How a quality improvement initiative can be used to promote single sex accommodation

Single sex accommodation is vital to ensuring patients’ privacy and dignity. A trust used a quality improvement initiative to set targets for achieving this

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The NHS is committed to delivering privacy and dignity to all patients. To this end, the Department of Health has implemented initiatives to eliminate mixed sex wards.

Salford Royal Foundation Trust is committed to three guiding principles of clean, safe and personal care. In April 2008, the trust launched its quality improvement strategy, and the single sex project within this aims to ensure that 95% of patients are admitted directly to single sex accommodation.

This initiative implemented a number of tests of change relating to workforce and culture, facilities and planning, and communication. To examine whether these tests had resulted in an improvement, outcome, process and balancing measures were designed. The outcome measures showed the trust reached a compliance rate of 93% of all patients admitted to three clinical areas.

**BACKGROUND**

The NHS Charter (Dyke, 1998) began to address how to eliminate mixed sex accommodation, and discussed patients’ rights and expectations in relation to single sex accommodation.

A 2009 national inpatient survey found the majority (92%) of respondents who had a planned admission to hospital said they did not share a sleeping area (for example a room or bay) with patients of the opposite sex when they were first admitted to a bed on a ward (Care Quality Commission, 2010). The Department of Health (2005) is committed to eliminating mixed sex hospital accommodation, defining single sex accommodation as “separate sleeping areas for men and women, segregated bathroom and toilet facilities for men and women and, in those trusts providing mental health services, safe facilities for the mentally ill”.

A recent study of mixed sex accommodation demonstrated that, while single sex accommodation is ideal, it is not the most important factor to most patients admitted to the emergency assessment unit (EAU) (Bonner et al, 2009). The study found that out of 1,000 respondents, 925 (93%) had been in bays and 665 (67%) had shared with the opposite sex. Most (579/665, 87%) were comfortable with this; 97% (966/1,000) felt there was sufficient privacy and all felt they had been given privacy when needed.

When asked, given the nature and function of the EAU, if they would be willing to share with the opposite sex if it meant a shorter stay, 857 (86%) said yes. This shows that implementing single sex accommodation in the EAU is potentially more difficult to do as it is not seen as a priority. Therefore any changes implemented in this area have the potential to be spread across the trust.

**PROJECT AIM**

Salford Royal Foundation Trust is committed to three guiding principles of clean, safe and personal patient care. As a result, the trust board and frontline staff are committed to ensuring that the trust delivers healthcare that helps to achieve this standard of care.

In April 2008, the trust launched its quality improvement strategy. This aims to save 1,000 lives by reducing the hospital standardised mortality ratio to one of the lowest in the NHS and to prevent 10,000 harmful events that patients might otherwise have experienced between 2008 and 2011.

The single sex accommodation project started in April 2009. It aimed to ensure that
95% of patients were admitted directly to single sex accommodation on the emergency clinical decisions unit (ECDU), EAU and heart care unit (HCU) by the end of September 2009.

In practice, single sex accommodation can be achieved if men and women have separate sleeping areas (such as single sex bays) and have separate toilets and bathrooms that they can reach without having to pass through (or close to) opposite sex areas. Ward layouts should minimise any risk of being overlooked or overheard by members of the opposite gender.

**METHOD AND PROGRAMME DESIGN**

The purpose was to empower frontline staff to make changes to current processes and ward organisation. Empowering staff to make this sort of change is important because they know what needs to be done to improve patient care.

The quality improvement methodology focused on wards testing changes in small areas before they were implemented on a wider scale. This approach ensured that frontline staff were able to test the changes, rather than having a change forced upon them. As staff developed the changes themselves, they also had ownership of them and therefore were more likely to sustain them.

In order to examine the current status of single sex accommodation at the trust, we needed to collect some baseline data. During December 2008, a matron undertook a two week trust based audit on the EAU. Of a total of 130 patients who were given the questionnaire and completed it, 25 (19%) were admitted to single sex accommodation, either a side room or single sex bay.

When examining this issue further, 17 (13%) patients were admitted to mixed sex accommodation to avoid a breach of the accident and emergency four hour waiting target. As a result of bed pressures and patient flow in A&E, 87 (67%) patients were given a bed in a mixed sex bay on the EAU at the time of admission, as it had been the only bed available. This audit was only undertaken on the EAU, so we do not have similar data for the other areas piloted in the study. These results clearly identified areas for improvement.

Furthermore, patient:toilet facility ratios were found to be as follows: EAU 23:3; ECDU 14:1; and HCU 10:1. It was evident that there was a need for improved separate washing and toilet facilities on all of the wards included in the pilot.

A faculty set up to address the issue of single sex accommodation identified three primary drivers. These are system components that will contribute to moving the primary outcome (Institute for Healthcare Improvement, 2008). On further exploration, the faculty team (consisting of relevant matrons, medical staff and nurses from the pilot wards, members from the bed management team and a member of the quality improvement directorate) identified secondary drivers that would be tested during the course of the project.

Improvement methodology uses driver diagrams to show a cascading set of “means” or drivers to achieve the study’s main aim (Fig 1).

**TESTS OF CHANGE**

Staff members were invited to implement tests of change using a Plan Do Study Act (PDSA) cycle (Deming, 1984). This is one of the most common tools for improvement and forms part of the Model for Improvement (Langley et al, 1996) (Fig 2).

The PDSA cycle teaches organisations to plan an action, do it, study it to see how it conforms to the plan and act on what has been learnt (Deming, 1984). Implicit in this approach is that improvement in quality results from continuous, incremental turns of the wheel. The cycle should be repeatedly implemented in spirals of increasing knowledge of the system; this knowledge contributes to the overall goal and each cycle brings people closer to their ultimate goal.

The following section provides details of the various tests of change that were implemented with the intention of achieving the outcome measure of ensuring that 95% of patients were admitted directly to single sex accommodation on the ECDU, EAU and HCU by the specified date.

Tests of change focused on three main areas: workforce and culture; facilities and planning; and communication. Small tests of change were conducted and evaluated and, following these, systems were developed to test these changes further.

When ward staff identified an idea for system change, they were encouraged to test it on a small scale using multiple PDSA cycles. This method of testing minimises the risk of being overlooked or overheard by members of the opposite gender.

![Fig 1. Single Sex Accommodation – Driver Diagram](chart)

![Fig 2. The Model For Improvement](chart)
practice changing practice

risks associated with system change and allows weaknesses in a new system to be acknowledged and redesigned before widespread implementation.

Workforce and culture
The workforce and culture primary driver focused on changing staff working practices and the trust’s culture. The initial test was to allocate each bed to either male or female patients, in separate bays, which was successful. To expand this further, three beds per sex were then allocated in separate bays and this, again, was successful.

This success was repeated until a failure was noted (male and female patients mixed). This failure was discussed with team members, and analysis showed a lack of communication among staff had caused the test of change to fail.

It was evident that awareness needed to be raised of the appropriate use of discharge facilities and the importance of understanding patient flow. To address this problem, a system was developed and tested whereby brightly coloured tape was used on the patient whiteboard to highlight the allocated single sex areas. This system of non-verbal communication proved successful and, along with the allocation of bed spaces, was spread throughout the pilot units.

Facilities and planning
Testing on the wards and the planning primary driver both focused on promoting the use of discharge facilities — the hospital discharge lounge or day areas — by patients waiting for transport home or discharge prescriptions to be completed. Engagement from junior doctors and ward pharmacists proved vital as their input helped to make the discharge process more fluid for patients.

To test and promote the use of discharge facilities, a poster was used as a visual prompt and a member of staff from the facilities, a poster was used as a visual

Communication
The communication primary driver encompasses engagement and continuous communication with patients, frontline teams and various members of the multidisciplinary team, which all proved to be essential.

The trust has a robust system of recording breaches. This involves producing a central recording book for each pilot area to document any individual breach of the single sex initiative, why it happened and whether it was resolved within 48 hours. Although this information should ideally be recorded as an adverse incident report of loss of service, staff have reported that this cannot always be completed reliably because of time constraints on the wards.

Finally, as part of this initiative, we designed a patient leaflet that would be given to every patient on admission. This prompted nursing staff to raise the issue of single/mixed sex accommodation with patients and obtain consent to place them in a mixed sex area should the need arise.

HOW DO WE KNOW A CHANGE IS AN IMPROVEMENT?
To examine whether the tests of change, detailed in the previous section, were effective, it was essential to examine change relating to key measures: outcome; process; and balancing measures. The Institute for Healthcare Improvement (2008) defines these as follows:

- **Outcome measures**: these show whether changes are actually leading to improvement:
  - Proportion of patients admitted directly to single sex accommodation on the EAU and ECDU;
  - Proportion of patients admitted directly to single sex accommodation on the HCU; this was assessed separately as it remains a Nightingale ward and frequently provides a higher level of care. The HCU admits more patients whose clinical need may override the single sex accommodation initiative.

- **Process measures**: to affect the outcome measure of improving patient safety, changes will be made to improve many core processes, as well as the culture as it relates to patient safety:
  - Proportion of patients admitted to mixed sex accommodation;
  - Average time — bed allocation to transfer;
  - Average time — discharge decision and transfer.

- **Balancing measures**: use of these ensures that changes to improve one part of the system are not causing new problems in other parts:
  - Patient satisfaction.

**Outcome measures**
This article presents the two main outcome measures for the single sex accommodation project. Fig 3 shows compliance with single sex accommodation on the EAU and ECDU. Week one was the last week of May 2009, which was followed by a four week period of rapid testing of the tests of change outlined in the previous section. The period between week 11 and week 13 was heavily affected by building work on the EAU, and monitored beds were lost during this time. However, the compliance rate soon reverted back to above the target once the building work had been completed.

Fig 4 shows compliance with single sex accommodation on the HCU (the scale and time period is the same as in Fig 3). This graph demonstrates an erratic system that has short periods of stability; weeks 4-6 show...
LONGITUDINAL MEASURES
The quality improvement measures used in this study are a combination of outcome measures, process measures and balancing measures. These enabled teams to look at what was working and how it was working, to collect baseline data and to provide evidence to show that changes had occurred.

The measures also helped to ensure that any changes were related to the developments that had been made and that they were not having a negative impact on other areas of the organisation – for example, the balancing measure looked at patient satisfaction and feedback.

This project has been shown to work in three specific areas, and it could be argued that this approach could be adopted in other areas of the trust. Its purpose was to create a model that was piloted and, following successful implementation, had the potential to be developed in other areas.

Spread and sustainability are at the heart of all quality improvement work that is undertaken at Salford Royal Foundation Trust and are essential if we are to ensure that the achievements gained are built on and developed. However, it is important to note that many of the changes designed from such work require some tailoring to different areas and a one size fits all approach is not always appropriate.

The model developed from this study provides a basis from which other areas and departments can design changes that are appropriate for the care delivered in their particular area.

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