Effect of single room hospital accommodation on staff experiences and the organisation of work.

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1. Introduction

There is growing enthusiasm for providing single room accommodation in hospitals. The British NHS currently recommends that all new hospitals should have at least 50\% single rooms. There is however mixed evidence about the benefits of single rooms with few empirical studies conducted. The anticipated benefits include improved patient privacy and rest, shorter recovery time, fewer infections and increased time spent on direct patient care. Anticipated problems include a higher incidence of falls, patient isolation, and higher staffing costs. In this study we investigate staff experiences and perceptions of single room accommodation before and after the move from multi bedded wards to a new hospital with 100\% single rooms. The results we report are part of a larger study that examined staff experiences, patient experiences, safety outcomes and the comparative costs of single rooms. The aims of the study of staff experiences were to investigate the advantages and disadvantages for staff of a move to all single room accommodation, and to examine how single room accommodation affects staff experience, wellbeing and their ability to deliver effective and high quality care.

2. Method

A before and after mixed methods case study design was used. The case study wards represented different clinical areas and patient groups. They were acute assessment, surgical, medical (older people) and maternity. The following data were collected before and after the move to the new hospital:

- Observations of clinical practice (pre move 118.75 hours, post move 131.60 hours, total 250.5 hours) to determine proportion of time spent on different activities
- Measurements of distances walked by staff collected by pedometer (pre move n=53 staff, post move n=56 staff).
- Survey of nurses’ and healthcare assistants’ perceptions of facilities, teamwork, safety climate, job satisfaction, well-being and stress. The response rate pre move was 31\% (n=55) and 27\% (n=55) post move.
- Interviews with nurses and healthcare assistants about their experiences of the different ward layouts, staff communication and teamwork and perceptions of patient experiences. (n=24 pre move and n=24 post move).

3. Results

A general linear model (GLM) using proportion of time as the dependent variable showed no significant change in the proportion of time spent on five different activities – direct care, indirect care, professional communication, medication tasks and ward related activity. There were fewer medication tasks recorded per hour post move, suggesting that the tasks were less fragmented and the number of interruptions decreased post move. A repeated measures GLM with the number of steps per hour as the dependent variable showed that travel distances increased for all staff with the highest increases in the older persons’ and surgical wards. Nurses experienced a larger increase in steps per hour (624 to 811, 3.74 to 4.86 miles) than healthcare assistants (828-862 steps, 4.96 to 5.17 miles).

Survey data showed that most staff preferred a mix of single room and multi bedded wards to cater for the needs of patients at risk of falls and the acutely ill and to allow social interaction. Staff perceived the new hospital was better for efficiency, patient amenity, infection control, patient privacy and patient interaction...
with family. It was worse for staff spending time with patients, communicating with patients, monitoring patients, responding to calls for assistance, risks to staff safety and teamwork.

Interview data showed that staff found the single room environment supported the delivery of good care but also increased walking distances and impacted on their well-being. Single rooms reduced the ability to monitor patients and nurses felt great pressure to ensure the safety of patients, especially those at risk of falling. Staff felt more isolated at work as they were often working alone in a single room and it was difficult to find colleagues. The quality of teamwork was initially reduced as there was less interaction with colleagues. Staff said there were fewer opportunities for informal learning, difficulties supervising staff and diminished trust and reciprocity between staff. Management of work and prioritising patient care was difficult as nurses had to divide their time between patients who had high expectations and who did not know what other demands there were on nurses’ time. New ways of working were devised, including reconfiguring the nursing teams, regular room checks and falls interventions.

4. Results
The study showed that the move to all single room accommodation had a mixed effect for nurses and the organisation of work. The increased travel distances, sense of isolation and reduced teamwork were reported as difficulties. Staff had to change the way they worked to suit the new layout and it sometimes took several attempts to find ways to address problems such as reducing patient isolation and locating colleagues. Better planning and anticipation of the changes required might have assisted the adjustment. Overall, staff felt that there should be more flexibility in the design, with a mixture of single and shared accommodation.

5. Discussion
The study showed that the move to all single room accommodation had a mixed effect for nurses and the organisation of work. The increased travel distances, sense of isolation and reduced teamwork were reported as difficulties. Staff had to change the way they worked to suit the new layout and it sometimes took several attempts to find ways to address problems such as reducing patient isolation and locating colleagues. Better planning and anticipation of the changes required might have assisted the adjustment. Overall, staff felt that there should be more flexibility in the design, with a mixture of single and shared accommodation.