Innovative ward layout can reduce wasted nursing time. A hospital designed three new wards to allow nurses to spend more of their shift providing direct patient care.

### Designing wards to release time to care

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- Benefits of improving ward designs

Pressure on staff numbers and increasingly complex care means it is more important than ever that nurses are enabled to spend as much time as possible on direct care.

The Productive Ward series was developed by the NHS Institute for Improvement and Innovation as a way of examining and improving ward environments to minimise the time wasted due to factors such as inefficient ward layouts.

It is based on the concept of “lean”, an approach to improve flow and eliminate waste developed by the Japanese car company Toyota (NHSI, 2011a).

Chesterfield Royal Hospital is a 500-bed district general hospital in the Peak District. In 2008, the hospital began to implement the Productive Ward programme.

A literature search on Productive Ward found mainly reports on how it had been implemented at acute hospitals. These self-reports described how the framework had enabled nurses to change ward routines, resulting in improvements to care in areas such as mealtimes (Taylor, 2007).

The Productive Ward series recommends that “activity follows” are performed at the start of the initiative to observe and record the amount of time nurses spend on different direct and indirect patient care and administrative tasks (NHSI, 2011b). Activity follows were undertaken at the hospital on six medical, orthopaedic and surgical wards using the validated audit tool designed by the NHSI during 2008-09.

Analysis of these activity follows showed clearly that ward layout was a major factor in wasted nursing time, reducing the amount of time nurses could spend on delivering direct patient care.

The well-organised ward module of the Productive Ward series advocates having everything in the right place to help reduce wasted time, so the decision to build three new wards at the hospital in 2009 gave us a great opportunity to look at how innovative ward design could release nurses’ time to provide more direct care (NHSI, 2011b).

#### Design principles

The senior matron for practice and professional development worked closely with the head of estates and the architect to ensure patient care was central to the new ward design from the start.

Aware of the activity-follows data, the design team initially spent time visiting ward areas, observing and talking to nurses, therapists, ward clerks, housekeepers and patient service assistants, to understand what aspects of their workplace prevented them from being efficient and effective.

To incorporate patient perspectives, the design team liaised with representatives from the trust governors and the initial design was also presented to members of the local community. Box 1 lists some of the main issues identified by staff as affecting their ability to be productive.

The design team wanted to create an environment that would help overcome the issues they had observed, and they developed four overarching design objectives for the project. These were translated into five patient-focused principles, which underpinned the building design (Box 2).

#### The ward design

The three new wards are identical in shape, with four bays of four beds and 16 single rooms designed in a T-shape, with the patient areas split into two halves.

Each bay and single room has en-suite facilities to promote privacy and dignity and enable isolation. All bays and single rooms were designed with large glass windows to prevent patients feeling isolated and enable nursing staff to observe patients, while each bay has storage space...
Innovation

Nursing Practice

4 A well-organised ward has everything in the right place, which saves time

5 Patient and staff feedback can be collected using semi-structured interviews and informal conversations

BOX 1. NON-PRODUCTIVE ENVIRONMENT

- Noise: wards were generally noisy, especially by the nurses’ station, which was stressful for staff and patients
- Lack of workspace: ward clerks, doctors, therapists, pharmacists and nurses all used the same limited number of phones and computers in a tiny space
- Dirty utility: cramped and difficult to get commodities in and out
- Sterile supplies, linen and other sundries/equipment: no dedicated area.
- Finding items was difficult
- Walking time: wards were in an L shape along a ward street, with all storage and the nurses’ station at one end, so time was wasted in walking
- Visibility: patients and nurses were not able to see each other unless in the same room/bay

Evaluation

Using semi-structured interviews and informal conversations, we sought feedback from ward matrons, their teams and patients on the extent to which the ward design had met the project’s objectives.

Overall, the design met the five patient-focused principles.

Regarding privacy and dignity, patients liked the single rooms and en-suite facilities. Staff reported that the en-suite facilities had reduced the use of commodes, especially at night, with patients walking to the toilet instead.

Nurses had initially been concerned that the move to 50% single rooms would reduce patient safety. However, the large windows meant this fear was not realised.

Nurse calls seemed to have reduced. This may be because patients feel safer because there is less noise.

Many aspects of the design have reduced wasted nursing time. In particular, having storage in bays and observation areas has reduced walking time, as has swipe-card access to the drug prep room.

The multiprofessional area and observation areas have enabled staff to work more efficiently because they have easy access to space and computers. The new wards are quieter and calmer, which contributes to a less stressful working environment for staff, and patients have said they sleep better because there is less noise.

The uncluttered central reception provides a clear focus point for patients to report to, and the matron’s office on the ward increases their visibility and ability to monitor standards.

Limitations

This preliminary evaluation lacks the rigour required to transfer findings to other settings and did not set out to measure outcomes beyond initial staff and patient perceptions. However, the findings suggest areas of improved productivity.

Activity follows are planned to identify whether the design has helped free up nurses to spend more time with patients and meant less time is wasted.

Conclusion

In a short period of time, the new ward design met the objectives and principles set out at the beginning of the project.

From the outset, the design team wanted to develop a ward plan that would act as a best-practice template for ward refurbishments. The evaluation shows that several areas should be incorporated into future ward refurbishments and potentially other new ward builds – particularly large viewing windows into patient rooms, multiprofessional communication areas and central, dedicated storage rooms.

We now intend to carry out a study to measure how the ward design has released time to care. NT

References

National Institute for Innovation and Improvement (2011a) Lean Thinking. London: Nhsi. tinyurl.com/institute-lean-thinking