Evaluating a major innovation in hospital design: Workforce implications and impact on patient and staff experiences of all single room hospital accommodation

Report of phase 1 findings for HaCIRIC

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Executive summary

Introduction and background

This report describes a research study into the impact of a hospital move to all single room accommodation. The research was undertaken at Maidstone and Tunbridge Wells NHS Trust’s new 512-bed hospital in Pembury, Kent - the Tunbridge Wells Hospital. The new build was completed in December 2010 with women and children’s services moving into the building in January 2011 and the remaining clinical services following in September 2011. It is the first district general hospital in England with single rooms throughout the in-patient accommodation.

In the UK, NHS service providers are encouraged by Department of Health guidance to provide higher proportions of single room accommodation (the aim of 50%) in any new hospital builds. It is important to build evidence about moves to single room accommodation as it may have a significant impact on patients, staff and health care organisations.

As yet there are few wards or hospitals in the UK with all single room accommodation and the opportunities for evaluation have been few. The available international and UK evidence is equivocal suggesting a range of potential benefits for patients and staff but also a range of potential disadvantages. Potential advantages of single room accommodation include reduced infection rates, fewer medical errors and faster patient recovery rates. Patients may experience increased privacy, dignity and comfort and less disruption from other patients including improved control over their environment, enhanced sleep, and enhanced contact with families. Staff may be able to provide more personalised patient contact, with fewer interruptions and less time spent walking.

Potential disadvantages of single room accommodation include reduced social interaction and thus patient isolation, less surveillance by staff, increased failure to rescue and increased rates of slips, trips and falls. The impact of single room accommodation on staff-to-patient observation, staffing levels, adjustments to staff skill mix, and staff travel distances is unclear. The costs and economic impact of more single room accommodation are also unclear.

Methods

The research has been undertaken within a realist evaluation framework, seeking to provide a holistic understanding of the 100% single room design, and specifically what works, and for whom, in what circumstances. The research seeks to identify the impact of the move to 100% single room accommodation on three key areas: care delivery and working practices; staff experience; and, patient experience. The research has adopted a longitudinal mixed methods case study design to facilitate a detailed understanding of the effects of the transition to all single rooms, providing a rounded picture of the issues.
The first phase of the research, reported here, provides both an understanding of the organisational context within which the move has taken place, and a ‘baseline’ understanding of care delivery and working practices, staff and patient experience in four case study wards.

Data collection has involved the following:

- Key stakeholder interviews with Trust staff and PFI consortium members
- Attendance at Trust ‘single room working group’ meetings
- Case study research on four wards (acute assessment, medical (older people), surgical and maternity) including a staff survey, observation of staff, staff interviews and patient interviews

**New hospital development context**

The decision to build a new hospital with 100% single rooms was ‘top-led’, with little involvement from staff not working at ‘board’ level. Following the Healthcare Commission investigation into infection control issues at the Trust, the small team of ‘champions’ leading the design were forced to resign. New and existing staff had concerns about the 100% single room design, particularly in relation to patient isolation and the safety of older, confused and infirm patients.

A lack of planning for the operationalisation of single room wards was identified early on following the change in leadership, but there was a delay in beginning any substantial transformation work. For example, a single room working group was not established until less than two years before the new hospital would be fully open and the focus of wider staff engagement and communication up to the move tended to prioritise move and migration issues. Important policies relating to single room working were not developed until very close to the move itself.

**Detailed description of four case study wards**

Three of the case study wards (acute assessment, medical (older people) and surgical) were located at the Kent & Sussex Hospital in Tunbridge Wells. The Kent & Sussex Hospital opened in 1934, as a purpose-built, state-of-the-art hospital facility, and featured south-facing traditional Nightingale wards (with rows of beds on either side) and three-quarter height glazing, designed to maximise fresh air and sunlight to support patient recovery (location of our surgical ward case study). During the Second World War, six wartime emergency huts were added to the hospital footprint (location of medical (older people) ward case study). Two of these were demolished in the 1980s, when a new Accident & Emergency wing was added to the hospital (location of our acute assessment ward case study). The fourth case study ward (maternity) was located on the old hospital site at Pembury. The site was originally a workhouse (which opened in 1836), and became a county hospital in 1938.

On the case study wards, healthcare assistants spent over a third of their time on shift engaged in direct care, while nurses/midwives spent a quarter of time on this activity. Nurses/midwives spent twice as much time undertaking documentation (14%) compared to healthcare assistants (7%).

Healthcare assistants walked further than registered nurses/midwives (on average, 768 steps per hour compared to 610 steps per hour). Among registered nurses/midwives, acute assessment ward
nurses walked furthest (745 steps per hour). During a 12-hour weekday shift nurses and midwives were walking 3.7 miles on average, while healthcare assistants were walking 4.6 miles on average (with acute assessment ward healthcare assistants walking furthest at 5.3 miles on average).

There was variation among the case study wards in relation to the proportion of time spent on professional communication, medication tasks and documentation. These differences relate in part to the differences between the wards in terms of patient groups, but also skill-mix, staffing levels, and organisation of work. Overall, nurses and midwives spent over a quarter (27%), and healthcare assistants just over a fifth (21%), of their time communicating or working directly with other staff.

**Impact of the physical environment on staff experience**

Staff emphasised that open-plan ward environments had some key advantages in relation to surveillance and monitoring of patients, staff teamwork and communication and social contact between patients. However, staff felt the old open-plan ward environments could be improved for staff, particularly in relation to space around the beds, staff-patient ratio, access to equipment and supplies, staff bases and facilities for staff.

Staff felt that the new hospital and single room wards would be much better for patient privacy, sleep and rest. Improved space around patient beds, with en suite toilet and shower facilities in the new hospital were perceived to be a massive improvement on current facilities, ensuring better patient experience, as well as making it easier for staff delivering care and assisting patients. The layout of wards in the new hospital, with centralised ward support facilities, was also felt to be an improvement on the existing dispersed support areas.

Pre-move staff concerns about the single room wards in the new hospital mirrored those aspects they felt were positive about the old accommodation. Staff were concerned that not being able to see or hear patients and other staff would impact on staff ability to monitor patients, and lead to an increase in patient falls, as well as patient and staff isolation. These concerns may have influenced staff preferences for ward design in the new hospital, with 75% of staff responding to the survey indicating a preference for at least half or more beds in bays.

**Impact of the physical environment on patient experience**

The physical environment of the case study wards influenced three key dimensions of patient experience. These were security, community and physical comfort. Positive perceptions of security were related to staff proximity and the ability to observe staff competence, witness the care of others and engage in social interaction with staff. However, for some patients, the hectic nature of the ward environment contributed to feelings of insecurity as patients felt that care was ‘rushed’ and staff did not have time to ‘comfort’ or ‘get to know’ patients. The physical layout and perceived temporal pressure on staff on the maternity ward led to patients feeling especially insecure.

Multi-bed rooms enabled patients to passively or actively engage in a patient community. Proximity of other patients helped ‘pass the time’, and many patients enjoyed the camaraderie of shared accommodation. Interaction with other patients could be an important source of emotional comfort, giving patients a sense of purpose. However, the therapeutic aspects of a community of patients
could be negated by the condition or behaviour of other patients. Confused or disruptive patients could change the community dynamic on the ward. For cognitively-well patients on the medical (older people) ward, the prevalence of dementia and confusion among other patients led to heightened feelings of isolation. Sharing accommodation with other patients was particularly problematic for maternity patients. Patients on the maternity ward experienced an acute lack of privacy which led to considerable emotional discomfort and anxiety.

Open ward accommodation had multiple implications for patients’ experiences of physical comfort. Availability of food and drink, location and size of shared toilet facilities, space around the bed, and lighting, temperature and noise were potential sources of discomfort which could be alleviated or exacerbated by the physical environment.

Patients’ views on single rooms were influenced by their experiences of shared accommodation. Maternity patients expressed a clear preference for single room accommodation as a means of improving maternity patient experience. This preference was related to the lack of security, privacy and physical comfort experienced in the open ward environment. Other patient groups held an ambivalent position in relation to single room accommodation. While sleep and rest and en suite facilities were regarded as definite benefits, patients were concerned about the loss of proximity to staff and loneliness and isolation.

**Discussion and conclusion**

Phase 1 of this longitudinal research study examining the move from open to all single room wards has sought to understand the organisational context, and staff working practices and staff and patient experience in the old accommodation at Maidstone and Tunbridge Wells NHS Trust.

Phase 1 findings presented in this report reveal a complex picture. The research has explored multiple perspectives and experiences, and used mixed methods to try and gain a more complete insight into the issues. Triangulation of results highlights both advantages and disadvantages associated with the old open plan accommodation. Positive and negative impacts arose from interactions between organisational context, type of care being delivered, type of patients, staffing practices, staff levels, expectations of staff and patients, and the design of the wards themselves. It is clear that there will be no simple answer to the question of what type of accommodation is best for care delivery and working practices; staff experience; and, patient experience but this realist evaluative perspective will explore how these interactions play out now staff and patients have moved to 100% single room accommodation.

Findings from phase 1 provide a baseline for phase 2 of the research which will explore new care processes and working practices, and staff and patient experience in the new all single room hospital, as well as how staff perceptions and experiences of the move to single rooms are shaped by formal organisational and change management processes. The longitudinal research design will consider how and why perceptions, practices and experience change in the new ward environments, and explore whether there are differences in experience among staff and patient groups and the case study wards.
Chapter 1: INTRODUCTION AND BACKGROUND

Introduction

This report describes a research study in to the impact of a hospital move to all single room accommodation. The report has been written by members of the research team at the National Nursing Research Unit (NNRU), King’s College London in collaboration with the wider project team. The research was funded by the Engineering and Physical Sciences Research Council (EPSRC) through the Health and Care Infrastructure Research and Innovation Centre (HaCIRIC) at Imperial College London.

The research was undertaken at Maidstone and Tunbridge Wells NHS Trust new 512 bed hospital in Pembury, Kent - the Tunbridge Wells Hospital. The new build was completed in December 2010 with women and children’s services moving into the building in January 2011 and the remaining clinical services following in September 2011. It is the first district general hospital in England with single rooms throughout the in-patient accommodation.

Working in collaboration with South East Coast SHA, Maidstone and Tunbridge Wells NHS Trust and research colleagues at HaCIRIC we have carried out in-depth research on care delivery and working practices and staff and patient experiences in the old hospital buildings during the period in the run-up to the move to the new hospital giving us ‘baseline’ before practices and experiences in four cases (postnatal ward; acute assessment unit; acute general surgery ward and elderly care ward). We also have undertaken interviews with 20 key stakeholders including the architects, builders and senior nursing staff and executives in the Trust. This Phase 1 work was completed in August 2011.

We are currently undertaking further research to build on the findings presented here (Phase 1). Phase 2 will collate data on after stage of the move into the new 100% single room Tunbridge Wells Hospital. We plan to go on to examine the impact of single room accommodation as the new hospital model ‘beds down’ and will replicate the data collection methods and tools used in the before study and revisit staff to hear their experiences of the issues and challenges, and to examine any changes to nurse staffing levels and nursing costs.

Together Phases 1 and 2 will deliver a project that answers significant questions for healthcare generally and the NHS in particular: How does the move to all single room hospital accommodation impact upon care delivery and working practices, staff experience, patient experience, costs and safety?
Background
Florence Nightingale influenced basic ward design principles by bringing together all that was needed for patient care in one place – natural light, ventilation and cleanliness. Until the second half of the twentieth century ‘Nightingale wards’ remained the ward layout of choice in most NHS hospitals (Hurst, 2008). In the 1960’s new builds started to experiment with racetrack wards and four to six bedded bay areas. As a basic unit of hospital accommodation, wards allow for patient-staff allocation based on patient dependency in rooms that facilitate close supervision (Hurst, 2008).

Some researchers argue that on the whole ward environments are generally less than therapeutic (Lawson et al. 2003) and that in-patients have little control over their (stressful) environment (Hutton, 2005). Studies of open multi-bedded in-patient environments have highlighted the added benefits of soothing decor, meaningful and varying stimuli, peaceful sounds; odourless and pleasant views (Couper et al. 1994, Hurst, 2008; CABE, 2004). Cancer patients, and patients who are disorientated, for example, fare better in wards with these characteristics since they can see daily and seasonal changes (Lawson and Phiri, 2000; Pattison and Robertson, 1996; Ulrich, 1997).

Involving patients in helping to improve care environments, including commenting on hospital design is a developing area of research (Ulrich et al. 2008; Bate et al. 2008). There is some evidence from hospital design in the USA (Ulrich et al. 2008) and from childbirth environments in the UK to suggest that the way in which hospitals and wards are designed can influence healthcare outcomes (NCT 2005; Newburn and Singh, 2003). A systematic review of the research conducted within HaCIRIC found considerable evidence linking healthcare environments to patients’ health outcomes, although the causes of these correlations remain unclear (Codinhoto et al. 2008).

In many European countries the case has been made for the inclusion of more single room accommodation in new hospital design. This is largely based on the belief that patients prefer single rooms and benefit from improved patient outcomes compared to hospital wards. A review of European perspectives on the determinants influencing design decisions on single room ward provision (Dowdeswell et al. 2004) concluded that four different types of factors are shaping decisions about single rooms:

Science-based decisions relating to the clinical and nursing care of patients and overall hygiene standards.

Value-based judgements about the nature of personal services and responsiveness to local community and generational cultures.

Operational needs for example, managing volatility in demand or changing clinical needs and priorities.

Economic considerations such as the costs and benefits of single room accommodation.
In light of these variable factors Dowdeswell et al. (2004) recommend that there should not be a generalised 'one size fits all' guideline but that the proportion of single room accommodation provided should be considered on a hospital-by-hospital basis and in relation to patient needs. They also recommend that hospital design models should ensure flexibility to accommodate future changes in the nature and type of service delivery, or in environmental standards.

The case for change

Since 2001 UK Department of Health guidance has been that ‘the proportion of single rooms in new hospital developments should aim to be 50% and must be higher than the facilities they are replacing’ (Hutton, 2004). Increasingly new hospital design includes greater ratios of single bedded accommodation and in some cases all single in-patient rooms and the UK government has pledged to increase the number of single rooms available to patients (Mooney, 2008).

In the context of increasing expectations of healthcare and of high quality service principles in general in the UK, the argument for single-bed rooms in hospitals is gaining prominence. Political aspirations for more single-room hospital accommodation are in part a response to a perceived public desire for such accommodation. It is also seen as a way to reduce healthcare associated infections (HCAI) (Ulrich et al. 2008), to address patient’s dislike of mixed-sex wards and to provide greater privacy and dignity in NHS hospitals (Department of Health, 2007).

Other suggested advantages of single room accommodation for patients include: increased patient comfort, safety and less disruption from other patients (Department of Health 2007), improved patient control over their environment, enhanced sleep, and better contact with families (Lowson et al. 2011; Ulrich et al. 2008; Mooney 2008; Young and Yarandipour, 2007; Department of Health 2007). Beneficial outcomes for patients may include: reduced infection rates, fewer medical errors and faster patient recovery rates (Ulrich et al. 2008; Mooney 2008; Young and Yarandipour, 2007).

Part of the argument in favour of single-bed rooms is that they can also be used to accommodate diverse functions, such as patient recovery, after surgery or other procedures, providing in-situ medical treatment – wound dressing, physiotherapy, etc. and the flexibility to provide accommodation for many different types of patient; e.g. maternity, mental health, paediatric, together with the equipment required for each speciality (Dowdeswell et al. 2004).

A report by the York Health Economics Consortium reported advantages of single room patient accommodation for staff include the potential for more personalised patient contact, potentially fewer interruptions to care delivery, and - with medical storage in rooms and less distraction - a decreased chance of prescribing errors (Lowson et al. 2011). There is also evidence of quieter environments for patients higher speech privacy and higher patient reported satisfaction with doctor and nurse communication in single room patient accommodation (Ulrich et al. 2008). However commentators have also drawn attention to potential disadvantages of single room accommodation, including increased staff travel distances; the potential need for an increase in staffing levels as a result of more single room occupancy and/or adjustments to staff skill mix (Snow, 2008; Mooney, 2008; Young and Yarandipour, 2007; Seelye, 1982). Potential disadvantages for patients may include: reduced social interaction and thus patient isolation; less surveillance by staff,
increased failure to rescue and increased rates of slips, trips and falls among patients (Snow, 2008; Ulrich et al. 2008; Mooney 2008; Young and Yarandipour, 2007). Much of this literature regarding the disadvantages is speculative and based on opinion rather than evidence, but the situation is complex and trade-offs between different advantages and disadvantages may be necessary (Stichler 2001).

The evidence for single room accommodation

There is little evidence from the UK on which to base decisions about moves to single rooms, even though the model is established in the UK private sector. A recent review of hospital design options by York Health Economics Consortium (Lowson et al. 2011) found scant and ambiguous evidence relating to the impact of single rooms on patient safety and concluded that more UK based research was required. Little is known about the likely impact on patients, staff or health care organisations or to address concerns among trustees and operators of healthcare environments that single patient rooms may be associated with inflated capital outlays, increased capital costs, augmented staffing levels, reduced patient safety and greater staff walking distances (Young and Yarandipour 2007).

Most available evidence derives from studies in the USA and Scandinavia (Ulrich et al. 2008; Mooney, 2008; Young and Yarandipour 2007), and whilst some evidence may be transferable not all is likely to directly translate to the UK due to different financial, cultural and organisational systems. As yet there are few wards or hospitals in the UK with all single room accommodation, and the opportunities for evaluation have been few, with the evaluation of Bevan ward, Hillingdon Hospital one of the few in the UK. Bevan ward is however, only one ward with 100% single rooms in an otherwise unchanged estate, so provides limited evidence for whole hospital re-design.

There is limited evidence for increasing the proportion of single rooms in the NHS on the basis of patient preferences. The evidence does not clearly point to a preference for single bed rooms among patients and little is known about patient preferences across different age and cultural groups (Chaudhury et al. 2005). One survey found that around 35% of the public would prefer single rooms, while around 40% preferred small single-sex bays (Department of Health 2007). Recent results from the York Health Economics Consortium (Lowson et al. 2001) evaluation of the pilot ward of 100% single rooms at Hillingdon hospital suggest that patients in single rooms were more satisfied than those in multi-bed rooms, infection rates did not decrease, while cleaning costs increased. Length of stay was unaltered (Lowson et al 2011). In other studies patients rated privacy and personal space important but they also said that when ill they wanted nurses to be closer (Lawson and Phiri, 2000; Pattison and Robertson 1996; Hutton, 2005).

There is little evidence about the impact of single room accommodation on patient safety. In 2007 the National Patient Safety Agency undertook a study including a review of empirical evidence, an analysis of National Reporting and Learning Systems data (NRLS) and interviews with clinicians and staff with experience of current conditions, who would be directly affected by the use of single patient rooms (Young and Yarandipour, 2007). These authors concluded that if there is good design (layout which includes observation points and large glazed windows and doors) the evidence does
not suggest that single patient rooms reduces staff-to-patient observation or increases accidents or ‘near miss’ injuries.

The evidence of the impact of single rooms on healthcare associated infection rates is conflicting (Roode and Goossensen, 2007). Some authors suggest that single rooms improve infection control (Ulrich et al. 2008), claiming that whilst a new build with all single rooms would add approx 5% to initial construction costs, these would be recouped through improved efficiencies linked to single room use, especially in infection control (Ulrich, 2006). However, others remain unconvinced. The European Health Property Network (EuHPN) which conducted a study on behalf of NHS estates remains sceptical as to the evidence for single rooms helping with infection (Dowdeswell et al. 2004). The ‘cohorting’ of patients -grouping of infectious patients and nursing them within an area of a hospital ward- to reduce spread of infection can be more easily achieved with single rooms. However, to be effective, staff cohorting is also essential - that is having a cohort of staff who only work with ‘infected’ patients- (National Nursing Research Unit 2007) and this may be equally as hard to achieve single room accommodation, as with other accommodation design.

Aspects of hospital and ward design have the potential to impact on all healthcare staff in a number of ways, however there is little evidence about staff perceptions or experiences of delivering care to patients in single room accommodation. The study by the Commission for Architecture and the Built Environment (CABE 2004) found links between hospital design and nurse recruitment, retention and productivity. The internal environment - space, storage and building/unit layout - was found to be important in the performance of nurses. Unfortunately, the study did not include data on workload and staffing, which in terms of staff performance and retention are also important issues (Maben et al. 2006; Maben et al. 2007).

A study in the US found that hospital nurses walk considerably more while at work on a nursing unit than while off work and time saved walking translates into more time spent on patient care activities (Hendrich and Chow, 2008). Whether centralised nursing stations are better than peripheral substations is not clear. In the UK a study on 375 wards found the amount of direct patient care and quality scores were higher in Nightingale wards where nurses’ had greater observation capability. Bay wards, owing to their greater peaks and troughs of occupancy, had a propensity to generate heavier workloads and patients were reluctant to call out-of-sight nurses (Hurst, 2008). Other authors have suggested bays can improve patient-nurse contact (CABE 2004), but under-staffed wards, whatever the layout, lead to negative outcomes (Needleman et al 2011).

There are many unanswered questions about the impact of more single room accommodation on the healthcare workforce. There is not yet sufficient evidence available in the UK to be able to draw valid and reliable conclusions in terms of the impact on nursing workforce requirements, or indeed requirements of other staff groups. Similarly, there is little or no UK evidence about impacts on morale, motivation and staff engagement.
Summary

- In the UK, NHS service providers are encouraged by Department of Health guidance to provide higher proportions of single room accommodation (the aim of 50%) in any new hospital builds. It is important to build evidence about moves to single room accommodation as it may have a significant impact on patients, staff and health care organisations.

- As yet there are few wards or hospitals in the UK with all single room accommodation and the opportunities for evaluation have been few. The available international and UK evidence is equivocal suggesting a range of potential benefits for patients and staff but also a range of potential disadvantages.

- Potential advantages of single room accommodation include reduced infection rates, fewer medical errors and faster patient recovery rates. Patients may experience increased privacy, dignity and comfort and less disruption from other patients including improved control over their environment, enhanced sleep, and enhanced contact with families. Staff may be able to provide more personalised patient contact, with fewer interruptions and less time spent walking.

- Potential disadvantages of single room accommodation include reduced social interaction and thus patient isolation, less surveillance by staff, increased failure to rescue and increased rates of slips, trips and falls.

- The impact of single room accommodation on staff-to-patient observation, staffing levels, adjustments to staff skill mix, and staff travel distances is unclear.

- The costs and economic impact of more single room accommodation are unclear.
Chapter 2: METHODS

This report is based on data collected during the first phase of a two phase longitudinal mixed methods study. The research has used a case study design (with four cases). This chapter provides an overview of the research approach and questions. It also presents the methods used and provides details of the study design, sampling, data collection and analysis.

2.1 Research approach

The research has been undertaken within a realist evaluation framework (Pawson & Tilley 1997, Greenhalgh et al. 2005). This approach moves beyond the simple question “Do single rooms ‘work’?” and instead seeks to provide a more holistic understanding of what works, and for whom, in what circumstances. Effects will be different for different staff groups, wards and patient groups. Some of the effects may be unwanted, in other cases wanted, and more likely they will be a mixture of wanted and unwanted effects. Realistic evaluation is an application of this insight to the examination of new programmes and innovations. Its concern with understanding causal mechanisms and the conditions under which they are activated to produce specific outcomes is highly relevant for this study.

Following previous research on innovation adoption in health service organisations (Greenhalgh et al. 2005), particularly ‘top down’ imposed innovation, this study takes into account four key components:

- wider NHS/societal context (see chapter 1 for details of the wider context);
- hospital and service context;
- the innovation itself (i.e. new hospital design and all single room patient accommodation);
- nature and quality of linkages between external stakeholders (e.g. the builders; architects; SHA) and their relationships with the hospital and its staff.

The four components exist in dynamic relation to the system as a whole and this research is designed to capture these interactions through an exploration of the process of transition to all single rooms, and how and why this may differ for different clinical services, staff and patient groups.

2.2 Research questions

The research seeks to identify the impact of the move to 100% single room accommodation on three key areas:

1. Care delivery and working practices
2. Staff experience
3. Patient experience

Research questions are as follows:
• How are work patterns disrupted and reconstituted, including through trial and error of new approaches (and to what extent are these successful)?
• How are staff perceptions and experiences of the move to single rooms shaped by formal organisational and change management processes?
• What are the advantages and disadvantages for staff of a move to all single room accommodation?
• Does the move to all single room accommodation affect staff experience and wellbeing and their ability to deliver effective and high quality care?
• What are the advantages and disadvantages for patients of a move to all single room accommodation?
• Does the move to all single room accommodation affect patient experience and wellbeing?
• Does it affect diverse patient groups differently?

2.3 Study design
In order to explore the impact of the move to all single room hospital accommodation on care delivery and working practices and staff and patient experience, the research has adopted a longitudinal mixed methods case study design. This approach will facilitate a detailed understanding of the effects of the transition to all single rooms, providing a rounded picture of the issues.

The first phase of the research provides both an understanding of the organisational context within which the move has taken place, and a ‘baseline’ understanding of care delivery and working practices, staff and patient experience in four case study wards.

The study was approved by Maidstone and Tunbridge Wells NHS Trust as a service evaluation project in July 2009 (R&D ref: 09/07/049A). Ethical approval was obtained from King’s College London Psychiatry, Nursing and Midwifery Research Ethics Sub-Committee (approval granted January 2010, ref. PNM/09/10-30).

2.4 Sampling and data collection

2.4.1 Organisational context
Data on organisational context was collected in two main ways. First, a series of key stakeholder interviews (n=20) was conducted between August 2009 and July 2010. Key stakeholders included senior Trust staff and PFI consortium member representatives. Trust staff interviewed included clinical and non-clinical staff, and staff directly involved in the new hospital development project. Key stakeholders were provided with an information sheet about the research (see appendix 1). Table 1 provides details of key stakeholders interviewed.

Key stakeholder interviews lasted between 30 and 60 minutes and were conducted using a topic guide (see appendix 2).

The topic guide prompted exploration of the following:

• Factors considered influential in commissioning the new build and the all single room design
• How the change management process has been handled in the Trust and facilitators and barriers to the embedding of new processes associated with the introduction of single rooms
• Perceived advantages and disadvantages of the new build and all single room accommodation for the Trust, its staff and patients

Table 1: Key stakeholders interviewed during phase 1 (n=20)

<table>
<thead>
<tr>
<th>Senior Trust staff</th>
<th>Trust New Hospital Development Team</th>
<th>PFI consortium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chief executive</td>
<td>Estates development director</td>
<td>Project manager/ clinical lead</td>
</tr>
<tr>
<td>Medical director</td>
<td>Redevelopment programme director</td>
<td>Builder</td>
</tr>
<tr>
<td>Director of nursing</td>
<td>Clinical planner</td>
<td>Architect</td>
</tr>
<tr>
<td>Deputy chief operating officer</td>
<td>Non-clinical planner</td>
<td></td>
</tr>
<tr>
<td>Head of service reconfiguration</td>
<td>Programme manager</td>
<td></td>
</tr>
<tr>
<td>Director of service improvement</td>
<td>Divisional project managers (planned; emergency; support; women and children’s)</td>
<td></td>
</tr>
<tr>
<td>Head of equality and governance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-executive director (patient experience)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Second, organisational context was also explored through regular attendance at the Trust’s ‘single room working group’ monthly meetings. Meetings were attended by a member of the research team from February 2010 to September 2011. Field notes were written up following each meeting, detailing the issues explored, progress made, and challenges faced.

2.4.2 Case studies

Four case study adult in-patient wards were purposively selected to encompass a range of different clinical areas and patient groups. Wards selected were: acute assessment; surgical; medical (older people); and, maternity. Full descriptions of each case study ward, including their physical layout and staffing are provided in chapter 4.

Case study data collection was undertaken between October 2010 and September 2011. Maternity fieldwork was completed prior to the move of women and children’s services to the new hospital in late January 2011. Fieldwork for the remaining case study wards was undertaken between January and September 2011, and completed prior to the move of remaining services in late September 2011. Staff and patients invited to take part received an information sheet about the research study (see appendix 3).

Quantitative and qualitative data collection was undertaken in each case study ward, as follows:
(i) **Observation of practice**

Observation was undertaken for around 30 hours in each case study ward (a breakdown is provided in table 2). All observation was carried out by the same member of the research team in order to ensure consistency in data collection across the four case study wards. Observation involved shadowing individual nursing and midwifery staff members (both registered and assistant staff) for between four and eight hours, recording their activity using a structured time-motion data collection tool. The aim of the observation of practice was to understand how and where staff spent their time. Staff were approached by either the ward manager or the researcher prior to the shift to see whether they would be willing to be shadowed. Where staff were approached by the ward manager, the researcher explained the research and that participation was voluntary prior to obtaining consent. A mix of qualified and assistant staff were shadowed in order to understand differences between these groups. Observation was undertaken during the day only (between 7am and 8pm), and while the coverage across the day was achieved, the findings are obviously not applicable to working practices on the wards at night. The data collected are indicative rather than representative.

<table>
<thead>
<tr>
<th>Staff group</th>
<th>Hours observation (no. staff shown in brackets)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acute assessment</td>
<td>Medical (older people)</td>
</tr>
<tr>
<td>Nurses/midwives</td>
<td>23 hrs (3)</td>
<td>13.5 hrs (2)</td>
</tr>
<tr>
<td>Healthcare assistants</td>
<td>6 hrs (1)</td>
<td>15.25 hrs (2)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>31 hrs (4)</td>
<td>28.75 hrs (4)</td>
</tr>
</tbody>
</table>

The data collection tool was developed by the research team using HanDBase software, and drew on a similar tool used in healthcare research designed and developed by Westbrook and Ampt (2009) (WOMBAT – Work Observation Method by Activity Timing). Time-stamped data was collected using a HanDBase custom form interface on a hand-held computer (PDA). The form contained a series of categories, each with a popup list of options or subcategories. As soon as a new record is opened, the time is recorded and the researcher then selects the relevant options from the popup lists to record the task/activity and location of the staff member being shadowed. Additional detail was collected in relation to two activity categories (direct care and face-to-face professional communication) which are predicted to change most in the all single room ward environment. The form also allowed the researcher to record whether the staff member was with another member of staff, and when they were using ICT devices (e.g. PC, telephone). Finally, the form included a ‘Twitter’ box, which allowed the observer to manually enter additional verbatim notes relating to working practices and effectiveness, particularly where the physical environment appeared to have a positive or negative impact. A full list of the HanDBase form categories and tables of definitions are provided in appendix 4.
(ii) Staff travel distances

During shadowing sessions, all nursing and midwifery staff on duty (excluding supervisory staff) were invited to wear pedometers (a breakdown by ward is provided in table 3). Pedometers were distributed and collected by the researcher before and after the shadowing sessions, and steps taken were recorded. The pedometer model used was the Omron Walking Style II. The quality of the pedometer was commented on by participating staff who displayed high motivation to wear the device.

Table 3: Staff travel distances – sample

<table>
<thead>
<tr>
<th>Staff group</th>
<th>Hours pedometer data (no. staff shown in brackets)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acute assessment</td>
<td>Medical (older people)</td>
</tr>
<tr>
<td>Nurses/midwives</td>
<td>111 hrs (11)</td>
<td>54 hrs (4)</td>
</tr>
<tr>
<td>Healthcare assistants</td>
<td>30 hrs (1)</td>
<td>117 hrs (10)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>141 hrs (12)</td>
<td>171 hrs (14)</td>
</tr>
</tbody>
</table>

1. Pedometer data were collected over multiple shifts and some staff members wore pedometers during observation sessions on two or more shifts.

(iii) Staff survey

A survey developed by the research team was distributed to all nursing and midwifery staff (N=136) across the four case study wards. Staff lists were provided by the ward managers, and a copy of the survey was addressed to each member and placed in a box for collection by staff when they were next on duty. Boxes containing the surveys were located in either the ward manager’s office or staff break room and staff were informed about the survey by ward managers and the researcher during observation sessions. Posters were also put up on the wards. An incentive was offered to staff completing the survey, with a prize draw for £75 Marks and Spencer gift card for each ward. Completed surveys were returned directly to the research team using a freepost reply envelope. Reminder posters were put up after two weeks of the box being on the ward to encourage further responses.

A total of 55 staff completed the survey (39 registered nurses and midwives and 16 healthcare assistants). This represents a 40% response rate overall (a breakdown by ward is shown in table 4). Staff responding to the survey had been working on the case study wards from between 6 months and over 16 years (mean number of years worked on ward was 5).
Table 4: Staff survey – sample

<table>
<thead>
<tr>
<th>Ward</th>
<th>Staff completing survey</th>
<th>Response rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute assessment</td>
<td>12</td>
<td>(46%)</td>
</tr>
<tr>
<td>Medical (older people)</td>
<td>11</td>
<td>(33%)</td>
</tr>
<tr>
<td>Surgical</td>
<td>15</td>
<td>(37.5%)</td>
</tr>
<tr>
<td>Maternity</td>
<td>17</td>
<td>(44%)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>55</td>
<td>(40%)</td>
</tr>
</tbody>
</table>

1. N=136

The survey was designed to capture staff views and experience relating to the old hospital environment, as well as staff views regarding the new hospital development. Items were identified and adapted from existing surveys looking at similar issues, including tools used by Chaudhury et al. (2006), France et al. (2005) and West et al. (2010). The survey also incorporated a validated measure relating to team working, communication and patient safety, the 22 item version of the Teamwork and Safety Climate Survey (Hutchinson et al. 2006). A copy of the survey is provided at appendix 5 and a table summarising the teamwork and safety climate factors and their associated items is provided at appendix 6. The survey covers the following areas:

- Perceptions of current ward layout, environment, facilities and information and communications technology (ICT)
- Perceptions of 100% single room wards (whether better or worse than current accommodation)
- Preference for proportion of beds in single rooms versus multi-bed bays in new hospital
- Information relating to staffing levels and activity during most recent shift
- Teamwork and safety climate (as described above)
- Demographic details

(iv) Staff interviews

In-depth interviews were conducted with nursing staff (registered and assistant staff). A total of 24 interviews were completed (6 per case study area). Half these interviews (n=12, or 3 per case study area) additionally involved reflexive photography (Hurworth et al. 2005). Reflexive photography is a type of photo-interviewing or photo-elicitation technique which entails research participants themselves taking photographs that serve as the main focus of ‘reflective’ discussion during a subsequent interview. The approach allows the research participant to talk about the significance and meaning of photographs which represent their perspective on the topic in question. Reflexive photography was used in this research to both generate a visual record of the work environments, and also encourage research participants to critically analyse the ward layout, environment and facilities. It was used prompt deeper consideration of positive and negative aspects of the work environment, and encourage participants to ‘view’ the environment in a new way or light, reassessing those aspects that are taken for granted (Banks 2001).
Table 5 provides a breakdown of staff interviews by case study ward. Staff were recruited via the ward managers and by the researcher while conducting observation on the wards. Staff were reminded that participation was voluntary. Of 24 staff interviewed, 10 staff had also been shadowed by the researcher. Interviews were conducted on the wards in a private room or quiet area, and lasted between 30 and 60 minutes. Staff taking part in reflexive photography interviews were provided with a disposable camera and a reflexive photography information and guidelines sheet (see appendix 7). Staff were asked to take a minimum of five photographs of aspects of the ward environment. The researcher collected the cameras from the wards and returned at a later time or date with the photographs to conduct the interview. Staff participating in reflexive photography interviews took a total of 128 photographs (between 5 and 26 per participant).

The staff interview topic guide (see appendix 8) covered the following areas:

- Ward layout, environment and facilities and perceived impact on direct and indirect care tasks
- Impact of physical environment on communication and teamwork
- Impact of physical environment on staff and patient safety
- Perceptions of patient experience in the old accommodation

### Table 5: Staff interviews – sample

<table>
<thead>
<tr>
<th>Staff group</th>
<th>Acute assessment</th>
<th>Medical (older people)</th>
<th>Surgical</th>
<th>Maternity</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurses/midwives</td>
<td>5 (3)</td>
<td>2 (2)</td>
<td>4 (2)</td>
<td>5 (3)</td>
<td>16 (10)</td>
</tr>
<tr>
<td>Healthcare assistants</td>
<td>1</td>
<td>4 (1)</td>
<td>2 (1)</td>
<td>1</td>
<td>8 (2)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>6 (3)</td>
<td>6 (3)</td>
<td>6 (3)</td>
<td>6 (3)</td>
<td>24 (12)</td>
</tr>
</tbody>
</table>

(v) Patient interviews

In-depth interviews were conducted with patients. A total of 32 in-depth patient interviews were conducted (with between 4 and 12 patients per case study area). Table 6 provides a breakdown of key characteristics of patients interviewed, including length of stay, age, parity (maternity patients) and gender.
Table 6: Patient interviews – sample

<table>
<thead>
<tr>
<th>Key characteristics</th>
<th>Case study ward</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acute assessment</td>
<td>Medical (older people)</td>
</tr>
<tr>
<td>Length of stay (range)</td>
<td>24-48 hrs</td>
<td>2-6 weeks</td>
</tr>
<tr>
<td>Mean age</td>
<td>57 years (range 42-73)</td>
<td>87 years (range 83-94)</td>
</tr>
<tr>
<td>Parity</td>
<td>Primiparous</td>
<td>Multiparous</td>
</tr>
<tr>
<td>Female</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Male</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>TOTAL (interviews per ward)</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

Parity is the number of children to which a woman has given birth. In this study primiparous refers to women giving birth for the first time, while multiparous refers to women giving birth for the second or third time. Maternity patients interviewed had experienced a variety of birth types including elective and emergency caesarean section, assisted (forceps or ventouse) and vaginal birth.

Patients were recruited in two ways. For three wards (acute assessment, surgical and maternity), the Trust sent a letter to recently discharged patients on behalf of the research team. Patients could then choose to opt-in by returning a reply slip directly to the research team. Patients were interviewed between two weeks to a month of being discharged from hospital. The majority of interviews were conducted in respondents’ own homes (n=24). Three interviews were conducted by telephone at the request of participants, and one interview was conducted at a healthcare facility that the respondent regularly attended (at the respondent’s request). Interviews lasted between 60 and 75 minutes (except the telephone interviews which lasted up to 30 minutes) and patients received a £25 cash payment as a thank you for giving up their time to participate in the research.

An alternative method was used to recruit patients on the medical (older people) ward because of the importance of identifying patients who would be cognitively able to give informed consent, and concerns about the potential burden placed on frail older patients in participating in an interview following discharge. The ward manager, in consultation with staff, recommended patients that the researcher could approach to provide information about the research. The researcher introduced herself to these patients and provided them with a copy of the patient information sheet. The researcher returned to discuss whether patients would be willing to take part 48 hours later. Patients were reassured that participation was voluntary. Due to patients’ conditions it was considered appropriate to interview patients at their bedside on the ward to reduce any risks associated with moving patients to another room on the ward. In order to maintain confidentiality of staff and other patients on the ward, these interviews were not recorded, and instead the researcher took detailed notes. This approach was felt to work well, with periods of writing by the
researcher allowing patients to think and rest during the interview. Interviews were shorter than those with patients from the other wards, lasting between 15 and 20 minutes.

Interviews were conducted using a topic guide (see appendix 9). The guide focused on patient experiences of the physical environment and the ways in which this was related to their overall experience of care, including:

- Feeling comfortable
- Feeling safe
- Interaction with staff
- Interaction with visitors

2.5 Data analysis and synthesis

Qualitative in-depth interviews with key stakeholders, staff and patients (excluding interviews with older medical patients) were digitally recorded and transcribed verbatim. Qualitative data were analysed using a framework approach, a method which involves the systematic analysis of verbatim interview data within a thematic matrix (Ritchie and Spencer 1994). The key topics and issues emerging from the interviews were identified through familiarisation with interview transcripts as well as reference to the original objectives of the case study research and the topic guides used to conduct the interviews. A series of thematic charts was developed and data from each transcript were summarised under each theme. This facilitated detailed exploration of the charted data, in order to map and understand the range of views and experiences in different themes as well as allowing comparison across cases and groups of cases.

Time-motion data was exported from the hand-held computers to Excel for analysis. Staff survey data was entered and analysed in SPSS. Quantitative data were analysed using simple descriptive statistics.

Data synthesis occurred as part of the analytical process, and connections were made between qualitative and quantitative data sources in order to identify core themes and connections.
Summary

- The research has been undertaken within a realist evaluation framework, seeking to provide a holistic understanding of the 100% single room design, and specifically what works, and for whom, in what circumstances.

- The research seeks to identify the impact of the move to 100% single room accommodation on three key areas: care delivery and working practices; staff experience; and, patient experience.

- The research has adopted a longitudinal mixed methods case study design to facilitate a detailed understanding of the effects of the transition to all single rooms, providing a rounded picture of the issues.

- The first phase of the research provides both an understanding of the organisational context within which the move has taken place, and a ‘baseline’ understanding of care delivery and working practices, staff and patient experience in four case study wards.

- Data collection has involved the following:
  - Key stakeholder interviews with Trust staff and PFI consortium members
  - Attendance at Trust ‘single room working group’ meetings
  - Case study research on four wards (acute assessment, medical (older people), surgical and maternity) including a staff survey, observation of staff, staff interviews and patient interviews
Chapter 3: NEW HOSPITAL DEVELOPMENT CONTEXT

Introduction

Maidstone & Tunbridge Wells NHS Trust is a large acute hospital trust providing general hospital services to 500,000 people living in the south of west Kent and parts of north east Sussex. It also provides cancer services for the whole of Kent and Hastings and Rother. Until September 2011, the Trust operated from three hospital sites (Maidstone, Kent & Sussex in Tunbridge Wells, and Pembury).

The new Tunbridge Wells Hospital at Pembury has been fully open since late September 2011 and replaces Kent & Sussex and Pembury hospitals. It was built under the Private Finance Initiative (PFI) scheme, whereby a hospital is designed and built by private companies who are repaid by the NHS trust over a period of 25 to 40 years. Following service reconfiguration, the new hospital has become the Trust’s centre for trauma surgery, orthopaedics, and women and children’s care, including consultant-led maternity services.

In order to understand potential facilitators and barriers to the operationalisation of the 100% single room design, it is important to set the build in its historical context. Figure 1 provides a timeline of the new hospital development and details key dates during the history of the PFI procurement and build. This chapter explores important historical factors which have influenced the change process including key drivers for the 100% single room design of the hospital, the design of the wards and single room itself, the affordability review and changes in the scope of the PFI scheme, the change in leadership and impact on the change process and the role of the single room working group.

Figure 1: New hospital development timeline

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb 2001</td>
<td>Government approves initial business case for new hospital.</td>
</tr>
<tr>
<td>Dec 2003</td>
<td>Planning permission for new hospital upheld following Judicial Review.</td>
</tr>
<tr>
<td>2004</td>
<td>Development of output specifications and approval of Outline Business Case. Trust advertises for PFI partner.</td>
</tr>
<tr>
<td>Jan 2005</td>
<td>Issue of preliminary invitation to negotiate (PITN) to short listed bidders (n=3). PITN includes [DH Estates] requirement that 50% of patient accommodation provided in single rooms. Involvement of National Patient Safety Agency (NPSA) as advisors to Trust.</td>
</tr>
<tr>
<td>May 2005</td>
<td>Submission of responses to PITN by bidders. Visit by Director of Nursing and Estates Director to US facility (new St. Joseph’s Hospital, West Bend, Wisconsin) with NPSA. St. Joseph’s was designed with input from healthcare and systems engineering to develop a set of design recommendations to guide the design of a new hospital facility focused on patient safety.</td>
</tr>
</tbody>
</table>
**Figure 1 cont: New hospital development timeline**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul 2005</td>
<td>Short list to two bidders and issue of final invitation to negotiate (FITN). FITN reflects learning from visit to St Joseph’s and asks bidders to present how their proposed designs are designed for patient safety. FITN includes requirement for 100% single room design.</td>
</tr>
<tr>
<td>Oct–Dec 2005</td>
<td>First outbreak of bacterial infection <em>Clostridium difficile</em> (<em>C. Diff</em>) at Maidstone &amp; Tunbridge Wells NHS Trust; Healthcare Commission investigation found that the Trust failed to identify the outbreak at the time.</td>
</tr>
<tr>
<td>Apr 2006</td>
<td>Submission of responses to FITN by bidders.</td>
</tr>
<tr>
<td>Apr–Sep 2006</td>
<td>Second <em>C. diff</em> outbreak; Healthcare Commission investigation found that the Trust was slow to respond to second outbreak (e.g. isolation ward not established until August).</td>
</tr>
<tr>
<td>Jun–Oct 2006</td>
<td>Affordability review of PFI health projects led by Richard Glenn on behalf of DH and HM Treasury. Scope of project shrinks, requiring bids to be revised.</td>
</tr>
<tr>
<td>May–Dec 2007</td>
<td>Submission of Appointment Business Case for external review by DH, HM Treasury and SHA.</td>
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<td>Oct 2007</td>
<td>Healthcare Commission report published highlighting 90 patient deaths between April 2004 and September 2006 in which hospital acquired <em>C. diff</em> was a definite or probable cause of death. During the same period a further 255 patients had died having contracted <em>C. diff</em>. Publication of the report prompts resignations of CEO, Chairman and Director of Nursing. New CEO appointed, along with an interim Director of Nursing.</td>
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<td>Nov 2007</td>
<td>Health secretary announces preferred PFI bidder, a consortium led by Equion, a division of infrastructure developer John Laing. Partners include: Laing O’Rourke (contractor responsible for design and build); Anshen + Allen (architect); HCP Social Infrastructure (UK) Ltd (project management and clinical leadership); Interserve (hard facilities management).</td>
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<tr>
<td>Mar 2008</td>
<td>Financial close and construction commences of all single room 513 bed District General Hospital. PFI agreement is over 30 years with capital build cost of £237 million.</td>
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<tr>
<td>Aug 2008</td>
<td>New permanent Director of Nursing takes up post.</td>
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<tr>
<td>Jun–Jul 2009</td>
<td>Single room ‘mock up’ opens on site for clinical staff to review, create ‘snagging’ list and explore feasibility of any desired design tweaks.</td>
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<tr>
<td>Aug 2009</td>
<td>First site visit by National Nursing Research Unit (NNRU) research team. Visit hosted by Director of Nursing and included tour of new hospital building site, attendance at Trust KPI meeting, and presentation of research project to Trust staff including ward managers following KPI meeting.</td>
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<tr>
<td>Aug–Sep 2009</td>
<td>Review of Trust’s preparedness to bring new hospital into operational use. Revision of governance structure to involve operational staff.</td>
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<tr>
<td>Sep 2009</td>
<td>Draft decant (move and migration) strategy produced by construction consultancy company Cyril Sweett Limited.</td>
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<tr>
<td>Nov 2009</td>
<td>Establishment of single room working group (chaired by director of nursing)</td>
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Feb 2010 - Public anxiety over service reconfiguration plans relating to removal of consultant-led maternity services from Maidstone site to new hospital’s centre of expertise leads to referral of decision by Kent County Council to Secretary of State for Health.

Apr 2010 - Communications consultancy Freshwater commissioned to conduct an audit and provide audit report and strategy for communicating service change. Audit finds that staff perceive a lack of communication, rumours and misinformation are an issue, and that there is patchy understanding of Trust’s strategic direction. Key issue is lack of clinical ‘champions’ to articulate service changes messages. Widespread concerns around single rooms identified.

May/Jun 2010 - Visit to new St. Olavs Hospital, Trondheim, Norway by senior nursing team.

Nov 2010 - Handover to Trust of new building for Women & Children’s Services.

Dec 2010 - Ruling by Health Secretary that consultant-led maternity services at Maidstone can close in September 2011 as planned, and services centralised at new hospital.

Jan 2011 - Closure of old Pembury hospital and services move into new hospital.


Sep 2011 - Closure of Kent & Sussex Hospital and services move into new hospital.

3.1 Drivers for 100% single room design

The planning of new in-patient accommodation is guided by Health Building Note 4 (HBN 04). In 1997, HBN 04 recommended that in new hospital builds a minimum of 50% of in-patient beds should be in single rooms. As outlined in chapter 1, the rationale underlying this recommendation includes rising patient expectations (including in relation to privacy and dignity), movement towards greater patient choice, and the prevention of healthcare acquired infections. The preliminary invitation to negotiate (PITN), issued by the Trust in January 2005, incorporated this guidance for 50% proportion of in-patient accommodation to be provided in single-occupancy en-suite rooms.

A key driver for the 100% single room design of the new Tunbridge Wells Hospital was the involvement of the National Patient Safety Agency (NPSA) in the PFI procurement process. The role of the NPSA included leading the NHS’s Design for Patient Safety initiative, and a strategic theme of the NPSA was to reduce risk by developing and introducing national safety improvement solutions or initiatives and by identifying local solutions that can be spread nationally. As part of the programme of work for this strategic theme, the NPSA advised Maidstone and Tunbridge Wells NHS Trust and the PFI consortia bidding for the new hospital development contract. The NPSA’s Head of Design and Human Factors worked with the Trust and met the three PFI bidders, attended various meetings, and took part in consultation and evaluation processes during the preliminary and final invitation to negotiate (PITN and FITN) stages of the procurement process.

The NPSA championed designing for patient safety, and promoted an all single room design as an important patient safety solution, particularly in relation to infection control, but also as means of
reducing patient falls, stress (caused by noise and sleep deprivation) and length of stay. Single rooms were also seen as means of improving staff to patient communication, patient confidentiality and privacy, family support, and patient satisfaction. The NPSA’s view was based on the same evidence base reported in chapter 1, and acknowledged potential negative effects of single rooms including a requirement for increased nursing resource, reduced staff to patient observation, social isolation of patients, as well as increased building costs.

Outputs from the NPSA’s involvement in the new hospital development at Pembury included an insert for NHS FITN documentation outlining a requirement for bidders to demonstrate how their proposals are designed for patient safety.

Through the NPSA’s involvement, both the Trust and PFI consortia were actively encouraged to consider the option of 100% single rooms in the new hospital. This shaped the procurement process, and by FITN (final invitation to negotiate), the specification for the new hospital included the requirement for 100% single rooms. Overall, this design decision would add 1% to the capital build cost, which was considered acceptable.

Thus, in a relatively short period of time (from PITN in Jan 2005 to FITN in July 2005), the 100% single room design was fixed. Members of the winning PFI consortium and the Trust acknowledged that the design was driven by the involvement of the NPSA and the competitive nature of PFI procurement.

> “The Trust had got a working relationship with the NPSA, National Patient Safety Agency, and they had two people working with them...We presented saying that we’d got to 50%, and [the NPSA representative] said...in the margins of the meeting, [they] regarded 50% as a failure...We then had to sort of think about, ‘Well, why is 50% the right number? How high could we go if the person marking it regards it as 50% is a failure?’... We kind of got to 80% in design terms very easily, and then we thought, ‘Well, why is 80% the right number? Why don’t we just go for it?’ Because of the NPSA being there, we believed that it had a very strong push on it, and we thought as a good tactic if we could get all the way we would then get that very strong vote. So I spoke with...the Director of Nursing and he was, ‘Why not? If we could we should.’” PFI consortium project manager and clinical lead (KSI 19 5-24)

> “I felt that one of the bidders in particular was very keen on the 100% single rooms because it gave them an edge, and they’re in business to do that.” Trust estates development director (KSI 6, p15)

It was also critical that the Trust board approved the decision, and the Chief Executive, was described as a powerful ‘champion’ of the 100% single room design. The motivation for the Trust was related primarily to building a patient-centred and safe environment, but also, as perceived by the PFI consortium and members of the Trust’s new hospital development team, the associated kudos or notoriety for being the first district general hospital in England to have all single rooms.

> “We were informally I suppose pushing the 100% single rooms through PITN. The FITN came out and had 100% single rooms in it. So we were probably quite closely aligned with the
Trust. And I think the people in the Trust could see the benefits of it… Certainly a chunk of that was around all the things that should flow from 100% single rooms with infection control, slips and trips, and all the rest of it. But maybe there was also I think a desire in the Trust to have some notoriety. There was an ego factor as well, I believe.” PFI consortium contractor (KSI 20 438-44)

“[There was] kudos about being the first…full-blown NHS general hospital…to have all of its inpatient accommodation in single rooms, both elective and emergency.” Trust clinical planner (KSI 1)

3.2 Ward and room design for the new hospital

The design of the inpatient wards and the individual single rooms was a response both to the building site itself1, and also Trust concerns regarding staffing levels required to nurse patients in single rooms. Wards were designed to enhance the therapeutic environment by maximising direct sunlight and views across the surrounding woodland in patient rooms (see photo 1). This led to a ‘perimeter’ design, with patient rooms wrapped around the outside of ward ‘fingers’, with inboard en suites2 and ward support facilities down the centre (see figure 2). The ‘perimeter’ design with inboard en suite facilities maximises external views (see photo 2) but restricts visibility from the corridor and a number of features were incorporated into the design to alleviate this, including a vision panel in the door with a direct line of sight to the patient bed head (see photo 3), decentralised staff bases and distributed touch-down bases. Single room working was also intended to be supported by the design of the ward layout to minimise walking distances for nurses, and the availability of wireless communications technology such as ‘Vocera’3.

Another ‘safety’ feature was the standardisation of patient room layout, incorporating key safety and therapeutic features. The room itself is designed with the en suite on the bed head wall with a hand rail to facilitate safe access across a short distance for patients mobilising independently (see photo 3). A clinical hand wash basin is located close to the entrance of the room, opposite the en suite, to support hand hygiene prior to patient contact (see photos 2/3). The specification for the design of the single room was influenced by a visit to a facility in the US by the Trust director of nursing and estates director with the NPSA during the procurement process (see figure 1).

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1 The hospital is designed to take advantage of the difficult natural sloping site by having three floors to the north and six/seven floors to the south. The majority of the single rooms are arranged to maximise views across the surrounding woodland areas that are listed as areas of outstanding natural beauty and Sites of Special Scientific Interest.

2 Three main configurations for en suite facilities are inboard, outboard and nested. Inboard facilities are located internally, on the corridor side of the room, whereas outboard en suites are located on the external wall. Nested en suites are located between patient rooms, and increase the overall floor space required.

3 ‘Vocera’ is a wireless voice communication system which combines communication system software with communication ‘badges’ that can be clipped to staff uniforms or worn on a lanyard. The system facilitates hands-free voice communication, with users able to initiate calls to other users using spoken commands (pressing a button and asking the system to call by name, title or function). Users are connected instantly to colleagues anywhere in the hospital’s wireless network. ‘Badges’ can also be ‘assigned’ to particular clusters of patient rooms to receive medical device alerts or nurse call bell notifications relating to those rooms.
Photo 1: New hospital during construction: old Pembury hospital in the foreground

Photo 2: Internal view of single room 1
(illustrating position of clinical hand wash basin and full height glazing to maximise views and natural light)
Photo 3: Internal view of single room 1
(illustrating position of bed head in relation to en suite and door (with vision panel) to corridor)

Figure 2: Floor plan showing ‘perimeter’ design of new hospital
with single rooms wrapped round the outside of each ward ‘finger’ and ward support facilities down the centre
3.3 Affordability review and scope of the PFI scheme

The scope of the overall PFI scheme was reduced in 2006 following the affordability review of PFI schemes undertaken by the Private Finance Unit of the Department of Health on behalf of the Treasury. At this point public spaces were reduced in size (for example, the entrance to the hospital and the restaurant). While the review did not lead to any changes to the wards in terms of number of beds and size of patient rooms, there were other key changes which have implications for the operationalisation of the wards. For example, ‘soft’ Facilities Management (FM) services, including ICT, ward housekeepers and ward stewards (providing a 24hr infrastructure and administrative role) were to be provided in-house rather than through the PFI project company.

“The PFI went from being a ‘chocolate chip’ to a ‘vanilla’ PFI, that’s what we call it [ ]. We were providing all the soft services at one stage. Part of our offering with the soft services was, in terms of the ward support...we were working on sort of a housekeeper type model that the person that came and did the cleaning was the same person that brought people their food, and they would build up a relationship with the patient. They weren’t going to be providing any nursing care, but they would be another person that was providing support to patients and could potentially take some of the pressure off the nursing staff.” PFI consortium contractor (KSI 20 565-573)

3.4 Change in leadership and impact on the change process

During the PFI procurement and build process the Trust was subject to an investigation by the Healthcare Commission into deaths related to outbreaks of the bacterial infection Clostridium difficile (C. Diff) (see timeline in figure 1). Following the well-publicised Healthcare Commission investigation into infection control failures at the Trust, there was a change in leadership, with most members of the small team involved in the PFI procurement process and key design decisions for the new hospital leaving the Trust in Autumn 2007.

The Healthcare Commission reported that poor infection control and hygiene were key factors in two C. Diff outbreaks between October 2005 and September 2006. The investigation highlighted a failure to identify the first outbreak, and a delay in responding appropriately to the second outbreak. It also blamed a shortage of nurses resulting in lack of time to clean hands properly, empty and clean commodes, clean mattresses and equipment properly and follow barrier nursing precautions consistently. Other contributory factors cited in the report included the number of patient transfers between wards (exacerbated by Trust focus on meeting A&E waiting time targets), old buildings with few single rooms or side rooms to isolate patients, and above national average bed occupancy rates on medical wards, sometimes over 100%, with ‘escalation areas’ used to accommodate extra patients and beds placed too close together.

For the incoming Chief Executive and interim nursing director, the Healthcare Commission findings set out clear priorities relating to improving staffing levels and implementing robust infection control protocols. The outcome of the investigation also led to a complex set of tensions with implications for the new hospital build. Discontinuity in project leadership within the Trust was a particular issue with a lack of ownership of and buy-in to the 100% single room design, and lack of confidence in the
design decision, among members of the new senior team. The context for change in relation to the new hospital and single room working had shifted from a ‘receptive’ to a ‘non-receptive’ context (Pettigrew et al. 1992).

The incoming CEO was concerned whether the 100% single room design was appropriate for an acute hospital, and explored with the new hospital development team whether there was an option to change the design.

“I wasn’t sold on the idea of all single rooms. And I wondered what the rationale for that was at the time...I wanted to do a piece of work as to whether it was possible to change that decision and change the hospital into maybe a 50/50 split between bayed areas and single rooms. I was concerned about the cost effectiveness of [the 100% single room design]. I was also concerned about the...isolation that patients might feel, because the interesting thing around Pembury is its fundamental function is as an emergency hospital...We’re not talking about minor elective cases, we’re talking about predominantly elderly and predominantly very sick people, and I just wondered how much work had been done in terms of looking at how that was going to operate in reality. It seemed like a very good idea, and certainly the previous regime of the hospital had seen single rooms as being [ ] the solution to infection control...clearly I didn’t want to do anything against that – but equally... the previous chief executive had nailed her flag to the mast in terms of having the first all single room hospital in the country, and I just wanted to be assured myself that that actually made sense.” Trust chief executive (KSI 7 p1)

In fact, any change at this stage in the procurement process had prohibitive financial implications. The narrow template of the wards, with single rooms designed around the perimeter, meant incorporating four-bed bays would be impossible within the proposed design. Furthermore, following the Healthcare Commission report there was a political imperative to ensure that Tunbridge Wells had a new hospital, and the Chief Executive was under pressure to sign up to the new hospital within the PFI procurement timetable (financial close was reached in March late 2008 and construction started).

“It became very clear there was a window of opportunity for a new hospital. If that window of opportunity – which was actually quite narrow – was missed in any way, there wouldn’t be a new hospital in Pembury. And I think I certainly took the view – as did the Board at the time – that if you look at the existing sites of Tunbridge Wells [Kent & Sussex and Pembury hospitals], there was absolutely no way that they could continue providing care for a sort of elongated period of time... So in a sense a [100%] single room [design] became a bit of a side issue because the issue became, ‘Do you want a new hospital or not in Tunbridge Wells?’ And that was easier to justify. Albeit it was done both by ourselves and the SHA very much with our eyes open in terms of some of the problems that still needed to be resolved, not least the finances, not least the actual operational policy and how these single rooms would operate. So it wasn’t an ideal situation.” Trust chief executive (KSI 7 p3)
While the Trust necessarily focused on resolving the day-to-day operational shortcomings of the organisation, transformation work relating to the new hospital, and single room working, was delayed. The disjuncture caused by the change in leadership and loss of knowledge of those who were closely involved in the build meant that engagement with bringing the new hospital into operational use was not high on the agenda of senior staff at the Trust. The PFI consortium project manager was concerned about the impact this lack of engagement might have on operationalising the single room wards.

“If someone wasn’t there, [ ] they don’t necessarily understand the reason you got to where you got to, and nor do they necessarily share that common goal. So the trust board that we worked with just doesn’t exist...I started to worry that...we would build something that would become a white elephant, because none of the transformation work would happen... I was really worried that the new team, who had no real ownership of this, it’s going to be their hospital, it’s not our hospital, and they weren’t part of the journey, they didn’t necessarily agree with the destination anyway, and I don’t know if they did or they didn’t because we didn’t have that level of engagement... I was really, really worried that the Trust would not then engage with the clinical teams and get them to think about how they change their practice, and how they work on a dispersed nursing basis, and that they do their workforce planning and all the rest of it.” PFI consortium project manager and clinical lead (KSI 19; 132-161)

A review of the Trust’s preparedness to bring the new hospital into operational use was undertaken in August-September 2009. The review assessed the governance structures in place and identified an absence of operational staff involvement in processes and preparation for taking over the new hospital. The governance structure was revised to involve operational staff in the management and moving forward of the redevelopment programme, and working group deliverables were set and meeting structures realigned. User groups that had been involved at the FITN stage, particularly in relation to the layout of the single rooms itself, were reconvened as move and migration working groups, led by divisional project managers seconded to the role from within the Trust. The focus of the working groups was mainly the decant strategy, including the movement of equipment and safe move of patients.

“My job is to get the services that are on the sites we have at the moment into the new hospital, and do that as effectively and as efficiently as I possibly can.” Divisional project manager, planned services (KSI 12)

The divisional project managers arranged site visits for their user groups, although access was limited to small groups and as construction progressed areas were ‘shut down’ in preparation for handover to the Trust, further restricting viewing opportunities for staff.

A communications strategy audit commissioned by the Trust in the first quarter of 2010 identified widespread concern about single room working and a lack of clinical ‘champions’ to communicate service change messages. The report (by Freshwater) recommended that communication updates
for clinical staff on recommended best practice for nursing patients in single rooms were required as part of a comprehensive programme of staff communication.

3.4.1 Single room working group

A single room working group was established in November 2009. There was a lack of detailed information in the business case for the new hospital relating to single room working, which meant that there was a lack of information to draw on in developing operational policies.

“There was I think a little bit shaky was I don’t think really and truly much work had been done about how these rooms would operate in practice. So the rationale for, you know, the standard operating procedures of how a ward would operate on a single room basis, how IT and technology might be able to support that. I think it [was] thought, ‘Yes, IT could support it,’ but actually no more work had been done to describe exactly how that might happen. So it was seen as a good idea...work had been done, but actually, if I’m honest, I think a lot of it was quite superficial.” Trust chief executive (KSI 7 p2)

“You need to, I think, before we did, [ ] do a lot more of the ‘what if?’ scenarios internally, before you’ve engaged with your design team and planners, because there is always a risk that they’ll drag you along with them... I think a little more time thinking through exactly what it had meant before we got to this stage would have done two things; it would have helped crystallise that decision but also it would have helped us pre-plan the work that we’re now doing. We’re not tripping over issues, but we didn’t think through what all the issues were. We got a lot of them, but I think if we’d spent a little bit more time at that stage, we’d have been far better equipped to start dealing with the issues because we would have known what they were.” Trust estates development director (KSI 6 p15)

“By having that single room working group we were able to come to the conclusion that a lot of the IT issues were ideas and not decisions made, not plans. So it then helped us to just hive that off [as a sub-group] and say, ‘You go ahead look at the innovation, look at the opportunities, but because they’re not going to be ready on day one we need to remain focussed on the workforce, the development, the practical issues’. ” Trust director of nursing (KSI 10 p3)

There was also a lack of joined-up working between the new hospital development team and clinical stakeholders, which continued throughout the construction of the new hospital. Key information was shared with clinical stakeholders via the NNRU research team, rather than via any formal or informal communication channels within the Trust or between the Trust and the PFI consortium. For example, information relating to the design of the general adult wards, whereby nursing was intended to be delivered in a decentralised way to each ‘cluster’ of 10 patient rooms was shared with the Director of Nursing by the research team in late June 2010 following a research interview with the architect.

A key turning point was a visit to St Olavs hospital in Trondheim, Norway in May/June 2010 by members of the senior nursing team. The terms of reference for the visit included learning to inform
the development of operational policy and procedures, workforce planning (including roles and utilisation), ICT solutions to support patient care and understanding the single room environment from a patient and staff perspective. Lessons learnt were fed back to working groups and senior nursing staff were able to communicate positive messages relating to single room working and patient experience. However, while the visit was positive, there was limited time relative to the move dates for the new hospital (January and September 2011) to develop a comprehensive transition strategy for single room working, and progress tended to be piecemeal. There were several important components or operational details, which were late or delayed which had potential implications for successful single room working and the operationalisation of the new all single room wards:

- The integration of the nurse call system with the wireless phones was delayed until some months after the final move of services to the new hospital in late September 2011 (estimated date for integration March 2012).

- The design of the en suite toilet required a customised sanitary chair for patients unable to mobilise independently. However, a decision regarding the purchase of sanitary chairs was not made until early September 2011, with no guarantees at that stage whether the company manufacturing the chairs would be able to fulfil the order.

- A requirement for ‘patient status at a glance’ information to be available at the entrance to individual rooms was identified (for example, to indicate nutrition status, infection control pathway information, and whether a member of staff is currently in the room) but there was nowhere to write or affix information. The solution (magnetic strips affixed to patient room doors) would not be in place until after the final move.

- A policy or standard operating procedure for a ‘nurse/midwife in charge’ in the single room environment (based on the role as operated at Hillingdon Hospital’s single room pilot ward), was not drafted until July 2011, leaving limited time to disseminate to ward staff. The Hillingdon policy was shared with Trust staff via the NNRU research team.

Several other issues were reported to the single room working group following the final move of services to the new hospital which may relate to the lack of detailed work around operationalising the single rooms wards described above. Examples include the following:

- A key difficulty for ward staff was visitor access (and egress) from the wards in the absence of a ward steward or receptionist role. Nursing staff were dealing with an increase in interruptions during visiting hours and it was proving difficult to operationalise the hospital as designed (with secure entry and exit) without receptionist cover which had been identified as unaffordable during workforce planning.

- An increase in falls and length of stay was noted during the immediate post-move period. Falls assessment forms were not being completed routinely or consistently and the need for this was to be urgently communicated. The side room protocol that was operational in the
old hospital accommodation had not been revised to cover all single room wards in the new hospital, and intentional rounding (regular nursing rounds) had not been formalised as part of an operating procedure for the new wards.

- The nurse-in-charge role had not been communicated sufficiently well to ward staff and practical issues needed ironing out. These included that the nurse-in-charge should always have a wireless telephone with them, and that a wireless phone unit should be dedicated for use by the nurse-in-charge so that they always have the same telephone number and are easily contactable. Site practitioners had reported having to take information on bed state from each cluster on some wards. The nature of the role (as supervisory) needed re-emphasising. These issues may have been compounded by the lack of a central whole-ward ‘patient status at a glance’ board (a suitable site and space for a central board was not available and the solution was to have three boards, one per cluster).

- Misinformation relating to the housekeeping role had not been successfully overcome. The confusion appears to have arisen as a result of the changes to soft FM service provision as part of the affordability review. Some wards were reported as working well with catering staff to resolve issues, but others were described as ‘at a stand-off’ with catering staff, with staff unable to see how the role was assisting them. The single room working group acknowledged that dry runs or trials of meal delivery before the move would have been beneficial.

- The decision to install wall-mounted flat-screen TVs in patient rooms was described as problematic, with over 200 remote control units getting lost (for example, ending up in the dirty laundry) and requiring replacing during the first few months of opening. The operation of the TVs was causing problems for nursing staff, especially in the absence of remote control units, but also due to a weak television signal within the building.
Summary

• The decision to build a new hospital with 100% single rooms was ‘top-led’, with little involvement from the Associate Directors of Nursing and below.

• Following the Healthcare Commission investigation into infection control issues at the Trust, the small team of ‘champions’ leading the design no longer existed.

• New and existing staff had concerns about the 100% single room design, particularly in relation to patient isolation and the safety of older, confused and infirm patients.

• A lack of planning for the operationalisation of single room wards was identified early on following the change in leadership, but there was a delay in beginning any substantial transformation work.

• A single room working group was not established until less than two years before the new hospital would be fully open.

• The focus of wider staff engagement and communication up to the move tended to prioritise move and migration issues.

• Important policies relating to single room working were not developed until very close to the move itself.
Chapter 4: DETAILED DESCRIPTION OF FOUR CASE STUDY WARDS

Introduction

This chapter describes the physical layout and staffing of the four case study wards and reports findings from non-participant observation of nursing and midwifery staff carrying out routine practice during different shifts. Section 4.1 describes some of the key characteristics of each ward, illustrated with annotated floor plans. Section 4.2 provides a summary of routine data provided by the Trust. Section 4.3 goes on to provide a portrait of task time distribution for nursing and midwifery staff on each ward. It looks at activity and location of staff, interaction with other staff, and staff travel distances, and explores differences between staff groups and among the wards. This chapter provides important context for the findings from the survey and qualitative in-depth interviews with staff and patients, presented in chapters 5 and 6.

4.1 Overview of built environment and staffing on case study wards

Three of the case study wards (acute assessment, medical (older people) and surgical) were located at the Kent & Sussex Hospital in Tunbridge Wells (see photos 4-10). The Kent & Sussex Hospital opened in 1934, as a purpose-built, state-of-the-art hospital facility, and featured south-facing traditional Nightingale wards (with rows of beds on either side) and three-quarter height glazing, designed to maximise fresh air and sunlight to support patient recovery. During the Second World War, six wartime emergency huts were added to the hospital footprint. Two of these were demolished in the 1980s, when a new Accident & Emergency wing was added to the hospital. The acute assessment ward was located in the Accident & Emergency wing of the hospital, and was therefore the most modern of the case study wards. The medical (older people) ward was located in one of the four remaining wartime emergency huts. The surgical ward was located in the original 1930s buildings at Kent & Sussex Hospital, and featured a light and airy, high-ceilinged Nightingale ward environment.

The fourth ward (maternity) was located on the old hospital site at Pembury. The site was originally a workhouse (which opened in 1836), and became a county hospital in 1938. Various buildings were added from the mid to late 19th century. The maternity ward was housed on the first floor of the old Victorian buildings at Pembury (built c. 1890, see photo 11), with the Delivery Suite located some distance away on the ground floor in ‘temporary’ flat roofed accommodation which opened in 1969. A Special Care Baby Unit was also located on the ground floor.
Photo 4:  Front of Kent & Sussex Hospital

Photo 5:  Accident & Emergency wing, Kent & Sussex Hospital
Photo 6: South-facing Nightingale wards with curved fire escapes at Kent & Sussex Hospital

Photo 7: South-facing Nightingale wards with curved fire escapes at Kent & Sussex Hospital
(surgical ward shown at level 3)
Photo 8: Side view of 1930s built wards (including surgical ward) at Kent & Sussex Hospital

Photo 9: View of four wartime emergency huts at Kent & Sussex Hospital
Photo 10: Wartime emergency hut housing medical (older people) ward, Kent & Sussex Hospital

Photo 11: Maternity ward at old Pembury Hospital (showing postnatal section on first floor)
4.1.1 Acute assessment ward

The acute assessment ward admitted patients from Accident & Emergency requiring further assessment, diagnosis and treatment, including determining whether they needed to be admitted to one of the wards. It also cared for patients admitted from A&E who were waiting for a bed on a ward. Patients could remain on the ward for up to 48 hours if they were going to be discharged. The ward comprised 16 beds, arranged in three bays of three, four and six beds, plus one single and one double side room (see figure 3). The ward had three patient toilets, one with an over bath shower. During the day, the ward was staffed by four nurses (including a ‘nurse in charge’) and one healthcare assistant (see table 7 for details on staff deployment).

As the ward diagram (see figure 3) shows, the bays were arranged around a central area and main staff base. Shift handover was taken in the central area at the ‘patient status at a glance’ board. A second staff work station (for one person, with a PC but no telephone) was located on the back bay. The clean and dirty utility rooms were accessed from the back bay, and the ward kitchen from the central area. The linen store and equipment/consumables store rooms were located outside the ward entrance. The ward had a single drugs trolley, which remained in the clean utility room, with staff from each bay going to the drugs trolley during medication rounds. Staff toilets and lockers (shared with other departments) were also located around the corner from the ward entrance and the staff break room was shared with A&E staff (and was located away from the ward).

The ward had struggled to recruit staff, but a recent recruitment drive (in anticipation of the need for more staff at the larger ward in the new hospital) had resulted in recruitment of a cohort of young, newly qualified nurses from Ireland and Northern Ireland who started in January 2011. Existing staff were excited about the new energy that these new nurses had brought to the experienced team. Staff interviewed described the ward as extremely busy, with the high turnover making it difficult to provide quality care at peak times. It also meant staff were not always able to take their allotted breaks.

“Sometimes we can have a whole sixteen patients and we can clear them and get a whole new sixteen patients, in a day. So it’s absolutely hectic. It’s challenging, it’s so difficult. You never know how your day’s going to be... you don’t know where to start, and you stress yourself out over little things, and people forget breaks and we forget to look after ourselves down here.” Healthcare assistant, acute assessment ward (A1 176-184)
Figure 3: Acute assessment ward layout

Table 7: Acute assessment ward staffing (day shift)

<table>
<thead>
<tr>
<th>Section of ward</th>
<th>Beds</th>
<th>Nurse in charge</th>
<th>Registered nurses</th>
<th>Healthcare assistant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front bay &amp; single side room</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Middle bay &amp; double side room</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Back bay</td>
<td>6</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

See end of section 3.1 for key to ward layout diagrams.
4.1.2 Medical (older people) ward

The medical (older people) ward was a sub-acute ward that admitted older patients from other wards in the hospital (mainly acute medical wards) who required slow-stream rehabilitation or palliative care. The ward had its own medical team, and physio- and occupational therapists. The ward comprised 28 beds, arranged as a female 14-bedded section, a male ten-bedded section and a side room annex of four en suite rooms which were designated as the hospital’s cohort area for any patient diagnosed with *Clostridium difficile* infection (see figure 4). During the day the ward was staffed by a team of eight nursing staff (3 nurses and 5 healthcare assistants) (see table 8 for details on staff deployment).

The ward was a Nightingale style ward, divided into two sections with a fire door/partition wall dividing male and female patients. There were staff bases on both sections, each with a PC and telephone. Ward support facilities were shared, requiring staff working on the female end of the ward to access facilities on the male end of the ward (clean and dirty utility rooms, kitchen and linen store), although a second drugs trolley was secured at the staff base on the female section. Staff working on the male end had to walk through the female ward to access the store room and staff break room. Shift handover took place in the staff break room and incoming staff took handover for all patients on the ward. ‘Patient status at a glance’ information was provided as a printed document (handover sheet) which was updated electronically.

In contrast to the acute assessment ward, many patients were long staying (anything from 2 weeks to 3 months), with co-morbid conditions, often awaiting placement in community care settings. The ward accommodated multiple patients with dementia, as well as patients with poor mobility, eyesight, hearing and speech. Nursing care was providing according to a strict routine, with protected mealtimes. Work was described as very hard and heavy, with multiple patients requiring two members of staff to work together (doubling up) to assist with activities of daily living (such as toileting and bathing). Staff interviewed consistently mentioned how challenging they found caring for patients with dementia, and staff were frequently observed dealing with aggressive and violent behaviour, with staff being pinched, pushed, slapped, kicked and punched by patients. This was alleviated by good team work.

“I think it’s good that there’s a good team here. If you’ve been following a patient around for ages that is violent and has tried to kick you and hit you, you just say to somebody, ‘I can’t do this anymore, can you take them for a bit because I’m at bursting point,’ they will do it and understand.” Nurse, medical (older people) ward (E5 199-202)
Figure 4: Medical (older people) ward layout

Table 8: Medical (older people) ward staffing (early/day shift)

<table>
<thead>
<tr>
<th>Section of ward</th>
<th>Beds</th>
<th>Registered nurses</th>
<th>Healthcare assistants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>14</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Male</td>
<td>10</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Side rooms</td>
<td>4</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>
4.1.3 Surgical ward

The acute general surgical ward was the largest case study ward, accommodating 35 patients (including 1 escalation bed, which was in use during data collection). The ward specialised in pre and post operative colorectal, breast and vascular cases, and admitted step-down patients from ITU. It also accommodated patients from other specialties (medical and orthopaedic) on a regular basis. The male section of the ward (11 beds) was self-contained, with its own staff base and clean and dirty utility rooms (see figure 5). Shift handover for this section of the ward was taken in the staff break room, and incoming staff took handover for these patients only. During the day the male section of the ward was staffed by two nurses and two healthcare assistants (see table 9).

The remaining beds on the ward (24) were divided into a female section (9 beds) and a mixed sex section (12 beds), with a fire door/partition wall. Three further beds were located in a single and double side room located between the female and male sections of the ward (see figure 5). Shift handover for these beds was taken in the ward managers’ office, and incoming staff took handover for all 24 patients. During the day, these sections of the ward were staffed by four nurses (2 per section) and three healthcare assistants who floated across both section (see table 9). The majority of staff rotated on a monthly basis between the male section of the ward and the female/mixed sections. As for the medical (older people) ward, ‘patient status at a glance’ information was provided as a printed document (handover sheet) which was updated electronically.

The female and mixed sex sections (and side rooms) shared ward support facilities (clean and dirty utility rooms). All three sections of the ward also shared store rooms, the kitchen and staff break room. The ward had a small changing/locker room and a single staff toilet. Working on the ward was described by staff interviewed as interesting but challenging, with an enormous workload and sometimes very fast turnover. Staffing included a high proportion of Filipino nurses and healthcare assistants. The ward manager had been in post for longer than 10 years, and continuity of leadership and strong leadership was considered to be an important factor in the strong teamwork and standard of care on the ward.

“In general it’s [teamwork] very good and particularly with our support workers [healthcare assistants], we’ve got a very high standard on here. Sometimes I feel like they’re the backbone of the ward, they keep things working smoothly so that the staff nurses can do their job effectively, they’re very good here.” Nurse, surgical ward (S1 128-131)
Figure 5: Surgical ward layout

Table 9: Surgical ward staffing (early/day shift)

<table>
<thead>
<tr>
<th>Section of ward</th>
<th>Beds</th>
<th>Registered nurses</th>
<th>Healthcare assistants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixed sex</td>
<td>12</td>
<td>2</td>
<td>3 (shared)</td>
</tr>
<tr>
<td>Female &amp; side rooms</td>
<td>12</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>11</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>35</td>
<td>6</td>
<td>5</td>
</tr>
</tbody>
</table>
4.1.4 Maternity ward

The maternity ward at Pembury comprised three sections: antenatal, postnatal and postnatal with transitional care (for low dependency neonates requiring more treatment or observation than babies on the postnatal section, but not, or no longer, needing the services of the Special Care Baby Unit). The postnatal section of the ward also included a modern side room annex with four en suite single rooms (see figure 6). These were amenity rooms, and could be pre-booked. They were also allocated free of charge when a clinical need arose (for example, where a mother was re-admitted with postpartum complications following discharge, to reduce cross-infection risk from her baby), or on a ‘courtesy’ basis when patients were distressed.

The postnatal section of the ward (including the side rooms) was licensed to care for up to eight women along with their babies, and was staffed by one midwife and one healthcare assistant (see table 10). When the number of women exceeded eight, an additional midwife was called on duty. The total number of bed spaces (12 beds on the ward, and 4 side rooms) meant that there was some degree of flexibility in terms of occupation of bed spaces (for example, women could be spread out on the ward). The postnatal section was self-contained with its own clean and dirty utility rooms, staff break room, nursery, kitchen, day/dining room, milk kitchen and staff base, located off the main ward in an office (see figure 6). There was no staff toilet on the section however, with staff having to cross the link corridor to the antenatal section to use the single staff toilet on the ward. Shift handover was taken at the staff base, where the ‘patient status at a glance’ board was also located.

The antenatal and transitional care sections were staffed by a midwife each, with one healthcare assistant assigned to work across both sections (see table 10). The sections shared clean and dirty utility rooms, staff break room and kitchen. The transitional care section had its own nursery and milk kitchen, but shared the day/dining room with the postnatal section, and women had to walk (with their babies in cots) to use that room. The antenatal section had a table and chairs where women could eat.

Each section had its own staff base, and shift handover was taken separately with incoming staff taking handover for their section only. The healthcare assistant took handover for the transitional care section only (despite also covering the antenatal section).

Midwifery staff rotated (on a six-monthly basis) between the Delivery Suite and maternity ward. The workforce was characterised by its high proportion of long service staff, including both midwives and healthcare assistants. Due to the movement of other services from the old Pembury site, the remaining women and children’s health service staff were felt to make up a small but close-knit community.

“Although the building is very old it’s always been very friendly, very family feeling almost. You know, because we are quite small everybody within this sort of unit, the women’s and children’s health, we all know each other, we can all work together.” Healthcare assistant, maternity ward (M1 15-17)
Figure 6: Maternity ward layout

Table 10: Maternity ward staffing (day and night shift)

<table>
<thead>
<tr>
<th>Section of ward</th>
<th>Beds</th>
<th>Registered midwives</th>
<th>Healthcare assistants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postnatal and side room annex</td>
<td>8</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Antenatal</td>
<td>10</td>
<td>1</td>
<td>1 (shared)</td>
</tr>
<tr>
<td>Transitional care</td>
<td>8</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>
Key for ward layout diagrams (figures 3 to 6):

- Patient care areas/areas with visual sightlines to patient beds
- Ward support areas
  1. Clean utility (clinical room)
  2. Dirty utility (sluice)
  3. Linen store
  4. Kitchen
  5. Store room
  6. Utility and storage area
  7. Nursery (maternity only)
  8. Milk kitchen (maternity only)
  9. Physiotherapy/day room (medical ward only)

- Patient toilets/bathrooms
- Staff bases
- Staff facilities (toilets, lockers/changing areas, break rooms)
- Office space (ward manager/ward clerk)
- Day/dining/children’s play area (maternity only)
4.2 Summary of routine data provided by the Trust

Maidstone & Tunbridge Wells Trust provided routine data relating to the three case study wards located at Kent & Sussex hospital. Table 11 provides overall staffing, bed numbers and nurse/patient ratios for each ward. Table 12 shows the performance of the wards on routine nurse-sensitive patient safety measures for the 12-month period January to December 2010.

Table 11: Staffing for the three case study wards at Kent & Sussex hospital

<table>
<thead>
<tr>
<th>Case study wards (Kent &amp; Sussex hospital only)</th>
<th>Acute assessment</th>
<th>Surgical</th>
<th>Medical (older people)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WTEs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trained (RN)</td>
<td>21.87</td>
<td>27.47</td>
<td>15.43</td>
</tr>
<tr>
<td>Untrained (HCA)</td>
<td>5.94</td>
<td>15.22</td>
<td>18.98</td>
</tr>
<tr>
<td><strong>Total WTEs</strong></td>
<td>27.81</td>
<td>42.69</td>
<td>34.41</td>
</tr>
<tr>
<td><strong>Beds</strong></td>
<td>16</td>
<td>34</td>
<td>28</td>
</tr>
<tr>
<td><strong>Ratio</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nurse to beds</td>
<td>1.74</td>
<td>1.26</td>
<td>1.23</td>
</tr>
<tr>
<td>RN</td>
<td>79%</td>
<td>64%</td>
<td>45%</td>
</tr>
<tr>
<td>HCA</td>
<td>21%</td>
<td>36%</td>
<td>55%</td>
</tr>
</tbody>
</table>

Table 12: Summary statistics for selected safety indicators for 2010

<table>
<thead>
<tr>
<th>Ward</th>
<th>medication error</th>
<th>Falls</th>
<th>Falls with injury</th>
<th>Healthcare acquired pressure ulcer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute assessment</strong></td>
<td>0.3</td>
<td>1.6</td>
<td>1.2</td>
<td>1.1</td>
</tr>
<tr>
<td><strong>Medical (older people)</strong></td>
<td>0.2</td>
<td>2.9</td>
<td>1.8</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Surgical</strong></td>
<td>0.3</td>
<td>2.0</td>
<td>0.6</td>
<td>1.1</td>
</tr>
</tbody>
</table>

57
4.3 Task time distribution, interaction with other staff and travel distances for nursing and midwifery staff on the case study wards

This section draws on day shift observation data (118.5 hours of staff shadowing) to describe how and where nurses, midwives and healthcare assistants spent their time on the case study wards, including interaction with other staff and travel (walking) distances. As outlined in chapter 2 (Methods), these data should be treated as indicative, rather than representative, of distribution of time.

4.3.1 Task time distribution and location of staff by staff group

Figure 7 illustrates the differences between registered nurses/midwives and healthcare assistants in proportion of time spent on different activities across the four case study wards. There was some variation between staff groups in terms of the distribution of time spent on different tasks or activities. Four activities (direct care, professional communication, medication tasks and documentation) accounted for 70 per cent of nurses/midwives’ (n=11; 70.3 hours) time on shift (see figure 7). Across the four case study wards, the greatest proportion of time was spent on direct care (25%). Use of ICT (PCs and telephones) to undertake documentation, indirect care or ward-related tasks accounted for less than a tenth (7%) of nurses and midwives time on shift. The majority (63%) of healthcare assistants’ (n=8; 48.2 hours) time on shift was taken up by two activities: direct care and ward-related tasks (see figure 7). Healthcare assistants spent over a third of their time on shift engaged in direct care, while nurses/midwives spent a quarter of time on this activity. Nurses/midwives spent twice as much time undertaking documentation (14%) compared to healthcare assistants (7%). Nurses/midwives spent a similar proportion of time (14%) performing medication tasks, while healthcare assistants were not involved in this activity. Nurses/midwives spent more time (17%) than healthcare assistants (9%) in face-to-face communication regarding patient care (see sections 4.3.3 and 4.3.4 for further detail on interaction with other staff). Finally, healthcare assistants spent over a fifth (28%) of time on shift engaged in ward-related activities (including cleaning, bed-making between patients and stocking utility rooms and linen trolleys etc.), whereas nurses/midwives spent less than a tenth of their time on this activity.
Observation tool category definitions for activity and location are provided at Appendix 4. Note that ‘At bedside’ includes non-direct care activity performed at a patient-occupied bedside (for example, documentation, indirect care and medication tasks). ‘On ward’ refers to staff being in the same open plan area as patient beds, but not at a patient-occupied bedside.

Nurses /midwives and healthcare assistants spent a similar proportion of time on shift (over one-third) at patient-occupied bedsides (with patients) (see figure 8). As with task time distribution (and related to it), there were also differences between staff groups and among the case study wards in relation to proportion of time spent in different locations, particularly staff bases and ‘on ward’.

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5 Activity category definitions for the observation tool are provided at Appendix 4. Legends for all figures included in sections 4.3.1 to 4.3.4 indicate the number of staff that were shadowed, and the total amount of hours spent shadowing staff.
4.3.2 Task time distribution and location of staff by ward

There was variation among the case study wards in relation to the proportion of time nurses spent on professional communication, medication tasks and documentation (see figure 9). Nurses on the acute assessment ward spent less time on professional communication compared with the other case study wards. Nurses on the medical (older people) ward spent more time undertaking medication tasks than staff on the other wards, while midwives spent more time on documentation than nurses. These differences relate in part to the differences between the wards in terms of patient groups, but also skill-mix, staffing levels, and organisation of work.

For example, on the acute assessment ward, there was a higher skill mix with three nurses assigned to deliver care according to a patient allocation model (each nurse was allocated up to 5 or 6 geographically co-located patients). Nurses were supported by a nurse in charge (day shift only) and one healthcare assistant, but the organisation of work meant there was less professional communication with nursing colleagues in comparison to the other case study wards, with staff taking individual responsibility for the care of their patients.

Nurses on the medical (older people) ward spent less time on direct care compared to nurses/midwives on the other case study wards (at one-fifth of shift time), and spent a greater proportion of time on medication tasks (32%), undertaking lengthy and sometimes complex medication rounds for 14 patients. On the maternity ward, midwives were engaged in a high proportion of direct care (28%), but also spent a considerable amount of time (32%) undertaking documentation. Rapid

6 Location category definitions for the observation tool are provided at Appendix 4. Note that ‘At bedside’ includes non-direct care activity performed at a patient-occupied bedside (for example, documentation, indirect care and medication tasks). ‘On ward’ refers to staff being in the same open plan area as patient beds, but not at a patient-occupied bedside.
turnover, and documentation required to cover both mother and baby (including transitional care babies and multiple births) meant the proportion of shift time spent on this activity was much higher for midwives in comparison to nurses on the other wards. It also meant that midwives spent a considerable proportion of time on shift (61%) at the staff bases (see figure 10), and as these staff bases were located in offices just off the main sections of the ward, it meant midwives were not able to see or hear patients when located at staff bases.

Figure 9: Proportion of nurses’/midwives’ time by ward spent on four activities consuming most time (day shift only)
Healthcare assistants on the medical (older people) and surgical wards spent more time on direct care (48% and 43% respectively), than their counterparts on the acute assessment (25%) and maternity wards (20%) (see figure 11). Healthcare assistants on the maternity ward spent the largest proportion of time on ward related activities (40%). These differences are likely to be accounted for by the largely self-caring patient population on the maternity ward (and open visiting for fathers), compared to the much ‘heavier’ workload for healthcare assistants on the medical (older people) and surgical wards.

**Figure 11: Proportion of healthcare assistants’ time by ward spent on two activities consuming most time (day shift only)**
There was variation among healthcare assistants on the four case study wards in terms of time spent at staff bases, ward support areas and ‘on ward’, with healthcare assistants on the maternity ward spending more of their time at staff bases than their counterparts on the other case study wards (29% compared with between just 1 and 6%) (see figure 12). Medical (older people) ward healthcare assistants spent more time (28%) in ward support areas compared to healthcare assistants on the other wards (who spent between 8 and 16% of time at ward support locations). These differences are related to task time distribution discussed above.

Figure 12: Proportion of healthcare assistants’ time by ward spent at four locations consuming most time (day shift only)

4.3.3 Interaction with other staff by staff group

Overall, nurses and midwives spent over a quarter (27%), and healthcare assistants just over a fifth (21%), of their time communicating or working directly with other staff (see figure 13). Both staff groups spent the same proportion of time (19%) working or communicating with nursing or midwifery colleagues (including ward managers, shift coordinators, nurses, midwives, and healthcare assistants), while nurses and midwives spent more time than healthcare assistants communicating or working directly with other health professionals (including allied health professionals and doctors).
4.3.4 Interaction with other staff by case study ward

Nurses on the surgical and medical (older people) wards spent the highest proportion of time on shift (26%) communicating or working directly with nursing colleagues (nurses including ward managers, and healthcare assistants) (see figure 14). This finding is likely to correspond to the larger teams operating on these wards (teams of 3.5 to 4 staff on the surgical ward and teams of 3 to 4 on the medical ward). Staff would frequently assist each other with tasks, and also able to update each other during frequent informal handovers.

Nurses on the acute assessment ward and midwives on the maternity ward spent the lowest proportion of time on shift (15 and 14% respectively) communicating or working directly with nursing or midwifery colleagues. This might be explained by the smaller teams on both these wards, with nurses and midwives largely working alone and sharing support from healthcare assistants.

Nurses on the medical (older people) ward spent a higher proportion of time on shift (12%) communicating or working directly with other health professionals (see figure 14). This is likely to be related to the presence of ward-based medical and allied health professional teams.
As with nurses on the surgical ward, healthcare assistants on this ward also spent the highest proportion of time on shift (27%) communicating or working directly with other staff (see figure 15). The healthcare assistant on the acute assessment ward spent the next highest proportion of time (20%). This is a higher figure than for nurses on the acute assessment ward (see above) and is perhaps explained by the organisation of work on the ward with the healthcare assistant working across the ward (with 3 nurses and a nurse-in-charge).
4.3.5 Travel (walking) distances

During observation sessions all nursing or midwifery staff on shift consented to wear pedometers and mean steps per hour were calculated for each staff pedometer session (73 pedometer sessions lasting a total of 514 hours). Overall, healthcare assistants walked further than registered nurses/midwives (on average, 768 steps per hour compared to 610 steps per hour) (see figure 16). Among registered nurses/midwives, acute assessment ward nurses walked furthest (745 steps per hour). This is perhaps unsurprising, given the organisation of work on the acute assessment ward, with its higher skill mix, and patient allocation model of staff deployment. Midwives on the maternity ward walked the shortest distances (475 steps per hour). This might be explained by the high proportion of time midwives on the maternity ward spent at staff bases (see above).

Healthcare assistants on the acute assessment and maternity wards walked furthest (878 and 786 steps per hour respectively). Healthcare assistants on the acute assessment and maternity wards spent 10 per cent of their time undertaking work duties off the ward (including escort/transfer of patients and ward-related tasks), increasing the distance travelled while on shift.

With approximately 2,000 steps in a mile, during a 12-hour weekday shift nurses and midwives were walking 3.7 miles on average, while healthcare assistants were walking 4.6 miles on average (with acute assessment ward healthcare assistants walking furthest at 5.3 miles on average).

![Figure 16: Walking distances on case study wards by staff group (day shift only)](chart.png)
Summary

- Healthcare assistants spent over a third of their time on shift engaged in direct care, while nurses/midwives spent a quarter of time on this activity.

- Nurses/midwives spent twice as much time undertaking documentation (14%) compared to healthcare assistants (7%).

- There was variation among the case study wards in relation to the proportion of time spent on professional communication, medication tasks and documentation. These differences relate in part to the differences between the wards in terms of patient groups, but also skill-mix, staffing levels, and organisation of work.

- Overall, nurses and midwives spent over a quarter (27%), and healthcare assistants just over a fifth (21%), of their time communicating or working directly with other staff.

- Healthcare assistants walked further than registered nurses/midwives (on average, 768 steps per hour compared to 610 steps per hour).

- Among registered nurses/midwives, acute assessment ward nurses walked furthest (745 steps per hour).

- During a 12-hour weekday shift nurses and midwives were walking 3.7 miles on average, while healthcare assistants were walking 4.6 miles on average (with acute assessment ward healthcare assistants walking furthest at 5.3 miles on average).
Chapter 5: IMPACT OF THE PHYSICAL ENVIRONMENT ON STAFF EXPERIENCE

Introduction

This chapter explores the impact of the physical environment of staff experience. It draws on findings from the staff survey and in-depth interviews, and first explores staff perceptions of positive aspects of working in largely open plan ward environments in the old hospital buildings at Tunbridge Wells (Kent & Sussex) and Pembury. It then goes on to highlight aspects of these environments that staff felt were negative. Finally, this chapter provides an insight into nursing and midwifery staff views on the move to all single room accommodation in the new hospital.

5.1 Positive aspects of open plan ward environments

Nursing and midwifery staff responding to the survey (N=55; 40% response rate) were asked to rate the extent to which they agreed or disagreed with a series of statements (37) about the current ward environment, and to rate how helpful or unhelpful they felt the current ward environment was for various aspects (35) of work.

Tables 13 and 14 show those items for which the mean score across the four case study wards was highest (items with an overall mean score >3.5). Items that staff felt more strongly positive about (in comparison to other items) included the ability to monitor patients, social contact between patients, responding to patient calls for assistance, ease of obtaining advice and assistance from colleagues and knowing when colleagues might need a helping hand.

Table 13: Agreement with statements about current (open plan) ward (items with overall mean score > 3.5; 1=Strongly disagree and 5=Strongly agree)

<table>
<thead>
<tr>
<th>Item</th>
<th>Acute assessment</th>
<th>Medical (older people)</th>
<th>Surgical</th>
<th>Maternity</th>
<th>ALL</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy for patients/visitors to find way within ward</td>
<td>3.67</td>
<td>3.57</td>
<td>3.93</td>
<td>3.35</td>
<td>3.62</td>
<td>50</td>
<td>1</td>
<td>5</td>
<td>.805</td>
</tr>
<tr>
<td>Ward layout makes it easy to monitor patients</td>
<td>3.58</td>
<td>3.71</td>
<td>4.13</td>
<td>3.00</td>
<td>3.57</td>
<td>51</td>
<td>1</td>
<td>5</td>
<td>1.153</td>
</tr>
<tr>
<td>Easy for new staff to find way about</td>
<td>3.67</td>
<td>3.86</td>
<td>3.53</td>
<td>3.35</td>
<td>3.55</td>
<td>51</td>
<td>1</td>
<td>5</td>
<td>.901</td>
</tr>
</tbody>
</table>

7 Full details of survey response rate and sample profiles for survey and interviews are provided in chapter 2 (Methods).
8 See appendix 5 for a copy of the staff survey containing these statements.
Table 14: Current (open plan ward) considered helpful for...
(items with overall mean score > 3.5; 1=Very unhelpful and 5=Very helpful)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acute assessment</td>
<td>Medical (older people)</td>
<td>Surgical</td>
<td>Maternity</td>
<td>ALL</td>
<td>N</td>
<td>Min</td>
<td>Max</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Social contact between patients</td>
<td>4.17</td>
<td>4.36</td>
<td>4.27</td>
<td>3.06</td>
<td>3.89</td>
<td>55</td>
<td>1</td>
<td>5</td>
<td>1.031</td>
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<tr>
<td>Responding to patient calls for assistance</td>
<td>3.50</td>
<td>4.36</td>
<td>4.07</td>
<td>3.41</td>
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<td>5</td>
<td>0.826</td>
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<tr>
<td>Communication between nursing staff and patients</td>
<td>3.83</td>
<td>4.18</td>
<td>3.73</td>
<td>3.44</td>
<td>3.76</td>
<td>54</td>
<td>1</td>
<td>5</td>
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<td>Being aware of general running issues on the ward</td>
<td>3.83</td>
<td>4.00</td>
<td>4.00</td>
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<td>3.76</td>
<td>55</td>
<td>2</td>
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<td>0.637</td>
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<tr>
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<td>4.18</td>
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<td>3.87</td>
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<td>55</td>
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<td>Social interaction among ward staff</td>
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<td>3.73</td>
<td>3.29</td>
<td>3.69</td>
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<td>0.862</td>
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<tr>
<td>Communication between nursing staff and doctors</td>
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<td>3.60</td>
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<td>55</td>
<td>1</td>
<td>5</td>
<td>0.865</td>
<td></td>
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<tr>
<td>Ability of staff to keep each other updated re general running issues</td>
<td>3.58</td>
<td>4.09</td>
<td>3.67</td>
<td>3.06</td>
<td>3.56</td>
<td>54</td>
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<td>Knowing when other staff might need a helping hand</td>
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<td>4.07</td>
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<td>55</td>
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<td>5</td>
<td>1.069</td>
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</tbody>
</table>

Positive ratings for the questionnaire items shown in tables 13 and 14 support findings from interviews with staff. A key theme to emerge was the value that staff placed on the visual and aural proximity of staff and patients on open plan wards. Visual and aural proximity of staff to patients (and vice versa), staff to other staff, and patients to other patients in the open plan ward environment resulted in three key perceived benefits for staff, as follows:

a) Enhanced surveillance and monitoring of patients
b) Increased opportunity for teamwork and communication
c) Facilitation of social contact between patients

Staff experiences of each of these benefits are explored in turn below. Where there were differences among the case study wards in relation to the items presented in tables 13 and 14, these are highlighted in the relevant sections below.

a) Enhanced surveillance and monitoring of patients

Staff from all four wards described how the open plan design of their ward enabled them to see multiple patients in a short amount of time as they moved about and through the ward during the shift. Staff felt that being able to see (and hear) multiple patients meant they had a good sense of
what was ‘going on’ with individual patients, and could quickly identify changes in patients’
conditions or risks to patient safety.

“If you stand at the [entrance to the front bay] you can see the four patients. Nine times out
of ten they’re on monitors, they are very ill, they’re critical, they’ve maybe active chest pain,
there’s a lot going on. So I think to be able to stand and see them you can tell a lot.” Nurse,
acute assessment ward (A2 158-162)

“Even when I’m sitting here by the desk [staff base], I can see the other end of the [male
section], and both ends of the [male section], and the front... By just looking up, you can
automatically see that, ‘Oh, I think he’s not breathing well,’ or something is going wrong,
and you can act immediately.” Nurse, medical (older people) ward (E6 164-172)

“Here we’ll see someone getting agitated and we’ll think, ‘Oh perhaps they want to go to the
toilet’, and you can nip in there and sort it out because they’re continuously looked at. Every
time you walk up and down the ward here, you just look at them you think, ‘Oh shall I get
that for you?’ because they’re hanging out of bed trying to get something or ‘You don’t look
well’. “ Nurse, surgical ward (S6 520-524)

“I was on [the postnatal section] the other night in the early hours of the morning and I was
seeing somebody and I could hear this baby throwing up, so I dived behind the curtain so I
could get it on its side, pat on the back. So, yeah, you can see the patients as you walk down
very easily. You hear things.” Midwife, maternity ward (M3 151-154)

Photo 12: Staff photo illustrating visibility from staff base, surgical ward (S4.1)
The surveillance and monitoring of patients was also enhanced through the fact that multiple staff were working on, or passing through, open plan patient care areas and were able to identify individual patient care issues (see chapter 4 for diagrams and descriptions of ward layouts).

“From the nurse in charge point of view, I can see everything that’s going on. I can literally turn round 360 degrees almost, and see what’s going on with most patients, how they look, what’s going on; is there a doctor in with them...have they got visitors there?” Nurse, acute assessment ward (A4 78-81)

“Our ward is laid out for 28 patients. They’re all ‘our’ 28 patients...Here everybody is concerned about each patient and everybody sees different things about those patients on a daily basis... as soon as something goes wrong or there’s a change, you spot that really, really quickly.” Healthcare assistant, medical (older people) ward (E3 220-242)

The open plan ward layout meant staff walking through different sections (for example to access ward support or staff areas) could spot issues and intervene, increasing opportunities for ensuring patient safety. This behaviour was observed and noted during staff shadowing sessions (see Box 1).

**Box 1: Examples of staff identifying patient care issues in open plan sections of the ward where they were not assigned to be working**

*Example 1:* On the surgical ward, a healthcare assistant assigned to the female and mixed sex areas of the ward was passing through the male section as she returned to her area following a break. Exiting the staff break room at 12.34pm she noticed that the patient’s surgical drain was full. The healthcare assistant called out to staff assigned to that area (including the nurse being shadowed that shift) that the drain was full. This prompted discussion between the two nurses caring for patients in that area about volume drained, and the possible need for a blood transfusion. A decision was made to page the doctor. There was no response so the nurse alerted the ward manager who was able to contact the medical team. The ward manager confirmed that a doctor was on his way at 12.42pm. The doctor arrived on the ward at 12.48pm. The ward manager returned soon after to praise staff for acting quickly.

*Example 2:* On the medical (older people) ward the nurse being shadowed was assigned to the female section. On her way to treatment room to get saline for drip, she passed through the male section and noticed that a patient had a nose bleed. She stopped and provided care to the patient to try and stop the nose bleed, and was able to call the nurse assigned to that area over and discuss a plan of action in case further treatment was required (cauterisation).
There were some important differences between the case study wards in relation to surveillance and monitoring of patients. Ward-level observation data reported in chapter 4 shows that nurses on the surgical, medical (older people) and acute assessment wards were in visual and aural proximity to patients for 73, 71 and 61 per cent of the time on shift respectively, either at patient bedsides, ‘on ward’ (being in the same open plan area as patient beds, but not at a patient’s occupied bedside) or at staff bases co-located in, or with visual and aural proximity to, patient care areas. Healthcare assistants on these three wards spent 73, 64 and 60 per cent of the time on shift respectively in visual and aural proximity to patients. In contrast, midwives were in visual and aural proximity to patients for just over a third of the time (35%), with maternity ward healthcare assistants spending just over half the time on shift (52%) in visual and aural proximity to patients. Among the case study wards, maternity ward staff also had the lowest mean score for the item ‘Ward layout makes it easy to monitor patients’ (mean score of 3, compared to 4.13 for surgical ward staff with the highest mean score, see table 13). This is perhaps unsurprising given the location of maternity ward staff bases (outside patient care areas), and the proportion of time midwives and healthcare assistants on the maternity ward spent at staff bases (see chapter 4).

“If we’re doing notes... you’re not actually in the same place as the ladies, so it’s quite hard to keep an eye on them...Because you’re not really on the ward with the patients, it’s not brilliant at being able to see what happens.” Midwife, maternity ward (M2 123-130)

The ability of staff to monitor patients in open plan or shared ward accommodation was also enhanced by the proximity of patients to other patients. Staff were able to prioritise themselves in relation to patient requests for assistance, and respond to patients, letting them know when they would be with them, or asking them to use their call bell to alert another member of staff.

“Where I am today it’s been absolutely hectic because we’ve got confused patients. They’re all constantly shouting out. And where we are now, we can shout over, ‘I’ll be with you in a minute.’ [It helps with] knowing where to go, how to prioritise yourself really, [ ] here you can look out and see, ‘Well, I’ll go to her first,’ or say to someone, ‘If I go to her, will you go to her?’” Healthcare assistant, acute assessment ward (A1 157-163)

“You are in with somebody else and somebody needs you they just have to say, ‘Nurse, can you come to me next?’, which I love...or if I’m with somebody and I am going to be a while, I’ll say... ‘Can you press your bell and one of the other nurses will come.’ And it’s an immediate reassurance.” Nurse, acute assessment ward (A5 163-218)

Equally, staff felt they benefitted from patients acting as an extra pair of eyes on the ward, using their call bells to alert staff on behalf of other patients, particularly confused or distressed patients, when they could see they required assistance.

“We’ve got patients who look out for [other patients]. If a patient next to them sees that they’re having trouble doing something they’ll ring their bell for them and say, ‘Oh, nurse, she’s doing this, she’s doing that, I think she’s trying to stand up...’ which is really good.” Healthcare assistant, medical (older people) ward (E3 165-169)
b) Increased opportunity for teamwork and communication

As demonstrated by the examples provided in Box 1 above, visual and aural proximity of staff to other staff on open plan wards facilitated teamwork and communication. Staff valued being easily able to request or provide assistance where needed. Among the case study wards, surgical and medical (older people) ward staff had the highest mean scores for the items ‘Obtaining advice from colleagues’, ‘Finding a staff member’, and ‘Knowing when other staff might need a helping hand’ (mean scores >4). This reflects the Nightingale environment and larger staff teams on these wards (see chapter 4).

“I think teamwork is very good here and I think it is because you can see who’s busy and who to ask for a hand.” Nurse, medical (older people) ward (E5 172-173)

“It’s one of the lovely things about the Nightingale wards, at least we [nursing staff] can all see each other... you can go, ‘Do you want some help there?’ It’s almost like a sixth sense that you’ve got, if someone needs some help or something... by the way [a colleague is] talking behind the curtains, ‘You’re alright there?’ ‘Yes, fine [ ],’ or, ‘Yes, actually you could give me a hand if you could’.” Healthcare assistant, medical (older people) ward (E2 181-193)

“Sometimes you are faced with a situation that is difficult to manage on your own and so there’s nearly always somebody very close by that you can call. Or if maybe you were struggling a bit in any way really, whether it was communication or with a patient who was obstructive, somebody else would probably hear and come to your rescue. Those are big advantages.” Nurse, surgical ward (S3 81-85)

The open plan environment also ensured that staff were able to identify when different areas of the ward were falling behind with completing tasks, to help each other facilitating situation awareness, and ensuring the smooth running of the ward.

“[Teamwork] is facilitated by the area so we can just see everything that’s going on. I mean the girls will perhaps finish making all their beds this end [female bed area] and see that up the other end [mixed area] there’s beds to be made and people haven’t had washes so they’ll just pop off up there... and you don’t have to ask them...they’ll say, ‘Oh we’ve done that for you because we could see that you were behind.’” Nurse, surgical ward (S6 277-284)

The examples in Box 5.1 and quotations above also demonstrate that teamwork and situation awareness were additionally supported through strong leadership by ward managers and the rotation of staff through the different sections of the ward, so that all staff felt part of a team responsible for all patients and sections of the ward. During observation sessions ward managers were frequently observed on the ward ‘floor’, assisting and encouraging their team. Ward managers
were heard praising (and sometimes reprimanding) staff, actively assisting with direct care and ward-related activities such as bed making between patients. They also advised staff, for example on appropriate menu choices for patients on different diets, and drew staff attention to the introduction of new consumable designs or products.

However, as with surveillance and monitoring, there were also some important differences among the case study wards in relation to teamwork and communication. As described in chapter 4, midwives and healthcare assistants on the maternity ward spent the lowest proportion of time communicating or working directly with midwifery colleagues (14% for both staff groups), while nurses and healthcare assistants on the surgical ward spent most time on shift communicating or working directly with nursing with colleagues (approximately 26% for both staff groups). These findings reflect differences in physical layout, size (in terms of number of beds) and the organisation of work on these wards. For example, as discussed previously (see chapter 4), with more beds per section on the surgical ward, staff teams were larger and staff spent more time in proximity to a number of other staff members, whereas on the maternity ward, bed numbers in each area were lower, and staff teams were smaller.

The staff survey included the validated Teamwork and Safety Climate questionnaire (see chapter 2 for details), and the teamwork factor scores highlight these differences between the case study wards. The teamwork factor 1 (Input into decisions and collaboration from other staff) score was highest for acute assessment ward staff (at 4.167) (see table 15). Individual items in this factor (‘Decision making uses input from relevant staff’, ‘Easy for staff to ask questions when do not understand something’ and ‘Have support needed from other staff’ also received high mean scores (>4) from surgical ward staff, with medical (older people) ward staff rating ‘Doctors and nurses work well together’ and ‘Easy for staff to ask questions when do not understand something’ strongly. The teamwork factor 1 score was lowest for staff on the maternity ward (3.8). Teamwork factor 2 (information handover) was consistently strongly scored across the case study wards although again the maternity ward scored lowest (<4) (see table 16).

These findings may reflect the higher levels of situation awareness on the acute assessment, medical (older people) and surgical wards resulting from shared handover practice and high visibility of other staff on these wards (see chapter 4 for details). For example, the size and layout of the acute assessment ward meant it was easy for staff to see or locate each other, and interaction at the central staff base and in the kitchen was common. In contrast, the smaller teams, separate handovers, and physical layout of the maternity ward meant it was less easy to interact with other staff.
Table 15: Individual item and scale mean scores for Teamwork factor 1: Input into decisions and collaboration with other staff (1=Strongly disagree and 5=Strongly agree)

<table>
<thead>
<tr>
<th>Mean</th>
<th>Acute assessment (n=12)</th>
<th>Medical (older people) (n=11)</th>
<th>Surgical (n=15)</th>
<th>Maternity (n=17)</th>
<th>ALL</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff input well received on ward</td>
<td>4.00</td>
<td>3.82</td>
<td>3.93</td>
<td>3.24</td>
<td>3.71</td>
<td>55</td>
<td>2</td>
<td>5</td>
<td>.956</td>
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<tr>
<td>Decision making uses input from relevant staff</td>
<td>3.92</td>
<td>3.64</td>
<td>4.21</td>
<td>3.24</td>
<td>3.72</td>
<td>54</td>
<td>2</td>
<td>5</td>
<td>.856</td>
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<tr>
<td>Doctors and nurses work well together</td>
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<td>4.36</td>
<td>3.53</td>
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<td>3.87</td>
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<td>Disagreements are resolved appropriately</td>
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<td>3.27</td>
<td>3.93</td>
<td>3.47</td>
<td>3.65</td>
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<td>5</td>
<td>.907</td>
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<tr>
<td>Easy for staff to ask questions when do not understand something</td>
<td>4.67</td>
<td>4.09</td>
<td>4.47</td>
<td>3.82</td>
<td>4.24</td>
<td>55</td>
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<td>Have support needed from other staff</td>
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<td>3.91</td>
<td>4.27</td>
<td>3.76</td>
<td>4.00</td>
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<td>55</td>
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**SCALE: Input into decisions and collaboration with other staff**

<table>
<thead>
<tr>
<th>Mean</th>
<th>Acute assessment (n=12)</th>
<th>Medical (older people) (n=11)</th>
<th>Surgical (n=15)</th>
<th>Maternity (n=17)</th>
<th>ALL</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Know first and last names of all staff worked with on last shift</td>
<td>4.50</td>
<td>4.55</td>
<td>4.50</td>
<td>4.41</td>
<td>4.48</td>
<td>54</td>
<td>2</td>
<td>5</td>
<td>.606</td>
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<tr>
<td>Important issues well communicated at shift changes</td>
<td>4.17</td>
<td>4.18</td>
<td>4.40</td>
<td>3.53</td>
<td>4.04</td>
<td>55</td>
<td>1</td>
<td>5</td>
<td>.838</td>
</tr>
<tr>
<td>Briefings are common</td>
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<td>4.09</td>
<td>3.57</td>
<td>2.82</td>
<td>3.50</td>
<td>54</td>
<td>1</td>
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<td>3.82</td>
<td>4.33</td>
<td>4.06</td>
<td>4.04</td>
<td>55</td>
<td>0</td>
<td>5</td>
<td>.793</td>
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<tr>
<td>Satisfied with quality of communication with nurses/midwives</td>
<td>4.08</td>
<td>3.91</td>
<td>4.20</td>
<td>3.94</td>
<td>4.15</td>
<td>55</td>
<td>3</td>
<td>5</td>
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</table>

**SCALE: Information handover**

Table 16: Individual item and scale mean scores for Teamwork factor 2: Information handover (1=Strongly disagree and 5=Strongly agree)

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<th>Acute assessment (n=12)</th>
<th>Medical (older people) (n=11)</th>
<th>Surgical (n=15)</th>
<th>Maternity (n=17)</th>
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<th>N</th>
<th>Min</th>
<th>Max</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Know first and last names of all staff worked with on last shift</td>
<td>4.50</td>
<td>4.55</td>
<td>4.50</td>
<td>4.41</td>
<td>4.48</td>
<td>54</td>
<td>2</td>
<td>5</td>
<td>.606</td>
</tr>
<tr>
<td>Important issues well communicated at shift changes</td>
<td>4.17</td>
<td>4.18</td>
<td>4.40</td>
<td>3.53</td>
<td>4.04</td>
<td>55</td>
<td>1</td>
<td>5</td>
<td>.838</td>
</tr>
<tr>
<td>Briefings are common</td>
<td>3.83</td>
<td>4.09</td>
<td>3.57</td>
<td>2.82</td>
<td>3.50</td>
<td>54</td>
<td>1</td>
<td>5</td>
<td>1.077</td>
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<tr>
<td>Satisfied with quality of communication with healthcare assistants</td>
<td>4.33</td>
<td>3.82</td>
<td>4.33</td>
<td>4.06</td>
<td>4.04</td>
<td>55</td>
<td>0</td>
<td>5</td>
<td>.793</td>
</tr>
<tr>
<td>Satisfied with quality of communication with nurses/midwives</td>
<td>4.08</td>
<td>3.91</td>
<td>4.20</td>
<td>3.94</td>
<td>4.15</td>
<td>55</td>
<td>3</td>
<td>5</td>
<td>.524</td>
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</table>

**SCALE: Information handover**

75
Side room annexes on the medical (older people) and maternity wards were particularly problematic in relation to teamwork and communication. These areas had poor visibility to the staff bases and open plan sections of the ward (see ward diagrams in chapter 4). Staff working in these areas often felt isolated, found it harder to obtain assistance, and were concerned that they were unaware what was going on in other areas of the ward.

“It’s one nurse out here [on the side room annex] and although you can call for help you know that everybody else is busy on the wards so you do try and do as much as you can yourself. Whereas if you were on the ward and you saw somebody free you would say, ‘Could you just give me a quick hand,’ but it doesn’t tend to work quite like that out here.” Nurse, medical (older people) ward (E5 76-80)

“Once you get stuck in a side room with a lady, who you might be helping with breast feeding or something like that, sometimes you can be in there a good half an hour and you don’t know what else is going on. That’s the problem, you can’t hear the buzzers [nurse call system], the telephone, or the door bell [visitors’ ward entry buzzer].” Midwife, maternity ward (M4 123-126)

Staff assigned to the back bay on the acute assessment ward also felt it was a lonelier area of the ward to work.

“I think from anyone that’s out the back, they don’t get the communication as much as the other people get.” Healthcare assistant, acute assessment ward (A1 104-105)

“If you’re out at the back, you’re really ostracised, because the [staff base] and the doctors are at the front. And it’s not far, but you do kind of feel a bit like you’re on your own. If you work out at the back, then I always feel a bit like I’ve no one to talk to.” Nurse, acute assessment ward (A6 78-81)

Communication issues in side room annex areas and the rear bay of the acute assessment ward were exacerbated further by the absence of telephones in these areas.

c) Facilitation of social contact between patients

Finally, in relation to visual and aural proximity, staff were positive about patients being able to see, hear and interact with each other in shared open plan areas. Social contact between patients was seen as an aid to staff on busy wards, who might not have time to interact for longer periods with patients, and was perceived to support recovery and relieve boredom on the wards.

“If you have one end of the ward where everybody’s quite jolly, it really lifts the spirits of everybody. And it’s very distracting. If you’re sick in a room on your own and it’s quiet and all you’ve got to think about is your pain, whereas if you’ve got distractions of people walking around, talking to you, it’s a really good therapy.” Nurse, surgical ward (S6 335-339)

“Other patients will give somebody a boost, and they will talk to them [another patient] and they’ll say, ‘Oh come on, try and eat a bit more’...that helps people a great deal, if
somebody’s there talking to them... If we’ve got two people who are reasonably well and they like a chat... we do try and juggle the beds around so that they’re together, so that they can have a talk.” Healthcare assistant, medical (older people) ward (E2 138-145)

“Quite often if a patient has got visitors, they’ll start talking to the patient next to them... I think that it brightens up their day.” Healthcare assistant, medical (older people) ward (E3 169-177)

“Today in one of my rooms there’s two women and they’re just chatting and chatting and it’s passing the day for them. It’s a bit of company for each other.” Nurse, acute assessment ward (A2 270-272)

Staff did acknowledge, however, that patients did not always want to interact, and there was a sense particularly on the maternity ward that interaction among patients was becoming less and less, with women preferring not to interact with each other and to keep their curtains drawn around their beds for privacy. Interestingly, while staff on the acute assessment, surgical and medical (older people) wards tended towards rating the ward environment as very helpful for social contact between patients, staff on the maternity ward did not rate this aspect of the ward environment so strongly. This may be because of the flexible use of space on the postnatal section of the ward (see chapter 4) and issues of noise on the ward (including use of CTG monitors, and babies crying), as well as the perception that women tended to interact less than in the past, with more partners present for more of the time, and the increased use of mobile phones to keep in touch with social networks outside hospital.

“It goes in waves, and sometimes you don’t get any interaction at all, and it does vary sometimes.” Midwife, maternity ward (M3 372-379)

The absence of any patient entertainment (TVs or radios) and lack of day rooms on the wards was also felt to create problems, with patients getting bored and experiencing feelings of frustration, institutionalisation or isolation.

“People get bored and that’s when they get frustrated and that’s when we get the trouble, and so I think maybe a TV might just calm everybody down while they’re waiting for a doctor. I think it would be a really good idea just to get at least one in each bay just so people would watch it.” Healthcare assistant, acute assessment ward (A1 354-357)

“It would be very nice like a day room or something, or somewhere where we could organise to do things, because some of the patients they get so bored in the ward, sometimes they sit in there and do nothing... That would be very nice, so you can offer it to the patient ‘We’ve got a day room where you can go and you can play some games or use the television or computer’.” Healthcare assistant, surgical ward (S2 330-340)

“I think TV’s are quite a vital thing, particularly for the elderly who may not have mobiles or be able to talk to people on the phone. It would be really nice if people could have TV’s, particularly the people who are here for more than a week or so. It’s quite isolating and I
think TV’s would help connect them with the outside world, make them feel less institutionalised.” Nurse, surgical ward (S1 270-275)

5.2 Negative aspects of open plan ward environments

As discussed in section 5.1 above, staff praised the open plan ward environments in the old hospital buildings for enabling the surveillance and monitoring of patients, increasing opportunities for teamwork and communication and facilitating social contact between patients. However, there were several negative aspects associated with the open plan ward environment that were identified by staff. Table 17 shows items (statements about the current ward environment) for which the mean score was lowest (items with mean score < 2.5). The lowest mean scores related to temperature and noise, with staff tending to disagree that these were easy to adjust or control.

Table 17: Agreement with statements about current (open plan) ward
(items with overall mean score < 2.5; 1=Strongly disagree and 5=Strongly agree)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th></th>
<th></th>
<th></th>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acute assessment</td>
<td>Medical (older people)</td>
<td>Surgical</td>
<td>Maternity</td>
<td>ALL</td>
<td>N</td>
<td>Min</td>
<td>Max</td>
<td>SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easy to adjust temperature</td>
<td>1.58</td>
<td>2.18</td>
<td>1.87</td>
<td>1.59</td>
<td>1.78</td>
<td>55</td>
<td>1</td>
<td>5</td>
<td>.937</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easy to keep patient care areas quiet</td>
<td>1.50</td>
<td>2.14</td>
<td>1.73</td>
<td>1.88</td>
<td>1.78</td>
<td>51</td>
<td>1</td>
<td>4</td>
<td>.808</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Space at bedside sufficient for staff providing care</td>
<td>2.50</td>
<td>1.71</td>
<td>1.67</td>
<td>1.82</td>
<td>1.92</td>
<td>51</td>
<td>1</td>
<td>5</td>
<td>.997</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facilities provided for patients/visitors adequate</td>
<td>1.83</td>
<td>2.36</td>
<td>1.33</td>
<td>2.29</td>
<td>1.95</td>
<td>55</td>
<td>1</td>
<td>4</td>
<td>.989</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adequate space for family/visitors at bedside</td>
<td>2.25</td>
<td>2.18</td>
<td>1.87</td>
<td>1.88</td>
<td>2.02</td>
<td>55</td>
<td>1</td>
<td>4</td>
<td>.871</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff changing/lockers adequate</td>
<td>2.00</td>
<td>3.00</td>
<td>1.20</td>
<td>2.41</td>
<td>2.04</td>
<td>51</td>
<td>1</td>
<td>5</td>
<td>1.216</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff rest area aids relaxation/recuperation</td>
<td>2.75</td>
<td>3.09</td>
<td>1.53</td>
<td>1.94</td>
<td>2.24</td>
<td>55</td>
<td>1</td>
<td>5</td>
<td>1.088</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adequate space at staff bases</td>
<td>1.92</td>
<td>3.27</td>
<td>1.80</td>
<td>2.47</td>
<td>2.33</td>
<td>55</td>
<td>1</td>
<td>5</td>
<td>1.090</td>
<td></td>
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</tbody>
</table>

Several items with low mean scores were also identified by staff as key priorities for improving the current ward environment (space at patient bedsides, staff facilities including changing areas and break rooms, and staff bases), along with some additional issues including access to equipment and supplies (see figure 17).
Figure 17: Staff priorities for improving the current ward environment (for staff) (N=47; open question asking staff for up to two priorities)

Figure 17 provides a sense of issues that staff spontaneously felt were important to address in order to improve the current ward environment for staff. Staff views and experiences in relation to the five most frequently mentioned issues (space around patient beds, staff-patient ratio, access to equipment and supplies, staff bases and facilities for staff) are explored in turn below.

a) Space around patient beds

The most frequently mentioned (by 22 staff) priority for improving the current ward environment was the lack of space around patient beds. Mean scores were lowest for ‘Space at bedside sufficient for staff providing care’ for the older case study wards at Kent & Sussex (surgical and medical (older people) wards), and was also low (<2) for maternity ward staff (see table 17). Problems created by lack of space included risk of musculoskeletal injuries, trip hazards, and a perceived increase in time required to undertake tasks. Lack of space for staff to provide nursing care to patients emerged as a key constraint experienced by staff in the open plan environment, and was a core theme identified through interviews with staff.

“Sometimes there’s no room to even get an [observation] trolley in and you’re moving bags or patients’ property and it can be quite time consuming to do that... it is quite confined and quite small and there’s not much room to move.” Nurse, acute assessment ward (A2 82-87)

“When you want to hoist someone...it takes so much time, you’ve got to move the bed that side, you’ve got to move the [other furniture], you know. It’s so, so much energy doing that, rather than if there was enough space, you just wheel it in, hoist your patient, take them away, and that’s it. But then we’ve got to manoeuvre this, manoeuvre that... And already there’s so much to do.” Nurse, medical (older people) ward (E6 236-242)

“You’re banging into the next patient’s chair or locker and stuff like that. It’s really tight around the bed space, and when you’re trying to move things and when people have got drip
stands and goodness knows what there is hardly any space at all, and when trying to get a commode in there you’re fighting with everything really.” Nurse, surgical ward (S4 322-326)

“It’s amazing around the bed spaces that people haven’t hurt themselves and fallen over the wires and cords and things, the drips, the catheter bag stands and wires that go from the pumps to the sockets and God knows what else there is.” Midwife, maternity ward (M3 442-445)

Staff took photographs illustrating the lack of space for working. The lack of space inevitably meant adjacent space (either other patients’ bed spaces or walkways) was encroached upon, and staff were frequently observed rubbing against curtains or having to exit from one side of the curtains and re-enter through the other side in order to perform care tasks. Describing responding to a recent cardiac arrest that had occurred on the acute assessment ward, a nurse interviewee explained:

“The other patients...they had to listen to everything that was going on. We didn’t have enough space in the area, you’ve got lots of people around [the bed]...about nine of you in this teeny tiny space, it’s not practical.” Nurse, acute assessment ward (A4 40-43)
Privacy curtains were often difficult to pull round and did not pull freely. Glazed or other partitions subdividing open plan wards or screening staff bases further reduced space at patient bedsides. Curtain rails also presented a vertical obstacle when using mobile hoists (this was an issue for transferring bariatric patients). Staff described having to ‘reach all over the place’ and ‘climb over stuff’, commenting that this was a cause of back injury. Limited space around beds also restricted access to clinical hand wash basins and alcohol hand gel dispensers. Hand-hygiene compliance was observed to be extremely high, with staff frequently seeking basins and hand gels, in spite of the awkward access to basins and hand gels.

“The only basin for washing your hands in, for [those] twelve patients, is in that bed space. And once a bed is in there, you can’t get to the sink to wash your hands. You can just get in there, but if you start to wash your hands, water goes over the patient’s bed and what have you, so, no, you can’t.” Nurse, surgical ward (S6 52-58)

“They [staff] can’t always get to a gel either; they always seem to be miles away and not there. You look for your gel and it’s over six bags on the locker and the baby’s cot as well over there, so you have to go next door and get some more from there.” Midwife, maternity ward (M3 345-353)

Space issues extended to patient toilet and bathroom facilities, with lack of space in toilets and showers making it difficult for staff to assist patients and creating obstacles for patients attempting to mobilise independently. Distances to toilets, too few toilets in some areas (for example, 4 toilets for 24 beds on the female and mixed sex areas of the surgical ward), and non-accessible toilets meant patients having to use commodes, resulting in a lack of dignity and independence for patients and extra work for staff.

“This morning... in the space of half an hour we had to turn five commodes because it was morning, eight o’clock, people wake up, ‘Oh I need the toilet’ and because it’s morning they are not that up on their feet yet ... they can’t move that much so they have to have the commode. It’s heavier. Afterwards you have to clean the commode, which takes a lot of time, so it’s heavier.” Healthcare assistant, surgical ward (S5 81-86)

Some ward areas had good sized wet rooms which staff described in very positive terms, but there was variation between areas. The acute assessment ward had one over-bath shower which was inaccessible for mobility-impaired patients and rarely used. Enclosed shower cubicles were viewed as problematic in the hospital environment, and wet rooms with restricted access were associated with risks for both staff and patient safety.

“The shower in the men’s [section] has got like a partitioned bit. So when you wheel in a patient on a commode to shower them, you can’t actually move round that patient to shower. You can only stand behind. And it’s slightly on a slope as well, so if you try and take the wheels off the commode and the brake off, the patient sort of slides, and if you’re not ready you’ve sort of gone with the patient.” Healthcare assistant, medical (older people) ward (E3 111-115)
“Often when they have a shower post-section quite a lot of them do faint and it’s quite difficult to actually get in with a wheelchair and to try and get them into the wheelchair. I’ve had loads of episodes where I’ve just not been able to get ladies out, and it’s just been a bit of a nightmare... because it’s only a tiny corridor to actually get into the bathroom, and trying to manoeuvre a chair up there and then trying to get the lady in.” Midwife, maternity ward (M4 369-385)

b) Staffing levels

The second most frequently mentioned priority for improving the current ward environment was improving staffing levels. ‘Levels of staffing on this ward are sufficient to handle the number of patients’ had the lowest mean scores of all the safety climate items for safety climate factor 2 (overall confidence in safety of organisation)(see table 18). The score for this item was lowest for maternity ward staff, and also low (<3) for surgical and medical (older people) ward staff.

Table 18: Individual item and scale mean scores for Safety climate factor 2: Overall confidence in safety of organisation (1=Strongly disagree and 5=Strongly agree)

<table>
<thead>
<tr>
<th></th>
<th>Acute assessment (n=12)</th>
<th>Medical (older people) (n=11)</th>
<th>Surgical (n=15)</th>
<th>Maternity (n=17)</th>
<th>ALL N</th>
<th>Min</th>
<th>Max</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levels of staffing sufficient</td>
<td>3.25</td>
<td>2.64</td>
<td>2.40</td>
<td>2.29</td>
<td>2.60</td>
<td>55</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Would feel safe as patient</td>
<td>3.83</td>
<td>3.45</td>
<td>3.57</td>
<td>3.41</td>
<td>3.56</td>
<td>54</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Trust management does not compromise patient safety</td>
<td>3.00</td>
<td>3.18</td>
<td>3.47</td>
<td>3.06</td>
<td>3.18</td>
<td>55</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>SCALE: Overall confidence in safety of organisation</td>
<td>3.36</td>
<td>3.09</td>
<td>3.10</td>
<td>2.92</td>
<td>3.10</td>
<td>54</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

Interestingly, the physical environment did seem to have some impact on the deployment of staff. Specifically, on two of the case study wards, open plan ward sections which were visually and aurally adjacent to other shared the support of a healthcare assistant. In the case of the maternity ward, the antenatal and transitional care sections of the ward shared one healthcare assistant (see chapter 4 for diagram of the ward layout, including details of bed numbers and staff deployment). Separate staff bases (and shift handovers) for each section (as outlined in chapter 4), resulted in a lack of coordination of the work of the ‘shared’ healthcare assistant.

“Sometimes they’re [healthcare assistants] just so pulled between the two of us [midwives on each area], they’re so busy... Last Friday I wrote an IR1 [Incident Report form for reporting adverse incidents, hazards and ‘near miss’ events] because it was just so awful.” Midwife, maternity ward (M3 44-47)
The lack of confidence in staffing levels was possibly further exacerbated by the proportion of time (10%) health care assistants on the ward were required to spend off the ward, escorting and transferring patients (e.g. accompanying mothers or delivering expressed milk to the Special Care Baby Unit) and undertaking ward-related tasks (e.g. delivering blood samples and fetching drugs from the pharmacy).

Similarly, on the surgical ward, the visually and aurally adjacent mixed sex and female/side room sections were supported by three, rather than four, healthcare assistants covering 24 beds, compared to two healthcare assistants for 11 beds on the male section. Unlike on the maternity ward, shift handover was taken for both these sections (mixed sex and female/side room) of the ward, which was felt to help with the smooth running of these areas, but despite this, staff felt that the male area was staffed ‘correctly’, and there was a general perception among surgical ward staff that working on the male area of the ward was easier because of this.

On the medical (older people) ward, the high visibility of patients on the open plan sections of the ward also meant staff were usually expected to safeguard confused and wandering patients without additional assistance.

“Sometimes we have two, three wandering [patients] at the same time... we have got to sacrifice someone [staff member] from the numbers, and already we are thin on the ground. Taking that one person...leaves the other patients without enough care. But it has to be done, because the work has to be done as well.” Nurse, medical (older people) ward (E6 250-261)

c) Access to equipment and supplies

Another perceived obstacle to delivering care in an effective and efficient way was access to equipment and supplies. There were two different issues which affected staff access to equipment and supplies. First, ward support areas, comprising clean utility room (medication and dressings storage and preparation area, also referred to as treatment room by staff), dirty utility room (sluice), equipment and consumables store(s), linen room, and kitchen, were dispersed across the wards (see descriptions and ward diagrams in chapter 4 for details). This meant that staff often had to walk some distance from the section they were working on to access required items.

“The linen room, the sluice...they’re kind of spread out, and you’re having to go here, there and everywhere to maybe get what you need.” Nurse, acute assessment ward (A2 235-237)

“When doing [meals and making toast or soup for patients, or providing meal-replacement drinks] and you’re working [on] the[mixed sex section] I found that the kitchen is too far... you have a long walk and... you get stopped maybe five times. You never get where you’re going to.” Healthcare assistant, surgical ward (S2 161-165)

Where there was only one item of equipment on a ward (e.g. wheelchair weighing scales; portable bladder scanner) the lack of centralised storage space, always meant it was further for some staff to access.
The foundation modules of ‘Productive Ward’ were being undertaken across the Trust at the time of data collection, and had resulted in some decentralisation of ward support facilities (for example, an additional linen trolley on the acute assessment ward to facilitate the storage of linen closer to the back bay), and rationalisation of storage (for example, all items required for catheterisation being stored in one location to reduce walking times). However, in spite of this, limited storage space on wards generally meant it was not always possible to store items close to where they were needed, and ward support areas were often cluttered, making it difficult to access equipment and supplies and limiting the space available to work.

“We should have more than one [drugs trolley]. I think we should have one at the back and we should find a space somewhere and have one at the front, because I just hate being in the front and having to walk five different times back around the back to get my drugs... oh, it’s just a disaster. It takes so long... I know they say, ‘Oh, where would we put it?’ but I’m sure we could find some space.” Nurse, acute assessment ward (A6 342-359)

“When drip stands aren’t in use...they’re popped in there [equipment store room]...then we can’t get to the drawers that have our moving and handling slide sheets in, also oxygen therapy equipment...all our TED [thrombo-embolus deterrent] stockings... So that is very limited and not very safe when you’re trying to get through. You[ ] have to take all the drip stands out.” Nurse, surgical ward (S6 138-144)

“The sluice room in 11A is quite cluttered. It’s difficult even when you go with the commode to clean it, there’s not much space there. There’s laundry, bins, everything and really in such a small, tiny room it’s quite a lot.” Healthcare assistant, surgical ward (S5 92-94)
Lack of dedicated storage space meant equipment and supplies were often stored in corridors or patient care areas, further reducing available room in these areas and creating obstacles for the easy movement of staff, patients and beds. Equipment and supplies were also stored in patient toilets and bathrooms, meaning they would need to be moved out before facilities could be used.

The second issue affecting access to equipment and supplies was its availability. Staff were frequently observed during observation sessions searching for equipment, particularly drip stands, portable observation machines and digital ear thermometers. Charging of observation machines seemed to be problematic (despite staff religiously plugging them into the mains when not in use), meaning staff might have to stop mid-task and locate another one.

“Recently we’ve had a shortage of drip-stands. Looking around for things like that is really frustrating when you’re busy, you don’t really want to be taking up your time looking for a drip-stand that you feel should be there, that’s really irritating.” Nurse, surgical ward (S1 101-104)

“There’s only one Dinamap [blood pressure monitor] for the whole [postnatal area], and across the way they’re using one Dinamap for two [areas]. So if it’s full and you’re trying to go round and do an [observation round], you know, we’ve got maybe one manual blood pressure... an extra Dinamap would [ ] be [ ] beneficial.” Midwife, maternity ward (M4 107-111)

“I don’t think I’ve ever managed to get an [observation] round done without the machines stopping or running out of battery and I think that’s just so time consuming.” Nurse, medical (older people) ward (E5 129-134)

d) Staff bases

Staff bases were also highlighted as an area of the ward in need of improvement. Space at staff bases varied, but was generally considered inadequate, particularly as bases were usually shared with doctors, allied health professionals and ward clerks during the day. Doctors and allied health professionals were described as ‘dominating’ and ‘taking over’ staff bases, reducing nursing and midwifery staff access both to space for undertaking documentation, but also access to the limited number of PCs and telephones on the wards.

“All the doctors... sit at the [staff base]..[It means] not having access to the computers because the doctors dominate the area, or even a chair just to sit down to write your notes.” Nurse, acute assessment ward (A4 41-55)

“There’s pharmacists, the doctors waiting, I’m waiting, and we all want to log into one computer, which is like time wasting... And by the time they’ve finished...I’ve got to go and start medication, or do something else... You’re having to remember to come back... And sometimes you’ve got to rush at the last minute, like, ‘Oh my God, it’s already 8.25 pm, oh, I haven’t entered that, I haven’t done that’.” Nurse, medical (older people) ward (E6 192-213)
“You often have nurses sitting there, then you’ll get physios and OT coming along, they might want to sit down and there’s only one screen [PC] in the ward and that’s really not enough, we need more screens [PCs] to be effective because you’re waiting to use the screen [PC] and so it would be useful to have more computer stations... it would be nice to have greater access.” Nurse, surgical ward (S1 170-175)

“The doctors want to come in and write things in there, and it’s just not big enough. We could do with a much more sensible area, if you like, either a central area where everybody can go and write their notes in or bigger spaces in the rooms that we’ve got, because there is just not enough. Given the amount of paperwork that’s involved these days it really isn’t adequate.” Healthcare assistant, maternity ward (M1 258-263)

Photo 16: Staff photo illustrating medical staff dominating the staff base (acute assessment ward (A4.2))

e) Staff facilities

Staff breaks were usually short in duration (for example, two 30-minute breaks over the 13.5 hour day shift on the elderly care ward), meaning that there was little time for staff to leave the ward (and in any case, staff were often required to remain on the ward during breaks in case they were needed, particularly if the ward was short-staffed). Staff were grateful when they had break rooms
on the wards, allowing them to ‘get away’ from the ward to unwind or rest, as well as to eat and drink.

“We are really grateful that we’ve got our own staffroom... we [ ] have our coffee breaks and our tea breaks in there. And we can have all our chats. And you can go for a snooze if there’s no one else in there when you have your lunch break, sit there, you know, just relax, chill out, which is a good thing about that.” Nurse, medical (older people) ward (E6 339-344)

Acute assessment ward staff had to share the break room on the A&E ward, and so could not always leave the ward to take a break. Instead, staff here relied on the space in the kitchen which was around a corner and therefore out of sight of patients, relatives and visitors (see ward diagram in chapter 4) to get a few moments ‘away’ from the ward.

“You can have a quiet few minutes and if you want somewhere private to talk to somebody, another member of staff particularly, we go in there...It’s kind of like our little bolt hole and it’s the only place in the entire department where you can do it. The sluice you can’t, the treatment room you can’t, it’s the only place where you cannot be seen.” Nurse, acute assessment unit (A5 74-88)

On the surgical ward, the break room was often used for meetings by other health professionals, and staff felt they did not always get a ‘proper’ break.

“Sometimes you come in [the staff break room] and there’s a lot of people here, but I understand they’re doing their jobs, you know. But you work a twelve hour shift and you attempt in your lunchtime to get away for a little bit... Sometimes they do meetings in here...and you need to move to the [ward manager’s]... it is okay to be in there, but sometimes she needs to be doing her stuff as well and you feel a little bit... you know, you need a little bit more space for rest... our place where you can chat with your colleague or just rest, or nice in silence like that.” Healthcare assistant, surgical ward (S2 183-195)

“A staff room, just where we can rest. Like today we had to take turns on the chair to eat lunch. I’d finished so I said, ‘Oh yeah you can go now and take my chair and have lunch.’” Healthcare assistant, surgical ward (S5 320-322)

Staff break rooms usually had limited facilities and staff would have to fetch water or carry hot drinks from the ward kitchens. Staff break rooms were also observed to be generally dark, cold and shabby, and were often multipurpose serving not only as meeting rooms for all staff, as outlined above, but rooms for storage or clutter such as equipment or files.

“I think it [staff rest room] could be a lot nicer, do you know it definitely could and the drain smell in the back, that sort of thing. The room smells quite bad, especially this past week with the hot weather. I don’t know what it is, again it could be more light, more airy.” Nurse, acute assessment unit (A2 293-296)
“It’s not the most pleasant of staff rooms, it’s not very conducive to relaxing… it’s quite compacted and it’s not very bright and cheerful.” Nurse, medical (older people) ward (E5 149-153)

“There are no sofas in it, as you can see [ ] people’s bags and coats, and it’s usually like a stock room… There’s normally stuff piled... It’s normally quite cold in here as well, it’s got the old window.” Student Midwife, maternity ward (M5 202-210)
Staff also commented that the lack of staff toilets was problematic, meaning staff often had to go away and return later to use facilities. This was particularly an issue on the maternity and surgical wards, where there was only one toilet between all staff on the ward (including ward clerks, other health professionals and domestic staff). The toilet on the maternity ward was located on the antenatal area, meaning midwifery staff on the postnatal area had to walk across the link corridor to the other section to use it, and staff on the maternity wards complained that they often ended up not going to the toilet for the entire shift because they could not simply ‘nip to the loo’. There was also a lack of lockers and changing space, meaning staff belongings were not secure, or were stored at staff bases further reducing space in these areas.

“Toilet facilities are horrendous, one toilet for all of us, doctors, nurses, domestics - horrendous. So many times you walk up and there’s somebody in there. ..[The] changing facilities... [are] totally inadequate, totally. We know we’re not supposed to come to work in our uniforms...but there’s nowhere to hang your clothes, there’s nowhere to change.” Nurse, surgical ward (S6 413-419)
5.3 Looking forward to a new physical environment

Most staff had undertaken the induction programme (including tour of the new hospital) at the time of responding to the questionnaire and taking part in interviews, and so had some understanding of the physical layout of the new hospital, and how staff might be deployed on the wards. Prior to the move, staff were anticipating a number of improvements relating to the new physical environment, but were also concerned about several potentially negative impacts. These hopes and concerns are explored in turn below.

5.3.1 Anticipated improvements associated with the new hospital build and 100% single rooms

As shown in table 19, there was a strong view among staff that all single room wards would be better than the old accommodation for patient sleep and rest, patient privacy, infection control, confidentiality and ease of taking patients to toilets and bathrooms.

Table 19: Staff perceptions on whether 100% single room ward will be worse or better than current ward (highest mean scores; 1=Much worse and 5=Much better)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient sleep and rest</td>
<td>4.92 4.36 4.87 4.59 4.69</td>
<td>55</td>
<td>3</td>
<td>5</td>
<td>0.505</td>
</tr>
<tr>
<td>Patient privacy</td>
<td>4.75 4.45 4.86 4.59 4.67</td>
<td>54</td>
<td>3</td>
<td>5</td>
<td>0.583</td>
</tr>
<tr>
<td>Preventing/controlling</td>
<td>4.83 4.36 4.87 4.47 4.64</td>
<td>55</td>
<td>3</td>
<td>5</td>
<td>0.522</td>
</tr>
<tr>
<td>hospital-acquired infections</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintaining patient</td>
<td>4.33 4.00 4.87 4.18 4.36</td>
<td>55</td>
<td>0</td>
<td>5</td>
<td>0.93</td>
</tr>
<tr>
<td>confidentiality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ease of taking patients</td>
<td>4.58 3.73 4.47 4.47 4.35</td>
<td>55</td>
<td>0</td>
<td>5</td>
<td>1.004</td>
</tr>
<tr>
<td>to toilet/bathroom</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Staff also indicated up to two aspects of the new hospital that they were most looking forward to, in response to an open question (see figure 18). Again, patient privacy featured strongly (being mentioned by 22 staff), as did improved patient sleep and rest (mentioned by 15 staff), improved patient toilet and bathroom facilities (mentioned by 9 staff), and improved infection control (mentioned by 6 staff). Staff were also looking forward to a modern working environment and more space around patient beds. Staff views on improvements in relation to patient experience and work environment for staff are discussed in turn below.
Figure 18: What staff were most looking forward to in relation to the move to 100% single rooms in the new hospital (N=51; open question asking staff for up to two aspects)

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved patient privacy</td>
<td>22</td>
</tr>
<tr>
<td>Modern working environment</td>
<td>21</td>
</tr>
<tr>
<td>Improved patient rest and sleep</td>
<td>15</td>
</tr>
<tr>
<td>More space around patient beds</td>
<td>12</td>
</tr>
<tr>
<td>Improved patient toilet/bathroom facilities</td>
<td>9</td>
</tr>
<tr>
<td>Improved infection control</td>
<td>6</td>
</tr>
<tr>
<td>Other</td>
<td>12</td>
</tr>
</tbody>
</table>

**a) Improvements for patient experience**

Staff were looking forward to improved privacy, sleep and rest for patients. Single rooms would also ensure that patients would not be disturbed as in the old accommodation, for example by general ward activity, or by other patients, which could create anxiety.

“Lots of stuff is happening like we are serving supper at the same time as the domestics are cleaning the bed, which they try not to clean it just when people are eating but sometimes we are in a hurry for the bed, so they have to... you’ve got all the things that patients don’t need to see but because we are an open ward you can see everything.” Healthcare assistant, surgical ward (S5 111-119)

“On [the antenatal area], because you’re doing sort of CTGs the whole time [ ] you can always hear like other peoples’ babies’ heartbeats going on... it’s so noisy on there, whatever happens you can hear. Like the other day...someone delivered on the ward [because there wasn’t enough time to get her to the Delivery Suite] and... The other women on the ward they were just sort of looking as if to say, ’Is this really what it’s going to be like?’ and so in that sense it’s not good.” Student midwife, maternity ward (M5 390-398)

En suite toilets and showers for all patients were also considered to be a major advantage of the new hospital, overcoming issues such as reduced availability of toilets due to allocation of facilities to individual patients being barrier nursed, and distances to toilets prohibiting patients from using them independently.
“If someone is barrier nursed...that means there’s only one toilet for the rest of everybody [11 patients], and on a colorectal ward, [that’s] very inadequate really... And obviously, if you’re in the bed [at] one end of the section... and the toilet is the other, it’s quite a long way to walk for elderly people, a long way. So we’d either have to push them in a chair or help them walk. Their independence to toilet themselves has gone a bit really, because it’s such a long distance.” Nurse, surgical ward (S6 95-108)

Staff also felt that single rooms would facilitate better nurse-patient relationships. An ironic by-product of the visual and aural proximity of patients and staff meant that personalised interaction with patients was often limited.

“I think the advantage will be that you can give holistic care probably much better, and I think the whole situation in nursing will enable you probably to build up an even better relationship with your patient because you’re spending single [one to one] time with them, literally within four walls and I think you’re probably going to communicate more with them.” Nurse, surgical ward (S3 160-166)

“It [will be] nicer to look after them [patients], immediately when you enter the room you [will be] greeted. In here because we are ‘in touch’ [in visual and aural proximity to patients], you don’t have much interaction. Of course you say, ‘I’m going to take your blood pressure’ but in [the single rooms] probably there will be more communication with them.” Healthcare assistant, surgical ward (S5 238-241)

b) Improvements to working environment for nursing and midwifery staff

Staff were looking forward to better organised ward areas, with an improved layout. In particular, staff were looking forward to having staff bases located in close proximity to patient rooms, centralised ward support areas with sufficient space for all equipment and supplies to be stored in the ‘correct’ place.

“Everybody has direct access...everything is just there... everything within arm’s reach. In the new hospital, you just come out of a [patient] room and you’re facing almost everything you need, your treatment room, your station [staff base] and everything’s just there, whereas here it’s just maybe not.” Nurse, acute assessment ward (A2 306-309)

Staff were also looking forward to improved space around patient beds, and considered the single rooms in the new hospital to be sufficiently big to facilitate efficient and effective care delivery. Staff on wards where single and double side rooms were not en suite (acute assessment and surgical ward) were also looking forward to improved infection control.

“You can’t effectively barrier nurse somebody with diarrhoea and vomiting if they have to come out to use a toilet or if we have to wheel a commode all the way through the ward to
the macerator…but that’s all we can do really, keep it covered, wheel it down, get rid of it.”
Nurse, surgical ward (S6 498-502)

5.3.2 Concerns associated with the new hospital build and 100% single rooms
Preferences for ward design in the new hospital were mixed, with a majority (75%; n=41) of staff responding to the survey indicating a preference for at least half or more beds in bays, while a minority (25%; n=14) indicated a preference for more or all beds in single rooms (see figure 19).

Figure 19: Staff preferences for ward design in the new hospital (N=55)

As shown in table 20, there was a strong view among staff that all single room wards would be worse than the old accommodation for the ability of patients to see staff, monitoring patients, social contact between patients, knowing when other staff might need a helping hand and risk of patient falls.

Table 20: Staff perceptions on whether 100% single room ward will be better or worse than current ward (lowest mean scores; 1=Much worse and 5=Much better)

<table>
<thead>
<tr>
<th></th>
<th>Acute assessment</th>
<th>Medical (older people)</th>
<th>Surgical</th>
<th>Maternity</th>
<th>ALL</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability of patients to see staff</td>
<td>1.17</td>
<td>1.45</td>
<td>1.80</td>
<td>1.47</td>
<td>1.49</td>
<td>55</td>
<td>0</td>
<td>4</td>
<td>.879</td>
</tr>
<tr>
<td>Monitoring patients</td>
<td>1.50</td>
<td>1.50</td>
<td>1.87</td>
<td>1.24</td>
<td>1.52</td>
<td>54</td>
<td>0</td>
<td>4</td>
<td>.771</td>
</tr>
<tr>
<td>Social contact between patients</td>
<td>1.25</td>
<td>1.90</td>
<td>1.60</td>
<td>1.47</td>
<td>1.54</td>
<td>54</td>
<td>1</td>
<td>5</td>
<td>.794</td>
</tr>
<tr>
<td>Knowing when other staff might need a helping hand</td>
<td>1.50</td>
<td>1.55</td>
<td>2.07</td>
<td>1.59</td>
<td>1.69</td>
<td>55</td>
<td>0</td>
<td>4</td>
<td>.960</td>
</tr>
<tr>
<td>Minimising risk of falls/injury to patients</td>
<td>1.17</td>
<td>1.45</td>
<td>2.20</td>
<td>2.65</td>
<td>1.96</td>
<td>55</td>
<td>0</td>
<td>5</td>
<td>1.305</td>
</tr>
</tbody>
</table>
Staff also indicated up to two aspects of the new hospital that they were most concerned about, in response to an open question (see figure 20). The most frequently mentioned concern was monitoring patients (mentioned by 29 staff), followed by patient isolation (mentioned by 26 staff). Staff were also concerned about an increase in falls or not seeing falls when they happened, staff isolation and safety, and whether the staff-patient ratio would be sufficient for single rooms.

**Figure 20: What staff were most concerned about in relation to the move to 100% single rooms in the new hospital (N=53; open question asking staff for up to two concerns)**

<table>
<thead>
<tr>
<th>Concern</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitoring patients and preventing falls in the single room ward environment</td>
<td>29</td>
</tr>
<tr>
<td>Patient isolation</td>
<td>26</td>
</tr>
<tr>
<td>Falls increase/not seeing falls</td>
<td>20</td>
</tr>
<tr>
<td>Staff isolation/safety</td>
<td>11</td>
</tr>
<tr>
<td>Improved staff-patient ratio/quality time with staff</td>
<td>9</td>
</tr>
<tr>
<td>Responding to patient calls for assistance</td>
<td>6</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
</tr>
</tbody>
</table>

a) **Monitoring patients and preventing falls in the single room ward environment**

Staff were concerned that single rooms would make it harder and more time-consuming to keep an eye on patients.

“It’s not like being on the ward where you can just walk past and think, ‘Oh that lady looks a bit off-colour, she hasn’t got her drink topped up.’ You have to make sure that you go in and check all the time, so as soon as you have finished then you’re back round checking everybody and you have to physically go in and see that they’re alright.” Nurse, medical (older people) ward (E5 82-87)

Staff were also concerned about the impact of single rooms on patient falls. There was a common perception that the open-plan environment prevented falls, and even where it did not, staff were able to respond immediately.

“I do believe that in the new hospital there will be a lot more falls... these are old people who aren’t particularly steady on their feet. If I can talk about a little while ago when we had four patients on the men’s end, all of which were wandering patients, all that were ‘special’,

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because you couldn’t turn your back without them standing up and trying to move off... I think there will be a lot more falls. Will we get to them in the right amount of time? I don’t think we will...And it’s alright saying, ‘Yes, but they could push their bell.’ ... A lot of them don’t push their bells because it means nothing to them. A lot of them pick it up and think it’s a telephone, you know?” Healthcare assistant, medical (older people) ward (E3 244-253)

“To have a confused patient in a room on their own is going to be quite dangerous and I think that’s going to lead to more incidents happening. That’s a big concern for lots of staff. I think they’re worried about how they’re going to maintain a safe environment for their patients.” Nurse, surgical ward (S1 225-228)

b) Patient and staff isolation

Staff were concerned that patients might feel isolated in single rooms.

“Some of them don’t have family, and they would feel lonely or alone all the time, and of course we don’t have the time to spend half an hour at a time with them, you know what I mean? You can’t. And then maybe it would then be worse for them. On the ward now they can see us, have a joke with us, talk with us and still see that something’s happening around them, but if they were in single rooms: nothing. Come on, no one wants to watch TV all the time.” Healthcare assistant, medical (older people) ward (E1 196-201)

Staff were also concerned about their own isolation. In contrast to the teamwork and communication discussed in sections 3.1.3 and 3.2.1 above, staff anticipated that single rooms wards would entail an increase in lone (and lonely) working.

“I think it’s going to be quite lonely nursing. I think it might sometimes be difficult to leave the single side rooms because I think the patients will like you being in there, having a little chat.” Nurse, surgical ward (S3 160-162)

“We’re going to be a bit more isolated...it’s going to be very different being a bit more isolated in your side rooms and you could walk up and down and not pass anybody for ages.” Nurse, surgical ward (S6 374-379)

“The down side is the isolation, never seeing anybody, never seeing other members of staff.” Midwife, maternity ward (M6 331-332)
Summary

- Staff emphasised that open-plan ward environments had some key advantages in relation to surveillance and monitoring of patients, staff teamwork and communication and social contact between patients.

- Staff felt the old open-plan ward environments could be improved for staff, particularly in relation to space around the beds, staff-patient ratio, access to equipment and supplies, staff bases and facilities for staff.

- Staff felt that the new hospital and single room wards would be much better for patient privacy, sleep and rest.

- Improved space around patient beds, with en suite toilet and shower facilities were perceived to be a massive improvement on current facilities, ensuring better patient experience, as well as making it easier for staff delivering care and assisting patients.

- The layout of wards in the new hospital, with centralised ward support facilities, was also felt to be an improvement on the existing dispersed support areas.

- Pre-move staff concerns about the single room wards in the new hospital mirrored those aspects they felt were positive about the old accommodation. Staff were concerned that not being able to see or hear patients and other staff would impact on staff ability to monitor patients, and lead to an increase in patient falls, as well as patient and staff isolation. These concerns may have influenced staff preferences for ward design in the new hospital, with 75% of staff responding to the survey indicating a preference for at least half or more beds in bays.
Chapter 6: IMPACT OF THE PHYSICAL ENVIRONMENT ON PATIENT EXPERIENCE

Introduction

This chapter presents findings from the analysis of 32 in-depth interviews conducted with patients. Patients who participated in interviews described both positive and negative experiences of the physical environment and shared patient accommodation during their hospital stay. Interviews were first analysed inductively, with themes emerging from the data. There is limited research which explores the impact of the ward environment on patient experience, but there are some qualitative interview studies that are relevant, and a consideration of themes found in the literature was incorporated into a second analytical process. A combination of inductive and deductive analytical approaches revealed three key dimensions of experience that were influenced by the physical environment and contributed to patients’ overall positive or negative experience of shared accommodation. These dimensions were security, community and physical comfort. Each dimension, and the ways in which the physical environment affected patient experience, is discussed in detail below, drawing on relevant evidence from the literature. Finally, patient views on single room accommodation are presented.

6.1 Security

Previous research has found that hospitalised patients feel a lack of security if staff are inattentive or not in close proximity (Shattell 2001), and that emotional comfort is negatively affected when patients feel that assistance is not easily obtainable (Williams et al. 2008). Lasiter (2011) explored older ICU patients’ perceptions of feeling safe and identified four key factors influencing patient experience. Patients felt safe when they were able to obtain assistance (initiative), when nurses were monitoring them (oversight), where nurses were competent and professional (predictability), and where nurses were in close proximity to patients (proximity). While Lasiter’s (2011) study involved a very specific patient group with particular vulnerabilities, the key components for older ICU patients’ perceptions of feeling safe were also identified in this research. Also of relevance to this research is the finding highlighted by Maben et al. (2012), that patients also base their evaluations of the quality of care on the care they witness other patients receiving. Interviews with patients who had received care on the four case study wards revealed that the physical environment influenced patients’ perceptions of security and feeling safe in a number of ways. First, shared patient accommodation and an open ward environment with the staff base or nurses’ station visible from patient beds enabled patients to see staff and evaluate their competence, leading to a sense of safety. Second, the open ward environment also meant staff were close by at all times, and this proximity also increased patients’ perceptions of security. Third, shared patient accommodation allowed patients to witness the way staff cared for and treated other patients, and this witnessed care of others was an important factor in patients’ feeling they were in a safe environment. Fourthly, the social context of the open ward environment, in which patients are able to engage with staff as they go about their duties, was a source of comfort to patients.
This section discusses patients’ positive experiences of competence, proximity, witnessed care of others and the social context in the open ward environment, before going on to highlight negative experiences associated with the physical environment and its influence on perceptions of security.

6.1.1 Competence

As for patients in Lasiter’s (2011) study, it was important that staff on the case study wards were perceived by patients to be competent and know what they were doing. Patients described staff as ‘efficient’, ‘professional’, ‘on the ball’ and ‘doing their job’. The open ward environment allowed patients to observe staff going about their duties, and seeing staff behaving in a professional and efficient manner was important in patients’ perceptions of safety and security.

“\"When I got up there [onto acute assessment ward] I told the nurse that I was diabetic, and they immediately got a sandwich and some tea for me. And then that nurse was so good, she just went round all night checking on you and giving you drugs. Just very nice and quiet.\"”
Patient, acute assessment ward (female – age 70, A2 113-119)

“They were checking my blood pressure, doing all the obs. That was constant. Then obviously once I felt better, they gave me a cup of tea, something to eat. But they were doing their job, there were no two ways about that.” Patient, acute assessment ward (male – age 46, A4 65-70)

“\"Everyone seemed to be on the ball, they obviously had to come round and check you for temperature and everything like that and give you your [medications]. I was on steroids and other things, you know. Everyone was well turned out and very cheerful, just what you’d expect really.\"” Patient, surgical ward (female – age 67, S3 256-259)

“They kept a pretty keen eye on me I think. Lots of blood taken, lots of checks all day, and during the night. So I was pretty well looked after, I thought...And they were very kind, very efficient, and nothing was too much trouble... I was impressed by their efficiency, they all seemed to know what they should be doing, no one was wandering round saying, ‘Am I doing this right,’ [ ] It’s all spot on.” Patient, surgical ward (male – age 71, S10 70-72; 283-284)

6.1.2 Proximity

Proximity of staff was also considered important. Patients felt safe where staff were within ‘calling’ distance, and could respond immediately when patients called them or used the nurse-call system. Patients valued staff being close enough to identify any problems or observe when patients were in distress.

“You were so close to the station anyway so if something did go wrong you could call somebody. They didn’t draw the curtains so they could all see you all night and I thought it was not bad at all... they did keep a good watch on you.” Patient, acute assessment ward (female – age 55, A5 100-112)

“You could always see that there was a nurse there...at that desk [nurses’ station], or in that ward. You were never ever left alone sort of thing. And to me that’s important because if
you press the buzzer, they look up, they’re with you within seconds...One night...I’d been given the Tunbridge Wells beer, as they call it,...it’s an enema...I woke up in the middle of the night, and I knew I’d made a mess, and I sat up and the nurse more or less heard me sit up, and I just called her over. So I didn’t have to shout, didn’t have to...again, I thought, ‘There you are, that’s good, having them right there,’ in the middle of the ward really.” Patient, surgical ward (male – age 73, S6 190-207)

6.1.3 Witnessed care of others

This study has found that sharing accommodation meant patients were able to directly observe how staff cared for and treated other patients in their ward area, and this observation also contributed to patients’ overall experience of personal security. Patients felt comforted by observing staff ensure all patients were washed and had enough food and drink. Watching staff responding promptly to nurse call bells and treating other patients with dignity and kindness, further underpinned patients’ impressions of being in a ‘safe’ environment.

“We all get washed thoroughly every day. If you can’t eat they help feed you, although that doesn’t apply to me...Staff on the whole are pretty good. Nothing’s too much trouble.” Patient, medical (older people) ward (female – age 83, E1 p1 notes)

“I saw them [nursing staff] topping up...[patients’] water and they’d make sure that their drinks were close to them. They were very good. So there’s constant drinks... if people hadn’t got food or they hadn’t been in in time to tick the boxes as such because they’d been admitted [that day], there was always something for them, whether the nurses would do toast and a drink or something.” Patient, surgical ward (female – age 53, S1 509-538)

“I came on the ward about half twelve [midday] and I noticed through the day and the night that nothing was too much trouble. They didn’t leave anybody, when somebody rang the bell... nobody got left. They all came and sorted everybody out, got you anything you wanted. And as I say I thought they were marvellous.” Patient, surgical ward (female – age 56, S4 159-164)

“The guy next to me...he was damned if one of the nurses was going to take him to have a bath. But the nurse did generally explain to him with all the right body language, from his level rather than standing above him, and she was using all her professionalism, and generally she just talked to him really calmly and nicely and explained everything to him in all different ways until he understood what she was on about...the general care was pretty damned good.” Patient, surgical ward (male – age 19, S5 223-231)

“Whenever they said they would do something, they did, so that was good. They didn’t forget about nothing, so that was very nice because you hear these stories that you’re ignored and well I wasn’t, never and everybody else around me seemed to get really good treatment.” Patient, surgical ward (male – age 54, S9 168-178)
6.1.4 Social context

Persson and Maattaa (2012) found that patients in multiple-bed hospital rooms appreciated staff entering the patient area and greeting patients, as it provided an opportunity to both see and be seen by staff. This was experienced as a therapeutic aspect of the ward environment. Similarly, Shattell (2001) noted that positive interaction with staff helped relieve boredom, loneliness and disconnection for hospital patients. Certainly, patients on the case study wards valued ‘social’ interaction with staff, such as staff greeting patients and being friendly and chatty. The open ward environment meant that despite the temporal pressure that staff were under (and there was consensus among patients across the case study wards that staff were ‘overrun’, ‘on the move the whole time’, ‘very, very busy’, ‘pushed to the limit’, ‘stretched’ and that the ward environment was ‘non-stop’, ‘hectic’ and even ‘manic’) there were opportunities for patients to interact with staff, for example when staff were making beds, cleaning beds between patients, or doing drinks rounds.

“[The] nurses...just being very friendly...was part of the healing process. It wasn’t just a matter of, ‘Oh, stick him in the corner and give him some pain relief, he’ll be okay.’ They were just really, really friendly. And I couldn’t have wished for anything more really, to be honest.” Patient, acute assessment ward (male – age 46, A4 155-166)

“They used to come and I’d have a laugh and a joke with them, pass the time of day...I know they’ve got their work to do but they always found time to have a natter. It wasn’t as though they were just doing their job and didn’t say anything.” Patient, surgical ward (male – age 54, S2 223-230)

“They used to bring your tea round and your cocoa on a night and they would say, ‘Are you alright? Everything okay?’ and you felt like you were cared for.” Patient, surgical ward (male – age 54, S9 76-84)

“It was nice in the morning, for a cup of tea, ‘Morning, hello, how are you today?’ And they were chatty, you’d get to know them, talk to them.” Patient, surgical ward (male – age 71, S10 334-343)
6.1.5. Negative experiences

The way that patients described the care they had received tended to indicate that care was largely reactive or task-driven, and the temporal pressure that patients identified would support this interpretation. It is worth noting that the features of security associated with the open ward environment and discussed above (competence, proximity, witnessing the care of others and the social context) may have compensated for an apparent lack of relational care (such as compassion, empathy and emotional support). For many patients, the compensatory features of the open ward environment contributed to a positive overall evaluation of the physical environment and care received. There were patients, however, for whom these features of the open ward environment did not compensate for the lack of relational care received as a result of the temporal pressure that patients believed staff were under, and patients felt that care ‘rushed’ and staff did not have time to ‘comfort’ or ‘get to know’ patients.

"The care I had was care, but it was completely rushed...they were kind, they did as much as they could with the facilities they’d got, but they didn’t have any extra time for any comfort that anybody might have wanted." Patient, surgical ward (female – age 53, S1 175-178)

“They asked me the general questions and were checking my bandage and all the rest of the stuff, but yes, there wasn’t any conversation like we’re having or anything like that. It was simply, ‘How are you feeling?’...Other than that they really don’t have the time to get to know the patient, or anything like that.” Patient, surgical ward (male – age 19, S5 267-274)
Negative experiences in relation to security and the physical environment were particularly evident in the maternity ward patient interviews. Both multiparous women (in this study, women who were giving birth for the second or third time) and primiparous women (women giving birth for the first time) experienced a lack of security on the postnatal ward. The layout of the maternity ward with staff bases located in office rooms outside the main ward areas, and amenity rooms in a separate side room annex, meant patients did not experience staff competence and proximity, or witness the care of others in the same way as patients on the other case study wards. The social context of the open ward was absent for maternity patients and there was a perception that staff were ‘behind closed doors’ for much of the time at staff bases because it was so busy, and this led to patients feeling ‘alone’ and ‘neglected’. Patients were also reluctant to use their call bells as they felt staff had more important things to deal with. Following the intensity of the delivery experience with one-to-one midwifery care, the transfer to the postnatal ward was described as a ‘shock’. The perceived absence of staff and particularly relational interaction with staff at this point in their care journey, left patients feeling ‘lonely’, ‘vulnerable’, ‘overwhelmed’ and ‘abandoned’. The experience of postnatal patients in this study echoes findings of other ethnographic studies of postnatal ward environments which have also found an absence of relational care, leading to women’s emotional needs being unmet (Dykes 2005).

“They only asked me once the whole time I was there if I did want anything. I think because I was a bit further up the ward and there was no one else in that section I don’t know if on change of shift if some of them had even known I was in there and they didn’t even come up to see me...if it was a first baby I think someone could have felt a bit neglected really... they just didn’t have the time to make impromptu stops at the bedside to see how you were.”

Patient, maternity ward (multiparous, M3 132-140; 288-289)

“I sometimes got the impression that if you were going to buzz or whatever, you’re not hassling, but it’s a bit of an interference, ‘Oh, yeah, what do you want?’ kind of thing, rather than... I didn’t feel confident. I didn’t feel confident pressing it, because I felt that I was disturbing someone...Yeah, I felt more that I was interfering with their duties, really.”

Patient, maternity ward (multiparous, M5 635-654)

“[Staff] just didn’t seem to want to chat really...And sometimes it can be a bit lonely, you feel really vulnerable, you’ve just had a baby. And your husband is coming in, you get really excited for them coming in, but they can’t often always stay, they’ve gone. And then if you are up most of the night because the baby is crying, sometimes you just want someone just to sit and talk to... because your emotions are all over the place ... I know they’re busy and doing other things. But just to make you feel a bit more at ease and a bit more that you’re not the only one that’s feeling perhaps a bit overwhelmed by it all.”

Patient, maternity ward (multiparous, M5 610-627)

“I felt I was a bit on my own...No-one came to see us until the drugs round, but they don’t obviously stop and talk to you at that point. There was no-one. I thought it would have been
nice to have someone just to chat to you, to see how I was. There was none of that...It would have been quite nice to have had someone just to have a, ‘How are you?’ chat. ‘Who’s this?’ That kind of thing, they just don’t have time for. It is the biggest experience of your life, you just felt a bit abandoned. I had no idea what to do." Patient, maternity ward (primiparous, M9 280-292)

6.2 Community

The second dimension of patient experience that was influenced by the physical environment was directly related to shared patient accommodation and the ‘community’ of patients. Persson and Maatta (2012) explored surgical and orthopaedic patient experiences of multiple-bed hospital rooms and found that having company was important to patients as it helped pass the time and reduced patients’ perceptions of their own suffering. Patients also felt supported by their room-mates who could summon help on their behalf if required, and provided encouragement during recovery or rehabilitation. In this study, proximity of other patients created a ‘ready-made’ community that could be experienced both passively (for example, an opportunity to simply watch or observe other patients as a way of passing the time or to distract patients from their own discomfort), and actively (for example, interacting with other patients in order to provide, and obtain, emotional support). Negative experiences of shared accommodation and the ward community were related to the cognitive condition of other patients and privacy issues. As with the physical environment and security, the maternity ward was a ‘special case’ in which the ward community and lack of privacy was a source of considerable emotional discomfort and anxiety.

6.2.1 Passive and active experiences of the ward community

Shared accommodation presented patients with a ‘great variety’ of activity to watch. Patients found watching activity ‘comforting’, ‘a diversion’ and ‘interesting’. The opportunity to be ‘nosey’ helped pass the time.

“It’s very interesting being in a ward, you’re watching out for everyone. It’s very interesting to see what’s happened to everyone. It gives you something to watch, something to think about.” Patient, acute assessment ward (female – age 70, A2 141-144)

"I quite liked being in a big ward because there was so much going on and I was able to be nosey... but then in my life I’ve always been involved with people... watching people.” Patient, surgical ward (male – age 71, S10 328-331)

Patients valued the camaraderie experienced in shared accommodation. Being within ‘talking distance’ of other patients allowed patients to greet each other, share personal details, and generally ‘rally round’ to ensure everyone was comfortable. Creating a friendly atmosphere and being able to ‘chat’ and ‘laugh’ with other patients was experienced as an important source of emotional support for patients.

"It was nice there because there was other people in the ward that I could talk to and have a laugh and joke with, yes. So that was quite nice, that was...There’s people around you...just
joking about with other people and, [saying] ‘Good morning,’ in the morning.” Patient, medical (older people) ward (male – age 77, S13 145-155)

"In the bed I was in, you had a nice little community of us, all within talking distance…it’s great. It’s good for morale. You learn to know what each other’s about...[it] created a wonderful atmosphere between one, two, three, four...the five of us...we got on well with one another. And we all knew what each other had got wrong with them.” Patient, surgical ward (male – age 73, S6 212-236)

"There was a girl next to me and her mother baked and she would give us all strawberry scones [Laughter] and we used to wait for her coming in because they were so nice. [Laughter] I’d give somebody some sweets [or] if I had a spare yoghurt, it was like that...Basically most of us just rallied round and looked out for each other because I was in eight days, so really nice people you met; people who were ill and even though you were ill, you could still have a laugh.” Patient, surgical ward (male – age 54, S9 95-103)

“You [ ] have that camaraderie going on as well...when you’re starting to feel a bit better as well it’s nice to have a chat. I mean family and that are alright, but they’re not there all the time ...once you’re on the mend it is quite nice to have a chat with someone.” Patient, surgical ward (female – age 51, S12 445-453)

Where patients felt able to provide emotional support to other patients, this gave them both a sense of purpose and helped put their own condition in perspective and reinforce perceptions of their own improvement and recovery.

“The chap opposite me...you could hear everything what the doctor was saying to him. Which, I’d previously been through in October, in the same ward. So I knew just what they were on about, and I thought, ‘Oh God, poor [ ] chap’...he’d had it worse than I’d had...And in a way, I went to him, because I felt sorry for the chap. So, all those things, it does help. Or it helped me...He said to me, ‘What [is] that scar?’ And I told him, and I said, ‘So I know what you’re going through.’ ‘Well, I’m blown’, he said, ‘So that’s what it looks like after about seven months?’ I said, ‘Yes.’” Patient, surgical ward (male – age 73, S6 245-259)

"I had three different ladies in with me during my time in there [double side room, surgical ward] and every time one of them went I felt alone, I started wallowing in my own suffering, if you like, and feeling unwell, whereas when there was somebody else there, because they were all a lot older than me, all three of them...the last lady was [over 80], and...it gave me a sense of purpose to help her and she was frightened and upset, I found that I was able to talk to her and hold her hand and things like that and I was on the road to recovery at that point.” Patient, surgical ward (female – age 57, S8 152-159)
6.2.2 Cognitive condition of other patients

Persson and Maatta (2012) found that the therapeutic environment of multiple-bed hospital rooms could transform quickly to a non-therapeutic environment, for example when noisy or when other patients’ symptoms of dementia or confusion became disruptive. In this study, it was clear that the ‘community’ dynamic could change quickly and patients who enjoyed the camaraderie and social contact also described times when the positive aspects of the ‘community’ of patients were negated. This happened when another patient became confused, or when a disruptive patient was admitted to the ward. When this happened, patients described feeling vulnerable and concerned, both for the patient’s welfare and sometimes their own. It also meant that staff were ‘tied up’ caring for or dealing with an individual patient, and patient’s perceived that temporal pressure for staff increased. This could lead to a reduction in their sense of security and emotional comfort.

“The man who was opposite...he’d got dementia and he was in the shouting stage...shouting out ‘Help’ all the time...they tried everything to help him; they were terribly, terribly patient...most of us, well I think all of us, understood, but it was a nuisance, because in the end it took over, you couldn’t do anything else but listen, and see how they were getting on with him.”

Patient, surgical ward (male – age 71, S10 267-280)
"We had a drunken patient brought in, which I didn’t think was necessary. She was an alcoholic. She didn’t want to be there, she kept trying to leave the ward. That was tying the nursing staff up for two days." Patient, surgical ward (female – age 51, S12 307-310)

The ‘community’ was also experienced differently by cognitively-well patients on the medical (older people) ward. Patients on this ward found themselves sharing accommodation with patients who were very confused and patients with dementia. This served to increase their sense of isolation and disconnectedness as it limited the possibilities for interaction.

“It's friendly, but you don’t meet people, people are in bed and don’t move around...Half the people [patients] are not in a fit state to talk anyway... It makes me feel isolated.” Patient, medical (older people) ward (female – age 83, E1 p2 notes)

“Sometimes you get on with the fellow in the next bed, I did when I first came, the fellow in the bed before, he was very forthcoming, but he went home and now this fellow [in next bed] hardly talks. There’s not always a lot companionship on an open ward.” Patient, medical (older people) ward (male – age 84, E3 p3 notes)

“The patients are mostly very silent. I don’t think there’s been a word between them...I haven’t spoken to anyone.” Patient, medical (older people) ward (male – age 85, E4 p1 notes)

This sense of isolation experienced by patients on the medical (older people) ward was compounded by the lack of patient entertainment. Not being able to follow sport or their usual radio or television programmes led to a loss of personal control and identity.

“It’s not helped by the lack of any entertainment, there is no TV or radio, and I’ve had nothing while I’ve been here. I’m a bit upset because I’ve missed all the Test matches and I’m a great cricket fan... They brought the library trolley round last week, but that was the first time I’d seen it, and they told me they didn’t have enough volunteers.” Patient, medical (older people) ward (female – age 83, E1 p2 notes)

“It’s quiet, there’s no music...My daughter gave me a little radio. I tried using that that night and got told off by one of the nurses so that didn’t last long...I haven’t got any ear phones.” Patient, medical (older people) ward (male – age 85, E4 p2 notes)

6.2.3 Privacy issues

Patients were generally impressed by staff behaviour in relation to curtain pulling and privacy. Patients comments indicated that curtains were appropriately and consistently drawn when required and patients felt that their dignity was always maintained. Privacy was more problematic. One view was that a lack of privacy was to be expected and was acceptable.

“If you’re really ill you just think this is what happens in hospitals and other people are terribly ill as well and it’s difficult to keep everybody private and provide that level of service...they’d pull the curtains but you obviously can hear what they’re saying about
different people. But it didn’t bother me that much. I think if you’re relatively well I think it might be a factor but once you’re so ill you really don’t care about anything.” Patient, acute assessment ward (female – age 55, A5 180-196)

"Everybody is in there; you’re all in the same boat. You’re all going to be told what’s what by the doctors. I wasn’t embarrassed once. I thought I might be from the point of view of having them saying about your constipation at the top of their voice. You know what I mean, it’s not at the top of their voice, but…I wasn’t embarrassed at all.” Patient, surgical ward (female – age 57 (S8 295-300)

Other patients found the lack of privacy difficult, and were left feeling vulnerable as a result. This was particularly evident on the maternity ward. The maternity ward was again a special case, where any benefits of a patient community were felt to be outweighed by the lack of privacy. While women who were giving birth for the second or third time (multiparous) tended to be more resilient in shared accommodation, tolerating it until they could be discharged, women giving birth for the first time (primiparous) experienced considerable emotional discomfort as a result of staying in shared patient accommodation.

As Dykes (2006) has described, multiple-bed maternity wards constitute a very public environment. The space is shared by antenatal and postnatal women. Postnatal women may have experienced a variety of birthing types (vaginal, assisted, elective and emergency caesarean section). The ward is visited by multiple healthcare staff and visitors, including midwifery staff, medical staff, allied health professionals and women’s family and friends. In this public environment, women feel insecure and under surveillance or the ‘gaze’ of many different people (Dykes 2006). It is unsurprising that primiparous women in this research experienced considerable anxieties at a time when they were learning how to look after a first baby. Intimate physical examinations and breast feeding were sources of concern in such a public environment.

"I had patients with families peeking through the curtains that didn’t fit properly. It was awful. I was so embarrassed… There’s no privacy. When you go into hospital that has to go. You have to leave that at home, but why should you?" Patient, maternity ward (primiparous, M6 357-363)

"You could also see in to everybody else’s [bed space]… I didn’t want to look in and see other people doing it [breastfeeding], but they were obviously comfortable with it...I just didn’t want anyone else to be looking in at me breastfeeding when it’s the first time you’ve done it, or the second time you’ve done it. Even just lying there… If people didn’t close the curtain properly…I would always close it because it was nice to have just a bit of privacy." Patient, maternity ward (primiparous, M9 391-399)

Women were worried about what other people might think if they were unable to comfort their baby (or babies) and stop them crying. Concerns about disturbing others in shared accommodation could become all-consuming, and patients experienced high levels of anxiety in relation to their baby crying.
“I was trying to keep him [baby] quiet to try not to disturb everybody else. I know... you shouldn’t really have to do that, but that’s the way I felt... I was getting really anxious when he was crying, because when he wants a feed, he really does cry. I was getting really anxious because I was thinking, ‘Oh, don’t wake everybody else up.’” Patient, maternity ward (primiparous, M1 121-129)

Labouring in shared accommodation was also experienced as difficult, with women feeling very conscious of not disturbing others, resulting in greater levels of emotional discomfort.

“Labouring on there, that I found quite hard, because you’ve got all the other mothers there, and you are conscious that it’s night-time, they’re trying to sleep, some of them are poorly. And I was going through labour, so my husband said, ‘You’re very good, very quiet.’ But I was very conscious as well that, ‘There’s all these other mums here.’...they [staff] said, ‘You can walk up and down and take a bath.’ But when it’s night-time, you’re very conscious that everyone else is trying to sleep. So I found that a little bit harder...they [staff] were very good, they got me a ball, they ran me a bath; they were really sweet to me.... But I must admit, I was quite happy when they said I could go down to delivery and actually be in a room.” Patient, maternity ward (primiparous, M10 157-182)

6.3 Physical comfort

The third dimension of patient experience that was influenced by the physical environment was physical comfort. Aspects of physical comfort of importance to patients included availability of food and drinks, location and size of shared toilet facilities, space around the bed, and lighting, temperature and noise.

6.3.1 Availability of food and drinks

Williams et al. (2008) found that the availability of food and beverages during hospitalisation had positive or negative impacts on patients’ experience. A key aspect of physical (and emotional) comfort for patients in this study was the availability of food and hot drinks, especially outside routine meal and ‘tea trolley’ times. Patients on the surgical ward felt comforted by seeing nursing staff ensure patients had enough food and drink. Also, although patients across the case study wards were generally reluctant to use the call bell system for non-urgent requests because of the temporal pressure they perceived staff to be under, the open ward environment and proximity of staff meant patients felt able to get the attention of staff when they were between tasks or passing by, and could request food and drink if they had missed meals or the ‘tea trolley’.

“[Things] like another cup of tea; they were good with that because sometimes if I went for an x-ray or something, two or three times that happened, and I missed the tea. So I said to [nursing staff], and she said, ‘Oh, I’ll get you one made up.’ It came along and I said, ‘I don’t expect it, just because I said it.’ ‘Oh no, that’s alright.’” Patient, surgical ward (male – age 54, S2 284-288)
Once again, maternity patients recounted a contrasting experience. Catering arrangements on the maternity ward were different to those on the other case study wards, with patients able to use a small stocked kitchen to make hot drinks, toast and cereal. Hot meals were provided in the day/dining room and mobile patients could serve themselves. However, perceived temporal pressure and the reduced proximity of staff in comparison to the other case study wards (because of the ward layout) resulted in patients feeling staff did not have time to explain the catering arrangements and orient patients to the kitchen facilities. Staff did not always ensure patients had eaten or had a hot drink, and were not always on hand for patients to ask. This led to patients experiencing further physical discomfort following labour, at a time when they would have appreciated the comfort and energy a hot drink or hot meal would provide.

“When I’d been in the delivery suite I had ordered dinner but by the time I’d got up onto the ward they obviously hadn’t communicated that I’d ordered the food and they’d cleared it all away, so I didn’t actually get a meal that night. They managed to find me a sandwich, but I didn’t have anything else to eat. That only came about when I asked one of the [midwives], ’What happens with dinner and where is it served?’ because I didn’t know if it was brought to your cubicle or if you had to go somewhere else, that wasn’t explained very well.” Patient, maternity ward (multiparous, M3 104-114)

“I wasn’t given anything other than the toast that I’d had in the delivery suite. I think it would have been nice to have a hot meal...to have a hot meal offered would have been quite nice...Or at least to have tea and coffee up there would have been quite nice. I just had a sandwich, and that’s the time you do want something hot inside you just to keep you going...The next morning they showed me the kitchen and said, ’That’s where the breakfast is and you help yourself.’ Presumably I could have done that that night but no-one said anything...I didn’t know the kitchen was there.” Patient, maternity ward (primiparous, M9 247-256; 326-329)

6.3.2 Location and size of shared toilet facilities

Physical comfort was also affected by shared toilet and bathroom facilities. Although there was strong consensus among patients across the case study wards that shared facilities were spotlessly clean, patients experienced physical discomfort relating to using toilet and bathroom facilities for a range of reasons. One source of discomfort was having to mobilise to use facilities that could be some distance away, requiring considerable physical effort, and also exacerbating feelings of emotional discomfort due to having to walk past other patients and visitors.

“The showers, from [the mixed section of the ward] you had to walk a fair bit, so that was a little bit awkward and considering [ ] what I had wrong with me, walking was quite difficult so of course I had to come out of my [section], go through like another little ward [female section] and then the showers were there...That was a bit difficult. It would have been nice had they have been nearer. I’m not complaining, just you want my observations, especially when you can barely walk.” Patient, surgical ward (male – age 54, S9 147-154)
“I had two drains to carry with me and your drip thing to get to the bathroom, and it pulls all your nightie up at the side and there’s visitors walking up and down and that is a nightmare. You’re constantly looking somewhere else, trying not to make eye contact because I get very embarrassed.” Patient, surgical ward (female – age 57, S8 201-208)

“They ran a bath which was down the end of the corridor. [ ] That was a bit of a pain, because you had to walk all the way up the corridor, and then you were trying to struggle all the way back. And [ ] you’re conscious because you’re stopping because you’re having a contraction and you’re midway down the ward. So you’re conscious that you’re walking past everyone then. And also I was constantly going to the toilet, which is right at the other end.” Patient, maternity ward (primiparous, M10 198-203)

The limited number of facilities led to patients feeling they had to rush when using the toilet or washing. New mothers felt anxious leaving their baby as toilets were too small to take cots in with them. Patients also struggled using facilities that were lacking in space and awkward to access.

“You’ve only got two toilets, which at times isn’t sufficient... one of the toilets is so small it’s worse than a little cupboard.” Patient, surgical ward (male – age 73, S6 496-501)

“Bending over and things, it’s all difficult. And the shower was...quite a long walk-in shower, so you had to walk quite far in...There was nowhere to put things that you needed to get [ ] out of your bag. So you’re getting things out of your bag on the floor.” Patient, maternity ward (multiparous, M5 410-423)

“The loos down there were just tiny. You’re sitting there and you’ve got these big maternity pads and you’re trying to work out everything.” Patient, maternity ward (primiparous, M9 360-362)

Photo 21: Staff photo illustrating lack of space in patient toilet, surgical ward (S5.4)
6.3.3 Space

Another aspect of the physical environment affecting physical comfort was the lack of space around patient beds. Lack of space, and sometimes limited access to a view from a window, led to patients feeling claustrophobic and confined.

“I’ve become totally claustrophobic since I’ve been in hospital and I can’t bear being indoors. At one point, because the lady next to me had got the curtain pulled, they kept pulling the curtain to do things for her, obviously, but it wasn’t being pushed back so I couldn’t see the window and I became really claustrophobic...One time...I said to my daughter on the phone, I’d got myself feeling panicky and I said, ‘I’m just going to go outside in a minute.’ She said, ‘You can’t go outside, just stay where you are.’” Patient, surgical ward (female – age 57, S8 441-457)

“That would be nice in the summer if you could get outside a bit more... on the ward it’s sometimes hot... your windows only open that [much] and you feel sometimes you can’t breathe in there.” Patient, surgical ward (male – age 54, S9 498-509)

Lack of space also led to anxieties about intruding into other people’s space, and also the intrusion into patients’ own personal space.

"The lady next to me had had part of her bowel removed so she was having terrible trouble, going to the loo constantly. That wasn’t really a problem in so much as that they were there for her but she had quite a few accidents. It was so horrible for her, well horrible. I just felt so sorry for her and not to point too fine a point on it, it splashed under the curtains between us. We were that close, the smell and everything else, it was just horrid." Patient, surgical ward (female – age 53, S1 87-93)

"I found the space between the beds...that was a bit tight...when the doctors were one side, they were more or less pushing onto you." Patient, surgical ward (male – age 73, S6 321-323)

"I used the ball. Which was extremely good to be honest, but [...], not a lot of room, so by the time you’ve got your curtains pulled round you and you’ve got your bed, I was pretty much on the curtain on the ball, because there was just no room around you. You didn’t really want to have your curtains open, especially as well as it was night-time. And I had the monitor next to me. So it was quite small...you couldn’t really do a lot." Patient, maternity ward (primiparous, M10 229-235)

6.3.4 Lighting, temperature and noise

Finally, patients experienced difficulties resting and sleeping in shared accommodation. Lighting, temperature and noise impacted on patients’ sense of personal control and physical comfort. Patients were also disturbed by the nurse-call system, alarms on monitors and pumps, patients snoring and mobile phone conversations.
“Once the lights go out it’s ok, but often the lights don’t go out until midnight so I’m tossing and turning until they do, I like the darkness” Patient, medical (older people) ward (female – age 83, E1 p2 notes)

“You could hear other people on their phones constantly… I love the fact that you’re allowed to have your phone… that’s brilliant. But having to listen to everyone else’s conversations, and they have the same conversation three times, their birth experience, you could do without that.” Patient, maternity ward (primiparous, M9 217-225)

Rest and sleep were particularly difficult for maternity ward patients, for whom the 24-hour environment and crying of other babies made it especially difficult to sleep.

“Quite a lot of people come up from the delivery suite at night time… so you’ve got the relatives and they’re unpacking everything. That was the worst thing, because I already didn’t have much sleep before then and I was so exhausted. It was quite upsetting when I was just lying down to go to sleep and the porters come in to move a bed, or patients come up from downstairs. Then he [baby] starts again and you have to get him up and feed him. I was, ‘Oh God, I just want to sleep.’” Patient, maternity ward (primiparous, M1 89-101)

"I got no sleep because it is just so noisy. If [baby's name] had slept even for an hour I would have slept that hour if it wasn’t for the noise and the other babies screaming. They all took it in turns, one by one, it was going round the whole ward. So it was very difficult to sleep in a maternity ward like that." Patient, maternity ward (primiparous, M6 241-244)

6.4 Patient views on single room accommodation

In interviews, patients were asked for their views regarding single rooms, and their feelings about the new hospital. Patients had not seen the single rooms in the new hospital at the time of data collection although some patients had experienced single room accommodation during private hospital care episodes in the past. Maternity patients expressed a clear preference for single room accommodation. This is unsurprising given the findings presented above. Maternity patients said they would particularly value the privacy and quiet afforded by single room accommodation in order to get used to looking after a new baby at a highly emotional time.

“I would certainly prefer my own private room. I don’t think big wards are any advantage in terms of chatting to people because I think everybody is there and no one’s interested in that at that time, they’ve just given birth. I think it would be a nicer environment… it would be nicer to have your own area and own room.” Patient, maternity ward (multiparous, M3 409-417)

"I do think it would be nice to have your own room…I think in a maternity unit, more than any other unit really, it would be nice to just have a bit of space on your own where you can just be with your baby, and not be interrupted by other screaming children. There are so many visitors who go onto the wards and it does get really noisy… Just be given the time to
sleep or relax, or just spend time with your baby. That's really important." Patient, maternity ward (primiparous, M9 482-491)

A more complex picture emerged for other patient groups, who tended towards a more ambivalent position and weighed up advantages and disadvantages of single room accommodation. For example, while patients acknowledged that single rooms would facilitate improved privacy and physical comfort (especially sleep and rest and access to en suite toilet and shower facilities), they balanced these benefits against concerns about security and loneliness and isolation. Patients expressed anxiety about staff not being in close proximity and a loss of the sense of community that shared accommodation encouraged.

For patients on the acute assessment ward, there was a concern that the ability to monitor patients would be reduced.

“I suppose you have the bell but then the problem is if you have these low blood pressure episodes they happen so quickly that you might not have a chance to ring the bell. And that would have worried me. Say you’d got up to go to the bathroom and then had one of these episodes and fallen over…that is a possibility for patients and then you just do wonder how often they would come along and check on you. So I don’t know. For one of those wards where you come straight out of A&E and presumably they are keeping you in there to watch you a bit, I would have thought that’s not a good idea.” Patient, acute assessment ward (female – age 55, A5 226-236)

Patients on the medical (older people) ward said they ‘didn’t mind’ single room accommodation, and that for sleep and rest it would be better. However, they also expressed ambivalence about being in a single room, wanting to have the option of having others ‘around’ some of the time, and to interact with other patients. Their ambivalence seemed to be related to their experience of sharing patient accommodation with patients they were unable to communicate with (due to the prevalence of dementia and confusion among patients on that ward- see section 6.2.2 above).

“I don’t mind [single rooms], sometimes you want it a bit quieter don’t you? I expect some things I won’t like, but you can’t have everything…Probably another time I’d think: ‘Oh no! I wish I had the others around me.’” Patient, medical (older people) ward (female – age 94, E2 p2 notes)

“There’s more good about it [open ward] than bad about it, but I would say having a separate room is better. I don’t know if you’re free to walk about [in the new hospital] and pop your head around the next fellow if he was ok and have a conversation, I don’t know if that would happen?” Patient, medical (older people) ward (male – age 84, E3 p3 notes)

For surgical ward patients, there was a higher degree of concern about potential boredom, isolation and loneliness in single rooms.

"I do think the days are going to be an awful long time. Because will you ever see anybody? Will you ever see any other patients? I don’t know. I believe you’ve got your own toilet, so
there’s no problem there. That’s going to be good, but as I say, it’s just being on your own, and how far away are the nurses, do they come into you, or is it just they pop in, in the morning, make your bed, do what they have to do, and then you don’t see them unless you want them? That’s what I’m wondering.” Patient, surgical ward (male – age 73, S6 438-446)

“En-suites, I think everybody knows how comfortable and how useful that is. It’s like being in a hotel room isn’t it?...If I was to go into a single room I’d find it very comfortable and pleasant, but I’d get worried about being bored and not having anybody to talk to... I don’t think I’d want to watch television...12 hours a day, but it’s nice to have it there ...But I would miss what’s happening to everybody else in a way. Because that’s always been part of being in hospital. ‘That chap over there he’s had this, and he’s had that.’ You almost make new friends, sometimes. That would be a minus I think.” Patient, surgical ward (male – age 71, S10 430-449)

“I think...single bed [rooms] are a bit isolating. You wouldn’t see life going by. Yes, it would be quieter, but perhaps a bit too quiet? And also, too, if like me initially you’re not mobile... okay, there some who are more mobile that might come out of their rooms but they’re not going to go into an individual room really to say ‘Hello’ and see how you’re getting on, rather than if they’re just passing by the bed, will they?” Patient, surgical ward (female – age 56, S11 137-147)

Summary

• The physical environment of the case study wards influenced three key dimensions of patient experience. These were security, community and physical comfort.

• Patients’ perceptions of security were influenced by the open ward environment. Positive perceptions of security were related to staff proximity and the ability to observe staff competence, witness the care of others and engage in social interaction with staff.

• For some patients, the hectic nature of the ward environment contributed to feelings of insecurity as patients felt that care was ‘rushed’ and staff did not have time to ‘comfort’ or ‘get to know’ patients.

• The physical layout and perceived temporal pressure on staff on the maternity ward led to patients feeling especially insecure.

• Multi-bed rooms enabled patients to passively or actively engage in a patient community. Proximity of other patients helped ‘pass the time’, and many patients enjoyed the camaraderie of shared accommodation. Interaction with other patients could be an
important source of emotional comfort, giving patients a sense of purpose.

The therapeutic aspects of a community of patients could be negated by the condition or behaviour of other patients. Confused or disruptive patients could change the community dynamic on the ward. For cognitively-well patients on the medical (older people) ward, the prevalence of dementia and confusion among other patients led to heightened feelings of isolation.

- Sharing accommodation with other patients was particularly problematic for maternity patients. Patients on the maternity ward experienced an acute lack of privacy which led to considerable emotional discomfort and anxiety.

- Open ward accommodation had multiple implications for patients’ experiences of physical comfort. Availability of food and drink, location and size of shared toilet facilities, space around the bed, and lighting, temperature and noise were potential sources of discomfort which could be alleviated or exacerbated by the physical environment.

- Patients’ views on single rooms were influenced by their experiences of shared accommodation. Maternity patients expressed a clear preference for single room accommodation as a means of improving maternity patient experience. This preference was related to the lack of security, privacy and physical comfort experienced in the open ward environment.

- Other patient groups held an ambivalent position in relation to single room accommodation. While sleep and rest and en suite facilities were regarded as definite benefits, patients were concerned about the loss of proximity to staff and loneliness and isolation.
Chapter 7: DISCUSSION

Introduction

Phase 1 of this longitudinal research study examining the move from open to all single room wards has sought to understand the organisational context, and staff working practices and staff and patient experience in the old accommodation at Maidstone and Tunbridge Wells NHS Trust.

Phase 1 findings presented in this report reveal a complex picture. The research has explored multiple perspectives and experiences, and used mixed methods to try and gain a more complete insight into the issues. Triangulation of results highlights both advantages and disadvantages associated with the old open plan accommodation. Positive and negative impacts arose from interactions between organisational context, type of care being delivered, type of patients, staffing practices, staff levels, expectations of staff and patients, and the design of the wards themselves. It is clear that there will be no simple answer to the question of what type of accommodation is best. The answer will be ‘it depends’. In phase 2, this realist evaluative perspective will be extended to explore how these interactions play out in single room accommodation.

Findings from phase 1 provide a baseline for phase 2 of the research which will explore new care processes and working practices, and staff and patient experience in the new all single room hospital, as well as how are staff perceptions and experiences of the move to single rooms are shaped by formal organisational and change management processes. The longitudinal research design will consider how and why perceptions, practices and experience change in the new ward environments, and explore whether there are differences in experience among staff and patient groups and the case study wards.

In describing and understanding the organisational context of the new hospital development, and staff and patient experiences in four open wards in the old hospital environments, this research sets up a number of key questions for phase 2 of the research, relating to possible short-term and long-term issues associated with the transition to the 100% single room design.

7.1 Organisational context

Chapter 3 describes the organisational context within which the all single room hospital was commissioned and brought into operation. The history of the build was a challenging one, including a complete change in leadership, and phase 2 of the research will explore the legacy of the organisational context in which the transition to all single rooms was made and the extent to which leadership discontinuity, loss of ‘champions’ and key knowledge, and lack of joined-up working have caused short and longer-term difficulties in the operationalisation of the all single rooms wards. Some key questions for the next phase of the research are:

- What are the implications of the discontinuity in project leadership and ‘championing’? Did the loss of knowledge and commitment in relation to the 100% single room design decision affect the transition?
• Has the low level senior stakeholder buy-in and ownership of the 100% single room design persisted, and with what effects?
• Did the focus on move and migration above consideration of changes to operational policy for the new wards affect the experience of staff in the immediate post-move period, and what have been the longer-term effects of this?
• Have any challenges to the integrity of the design in terms of change of use or changed service provision (for example, the lack of 24 hour reception staff, and other changes to ‘soft’ Facilities Management service provision discussed in chapter 3) affected the success of the building?
• What processes have supported staff in being flexible and adaptable in the new ward environments?

7.2 Staff experience

As described in chapter 5, staff were generally positive about open ward accommodation in the old buildings, particularly in relation to professional practice. Open wards were considered particularly helpful for surveillance and monitoring, teamwork and communication and social contact among patients. Staff were less positive about other aspects of the old ward environments, including space around patient beds and space in patient toilets and showers, staffing levels, access to equipment and supplies, staff bases and staff facilities.

Key elements of the new hospital’s design were intended to support nurses in delivering care quality and safety, including: single rooms; centralised ward support facilities; decentralised staff bases; distributed ‘touch down’ work stations; wireless communication system with integrated nurse call; pneumatic tube system. Key questions to be answered by the phase 2 research include:

• How effective are design features intended to support nurses and midwives? Are there also unintended consequences for nurses and midwives of the ward design?
• How well does the ward and single room design (including location and design of the en suite) work for monitoring patients and delivering direct care? Are staffing levels (and decentralised nursing for smaller ‘clusters’ of rooms) working, and have these changed over time?
• How does the new building impact on task time distribution and walking distances? What are the perceived positive and negative effects of the change?
• Has professional communication changed as a result of single room working? For example, is there less face to face communication? What are the implications for informal learning, doubling up and other dimensions of teamwork and communication?
• What has been the impact of delays to the integration of the nurse call system with the wireless phones (see chapter 3)? What were the short-term effects? What about longer-term impacts (for example, did late implementation affect uptake of the technology by staff)?
• How do staff now perceive their pre-move concerns about patient isolation, monitoring patients and preventing falls in the new hospital?
• How have staff developed care processes to overcome perceived challenges resulting from the ward design (for example, challenges in monitoring patients, falls prevention, teamwork and communication, staff and patient isolation)?
• Are there differences in staff experiences among the case study wards, and what is driving any differences (for example, differences may relate to patient acuity or conditions and differences in leadership)?

7.3 Patient experience

Qualitative interviews with 32 patients for phase 1 of the research revealed that the old physical environment of open Nightingale-style wards and shared patient accommodation had strong implications for experience in relation to security, community and physical comfort. For some groups of patients, multi-bed wards supported feelings of security resulting from patients’ ability to observe staff competence, have staff close by, witness the care of others, and engage in social interaction with staff. Some patients also benefitted from the proximity of other patients, and passive or active participation in a ward ‘community’.

There were, however, many negative aspects associated with shared patient accommodation, including difficulties caused by proximity of disruptive or confused patients. For some patients, especially maternity patients, the lack of privacy on open wards was problematic. Shared accommodation was also uncomfortable for many patients, characterised by a lack of space, reduced personal control over lighting, temperature and noise, and location and accessibility of toilet and shower facilities.

In phase 2, the research will explore how patient experience changes as a result of single room accommodation. Key research questions will include:

• Do patients feel secure in single rooms? What maximises security, and minimises insecurity, for patients? What are patient perceptions of staff competence and staff proximity (and through what mechanisms are these experienced)?
• How do patients experience call bell use, and what impact does this have on feelings of security?
• Do patients experience loneliness and isolation as a result of an absence of a ‘ready-made’ ward community? If so, what impact does this have, and are there any strategies that patients adopt to alleviate the lack of social contact?
• Do single rooms enhance patient comfort? Are there any aspects of the single room design that patients would change in order to increase comfort levels (and do different patient groups have different needs in relation to the single room design)?
• Are there any aspects of nursing care practices that would increase patient comfort in single rooms?
• Do the benefits of single rooms outweigh the disbenefits for patients? Does this differ among patient groups? For example, based on phase 1 findings we might expect that maternity patients in particular find single rooms beneficial. There may be important
benefits for other patient groups in relation to communication with nurses, allied health professionals and medical staff, which outweigh any negative aspects of experience.

7.4 Early anecdotal evidence relating to the move
In the immediate post-move period for adult general wards (October 2011 to February 2012), the Trust reported an increase in length of stay, falls and patient complaints. Post-project evaluation work undertaken by the Trust following the move of women and children’s services found that while 71% of patients were satisfied with their single room accommodation, 29% were not.

Anecdotal evidence suggested that staff felt unprepared for working in an all single room environment and that patient care had suffered as a result. The Chief Executive was quoted in the local press saying:

“Although we didn’t aim to do this, our staff were conditioned to thinking that the move itself was the end, they did an awful lot of work and tirelessly worked towards the closing down of the K&S and the move to the new hospital, and psychologically they felt that was it, but in actual fact it was only the start of the journey. I don’t think we’d anticipated that dip just after we moved quite as well as we could have done.” Chief executive quoted in the Kent & Sussex Courier, Friday 17 February 2012

Phase 2 will seek to understand both short and long-term effects of the transition to a new working environment for staff, and the impact of changes to working practices which have been implemented since the move. It will also explore the experiences of patients receiving care in single rooms.
References


NPSA. Hospital design for patient safety: Learning from a visit to St Joseph’s Hospital, West Bend, Wisconsin, United States (2007?)


Persson E, Maatta S. To provide care and be cared for in a multiple-bed hospital room. Scandinavian Journal of Caring Sciences 2012; [Epub ahead of print]


Appendix 1. Key stakeholder information sheet

We would like to invite you to take part in an independent research study. This research study is being carried out by health researchers from King's College, London and is looking at the impact of hospital ward design on staff and patient experiences.

Before you decide whether to take part you need to understand why the research is being carried out and what it would involve for you. Please take time to read the following information carefully. Talk to others about the study if you wish. Ask us if there is anything that is not clear or if you like more information; our contact details are at the end of this sheet.

Involvement in this research study is entirely voluntary and all data collected as part of the study will be treated as confidential. You are free to withdraw at any time without giving a reason.

Introduction and aims of the research

Until the 1960's most patients entering NHS hospitals were cared for in 'Nightingale wards'. Since then new builds have experimented with "racetrack" wards and 4-6 bedded bays. More recently the case has been made for more single room accommodation in new hospital designs. This study aims to explore the implications for the clinical workforce and patients of a move from 'traditional' facilities to a newly built facility in which all in-patient accommodation is in single rooms. The aims of this 'before and after' study are to identify the impact of the move to single room accommodation on:

- staff working practices and effectiveness
- patient experience
- staff experience
- the wider 'organisation' - with the move as an example of implementing organisational change

Background

Currently single rooms account for 28% of NHS beds. Since 2001, Department of Health guidance has been that the proportion of single rooms in new hospital developments should aim to be 50% and must be higher than the facilities they are replacing.

Increasingly new hospital designs therefore include greater ratios of single bedded accommodation and in some cases all single rooms. This is in part a response to (i) the perceived public desire for such personal accommodation, (ii) the problem of mixed sex wards and (iii) the potential for reducing healthcare acquired infections. However there is little evidence from the UK on which to base such reconfigurations, and little is known about likely impacts on staff and patients. Most evidence derives from studies in the USA and Scandinavia where a much larger proportion of hospital accommodation already comprises single occupancy rooms but this is unlikely to directly translate to the UK owing to different financial, cultural and organisational systems (as well as patient and staff expectations).

In a recent Policy + publication the National Nursing Research Unit (NNRU) reviewed the evidence and examined the advantages and disadvantages of single room accommodation for patients and staff. This review concluded that available international and UK evidence is equivocal suggesting a range of potential benefits for patients and staff but also a range of potential disadvantages and limitations. It further suggested that there is not yet 'sufficient' evidence available in the UK to be able to draw valid and reliable conclusions in terms of the impact on nursing workforce requirements, or indeed other staff groups.

We now have an opportunity to examine such implications for staff and patients’ experience of care in England as a result of the new Pembury hospital build which will be the first district general hospital in England with single inpatient rooms throughout (370 beds).

Research Questions include: does the move to all single room accommodation:

- affect patient and carer experience and well being?
- affect staff experience, well being & their ability to deliver effective & high quality care?
- affect diverse patient groups differently (e.g. pregnant women, the elderly)?
- disrupt work patterns and, if so, how are these reconstituted?

Research methods

This study will use mixed qualitative and quantitative methods to produce a rounded picture of the issues under investigation. We will start with a rich ethnographic description (through interviews, focus groups and direct non-participant observation) of staff and patient experiences before and after the move to single room accommodation at Pembury hospital and augment this data with a
staff questionnaire survey and analysis of routinely collected data (e.g. healthcare associated infections & other adverse incidents staff turnover, absenteeism, sickness / patient data).

Four ‘services’ which are moving to the new build will be identified, in consultation with the Trust, and selected to allow us to understand the impact of the changes made across different care provision; across a range of clinical areas for a range of patient groups.

Ethics: Potential risks and safeguards
This research study is fully funded by the Engineering and Physical Sciences Research Council (EPSRC) and therefore no financial contribution from Maidstone & Tunbridge Wells NHS Trust is required. The steering group for the study involves academic researchers, NHS practitioners and managers and patient representatives. The study will be undertaken in accordance with The Research Governance Framework for Health and Social Care (2005). The research team are aware of the sensitivities and ethics of researching in health care settings and have extensive fieldwork experience in this area. They also have experience of ‘naturalistic’, unobtrusive research designed to minimise any disruption to staff or patients. Consent will be sought from all participants and for observation of day-to-day activities in the selected case studies. Involvement in this research study is entirely voluntary and assurances will be given to participants that all discussions and interviews are entirely confidential. In all phases of the study the team will reiterate potential participants’ rights to:
- withdraw from the project at any time without prejudice or penalty
- stipulate for the removal of material from any transcripts/notes that they believe is of a sensitive or identifying nature
- withhold information.

This study has been reviewed and given approval by King’s College London Psychiatry, Nursing and Midwifery Research Ethics Sub-Committee (RESC ref no. PNM/09/10-30). The study has also been approved by Flo Panel-Coates, Director of Nursing and by Maidstone and Tunbridge Wells NHS Trust Research & Development Department.

Involvement of senior stakeholders
We are interested to speak to a small number of senior stakeholders who have been involved or will have an important role in the building of, and phased move to, the new Pembury hospital.

If you agree to participate, a member of the research team would come to meet with you at your place of work and interview you for up to one hour. We will ask you about your views, experiences and expectations in relation to the build and phased move to the new hospital.

We would like to tape-record the interview so we have an accurate record of what you tell us. The tape recordings will be transcribed, and anonymised. All data and field notes will be given a code to ensure confidentiality and stored in a locked filing cabinet or on a password protected computer secured against unauthorised access.

As a senior stakeholder within the Trust, we realise that you are likely to be identifiable in research outputs, and it will not be possible to guarantee anonymity. In order to maintain confidentiality, the research team will share the interview transcript with you so that you have an opportunity to highlight where information shared with the team will need to be treated with extra sensitivity, or omitted from any reports of the research altogether.

The recordings will be deleted after transcription. The data will then be analysed by the research team. With your permission, anonymised data (data which does not identify any one who has taken part) will be archived for up to six years after the end of the research, for use by other researchers for other purposes. We will ask you to sign a consent form agreeing to take part in the interview.

Benefits
As well as sharing findings among managers and clinical staff in the Trust and the four participating clinical services, the final report will be shared more widely with NHS Estates, policy makers in the NHS, as well as disseminated in peer reviewed (academic) journals and presented at professional and academic conferences. Anonymised extracts from the interviews may be used in publications arising from this research. Reports or papers resulting from the research with not identify any one who has taken part. The anonymised interview transcripts, with your permission, may be made available to other researchers and students for teaching / further research.

This is an important study because change in hospital design is likely to be an ongoing trend nationally, with many more hospitals with all single room accommodation likely to be built in the future. We hope that this research will generate knowledge that will inform policy more widely in relation to future design, and ultimately improve the experiences of staff and patients.

This project is funded by the Engineering and Physical Sciences Research Council (EPSRC) via their Health and Care Infrastructure Research and Innovation Centre (HaCIRIC) at Imperial College London. It is led by the National Nursing Research Unit (NNRU) at King’s College London in partnership with staff from HaCIRIC, the US Center for Health Care Design’s PEBBLE project, Maidstone and Tunbridge Wells NHS Trust, and the construction company Laing O’Rourke.

Further details of the project and wider NNRU research programme are available at:
http://kcl.ac.uk/ schools/ nursing/ nnru/ prog/ single.html

If you would like further information about this research please contact:
Dr J Jill Maben, Deputy Director, National Nursing Research Unit,
King’s College London. Telephone: 020 7848 3060 Email: jill.2.maben@kcl.ac.uk
Appendix 2. Key stakeholder interview topic guide

Impact of hospital ward design on staff and patient experiences

Topic Guide for Stakeholder Interviews

Research objectives for stakeholder interviews:

- What factors were influential in commissioning the new build?
- What factors have facilitated and constrained the redesign and embedding of new processes associated with the introduction of single rooms?
- How has the change management process been handled in the trust?
- What other changes are on-going in the trust?
- What are the advantages and disadvantages of the new build/ single room accommodation for staff and patients?

Note on use of this topic guide:

We wish to encourage participants to discuss their views and experiences in an open way without excluding issues that may be of importance to individual participants and the study as a whole. Therefore, unlike a survey questionnaire or semi-structured interview, the questioning will be responsive to respondents’ own experiences, attitudes and circumstances.

The following guide does not contain pre-set questions but rather lists the key themes and sub-themes to be explored with each participant. This allows the interviewer to formulate questions which are responsive to each individual participant. The topic guide does not include follow-up questions like ‘why’, ‘when’, ‘how’, etc. as it is assumed that participants’ contributions will be fully explored throughout in order to understand how and why views, behaviours and experiences have arisen. While all topics will be covered with each participant, the order in which issues are addressed and the amount of time spent on different themes will vary between participants.

1. Introduction
   - Introduce self, NNRU
   - Introduce research (funding, research design, outputs)
• Explain: confidentiality, tape recording, length of interview, nature of discussion (specific topics to address, but conversational in style, in your own words, no right or wrong answers), reporting and data storage/archiving
• Any questions
• Obtain written consent

2. The ‘story’

1. Tell me when you first heard about the project….
   a. When did you become involved?
   b. What happened next…

2. Tell me the story of this project – what were the key events / turning points/ decisions and key individuals?

3. ‘Actors’

3. Whose bright idea was this build? What was the starting point? How much of a priority was all single rooms in new build?

4. CAST LIST – who was involved from the beginning?
   a. Who made the decisions?
   b. Who were the champions and activists for this (in M&TW?)
   c. Driven clinically or estates and facilities?
   d. Were there any major disagreements (regarding single rooms)?
   e. What evidence base was used?
   f. Local community reactions / actors?
   g. Externally - SHA role? DH role/ support?

5. Where did you go to find out ‘how to do this’? (especially re single rooms)
   a. NHS estates info?
   b. PEBBLE involvement?

6. Have there been major shifts since the new ‘top team’ came in? What are these?

7. Who on the Exec board is responsible for the new build? Is someone on Exec board responsible for single rooms?

8. To what extent have the service re-design team (OD) been involved?

9. What thought has been given to patient experience improvement?

10. Which (ten) people do you think it is important for us to speak to get a good overview of the organisational context and decision making re single rooms?

4. Single rooms

11. How much of a priority are single rooms in new build?
   a. How much consideration has been given to the advantages and / or disadvantages for staff of the move to all single rooms?
   b. How was the room layout and design agreed (outboard bathrooms)?
c. How much consideration has been given to the advantages and or disadvantages for patients of the move to all single rooms?

12. How committed is the leadership to notion of single rooms? How do you think others in the organisation view single rooms?
   a. Is there a sense of shared purpose re single rooms?

13. Tell me about decision making processes in the course of the design and development
   a. e.g. Were any nurses / Drs / patients involved? How?

14. To what extent have (senior) managers in the trust begun to engage with the issue of organisational and change management processes related to the move to all single rooms?
   a. Did they meet with architects? How were decisions made – e.g. re 2 metres of track for hoists as opposed to three

15. How do you think single rooms will improve the working environment for staff and patients?

16. Are you part of any wider networks / organisations implementing single rooms? How are you in touch with them?

17. What would success look like to you re single rooms? Would others agree with you?

5. Process / Outcomes

18. What do you consider to be the key issues that you would like to pass on / communicate to the research team about the new build in relation to this project and the move to all single room accommodation?

19. Hindsight is a wonderful thing – what have you learnt (your top tips) in relation to this project – what would you pass onto to other trusts going through a similar process?

20. Anything else you would like to add?
Appendix 3. Patient and Staff information sheets

PATIENT INFORMATION SHEET

Research study on the impact of hospital ward design on staff and patient experiences

We would like to invite you to take part in an independent research study. This research study is being carried out by health researchers from King’s College, London and is looking at the impact of hospital ward design on staff and patient experiences.

Involvement in this research study is entirely voluntary and all data collected as part of the study will be treated as confidential. You are free to withdraw at any time without giving a reason and it will not affect your current or future care in any way.

Before you decide whether to take part you need to understand why the research is being carried out and what it would involve for you. Please take time to read the following information carefully. Talk to others about the study if you wish. Ask us if there is anything that is not clear or if you like more information; our contact details are at the end of this sheet.

What is the purpose of the study?
Hospital ward design is changing and we are undertaking this research in Maidstone and Tunbridge Wells NHS Trust to understand the ways in which different hospital ward designs influence staff working practices and ability to deliver high quality care and patients’ experiences of care.

Why are you inviting me to take part?
You are being invited to take part because you have recently been an inpatient at Kent & Sussex or Pembury hospital. The ward you were on is one of four wards that we will be looking at in detail during the course of this research. We are very interested to hear the experiences of patients, and would like to ask you to share your experiences with us.

Do I have to take part?
No, it is completely up to you to decide whether or not to take part. If you decide to take part you are still free to withdraw at any time and without giving a reason. A decision to withdraw at any time, or a decision not to take part, will not affect your current or future treatment or care in any way. Throughout all aspects of the research you have a right to:
- withdraw from the project at any time
- choose not to share information with us

What will happen to me if I do take part?
Taking part in the research will involve an interview with a member of the research team. We will come to meet with you and talk to you informally for about an hour. During the interview we will ask you about your experiences as an in-patient, for example what it was like for you staying on the ward.

The interview can take place at a time that is convenient for you, either in your home, or in a meeting room at the hospital if you would prefer. If you would like a carer or friend to be at the interview, just let us know. We will reimburse you for any travel expenses.

We would like to tape-record the interview so we have an accurate record of what you tell us. The tape recording will be transcribed, and anonymised. The recording will be deleted after transcription. The data will then be analysed by the research team.

With your permission, anonymised data (data which does not identify any one who has taken part) will be archived for up to six years after the end of the research, for use by other researchers for other purposes.

We will ask you to sign a consent form agreeing to take part in the interview.

Are there benefits in taking part?
There are no direct benefits to you as an individual. There will be benefits for Maidstone and Tunbridge Wells NHS Trust because this study will provide evidence for future policy relating to hospital design. It will help managers understand how staff can improve the way they work in different hospital environments. This is an important study because change in hospital design is likely to be an ongoing trend nationally, with many more hospitals with all single room accommodation likely to be built in the future. We hope that this research will generate knowledge that will inform policy more widely in relation to future design, and ultimately improve the experiences of staff and patients.
Will my taking part in the study be kept confidential?

Involvement in this research study is entirely voluntary and your responses are completely confidential. All data will be given a code to ensure anonymity and stored in a locked filing cabinet or on a password protected computer secured against unauthorised access. No-one else will know you have taken part unless you choose to tell them.

If you tell us something that indicates there is a risk of harm to yourself or someone else, then we will follow a 'disclosure protocol'. This involves seeking advice on whether we should disclose (tell a relevant agency or authority) about this risk.

Has this study been reviewed by an ethics committee?

All research undertaken by King's College London is considered by an independent group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed and given approval by King's College London Psychiatry, Nursing and Midwifery Research Ethics Sub-Committee (Ref no. PNM/09/10-30). The study has also been approved by Maidstone and Tunbridge Wells NHS Trust Research & Development Department.

What will happen to the results of the research study?

Anonymous results from the study will be presented to key people within Maidstone & Tunbridge Wells NHS Trust. You will not be identified in any way. The final report will be submitted to the research funder (see below for details). You will be able to access the report via the internet.

The findings will also be published in academic journals and presented at professional and academic conferences. Anonymised extracts from the interviews may be used in publications arising from this research. Reports or papers resulting from the research with not identify any one who has taken part. The anonymised interview transcripts, with your permission, may be made available to other researchers and students for teaching / further research.

This project is funded by the Engineering and Physical Sciences Research Council (EPSRC) via their Health and Care Infrastructure Research and Innovation Centre (HaCIRIC) at Imperial College London. It is led by the National Nursing Research Unit (NNRU) at King's College London in partnership with staff from HaCIRIC, the US Center for Health Care Design's PEBBLE project, Maidstone and Tunbridge Wells NHS Trust, and the construction company Laing O'Rourke.

Further details of the project and wider NNRU research programme are available at: 
http://kcl.ac.uk/schools/nursing/nnru/prog/single.html

If you would like further information about this research please contact: 
Dr Jill Maben, Deputy Director, National Nursing Research Unit, 
King's College London. Telephone: 020 7848 3060 Email: jill.2.maben@kcl.ac.uk
STAFF INFORMATION SHEET

Research study

Impact of hospital ward design on staff and patient experiences

We would like to invite you to take part in an independent research study. This research study is being carried out by health researchers from King’s College, London and is looking at the impact of hospital ward design on staff and patient experiences.

Before you decide whether to take part you need to understand why the research is being carried out and what it would involve for you. Please take time to read the following information carefully. Talk to others about the study if you wish. Ask us if there is anything that is not clear or if you like more information; our contact details are at the end of this sheet.

Involvement in this research study is entirely voluntary and all data collected as part of the study will be treated as confidential. You are free to withdraw at any time without giving a reason.

What is the purpose of the study?
Increasingly, new hospital designs include greater ratios of single bedded accommodation and in some cases all single rooms. However, there is little evidence from the UK about the impact of different hospital ward designs on staff and patients. This research will ‘follow’ four clinical services as they move to the new hospital in Pembury to explore how hospital design affects staff and patient experiences.

It involves a two-stage ‘before’ and ‘after’ design, through which we hope to answer the following research questions:

What impact does hospital ward design have on:

- patient and carer experience and well-being?
- staff experience, well being and their ability to deliver effective and high quality care?
- staff work patterns?

Why have I been chosen?
Your clinical service has been selected to take part in the study and we are asking all members of staff to participate in one or more ways.

Do I have to take part?
It is up to you to decide whether or not to take part. If you decide to take part you will be given this information sheet to keep. If you decide to take part you are still free to withdraw at any time and without giving a reason. A decision to withdraw at any time, or a decision not to take part, will not affect your current or future employment in any way. Throughout all aspects of the research you have a right to:

- withdraw from the project at any time
- ask for material from any transcripts/notes that you believe is sensitive or identifying to be removed
- withhold information

What will happen to me if I do take part?
Taking part in the research will mean sharing your views on issues relating to staff working practices and staff and patient experiences before, and after, the move to the new hospital. You may be invited in take part in up to four different ways:

Questionnaire survey
All staff in your department will be asked to complete a postal questionnaire survey on two occasions over a 12-month period. The questionnaire aims to collect snapshot data on nurses’ workloads and working conditions and will seek your views on issues relating to your working environment and working practices, and your perceptions of patients’ experiences. The questionnaire will take 15 minutes to complete. Returning a completed survey will indicate consent for this part of the study.

Interviews and focus groups
We will invite a smaller number of staff to be interviewed or take part in a focus group run by a member of the research team. If invited and you agree to participate in an interview, this can take place at a time and location of your choosing, and a member of the research team will come to meet with you and talk to you informally for up to one hour. We would like to ask about your views about the impact of the physical environment on quality of care (and working practices and morale) and staff-patient interaction. Interviews may also explore your experience (if any) of the single-room mock-up at Pembury.
If invited and you agree to participate in a focus group, this will take place in a meeting room at the hospital, and will cover similar issues as the interview, but will seek the views of the group on successes and challenges relating to the physical environment in which you work.

We would like to tape-record the interview and/or focus group that you take part in so we have an accurate record of what you tell us. The tape recordings will be transcribed, and anonymised. The recordings will be deleted after transcription. The data will then be analysed by the research team.

With your permission, anonymised data (data which does not identify any one who has taken part) will be archived for up to five years after the end of the research, for use by other researchers for other purposes. We will ask you to sign a consent form agreeing to take part in the interview and/or focus group.

**Reflexive photography**

We are keen to capture visual records of the ward before and after the move to the new hospital at Pembury. We would like this visual record to be created by staff, so that we can understand the physical environment of the ward as you see it. Some participants will therefore be invited to take part in a type of data collection known as ‘reflexive photography’. If you take part in reflexive photography, we will ask you to take photographs of your ward and then discuss the photographs with a member of the research team during an interview. We will provide disposable cameras and arrange for the photographs to be developed. All data will be anonymised. If you agree to take part in reflexive photography, we will ask you to sign a consent and image release form.

**Observation/shadowing**

Observation of day-to-day activities and interactions in your department will be undertaken for several days over a 12-month period and all staff may be indirectly observed at some point. We may also invite you to allow the researcher to shadow you, or ask you to wear a pedometer, through a working day or shift. If you agree, we will ask you to sign a consent form agreeing to be shadowed/wear a pedometer. All notes and data collected will be anonymised. Patients and staff will be free to ask us to stop observing at any point.

**Are there any benefits in taking part?**

There are no direct benefits to you as an individual. There will be benefits for Maidstone and Tunbridge Wells NHS Trust because this study will provide evidence for future policy relating to hospital design. It will help managers understand how staff can improve the way they work in different hospital environments.

This is an important study because change in hospital design is likely to be an ongoing trend nationally, with many more hospitals with all single room accommodation likely to be built in the future.

We hope that this research will generate knowledge that will inform policy more widely in relation to future design, and ultimately improve the experiences of staff and patients.

**Will my taking part in the study be kept confidential?**

Involvement in this research study is entirely voluntary and your responses are entirely confidential. All data and field notes will be given a code to ensure anonymity and stored in a locked filing cabinet or on a password protected computer secured against unauthorised access.

If you tell us something that indicates there is a risk of harm to yourself or someone else, then we will follow a ‘disclosure protocol’. This involves seeking advice on whether we should disclose (tell a relevant agency or authority) about this risk.

**Has this study been reviewed by an ethics committee?**

All research undertaken by King’s College London is considered by an independent group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed and given approval by King’s College London Psychiatry, Nursing and Midwifery Research Ethics Sub-Committee (Ref no. PNM/09/10-30). The study has also been approved by your managers and by Maidstone and Tunbridge Wells NHS Trust Research & Development Department.

**What will happen to the results of the research study?**

Anonymous results from the study will be presented to key people within Maidstone & Tunbridge Wells NHS Trust. You will not be identified in any way. The final report will be submitted to the research funder (see below for details). You will be able to access the report via the internet.

The findings will also be published in academic journals and presented at professional and academic conferences. Anonymised extracts from the interviews may be used in publications arising from this research. Reports or papers resulting from the research will not identify any one who has taken part. The anonymised interview transcripts, with your permission, may be made available to other researchers and students for teaching / further research.
# Appendix 4. List of PDA categories and definitions

## List of PDA categories and definitions

### Table 1: HandBase form ‘fields’ (main categories and subcategories)

<table>
<thead>
<tr>
<th>Main category</th>
<th>Popup list (select one)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TASK STATUS</strong></td>
<td></td>
</tr>
<tr>
<td>1. New [task/patient]</td>
<td></td>
</tr>
<tr>
<td>2. Continuation [of previous task/of care for patient]</td>
<td></td>
</tr>
<tr>
<td>3. Return [to an earlier task]</td>
<td></td>
</tr>
<tr>
<td>4. Pause session</td>
<td></td>
</tr>
<tr>
<td>5. End session</td>
<td></td>
</tr>
<tr>
<td><strong>ACTIVITY</strong></td>
<td></td>
</tr>
<tr>
<td>1. Direct care [enter sub-category in DC TYPE]</td>
<td></td>
</tr>
<tr>
<td>2. Documentation</td>
<td></td>
</tr>
<tr>
<td>3. Escort/transfer patient</td>
<td></td>
</tr>
<tr>
<td>4. Indirect care</td>
<td></td>
</tr>
<tr>
<td>5. Medication tasks [including medication administration]</td>
<td></td>
</tr>
<tr>
<td>6. Personal/social</td>
<td></td>
</tr>
<tr>
<td>7. Professional communication [enter sub-category in PC TYPE]</td>
<td></td>
</tr>
<tr>
<td>8. Ward-related</td>
<td></td>
</tr>
<tr>
<td>9. Other</td>
<td></td>
</tr>
<tr>
<td><strong>DC TYPE [Direct care subcategories]</strong></td>
<td></td>
</tr>
<tr>
<td>1. Admission/discharge</td>
<td></td>
</tr>
<tr>
<td>2. Assessment/monitoring</td>
<td></td>
</tr>
<tr>
<td>3. Assistance with activities of daily living</td>
<td></td>
</tr>
<tr>
<td>4. Care/treatment/intervention</td>
<td></td>
</tr>
<tr>
<td>5. Cleaning/bed making [patient present]</td>
<td></td>
</tr>
<tr>
<td>6. Communication with patient</td>
<td></td>
</tr>
<tr>
<td>7. Education/teaching</td>
<td></td>
</tr>
<tr>
<td>8. Mobilising patient</td>
<td></td>
</tr>
<tr>
<td>9. Other</td>
<td></td>
</tr>
<tr>
<td><strong>PC TYPE [Professional communication subcategories]</strong></td>
<td></td>
</tr>
<tr>
<td>1. Administrative</td>
<td></td>
</tr>
<tr>
<td>2. Being taught</td>
<td></td>
</tr>
<tr>
<td>3. Discussing patient care</td>
<td></td>
</tr>
<tr>
<td>4. Providing advice</td>
<td></td>
</tr>
<tr>
<td>5. Providing assistance</td>
<td></td>
</tr>
<tr>
<td>6. Seeking advice</td>
<td></td>
</tr>
<tr>
<td>7. Seeking assistance</td>
<td></td>
</tr>
<tr>
<td>8. Shift report</td>
<td></td>
</tr>
<tr>
<td>9. Other handover</td>
<td></td>
</tr>
<tr>
<td>10. Review/update patient status board</td>
<td></td>
</tr>
<tr>
<td>11. Teaching (informal)</td>
<td></td>
</tr>
<tr>
<td>12. Other</td>
<td></td>
</tr>
<tr>
<td><strong>LOCATION</strong></td>
<td></td>
</tr>
<tr>
<td>1. At bedside</td>
<td></td>
</tr>
<tr>
<td>2. Off ward</td>
<td></td>
</tr>
<tr>
<td>3. Office space</td>
<td></td>
</tr>
<tr>
<td>4. On ward [any patient care area, but not at patient bedside]</td>
<td></td>
</tr>
<tr>
<td>5. Staff area [change, toilet, break room]</td>
<td></td>
</tr>
<tr>
<td>6. Staff base [ward office, interview room]</td>
<td></td>
</tr>
<tr>
<td>7. Ward support area [clean/dirty utility, supply/store room, kitchen/pantry, medication storage/preparation area]</td>
<td></td>
</tr>
</tbody>
</table>
| WITH 1 | 1. Allied health professional  
|        | 2. Assistant/support worker  
|        | 3. Doctor  
|        | 4. Domestic services  
|        | 5. Maintenance/IT/equipment  
|        | 6. Midwife  
|        | 7. Nurse  
|        | 8. Nurse practitioner  
|        | 9. Patient/relative  
|        | 10. Play leader/nursery nurse  
|        | 11. Porter  
|        | 12. Practice Development Nurse  
|        | 13. Student  
|        | 14. Volunteer  
|        | 15. Ward clerk/receptionist  
|        | 16. Ward manager/ordinator  
|        | 17. Other  
| WITH 2 | Popup list as for With 1  
| WITH 3 | Select number of additional people involved in activity/interaction  
| MODE/DEVICE | 1. CoW [Computer-on-Wheels]  
|             | 2. Face-to-face  
|             | 3. Laptop/tablet  
|             | 4. Mobile/smart phone  
|             | 5. Non verbal  
|             | 6. Pager  
|             | 7. PC  
|             | 8. Telephone  
|             | 9. Wireless telephone  
|             | 10. Other  
| ‘TWITTER’ | Manually enter details of any observed problems relating to the layout, environment, facilities, technology (including ICT) and equipment. Include details relating to interruptions, frustrations or difficulties staff member had with completing task/activity.  
| DATE | Date record entered (recorded automatically)  
| TIME | Time record entered (recorded automatically)  


### Table 2: Activity definitions

<table>
<thead>
<tr>
<th>Sub-category</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Direct care</td>
<td>Tasks directly involved with patient care including specialist/technical care, assistance with activities of daily living, direct communication with patient and/or relatives</td>
</tr>
<tr>
<td>2. Documentation</td>
<td>Documentation (excluding medication documentation), paper or electronic (including updating patient status at a glance information)</td>
</tr>
<tr>
<td>3. Escort/transfer patient</td>
<td>Escorting or accompanying patient to another ward/department, transfer patient to a different room (e.g. for diagnostic procedure / treatment)</td>
</tr>
<tr>
<td>4. Indirect care</td>
<td>All tasks indirectly related to patient care of a specific patient, not covered elsewhere (e.g. in documentation, professional communication)</td>
</tr>
<tr>
<td>5. Medication tasks</td>
<td>All tasks associated with medication, including preparation, administration, documentation, checking etc.</td>
</tr>
<tr>
<td>6. Personal/social</td>
<td>Meal breaks, toilet breaks, breaks etc.; all non-work related communication, category includes complaining and expressing frustration about work</td>
</tr>
<tr>
<td>7. Professional communication</td>
<td>All communication (except medication task-related communication) between health professionals – see Table 4 for sub-category definitions</td>
</tr>
<tr>
<td>8. Ward-related activities</td>
<td>Any ward-related activity including bed management, staff rotas, non-patient related clerical/administrative work, keeping stores stocked/delivering supplies, making beds, preparing/checking equipment, attending meetings, cleaning, serving meals/drinks</td>
</tr>
<tr>
<td>9. Other</td>
<td>Any other activity</td>
</tr>
</tbody>
</table>

### Table 3: Direct care sub-category definitions

<table>
<thead>
<tr>
<th>Sub-category</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Admission/discharge</td>
<td>Any activity relating to admission or discharge which directly involves the patient</td>
</tr>
<tr>
<td>2. Assessment/monitoring</td>
<td>Visual observation, vital signs</td>
</tr>
<tr>
<td>3. Assistance with activities of daily living</td>
<td>Bathing, feeding, toileting, shaving</td>
</tr>
<tr>
<td>4. Care/treatment/intervention</td>
<td>E.g. Wound care and dressing, procedures and treatment, IV site change, UCI</td>
</tr>
<tr>
<td>5. Cleaning/bed making</td>
<td>Cleaning patient care area, changing bed linen (performed by the staff member for a patient under their care, for example following incontinence/vomiting)</td>
</tr>
<tr>
<td>6. Communication with patient</td>
<td>General communication (talking with/listening to), reassuring patients/relative, helping confused patients, responding to non-medical queries</td>
</tr>
<tr>
<td>7. Education/teaching</td>
<td>Providing specific education about patient’s condition and management</td>
</tr>
<tr>
<td>8. Mobilising patient</td>
<td>Assisting patient in mobilising (e.g. post-op)</td>
</tr>
<tr>
<td>9. Other</td>
<td>Any other direct care activity</td>
</tr>
<tr>
<td>Sub-category</td>
<td>Definition</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1. Administrative</td>
<td>Any communication related to running of the ward in general (e.g. staffing, bed allocation, staff coordination, staff meeting, scheduling)</td>
</tr>
<tr>
<td>2. Being taught (informal)</td>
<td>Being taught new skills or information (informal)</td>
</tr>
<tr>
<td>3. Discussing patient care</td>
<td>Discussing patient status or care plan, validation (verifying accuracy or appropriateness of a decision, procedure, care plan, strategy, approach)</td>
</tr>
<tr>
<td>4. Providing advice</td>
<td>Providing advice or guidance relating to a skill or clinical knowledge (asking “how to”)</td>
</tr>
<tr>
<td>5. Providing assistance</td>
<td>Providing assistance with equipment, procedures, data entry, locating people or items</td>
</tr>
<tr>
<td>6. Seeking advice</td>
<td>Seeking advice or guidance relating to a skill or clinical knowledge (asking “how to”)</td>
</tr>
<tr>
<td>7. Seeking assistance</td>
<td>Seeking assistance with equipment, procedures, data entry, locating people or items</td>
</tr>
<tr>
<td>8. Shift report/other handover</td>
<td>Excluding main shift report</td>
</tr>
<tr>
<td>9. Teaching (informal)</td>
<td>Teaching new skills or information (informal)</td>
</tr>
<tr>
<td>10. Other</td>
<td>Any other professional communication</td>
</tr>
</tbody>
</table>
Appendix 5. Staff survey

Impact of hospital ward design on staff and patient experiences

Staff Survey – Acute Assessment Unit (AAU)

What is this survey and why am I being asked to complete it?

This survey is part of a larger research study being carried out by the National Nursing Research Unit at King’s College London. This is an independent study exploring the impact of hospital ward design, before and after the move to the new hospital at Pembury, on staff and patient experiences. The overall aim is to gather information that will help us better understand how ward design affects the experiences of staff and patients. We hope the findings will inform policy more widely in relation to future hospital design, and ultimately improve the experiences of staff and patients.

Please answer this survey in relation to AAU only. The survey will take about 20 minutes to complete.

As a thank you for your time, staff taking part in the survey will be entered in a prize draw to win a £75 Marks & Spencer gift card (there is a £75 prize for each ward). If you would like to be entered for the prize draw please complete the prize draw slip attached to the enclosed letter and return with your questionnaire. This slip will be separated from your questionnaire so that your questionnaire responses remain anonymous.

Please return your completed questionnaire in the reply-paid envelope provided, to:

Jill Maben
National Nursing Research Unit
King’s College London
FREEPOST LON1124
SE1 8YY

Who will see my answers?

Only members of the research team at the National Nursing Research Unit will see your responses, which will be anonymised and treated as completely confidential. No one in your Trust will know whether you have responded or not. The number below will only be used by the National Nursing Research Unit for sending reminders to staff. Findings will be presented in a summary report in which no individual can be identified.

If you have any queries about this questionnaire please contact:

Clarissa Penfold or Jill Maben
Tel: 020 7848 3033 Tel: 020 7848 3060
Email: clarissa.penfold@kcl.ac.uk Email: jill.2.maben@kcl.ac.uk
A. To what extent do you agree or disagree with the following statements about the current ward layout, environment, facilities and information and communications technology (ICT) on AAU?

Please circle the number from 1 (Strongly disagree) to 5 (Strongly agree) which best matches your personal view.

<table>
<thead>
<tr>
<th></th>
<th>STRONGLY DISAGREE</th>
<th>DISAGREE</th>
<th>NEITHER AGREE NOR DISAGREE</th>
<th>AGREE</th>
<th>STRONGLY AGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The supplies, consumables and equipment needed to care for patients are always available on the ward</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>Staff toilet facilities are adequate</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>Patient toilets and bathrooms are a good size and allow for easy access</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>It is easy for staff who are new to the ward to find their way about</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Staff have regular access to a designated rest area</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Most patients are able to see staff from their bed</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>It is easy to keep patient care areas clean</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>Space at patients’ bedsides is sufficient for staff to provide care with ease</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>Lighting levels in patient care areas are easy to adjust</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>Staff changing and locker facilities are adequate</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11</td>
<td>It is easy to keep patient care areas quiet</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12</td>
<td>The ward layout makes it easy to monitor (keep an eye on) patients</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13</td>
<td>The location of staff workstations enables staff to remain close to patients</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14</td>
<td>Most patients have a window view of a natural setting / scene from their bed</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15</td>
<td>It is easy for patients, families and visitors to find their way about within the ward</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16</td>
<td>It is easy for patients to get to the toilet / bathroom (alone or assisted)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>17</td>
<td>Ventilation (air flow) in patient care areas is adequate</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>18</td>
<td>The availability of computers and IT equipment is adequate</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Continued from previous page (To what extent do you agree or disagree with the following statements about the current ward layout, environment, facilities and information and communications technology (ICT) on AAU?)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>STRONGLY DISAGREE</th>
<th>DISAGREE</th>
<th>NEITHER AGREE NOR DISAGREE</th>
<th>AGREE</th>
<th>STRONGLY AGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>The location and layout of the dirty utility room helps reduce the risk of spillages and cross contamination</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>20</td>
<td>It is easy to chart / document care close to the patient</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>21</td>
<td>There is adequate space at the nursing team station(s)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>22</td>
<td>Storage space for sterile supplies, consumables and equipment is adequate</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>23</td>
<td>The ward design / layout is helpful for isolating patients with infections</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>24</td>
<td>There is adequate natural light (daylight) for patients</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>25</td>
<td>The staff rest area aids relaxation and recuperation</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>26</td>
<td>There are sufficient toilets and bathrooms for patients on this ward</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>27</td>
<td>The ward layout helps to minimise walking distances for staff</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>28</td>
<td>The ward design / layout minimises the need to move patients within the ward</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>29</td>
<td>It is easy to adjust the temperature in patient care areas</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>30</td>
<td>There is adequate space for patients to move about the ward if appropriate</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>31</td>
<td>There are sufficient patient toilets and bathrooms</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>32</td>
<td>The medication storage and preparation area is adequate</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>33</td>
<td>The number and location of clinical hand wash basins supports good hand hygiene</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>34</td>
<td>The supplies, consumables and equipment needed to care for patients are easily accessible</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>35</td>
<td>There is adequate space for family members and visitors at the bedside</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>36</td>
<td>There is adequate storage for patients’ clothes and belongings</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>37</td>
<td>There is adequate natural light (daylight) for staff</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>38</td>
<td>Facilities provided for patients and visitors (e.g. day room) are adequate</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
B. Thinking about the current ward layout, environment, facilities and information and communications technology (ICT) on AAU, in your opinion how helpful or unhelpful are they for the following?

Please circle the number from 1 (Very unhelpful) to 5 (Very helpful) which best matches your personal view.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>VERY UNHELPFUL</th>
<th>UNHELPFUL</th>
<th>NEITHER HELPFUL NOR UNHELPFUL</th>
<th>HELPFUL</th>
<th>VERY HELPFUL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Obtaining assistance (hands-on help) from colleagues with patients, procedures, equipment, IT or locating people or items</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Safety and security of patients</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Communication between nursing staff and patients</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>Monitoring new/junior team members</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Communication between nursing staff and doctors</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>Ability of staff to spontaneously discuss issues of care</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>Ability of staff to keep each other updated about general running issues on ward</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>Privacy for patients during bathing / toileting</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>Discussing patient care with colleagues</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>Knowing when other staff might need a helping hand</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11</td>
<td>Preventing and controlling hospital-acquired infections</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12</td>
<td>Informal learning / learning from colleagues</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13</td>
<td>Minimising the risk of medication errors</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14</td>
<td>Being aware of general running issues on ward (e.g. staffing, patient dependency, number and status of patients)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15</td>
<td>Maintaining patient confidentiality</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>16</td>
<td>Social interaction among ward staff</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>17</td>
<td>Minimising the risk to staff of moving and handling injuries</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>18</td>
<td>Participation of family members in patient care</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>19</td>
<td>Overall comfort of patients</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Thinking about the current ward layout, environment, facilities and information and communications technology (ICT) on AAU, in your opinion how helpful or unhelpful are they for the following?

<table>
<thead>
<tr>
<th></th>
<th>Very Unhelpful</th>
<th>Unhelpful</th>
<th>Neither Helpful Nor Unhelpful</th>
<th>Helpful</th>
<th>Very Helpful</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>Minimising the risk to patients of physical and/or verbal abuse from other patients / visitors</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>21</td>
<td>Responding to patient calls for assistance</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>22</td>
<td>Minimising the risk to staff of slips, trips and falls</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>23</td>
<td>Privacy for patients during examination</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>24</td>
<td>Social contact between patients</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>25</td>
<td>Minimising the risk to staff of physical and/or verbal abuse from patients / visitors</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>26</td>
<td>Ability of staff to deliver high quality care for all patients</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>27</td>
<td>Staff spending time with patients</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>28</td>
<td>Safety and security of staff</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>29</td>
<td>Minimising the risk of falls and injury to patients</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>30</td>
<td>Privacy for patients when giving medical history or being advised</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>31</td>
<td>Patient sleep and rest</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>32</td>
<td>Finding a staff member</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>33</td>
<td>Patient interaction with visitors</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>34</td>
<td>Minimising the risk to staff of needlestick and sharps injuries</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>35</td>
<td>Obtaining advice from colleagues relating to a skill or clinical knowledge</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

C. What two things do you think would most improve the current ward environment for staff? Please list in order of priority with most important first.

1.
2.
D. What two things do you think would most improve the current ward environment for patients? Please list in order of priority with most important first.

1. 

2. 

**SECTION 2: MOVE TO 100% SINGLE ROOMS**

A. Wards in the new hospital development at Pembury will be 100% single rooms, all with en-suite toilet/shower. How much better or worse than your current ward do you think a ward with 100% single rooms with en-suite toilet/shower will be for the following?

Please circle the number from 0 (Don't know / unsure) to 5 (Much better) which best matches your personal view.

<table>
<thead>
<tr>
<th></th>
<th>DON'T KNOW/ UNSURE</th>
<th>MUCH WORSE</th>
<th>WORSE</th>
<th>NO DIFFERENT</th>
<th>BETTER</th>
<th>MUCH BETTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Minimising the risk of falls and injury to patients</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>Minimising the need to move patients within the ward</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>Keeping patient care areas clean</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>Communication between nursing staff and patients</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Participation of family members in patient care</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Responding to patient calls for assistance</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>Preventing and controlling hospital-acquired infections</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>Patient sleep and rest</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>Ease of taking patients to the toilet / bathroom</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>Ability of staff to deliver high quality care for all patients</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11</td>
<td>Maintaining patient confidentiality</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12</td>
<td>Minimising the risk to staff of physical and/or verbal abuse from patients / visitors</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13</td>
<td>Knowing when other staff might need a helping hand</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14</td>
<td>Ability of patients to see staff</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15</td>
<td>Patient privacy</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Continued from previous page (Wards in the new hospital development at Pembury will be 100% single rooms, all with en-suite toilet/shower. How much better or worse than your current ward do you think a ward with 100% single rooms with en-suite toilet/shower will be for the following?)

<table>
<thead>
<tr>
<th></th>
<th>DON'T KNOW/ UNSURE</th>
<th>MUCH WORSE</th>
<th>WORSE</th>
<th>NO DIFFERENT</th>
<th>BETTER</th>
<th>MUCH BETTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>Patient interaction with visitors</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>17</td>
<td>Minimising staff walking distances on the ward</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>18</td>
<td>Minimising risk to patients of physical and/or verbal abuse from other patients / visitors</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>19</td>
<td>Social contact between patients</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>20</td>
<td>Overall comfort of patients</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>21</td>
<td>Minimising the risk of medication errors</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>22</td>
<td>Staff spending time with patients</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>23</td>
<td>Monitoring (keeping an eye on) patients</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

B. What two things are you most looking forward to in relation to the move to 100% single rooms in the new hospital?
Please list in order of priority with most important first.

1. 

2. 

C. What two things are you most concerned about in relation to the move to 100% single rooms in the new hospital?
Please list in order of priority with most important first.

1. 

2. 

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D. If you could choose the layout of AAU, what would be your preference in relation to the proportion of beds in single rooms and small (4-bed) bays?

Please tick one box.

1. All beds in single rooms
2. More beds in single rooms than in bays
3. Half beds in single rooms and half in bays
4. More beds in bays than in single rooms

E. Have you worked on a ward with all single rooms previously?

1. Yes
2. No

F. Do you feel that you have been given enough information about the all single room ward design in the new hospital development at Pembury?

1. Yes
2. No
3. Don’t know

G. How have you received information about the ward areas at the new hospital development at Pembury?

Please tick all that apply.

1. General ward meeting
2. HR surgery
3. Move & migration meeting
4. ‘One future, two hospitals’ newsletter
5. User group meeting
6. Training
7. Intranet
8. Other(s): please specify:
    a.
    b.

H. Is there any other information / training you would like in relation to the ward areas in the new hospital development at Pembury?
SECTION 3: YOUR MOST RECENT SHIFT ON AAU

1. Which best describes the most recent shift you worked on AAU?
   - 1□ Early
   - 2□ Late
   - 3□ Long day
   - 4□ Night
   - 5□ Other: please specify:

2. On which day of the week did your most recent shift on AAU begin?
   - 1□ Mon - Fri
   - 2□ Sat
   - 3□ Sun

3. How many hours did you work on your most recent shift on AAU (excluding meal breaks)?
   
   Number

4. On your most recent shift on AAU did you work beyond your contracted hours?
   - 1□ Yes
   - 2□ No

5. In total, how many patients were you directly responsible for on the most recent shift you worked on AAU?
   
   Number

6. Is this number of patients typical of your usual workload for this shift/day on AAU?
   - 1□ Less
   - 2□ Typical
   - 3□ More

7. How many other staff (not including yourself) were also looking after these patients?
   
   Number

8. Of the patients you were directly responsible for on your most recent shift, how many required the following?

   a  Assistance with all activities of daily living
   
   Number

   b  Hourly or more frequent monitoring or treatments
   
   Number

9. How would you describe your role in caring for patients on your most recent shift on AAU?
   Please mark the one option that fits best.

   - 1□ I provided most care myself
   - 2□ I supervised the care given by others and provided some myself
   - 3□ Most direct care was provided by others
10. Overall, how satisfied are you with the quality of care that you provided to patients on your most recent shift on AAU?

- 0□ Not applicable (did not provide direct care)
- 1□ Very dissatisfied
- 2□ Dissatisfied
- 3□ Neither satisfied nor dissatisfied
- 4□ Satisfied
- 5□ Very satisfied

11. On your most recent shift on AAU, how often did you perform the following tasks? Please circle the number from 0 (Never) to 2 (Three or more times) which best matches your activity.

<table>
<thead>
<tr>
<th>Task</th>
<th>NEVER</th>
<th>ONCE OR TWICE</th>
<th>THREE OR MORE TIMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>a Delivering and retrieving food trays</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b Arranging discharge referrals and transportation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c Taking routine blood samples from patients</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d Escorting patients within hospital</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e Cleaning patient rooms and equipment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f Obtaining supplies or equipment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g Answering phones, clerical duties (not related to patient care)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12. How satisfied were you with how you were able to perform the following on your most recent shift on AAU? Please circle the number from 1 (Very dissatisfied) to 5 (Very satisfied) which best matches your personal view. Please circle 0 (Not applicable) if a task was not part of your role on your most recent shift.

<table>
<thead>
<tr>
<th>Task</th>
<th>NOT APPLICABLE</th>
<th>VERY DISSATIS FIED</th>
<th>DISSATIS FIED</th>
<th>NEITHER SATISFIED NOR DISSATISFIED</th>
<th>SATISFIED</th>
<th>VERY SATISFIED</th>
</tr>
</thead>
<tbody>
<tr>
<td>a Physical care of patients (e.g. treatments and procedures)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>b Emotional care of patients</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>c Monitoring / recording patients’ observations</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>d Pain management</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>e Assisting patients with activities of daily living</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>f Educating / teaching patients and family</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>g Medication administration</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>h Preparing patients for admission / discharge</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>i Care planning / coordination</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>j Documenting care</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
SECTION 4: JOB SATISFACTION, TEAMWORK AND SAFETY

1. Overall, how satisfied are you with your job?

- □ Very dissatisfied
- □ Dissatisfied
- □ Neither satisfied nor dissatisfied
- □ Satisfied
- □ Very satisfied

2. To what extent do you agree or disagree with the following statements about teamwork on AAU?
   Please circle the number from 1 (Strongly disagree) to 5 (Strongly agree) which best matches your personal view.

<table>
<thead>
<tr>
<th></th>
<th>STRONGLY DISAGREE</th>
<th>DISAGREE</th>
<th>NEITHER AGREE NOR DISAGREE</th>
<th>AGREE</th>
<th>STRONGLY AGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Staff input is well received on this ward</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>b</td>
<td>Decision making on this ward uses input from relevant staff</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>c</td>
<td>The doctors and nurses on this ward work together as a well coordinated team</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>d</td>
<td>Disagreements on this ward are resolved appropriately (i.e. not who is right, but what is best for the patient)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>e</td>
<td>It is easy for staff on this ward to ask questions when there is something that they do not understand</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>f</td>
<td>I have the support I need from other staff to care for patients</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>g</td>
<td>I know the first and last names of all the staff I worked with during my last shift</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>h</td>
<td>Important issues are well communicated at shift changes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>i</td>
<td>Briefings are common on this ward</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

3. How satisfied are you with quality of communication that you experience with each of the following staff groups on AAU?
   Please circle the number from 1 (Very dissatisfied) to 5 (Very satisfied) which best matches your personal view. Please circle 0 (Not applicable) if your role does not require you to communicate with a particular staff group.

<table>
<thead>
<tr>
<th></th>
<th>NOT APPLICABLE</th>
<th>VERY DISSATISFIED</th>
<th>DISSATISFIED</th>
<th>NEITHER SATISFIED NOR DISSATISFIED</th>
<th>SATISFIED</th>
<th>VERY SATISFIED</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Doctors</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>b</td>
<td>Registered nursing staff</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>c</td>
<td>Nursing assistant/support staff (CSWs/HCAs)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>d</td>
<td>Allied health professionals (e.g. PT, OT, S&amp;L, Dietician)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
4. To what extent do you agree or disagree with the following statements about safety on AAU?

Please circle the number from 1 (Strongly disagree) to 5 (Strongly agree) which best matches your personal view.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>STRONGLY DISAGREE</th>
<th>DISAGREE</th>
<th>NEITHER AGREE NOR DISAGREE</th>
<th>AGREE</th>
<th>STRONGLY AGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>I am encouraged by my colleagues to report any patient safety concerns I may have</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>b</td>
<td>The culture on this ward makes it easy to learn from the errors of others</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>c</td>
<td>I receive appropriate feedback about my performance</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>d</td>
<td>Medical errors are handled appropriately on this ward</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>e</td>
<td>I know the proper channels to which I should direct questions regarding patient safety</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>f</td>
<td>The levels of staffing on this ward are sufficient to handle the number of patients</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>g</td>
<td>I would feel safe being treated as a patient on this ward</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>h</td>
<td>Trust management does not knowingly compromise the safety of patients</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>i</td>
<td>This organisation is doing more for patient safety now than it did one year ago</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>j</td>
<td>Leadership is driving us to be a safety-centred organisation</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>k</td>
<td>My suggestions about safety would be acted upon if I expressed them to management</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

5. During the last 12 months have you been injured or felt unwell as a result of the following on AAU?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>□ Yes</th>
<th>□ No</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Moving and handling</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>b</td>
<td>Needlestick and sharps injuries</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>c</td>
<td>Slips, trips or falls</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

6. In the last 12 months have you personally experienced physical violence, harassment, bullying or abuse on AAU?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>□ Yes</th>
<th>□ No</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>From patients or their partners / relatives / visitors</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>B</td>
<td>From colleagues</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
7. To what extent do you agree or disagree with the following statements about working on AAU? 

Please circle the number from 1 (Strongly disagree) to 5 (Strongly agree) which best matches your personal view.

<table>
<thead>
<tr>
<th></th>
<th>STRONGLY DISAGREE</th>
<th>DISAGREE</th>
<th>NEITHER AGREE NOR DISAGREE</th>
<th>AGREE</th>
<th>STRONGLY AGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>I often feel under a lot of pressure at work</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>b</td>
<td>I worry a lot about my work outside working hours</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>c</td>
<td>My job is very stressful</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

SECTION 5: BACKGROUND DETAILS

1. What is your gender?
   - 1  □ Female
   - 2  □ Male

2. What is your age?
   - 1  □ 16-20
   - 2  □ 21-30
   - 3  □ 31-40
   - 4  □ 41-50
   - 5  □ 51-65
   - 6  □ 66+

3. How many hours a week are you contracted to work?
   - 1  □ Up to 29 hours
   - 2  □ 30 or more hours a week

4. Do you regularly work outside your contracted hours?
   - 1  □ Yes
   - 2  □ No

5. Which shifts have you worked in the last month?

Please tick all that apply.
   - 1  □ Early
   - 2  □ Long day
   - 3  □ Late
   - 4  □ Night
   - 5  □ Other: please specify:
6. What is your occupational group?

☐ Registered Nurse (RN) ☐ Clinical Support Worker (CSW) / Healthcare Assistant (HCA)

☐ Other: please specify:

7. Approximately, how many years have you worked?

Please enter number of years for each of the following:

<table>
<thead>
<tr>
<th>a</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>In your current occupational group (i.e. as CSW, HCA, RN)</td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>Years</td>
</tr>
<tr>
<td>In this specialty</td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>Years</td>
</tr>
<tr>
<td>In this Trust</td>
<td></td>
</tr>
<tr>
<td>d</td>
<td>Years</td>
</tr>
<tr>
<td>On this ward</td>
<td></td>
</tr>
</tbody>
</table>

8. What is your current pay band?

☐ Band 2 ☐ Band 3 ☐ Band 4

☐ Band 5 ☐ Band 6 ☐ Band 7

☐ Band 8 ☐ Other: please specify:

9. Did you undertake your initial nursing training in the UK?

☐ Yes ☐ No ☐ Not applicable

10. What is your highest level of qualification?

☐ No academic qualification ☐ NVQ level 1 / 2 / 3

☐ CSEs / GCSEs / O-levels ☐ A-levels, Vocational A-levels, AS levels

☐ Diploma (HND, HNC, NVQ level 4) ☐ University degree

☐ Postgraduate qualification (MA, MSc, PhD) ☐ Other: please specify:

11. Please use the space below and overleaf to write any additional comments you have about the ward layout, environment, facilities and information and communications technology (ICT) in the old and/or new hospital:

[Type a quote from the document or the summary of an interesting point. You can position the text box anywhere in the document. Use the Text Box Tools tab to change the formatting of the pull quote text box.]

THANK YOU VERY MUCH FOR YOUR TIME AND EFFORT IN COMPLETING THIS QUESTIONNAIRE
### Appendix 6. Teamwork and safety climate factors

Table X:

<table>
<thead>
<tr>
<th>Factor (scale)</th>
<th>Survey items</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Teamwork factor 1:</strong></td>
<td></td>
</tr>
<tr>
<td><em>Input into decisions and collaboration with other staff</em></td>
<td>• Nurse input well received where I work</td>
</tr>
<tr>
<td></td>
<td>• Decision making where I work uses input from relevant staff</td>
</tr>
<tr>
<td></td>
<td>• Doctors and nurses work together as well coordinated team</td>
</tr>
<tr>
<td></td>
<td>• Disagreements resolved appropriately</td>
</tr>
<tr>
<td></td>
<td>• Easy for staff to ask questions</td>
</tr>
<tr>
<td></td>
<td>• Have support need from other staff</td>
</tr>
<tr>
<td></td>
<td>• Satisfied with quality of collaboration</td>
</tr>
<tr>
<td><strong>Teamwork factor 2:</strong></td>
<td></td>
</tr>
<tr>
<td><em>Information handover</em></td>
<td>• Know first and last names</td>
</tr>
<tr>
<td></td>
<td>• Important issues well communicated</td>
</tr>
<tr>
<td></td>
<td>• Briefings common</td>
</tr>
<tr>
<td></td>
<td>• Satisfied with quality of collaboration with nurses</td>
</tr>
<tr>
<td><strong>Safety climate factor 1:</strong></td>
<td></td>
</tr>
<tr>
<td><em>Attitudes to safety within own team; capacity to learn from others</em></td>
<td>• Encouraged to report safety concerns</td>
</tr>
<tr>
<td></td>
<td>• Culture makes it easy to learn from errors of others</td>
</tr>
<tr>
<td></td>
<td>• Receive appropriate feedback</td>
</tr>
<tr>
<td></td>
<td>• Medical errors handled appropriately</td>
</tr>
<tr>
<td></td>
<td>• Know the proper channels</td>
</tr>
<tr>
<td><strong>Safety climate factor 2:</strong></td>
<td></td>
</tr>
<tr>
<td><em>Overall confidence in safety of organisation</em></td>
<td>• Levels of staffing sufficient</td>
</tr>
<tr>
<td></td>
<td>• Would feel safe being treated as a patient</td>
</tr>
<tr>
<td></td>
<td>• Management does not compromise safety</td>
</tr>
<tr>
<td><strong>Safety climate factor 3:</strong></td>
<td></td>
</tr>
<tr>
<td><em>Perceptions of management’s attitudes to safety</em></td>
<td>• This organisation doing more for patient safety than a year ago</td>
</tr>
<tr>
<td></td>
<td>• Leadership driving us</td>
</tr>
<tr>
<td></td>
<td>• Suggestions about safety would be acted upon</td>
</tr>
</tbody>
</table>

---

Appendix 7. Information and guidelines for taking part in reflexive photography

Impact of hospital ward design on staff and patient experiences

King's College London Psychiatry, Nursing and Midwifery Research Ethics Sub-Committee ref no. PNM/09/10-30

Information and guidelines for taking part in reflexive photography

What is the purpose of reflexive photography?
Reflexive photography is a data collection method in which research participants take photographs and then discuss and reflect on these images during an interview with a member of the research team. We are keen to capture visual records of the ward before and after the move to the new hospital at Pembury, and would like this visual record to be created by you, so that we can understand the physical environment of the ward as you see it.

What will taking part involve?
• We will provide you with a single use disposable camera to take photographs of your ward. We would like you to take at least five photographs. You should always use the flash when taking photographs.

• You are free to take photographs of any aspect of the work environment that you think is important.

• For example, you might want to photograph aspects of the physical environment (e.g. ward design, layout, environment, facilities, technology and equipment) that you consider to be helpful or unhelpful. You might include photographs of what you consider the best and worst areas of the ward, or a particular area or piece of equipment that helps or hinders your work.

• You may take photographs of any area of the ward, including non-patient and staff areas. Please remember not to put yourself or others at risk when taking photographs.

• You should avoid including identifiable people in your photographs (e.g. staff, patients or visitors). If you want to include people in any of your photographs, you should do so in such a way that they cannot be identified (e.g. we should not be able to see their face in the photograph).

• We will collect the camera back from you after two weeks and get the photographs developed.

• We will arrange an interview with you. This will take place with a member of the research team who will share your photographs with you and ask you talk about what they show and your reasons for taking them. With your permission the interview will be audio recorded, so we have an accurate record of what you tell us (the recording will be deleted after transcription). The photographs and interview data will then be analysed by the research team.

Will the photographs and interview data be confidential?
Your interview and photographs will be anonymised. This means you will be assigned a ‘participant identification code’ so no-one outside the research team will be able identify you as having taken the photographs, or through anything you tell us in the interview. If you do accidentally include identifiable people in any of your photographs these will be shredded following the interview.

We will ask you to sign a consent and image release form prior to taking part. This means that you are giving your permission for the research team to keep the photographs you take and use them alongside data from the interview for analysis and the purposes of dissemination of research findings (e.g. in a report of the research). Anonymised photographs selected for inclusion in research reports will be submitted to Maidstone & Tunbridge Wells NHS Trust, and only used with Trust permission.

If you have any queries, please do not hesitate to contact Clarissa Penfold, Lead Researcher,
Tel: 020 7848 3033, Mob: 07944 000 475, Email: clarissa.penfold@kcl.ac.uk
Appendix 8. Topic Guide for Staff Interviews

Impact of hospital ward design on staff and patient experiences

Topic Guide for Staff Interviews

Research objectives for staff interviews:

- Does the move to all single room accommodation affect staff experience and well being?
- How does the physical environment impact on the experience of staff providing care to patients and how this influence staff ability and capacity to deliver high quality care?
- Does it affect staff working practices and are these changed?
- Does it affect ability of staff to deliver high quality patient care?
- Are there advantages for staff of a move to all single room accommodation?
- Are there disadvantages for staff of a move to all single room accommodation?

Note on use of this topic guide:

We wish to encourage participants to discuss their views and experiences in an open way without excluding issues that may be of importance to individual participants and the study as a whole. Therefore, unlike a survey questionnaire or semi-structured interview, the questioning will be responsive to respondents’ own experiences, attitudes and circumstances.

The following guide does not contain pre-set questions but rather lists the key themes and sub-themes to be explored with each participant. This allows the interviewer to formulate questions which are responsive to each individual participant. The topic guide does not include follow-up questions like ‘why’, ‘when’, ‘how’, etc. as it is assumed that participants’ contributions will be fully explored throughout in order to understand how and why views, behaviours and experiences have arisen. While all topics will be covered with each participant, the order in which issues are addressed and the amount of time spent on different themes will vary between participants.
1. **Introduction**
   - Introduce self, NNRU
   - Introduce research (funding, research design, outputs)
   - Explain: confidentiality, tape recording, length of interview, nature of discussion (specific topics to address, but conversational in style, in your own words, no right or wrong answers), reporting and data storage/archiving
   - Any questions
   - Obtain written consent

2. **Background**
   **Aim:** to gather background contextual information which may have a bearing on experiences and can be followed up and explored during interview
   - Personal circumstances (grade of staff; where work; how long worked in Trust etc.)
   - Previous experience as member of staff elsewhere (and in ‘after’ interviews check whether worked in Trust before move to new hospital)

3. **Recent experience as member of staff in clinical service at MTW NHS Trust**
   **Aim:** to capture spontaneous reflections on recent experience and what aspects were important to participant
   - What is it like working in ward area?
   - Overall impression of ward and hospital
   - Experience (best and worst aspects of experience)

4. **Staff experience relating to physical environment**
   **Aim:** to encourage participant to reflect spontaneously on the physical environment in relation to staff experience
   - Positive aspects of physical environment (layout, environment, facilities)
   - Negative aspects of physical environment (layout, environment, facilities)
   - Affects different staff groups differently?

5. **Ward layout, environment and facilities and direct care**
   - Explore perceptions of impact of ward layout, environment, facilities and technology on direct care delivery and processes
     - Space at bedside
     - Ease of taking patients to toilets/bathrooms
     - General communication/interaction with patient
     - Education/teaching
     - Patient privacy/confidentiality
     - Mobilising patients
     - Visibility of patients
     - Awareness of general running issues on ward (e.g. staffing, patient dependency, number and status of patients)
     - Nurse call system (responding to patient calls)
     - Issues affecting time allocated to direct care (e.g. walking distances, location, availability and accessibility of supplies, consumables and equipment)
6. Ward layout, environment and facilities and communication/teamwork

- Explore perceptions of impact of environment on different aspects of communication and teamwork
  - Seeking advice / assistance
  - Informal teaching / learning
  - Monitoring new/junior colleagues
  - Discussing patient care (formal and spontaneous)
  - Visibility of staff/finding a staff member
  - Location and design of nursing team stations
  - Patient status board
  - Communication systems/devices
  - Confidentiality
  - Keeping staff updated
  - Staff coordination (e.g. team briefings/discussion)
  - Communication between nursing staff and doctors
  - Differences depending on time of day/night
  - Social aspects of work and staff well being – social interaction/support/isolation, staff space and facilities

7. Ward layout, environment and facilities and documentation and medication tasks

- Explore perceptions of impact of environment on documentation and medication tasks
  - How ward layout affects work processes in relation to these
  - Work stations (location, design, location, space etc.)
  - IT availability and mobile solutions
  - Medication storage, preparation and administration

8. Ward layout, environment and facilities and staff and patient safety

- Explore perceptions of impact of environment on staff and patient safety
  - Moving & handling
  - Slips, trips and falls (staff)
  - Needlestick/sharps injuries
  - Infection control (including hand hygiene, cleanliness of patient care areas)
  - Security of staff and patients(risk of physical/verbal abuse from patient/visitors)

9. Patient experience relating to physical environment

*Aim: to understand staff perceptions' of the patient experience relating to aspects of the physical environment*

- Visibility of staff
- Privacy
• Security
• Communication and support from other patients
• Interaction with visitors
• Involvement of family in patient care
• Bed and other furniture (e.g. chair, bedside cabinet)
• Facilities (bathroom, day room, accessibility of these)
• Risk of falls and injury
• Entertainment/communication (television, radio, telephone)
• During the day (noise, lighting, temperature, view outside)
• At night (noise, lighting, temperature, quality of sleep)
• Any times / experiences when patients feel particularly uncomfortable / unsafe
• Affects different patients differently (e.g. young adults, confused/dementia patients)?

10. Suggestions for improvements
Aim: to obtain staff suggestions for what would improve the physical environment and close interview on a positive note

• Explore improvements for staff, patients and visitors
  o Ward layout
  o Ward environment (e.g. heating, lighting, ventilation)
  o Ward facilities
  o Technology (ICT)
  o Any other aspects of physical environment

• New hospital development at Pembury
  o Explore views on design (100% single rooms)
  o Aspects looking forward to
  o Any anxieties/concerns

• Anything else would like to add
Impact of hospital ward design on staff and patient experiences

Topic Guide for Patient Interviews

Research objectives for patient interviews:

- Does the move to all single room accommodation affect patient and carer experience and well being?
- Does it affect diverse patient groups (e.g. pregnant women, the elderly) differently?
- Are there advantages for patients of a move to all single room accommodation?
- Are there disadvantages for patients of a move to all single room accommodation?

Note on use of this topic guide:

We wish to encourage participants to discuss their views and experiences in an open way without excluding issues that may be of importance to individual participants and the study as a whole. Therefore, unlike a survey questionnaire or semi-structured interview, the questioning will be responsive to respondents’ own experiences, attitudes and circumstances.

The following guide does not contain pre-set questions but rather lists the key themes and sub-themes to be explored with each participant. This allows the interviewer to formulate questions which are responsive to each individual participant. The topic guide does not include follow-up questions like ‘why’, ‘when’, ‘how’, etc. as it is assumed that participants’ contributions will be fully explored throughout in order to understand how and why views, behaviours and experiences have arisen. While all topics will be covered with each participant, the order in which issues are addressed and the amount of time spent on different themes will vary between participants.

1. Introduction
   - Introduce self, NNREU
   - Introduce research (funding, research design, outputs)
   - Explain: confidentiality, tape recording, length of interview, nature of discussion (specific topics to address, but conversational in style, in your own words, no right or wrong answers), reporting and data storage/archiving
   - Any questions
   - Obtain (written) consent
2. **Background**  
*Aim:* to gather background contextual information which may have a bearing on experiences and can be followed up and explored during interview

- Personal circumstances (main daytime activity, who live with)
- Previous experience as hospital in-patient

3. **Recent experience as patient in clinical service at MTW NHS Trust**  
*Aim:* to capture spontaneous reflections on recent experience and what aspects were important to participant

- Length of stay
- Overall impression of ward and hospital
- Experience (*best* and *worst* aspects of experience)
- Satisfaction (how satisfied overall with care and treatment received)

4. **Experience of being admitted to ward**  
*Aim:* to understand ‘touch point’ and significance for overall experience

- First impressions of ward environment (welcoming / unwelcoming, homely / clinical, friendly / frightening)
- Staff
- Ward (and layout of ward)
- Other patients
- Orientation to ward and facilities
5. Feeling comfortable

Aim: to understand aspects of the physical environment which influenced perceptions of comfort

- Impressions of ward environment over time
- General impact of environment on experience of feeling comfortable
- Bed and other furniture (e.g. chair, bedside cabinet)
- Facilities (toilets, showers/baths, day room)
- Ward layout (accessibility, noise, privacy etc.)
- Décor
- Entertainment/communication (television, radio, telephone)
- During the day (noise, lighting, ventilation, temperature)
- Views from bed, views from windows
- At night (noise, temperature, lighting, quality of sleep)
- Other patients
- Any times / experiences when felt particularly uncomfortable
- Any times / experiences when felt particularly comfortable

6. Feeling safe

Aim: to understand aspects of the physical environment which influenced perceptions of safety

- General impact of environment on experience of feeling safe
- Security of belongings
- Nurse call system / calling for assistance (ease or difficulty during day and night)
- Moving around the ward (any concerns re falls and injury)
- Visibility of staff
- Privacy, dignity, confidentiality
- Cleanliness and hygiene on the ward (including experience of staff hand washing)
- Any times / experiences when felt particularly unsafe
- Any times / experiences when felt particularly safe

7. Interaction with staff

Aim: to understand how role of physical environment in patients’ interactions with staff

- General atmosphere on ward (friendly, unfriendly)
- Staff behaviour and how interacted with patients (who, for what reason, how often)
- Relationships with staff (explore for different staff groups: domestics; assistant/support workers; midwives/nurses; doctors)
- Positive experiences
- Negative experiences
- Ways in which physical environment made interactions easier / more difficult (privacy, dignity, confidentiality)

8. Interaction with visitors

Aim: to explore how the physical environment made visiting enjoyable / less enjoyable
• Visiting times and visitors
• Facilities for visitors (chairs, refreshments etc.)
• Staff interaction with visitors

9. Suggestions for improvements

Aim: to obtain patients’ suggestions for what would improve the physical environment and close interview on a positive note

• Ward layout
• Other aspects of physical environment (noise, lighting, heating, ventilation)
• Facilities (toilets and bathrooms, day rooms, entertainment and telephones etc.)
• Visibility of staff
• Visitors
• Looking back now is there anything in particular that would have made your experience better/easier?
• How do you think we can improve patient experiences within these services?
• What matters most to you as a patient?
• Explore views on new hospital (100% single rooms) – what would be their choice if had to go into hospital again?
• Any thing else would like to add

End interview and make respondent payment