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Managing night-time vital signs observations: the conflicting care work of supporting sleep and preventing deterioration.

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Abstract

Patients' vital signs are monitored less at night, even when an early warning system (EWS) is used to measure patient acuity. Semi-structured interviews with 17 nursing staff revealed a range of hidden decision making processes used to balance the competing care work of supporting sleep, preventing deterioration, and meeting hospital and ward demands. It is recommended that teams discuss and audit decision-making around exceptions to EWS protocols at night.

Introduction

This qualitative study forms part of a mixed methods project, the *Night Surveillance Study*. The project aimed to ascertain the knowledge, beliefs, choices and practices of healthcare staff concerning performing vital signs observations during the night on general medical and surgical wards, and to ascertain factors that are associated with ward level observation compliance and individual self reported compliance.

Observations at night

Research suggests that vital signs observations are taken less often at night, even when an EWS is used [1,2]. A systematic review of why vital signs observations were missed at any time of day concluded that nurses use vital signs observations alongside intuition and 'pattern recognition' of deterioration based on experience as well as concerns raised by the patient's family members [3]. Relationships with other health professionals, ward equipment and clinical environment were also identified as factors in the papers reviewed. No research has focused on why observations are taken less at night [2,3] and qualitative research is needed to explore this topic [4].

Figure 1 Butterworth, J after Tomkins, C.A. (1855). *Florence Nightingale, An Angel of Mercy, Scutari Hospital 1855*. Credit: Wellcome Library, London. Available under Creative Commons Attribution only licence CC BY 4.0 http://creativecommons.org/licenses/by/4.0/

Background

This study was carried out in a UK hospital where an electronic physiological surveillance system sets the vital signs monitoring schedule. Monitoring frequency dropped at night in 37/39 wards.

Methods

Nursing staff were approached through the survey in stage one of the project. Ten staff were purposively recruited from wards with the lowest and highest quartiles of expected observations and the largest relative drop in observations at night. This was supplemented with a convenience sample of seven from wards in the middle quartiles (total n=17). The wider project took a pragmatic approach and interview data was analysed using a constant comparative method informed by grounded theory.

Results

Supporting an uninterrupted 'chunk' of sleep was described as a key care task.
Decisions about whether to measure vital signs at night involved:

- **Whether a full observation set seemed** '**necessary**'. 'Unnecessary' observations could be those for patients with chronic conditions who always scored highly, people who had difficulty sleeping, and outliers labelled 'fit for discharge'.
- **If it chimed with clinical judgement (formal and 'gut').**
- **Expectations of 'fresh observations' at 6am by doctors** These led to nursing staff deciding to miss scheduled observations that would have broken up 'chunks' of sleep
- **If it might disturb others** (patients in the same bay or 'confused' patients who may become agitated, waking others)
- **Ward protocols setting observation frequency** – in particular post-op intervals, which overrode EWS intervals but gave the impression of high compliance with EWS
- **Hospital surveillance audits** increased compliance but could damage nurses' sense of professional autonomy

Conclusion

Nursing staff's attempts to balance competing care tasks with ward expectations involved hidden decision making that could put some patients at risk of lowered monitoring at night.

Implications

- Further research should explore variations in night monitoring
- Night staff's views on exceptions to monitoring at night should be openly discussed with the whole clinical team.

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