

MINIMUM NURSING AIDE STAFFING REQUIRED TO IMPLEMENT RECOMMENDED CARE PRACTICES IN NURSING HOMES

We estimated the nurse aide time required to implement five care processes that improve nursing home (NH) resident outcomes. The care practices are relatively simple to implement and define what most would consider "humane" care. The care processes are:

- Changing or toileting incontinent residents
- Repositioning immobile residents to prevent pressure ulcers
- Providing feeding assistance to residents with low oral food intake
- Providing exercise to prevent decline
- Promoting the ability of residents to independently dress themselves.

We selected these five care processes for study using two evidence-based criteria. First, the clinical research literature provided evidence that the care process improved NH residents' clinical or quality of life outcomes. Second, the clinical literature addressed the number of residents who needed the care process, the frequency with which the process should be delivered to these residents and the nurse aide time required to implement the process. Based on this information, we then developed a mathematical model that simulated the process of delivering care to NH residents needing that care.

Simulation is a flexible tool that is especially appropriate for evaluating the effects of the physical layout of a facility, staffing levels, and service (i.e., care process) scheduling on the levels of service provided to care recipients and the associated staff work load. This tool has the advantage of allowing us to model several realistic work scenarios that include such factors as: observed variation in time to deliver a service; travel time from one resident to another; the need to accommodate breaks for staff; the time of day during which some services such as meals must be provided; and the need to accommodate random unscheduled events. In cases where we lacked the necessary data for the simulations we made conservative assumptions. For example, we estimated a low frequency of unscheduled events that required aide time (e.g., cleaning up spills, answering call lights).

The most time efficient staffing model for delivering the selected care processes varied staffing throughout the day and involved a minimum of one aide working with approximately five to six residents on the 7:00 am to 3:00 pm shift; seven to eight residents on the 3:00 pm to 11:00 pm shift; and 26 residents on the 11:00 pm to 7:00 am shift. This "time efficient" staffing model did not consider resident preferences (individualized care) and required that some staff be scheduled to work four-hour shifts during peak work load times (e.g., 6:00 am to 10:00 am). Simulations using aide to resident ratios that are more typically reported by NHs (i.e., 8 - 10 residents to 1 aide during the 7am - 3pm shift) were also conducted and revealed that most residents would not consistently receive the five care processes reviewed in this chapter even if nurse aides worked at unrealistic high productivity levels.

The staffing ratios recommended in our simulation model would, thus, require increased staffing investments in most NHs. Given the importance of these findings, we believe that field tests to validate these staffing requirements should be conducted. Specifically, field tests are needed to confirm the conservative assumptions that we were forced to make concerning some labor requirement issues and to identify the labor resource implications of scheduling the care processes according to resident preferences. An emphasis on individualized care will likely increase labor requirements even further compared to those we described in this chapter. In addition, field tests are needed to document the resources needed to implement additional care processes and the impact that the efficient implementation of these care processes has on enhancing resident quality of life and clinical outcomes.

In conclusion, we believe that all nursing home residents should have the opportunity to receive the basic care processes that we evaluated in this report. We, furthermore, believe that both current nursing aide staffing or even an increase to 2.0 hours of aide time per resident per day will not allow either humane and/or effective care to be implemented.