was different caring for residents with whom they did not have a relationship. When asked to give examples of good care, NAs talked about treating residents "like family," which meant providing individualized care in a way that allowed residents to maintain their sense of competence and dignity. Having ongoing relationships with residents allowed NAs to provide such care consistently. High-quality care also was demonstrated by promoting the resident's physical comfort, not making a resident

wait or rush, and treating each resident as an individual. Such “personalization” required adequate time to gain knowledge of each resident.

Although NAs were aware of the clinical outcomes that are used most often to measure quality of care, their perspectives on such outcomes were shaped by their relationships with individual residents. For example, NAs sometimes provided contradictory responses to questions about whether a particular resident was incontinent. One aide might describe a resident as incontinent while another would describe the same resident as continent “unless you make her wait too long.” In the latter response, incontinence was conceptualized as a reflection of the caregiver’s knowledge of the resident and her ability to respond rather than the resident’s intrinsic ability to control her bladder.

NAs’ beliefs about the significance of clinical outcomes like immobility, social withdrawal, and fecal impactions were mediated by their technical knowledge and expectations of what was inevitable and what was possible to alter about a particular resident’s condition. These expectations, in turn, were mediated by the NA’s knowledge of the individual, knowledge that could be gained only in a close relationship. NAs differed on whether such conditions were expected and usual *for certain individuals* or whether they were preventable. Assessments of preventability therefore were based on knowledge of and

relationship with the resident. When an NA was unfamiliar with a resident, he or she was more likely to accept the inevitability of these adverse clinical outcomes and to explain them by reference to age- and illness-related decline. Thus, the presence or absence of a relationship between NA and resident had a strong influence on clinical decisions and care outcomes.

### **The consequences of inadequate staffing**

Inadequate staffing prevented NAs from developing or demonstrating relationships with residents, thus preventing them from providing high-quality care—that is, care that reflected familiarity.

When short staffed, aides often responded by collapsing routine care tasks into a tightly packaged series of procedures. This packaging, or bundling, allowed them to accomplish several tasks in one visit to the resident’s room but it eliminated the variation in procedures that NAs identify as the provision of “personalized” care and also reduced the opportunities for residents to demonstrate reciprocity. For example, time pressures on the NAs made it impossible for them to chat with residents about their own lives. By making individualization and reciprocity impossible, short staffing lowered the quality of care. One aide described the general impact on residents of bundling and rushing below:

“Well, you have to hurry ‘em through everything and if it’s a person that has a routine and you hurry ‘em through it, it messes up their whole day . . . They feel like they’ve been rushed and they have been.”

The stronger the connection between aide and resident, the greater the distress—to both parties—caused by having to bundle care. NAs who bundled were acutely aware of and felt bad about what residents were losing.

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When short staffed, NAs enlisted a number of other time-saving measures including not allowing residents the time to choose what they wanted to wear, not allowing them to wear clothing that was more difficult to put on or take off, eliminating time-consuming grooming preferences like braids and makeup, eliminating oral care, eliminating walking and range of motion exercises, abbreviating bathing procedures ("faces and bottoms" only), not stopping to chat, and reducing other activities designed to allow choice and enhance residents' sense of reciprocity and competence. As one aide described:

"A lot of them don't get proper oral care. I mean, you don't get time to sit and really clean teeth. They don't get range of motion, they don't get their walks. A lot of them don't get, they'll get the basics, wash up, a basic oral care. Nothing real fancy. They'll get washed up, they're kept dry and turned over, but they don't get lotion, they don't get the one on ones, they don't get the walks, they don't get the range of motion they need. You know, you don't get all that when we're short staffed. Of course, it's expected of us to get it all done, but it's like . . ."

Toileting was another area that was affected by low staffing levels. NAs in several sites identified toileting as one of the first "cares" to be eliminated in times of understaffing. In one site, NAs described how they had "pretty much let go of" a toileting plan for residents, despite their recognition of its importance, because there simply were not enough staff to make it feasible. Residents who had once been seen as "continent unless you make [them] wait too long" soon were more likely to be described as incontinent.

Interestingly, the administrators of the facility believed that NAs were continuing to fulfill the toileting plan despite low staffing. As the NAs explained it, they did not report routinely to their supervisors that they had not taken residents to the toilet. Their reasons for not doing so were that they knew it

was unacceptable and therefore not the kind of information that should be reported, that the impossibility of following the plan was so obvious that it should be apparent to the supervisors, and that nothing was done when they previously had reported how time constraints had made toileting impossible.

No matter how committed they were to providing good quality care, short staffing made it impossible for most NAs to complete their work without cutting corners. As a previous study demonstrated, visibility and potential accountability often had greater influence than clinical significance when determining how corners were cut.<sup>23</sup> NAs described how, in general, corner cutting was more likely to be done in ways that were invisible to supervisors or that could not be traced to an individual. The more visible, tangible outcomes of NAs' work were more likely to be the focus of supervision and evaluation criteria than were the less visible outcomes. NAs thus believed that they were at greater risk for a poor evaluation if dirty linen were found on a hallway floor than if a resident spent time lying in a urine-soaked bed—the latter is "invisible" while the former cannot be hidden. Similarly, corners were more likely to be cut in ways that would not result in any personal accountability. The eventual consequences of directing less effort to mouth care, range of motion exercises, walking, and toileting would be shared among staff and across shifts but would not implicate any one individual.

Many NAs described how corner cutting was affected by their relationships with residents. A close relationship with a resident tended to shift the NA's attention away from his or her own risk of punishment or reprimand and toward the impact of corner cutting on the resident. Because he or she knew the resident, the aide would see and understand the very tangible consequences of cutting corners for that individual. When

NAs were working with people with whom they were familiar, they often sought to cut corners in ways that they knew would be less detrimental to the resident. (In effect, they were able to “personalize” corner cutting.) In this way, the relationship between NA and resident became a factor that mitigated the impact of short staffing on resident care. (The flip side, of course, is that if they did not know the resident, aides found it easier to cut corners in ways that were potentially harmful.)

The relational definition of quality care described by NAs explains, at least in part, their resistance to rotating shifts, to being pulled to another unit to fill in, to changing resident assignments, and to working with pool staff. (Although NAs often initially resist permanent resident assignments—fearing that they will “get stuck” with the more difficult and time-consuming residents—when such assignments are in place, NAs are reluctant to give them up.) Because such measures interfere with the development and nurturing of relationships, aides perceived these common staffing strategies as a basic quality issue. The centrality of relationships means that a staffing level may be calculated at a level higher than is practically the case: the same number of staff actually may represent two very different situations depending on the level of familiarity between staff and residents.

For example, according to most NAs, working with a “full” staff that includes new or inexperienced staff creates a situation that is “just like” being short staffed. In these situations, NAs can spend much of their time on a shift orienting new staff to residents or training them on policies and procedures. At the same time, the NAs are still responsible for completing care tasks for their own list of residents. In fact, aides find that the presence of staff who are not familiar with the residents actually distracts from their

work the same as if short staffed rather than facilitating their work as full staffing should. One nurse aide noted:

“They didn’t know the people, the routine, and basically you kinda had to help them out the whole time too. You had your work plus helping them out, telling them what to do, answering their questions.”

A similar situation arises with the use of pool staff, particularly pool staff who are not familiar with the residents:

“I don’t know. It’s more that some of them came in and just did things the way they wanted to, and didn’t ask what the residents’ routine was or just got ‘em up now, put ‘em to bed now and . . .”

Unfamiliar pool staff face a dilemma in their approach to care. If they don’t take the time to ask about resident preferences and routines, they might be perceived as having a bad attitude toward their work. If they do ask for assistance and guidance, it causes more work for the regular staff, who sometimes resent the time that such assistance takes away from their own care responsibilities. When residents with whom they had close relationships were turned over to pool staff, NAs often became involved with the care in order to make sure the unfamiliar aide was able to personalize the residents’ care. With some pool staff, the resulting disruption to the routines of both NAs and residents was severe enough that NAs would decide not to use the assistance of supplemental replacement staff even when it was available.

Inadequate staffing has detrimental effects on the physical and psychological experience of NAs as well as that of residents. NAs reported how physically exhausting it was for them to do their work when understaffed because they are required to complete care tasks for a greater number of residents in the same amount of time. One consequence of the heavy physical demands

and stress resulting from short staffing was the difficulty NAs have coming to work, or continuing to work, when the facility is short staffed. One NA said:

"That's my big concern right now, is the short staffing because I'm just tempted to, when I got to work and there's four of us, I'm tempted to take sick and go home because I can't stand it."

For many NAs, short staffing meant that they felt guilty if they took regularly scheduled work breaks. If they didn't take breaks, however, they reported increased stress and frustration. Because relationships with residents for most NAs are both the essence of high-quality care and the source of job satisfaction, when aides are not able to provide care in a way that is "like family," their job satisfaction falls sharply. (The inability to provide care in a way that is "like family" was one of the main reasons NAs gave for leaving their jobs. Other reasons included feelings of being disrespected by nurses and other supervisors, seemingly capricious absence policies, and low pay.) The physical difficulties of short staffing combined with the psychological stress of feeling they are giving care that is less than adequate causes morale to fall, which in turn leads to increased staff turnover. In a vicious cycle, this increased turnover exacerbates the problem of short staffing.

By contrast, when care was delivered in circumstances of adequate staffing, NAs were able to unbundle care procedures into discreet, personalized, slower-paced "cares." Unbundling allowed residents the opportunity to choose from among alternatives; to do

more for themselves; to influence the timing, pacing, and sequencing of their care; to make choices about how and when things are done; and generally to direct more of the care. Specifically, NAs reported that they were able to: answer call lights more quickly; spend time interacting with residents; read letters to and write responses for residents; take residents for walks; reheat food that had cooled down and get residents second helpings of favorite foods; allow residents to eat (or dress or bathe) at a comfortable pace instead of pushing them to finish; bathe residents at the time of day they preferred, using the desired water temperature; and taking residents to the toilet more frequently. From the NAs' perspective, the increased interaction with residents and the accompanying unbundling and personalization of care—in other words, the opportunity to develop and nurture a relationship—improved both the quality of care and the quality of NAs' work lives.

NAs' attention to caring relationships also provided pathways to good quality care that may not be tapped by existing measures of quality. Depression, for example, was interpreted by NAs as the consequence of life events, lack of interest in the environment, or, in particular, loss of meaningful relationships and a sense of contributing to others. When they sensed that a resident was depressed, NAs often responded by increasing their interaction with the individual, becoming more attentive and affectionate, and doing special things to cheer the resident. In effect, this was the NAs' plan for treating depression but it would not have been reflected as a plan in the written records that provide data for quality assessment.

## DISCUSSION AND CONCLUSION

Increasingly, expert definitions of quality have focused on the delivery of specific care

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processes and on clinical outcomes. The definition proffered by NAs in this study, however, focused on the processes through which care is delivered, judging these processes both as outcomes in and of themselves and as crucial for quality outcomes, some of which overlap with the outcomes identified by experts. In this study, relationship emerges as a central dimension of quality, one that encompasses both process and outcome elements. NAs define quality as a good relationship that leads to shared affective states like trust, respect, and affection, emotions that create a context for the performance of care tasks like dressing, bathing, and toileting. Written records, the source for most assessments of clinical outcomes, often do not reflect the actuality of task performance (e.g., the facility that had toileting plans but “let go of” them in conditions of short staffing and the unwritten plans for treating depressed residents) nor do they show the affective context in which NAs and residents interact.

Research on staffing and quality of care assumes that staffing is an antecedent that at least partially determines quality but usually fails to explain how the two are linked. Evidence from fieldwork among staff in LTC facilities reveals the mechanisms through which staffing influences quality of care: NAs describe high-quality care as care that is done “affectionately” or “individually” in ways that are “like family.” The outcomes that define this kind of quality are those that relate to the residents’ feelings and perceptions—the resident is comfortable and the resident’s sense of dignity and competence are maintained—rather than those that have to do with externally generated criteria. Quality care is facilitated by familiarity. Where familiarity is lacking, or impeded—as in conditions of short staffing—quality suffers.

Staffing levels are crucial to maintaining the relationships between NAs and resi-

dents and thus to ensuring the outcomes (both relational and clinical) that define quality care.

Several recent studies have reached similar conclusions about the importance of relationships to quality of care. Researchers in Australia<sup>24</sup> and Sweden<sup>25</sup> found that nursing home residents who were asked to reflect on quality expressed the importance of relationships (with caregivers and others). A theoretical model of nursing home care quality developed by Rantz and colleagues<sup>26</sup>—based on focus group discussions with nursing home workers, administrators, and regulators—posited that interaction of staff with residents and individualized care were both central dimensions of quality.

The relational/affective definition of quality described here has implications for studying the relationship between staffing and quality of care. While most research on staffing and quality poses staffing as a structural variable, this study suggests that it could be reconceptualized equally as a *process* variable and as an outcome in and of itself. That is, the link between staffing and quality lies in the process of developing relationships between staff and residents. In this reconceptualization, staffing levels, configuration, and skill mix become structural variables that facilitate or hinder such relationships.

Thinking of staffing as a process variable suggests a need for new ways to measure it. Staffing is more complex than common measures might suggest. As aides in this study reported, the assessment of staffing levels requires more than counting the number of bodies reporting to work each shift. Staff who do not have relationships with residents can be a hindrance as well as a help in the accomplishment of care tasks. Perhaps only staff who are familiar with residents—those who have established relationships—should “count” when staffing levels are measured.

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