

8 Hour shifts Vs. 12-Hour Shifts

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Clinical Question:

In the hospital setting, what is the effect of working 12-hour shifts on patient quality of care compared with 8-hour shifts?

Summary of Key Evidence:

Three sources of evidence were reviewed to answer the clinical question. The purpose of the first study by Reid, Robinson, and Todd (1993) “was to describe patterns of care under an 8-hour compared to a 12-hour shift system” (p. 403). This study is a non-experimental, repeated measures study using activity analysis. The study was conducted on 10 wards in 2 hospitals in the United Kingdom. The study was done in a wide range of settings including acute medical, acute surgical, maternity/neo-natal, and geriatric. The data collection was done through continuous observations of the nurses on the floor. These observations took place during the 8-hour shift and after they had worked the 12-hour shift for 6 months. Each nurse was observed every 15 minutes over 3 days totaling 36 hours in activities such as patient care activities, indirect care activities, routine care activities, and non-care activities. Reid, Robinson, & Todd (1993) reported that there is clear evidence showing decreased direct patient care especially in the final 3 hours of a 12-hour shift and an increase in non-care activities such as official or unofficial work-breaks.

The purpose of the second study by Stone et al. (2006) “was to compare the effects of 8 and 12-hour shifts on nursing, system and quality outcomes, while controlling confounding variables”(p. 1100). This study was a quantitative descriptive, cross-sectional research design study that took place in 13 New York City hospitals on 99 nursing units. Nurses were recruited via convenience sampling. Inclusion criteria consisted of medical-surgical units only. Direct care nurses were surveyed. The survey was an anonymous self report questionnaire format that was distributed in 2 waves. The data collection was done through nursing surveys, administrative records, and patient records. Nursing outcomes included burnout, job and scheduling satisfaction, preferences, intention to stay and employee safety. System outcomes included recruitment and turnover, staffing, absenteeism, and related costs. Quality outcomes included

medication events per bed, patient falls per bed, and decubitus ulcer prevalence per patient bed. The confounding variables of this study were the nursing demographics and organizational climate measures that were collected in the nurse survey. Stone et al. (2006) reported there were no differences in any of the quality of patient care variables. Overall the nurses that reported they worked 12-hours shifts were more satisfied with their jobs, experienced less emotional exhaustion, more satisfied with the work schedule, and were less likely to miss shifts.

The aim of the third study by Barker and Nussbaum (2011) was “to quantify, among registered nurses, the perceived dimensions and states of fatigue present, to investigate the relationships between perceived fatigue and perceived performance, and to identify differences in perceived fatigue levels and dimensions across demographic and work environment variables” (p. 1371-1372). The study is a qualitative, cross-sectional online survey research design. The study was conducted in the United States. There were 1006 Registered Nurses who partook in the online survey, but only 745 nurses completed the survey. Nurses were recruited via convenience sampling. Inclusion criteria consisted of all RNs currently employed in a hospital, community or public health setting, ambulatory care, or a nursing home/extended care facility. The data was collected between February 2008 and April 2009 through study advertisements that directed participants to an online survey. Five instruments were used to compile a Fatigue in Nursing Set which would only take 15-20 minutes to complete. The five instruments measured mental, physical, and total fatigue dimensions, acute and chronic fatigue states, and performance. Barker and Nussbaum (2011) reported that mental and acute fatigue levels were both higher than physical and chronic fatigue levels. Also, study shows that longer shifts and more hours worked per week were associated with increases in physical and total fatigue levels and mental levels also differed with shift schedules.

Clinical Bottom Line:

The evidence suggests that nurses are more physically and mentally fatigued when working longer hours and patient outcomes are significantly decreased within the last three hours of the 12-hour shift; however, nurses are more satisfied with the 12-hour shifts and are less likely to miss their shift.

Implications for Practice:

Nurses and nurse managers can use this evidence when designing work environments and schedules by considering variables such as fatigue levels, performance, nurse satisfaction, efficiency, and the detrimental effects on patient care.

Articles:

Barker, L.M., & Nussbaum, M.A. (2011). Fatigue, performance and the work environment: a survey of registered nurses. *Journal of Advanced Nursing*, 67(6),1370-1382. doi: 10.1111/j.1365-2648.2010.05597.x. Retrieved from CINAHL with Full Text database.

Reid, N., Robinson, G., & Todd, C. (1993). The quantity of nursing care on wards working 8- and 12-hour shifts. *International Journal of Nursing Studies*, 30(5), 403-413.

Stone, P.W., Du, Y., Cowell, R., Amsterdam, N., Helfrich, T.A., Linn, R.W., Gladstein, A., Walsh, M., & Mojica, L.A. (2006). Comparison of nurse, system and quality patient care outcomes in 8-hour and 12-hour shifts. *Medical Care*, 44(12), 1099-1106. Retrieved from CINAHL with Full Text database.