

Step-down beds in ENT and maxillofacial surgery

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Summary

The organisation and delivery of critical care services have come under scrutiny in recent years with media attention focusing on a shortage of intensive care beds and a lack of appropriately trained nurses to staff them (Wright 2000). The provision of these services is under review nationally, prompting a new approach to the organisation of intensive care and high dependency beds (DoH 2000, Scottish Executive 2000). In Lanarkshire in the specialties of ear, nose and throat (ENT) and maxillofacial surgery, access to these facilities was restricted and not always available or appropriate for these patients' needs. This article illustrates how nurses brought about real change by proposing a possible solution to establish two step-down beds in the ward. Establishing these beds not only provided many benefits for patients, but also gave nurses the opportunity to gain advanced skills and ultimately increased job satisfaction.

ENT and maxillofacial surgery nurses formalised a proposal to create two funded step-down beds which would receive patients from ICU, and more generally provide a facility for patients who require a higher degree of monitoring and nursing care than would normally be available in the main ward. These beds would be specific to the specialty and created from existing beds within the department. The proposal, also supported by medical staff, outlined the benefits to patients, but also for nurses in terms of improved skills and flexibility.

Background

High-dependency beds can be defined as: 'An area for patients who require more intensive observation or nursing care than would be expected in a general ward. It would not normally include patients requiring mechanical ventilation or invasive monitoring' (Edbrooke *et al* 1997). The Scottish Executive short-life working group (2000) summarised the elements of high-dependency care from Department of Health guidance in 1996 as follows:

- Patients requiring support for a single failing organ system, but not advance respiratory support.
- Patients who require more detailed observation or monitoring than can be provided on a general ward.
- Patients who do not need intensive care, but are not well enough to return to a general ward.
- Post-operative patients who require close monitoring for longer than a few hours.

The Scottish Executive (2000) and the DoH (2000) argue that the organisation of these services requires a different, more flexible approach that has, as its focus, the level of care required by the patient rather than 'the beds and buildings they occupy' (Scottish Executive 2000). Both working groups recommend dependency be measured on different levels graded zero to three (Box 1).

Our position in the specialty is not unique. Dhond *et al* (1998) estimated a vast unmet demand for high-dependency care that, if met, could save lives. Wright (2000) highlights how nursing and medical staff are increasingly being required to care for highly dependent patients in general wards. In the context of dependent and, on occasion, medically unstable patients transferred from the intensive care unit (ICU) to general wards, Haines *et al* (2001)

THE ENT AND maxillofacial surgery unit at Monklands Hospital has functioned as a regional inpatient unit for Lanarkshire since 1997, treating more than 3,500 inpatients a year. Scotland tops the league tables for mortality in Europe for many conditions including cancer, heart disease and stroke. Lanarkshire reports the third highest incidence of head and neck cancers in Scotland (ISD 2001). As a result there has been a 60 per cent increase in major head and neck surgery performed in the department over the past three years.

This level of activity, combined with increasingly complex surgery, and a higher volume of acute emergency admissions, created nursing and medical demands leaving existing facilities and staffing levels struggling. Nurses frequently highlighted difficulties in providing high standards of care under these circumstances. These additional demands on resources also created increased pressure on other areas of the service including intensive care facilities, which were not always available or appropriate for the needs of the patients referred. A six-bed high-dependency unit (HDU) is available, however, historically these were designated for general surgery and demand almost always exceeded supply.

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Key words

- ENT
- Maxillofacial
- Ward organisation

These key words are based on subject headings from the British Nursing Index. This article has been subject to double-blind review.

Box 1. Levels of dependency (DoH 2000)

Level 0	Patients whose needs can be met through normal ward care in an acute hospital
Level 1	Patients at risk of their condition deteriorating, or those recently relocated from higher levels of care, whose needs can be met on an acute ward with additional advice and support from the critical care team
Level 2	Patients requiring more detailed observation or intervention including support for a single failing organ system or post-operative care and those 'stepping down' from higher levels of care
Level 3	Patients requiring advanced respiratory support alone, or basic respiratory support together with support of at least two organ systems. This level includes all complex patients requiring support for multi-organ failure

highlight this as a potential cause of stress among nursing staff. Stress arose not in caring for these patients, but in trying to balance nursing time to care for their remaining allocated patients. Indeed, experienced nursing staff on this project reported that the opportunity to care for dependent patients improved job satisfaction.

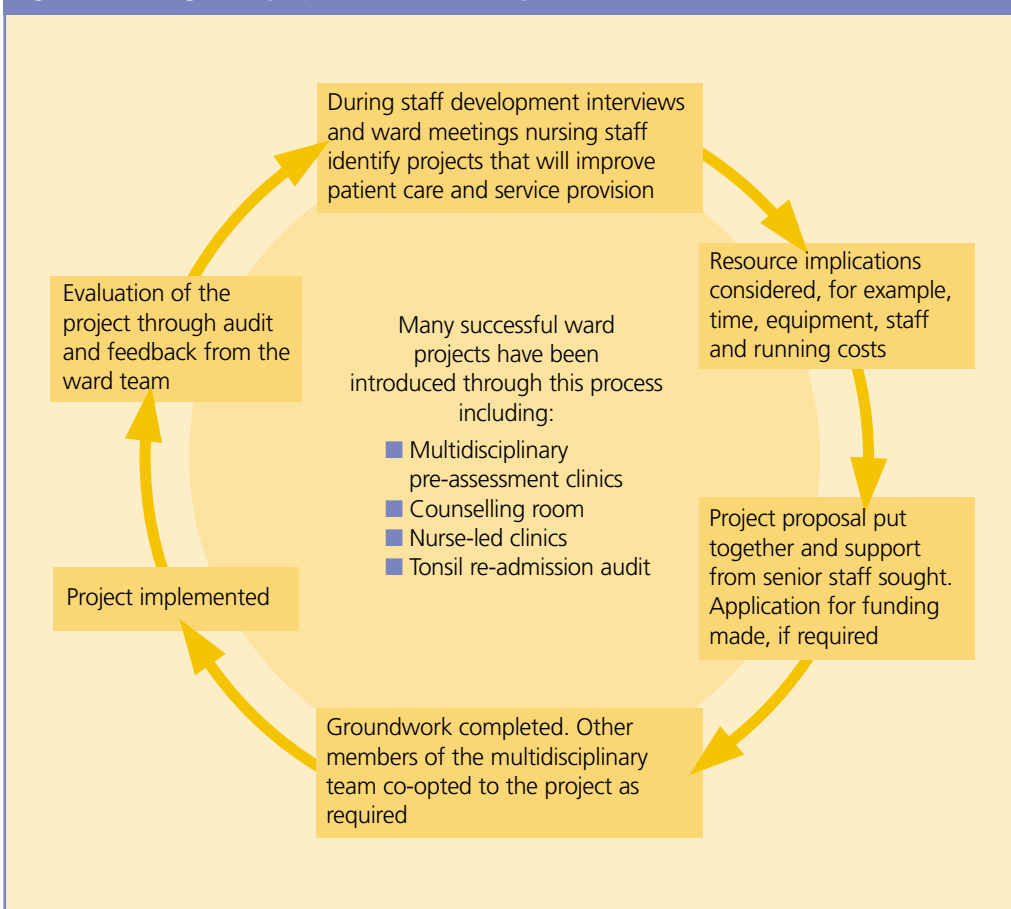
High-dependency beds can also be seen as a useful step-down facility for patients who are not well enough to be cared for on a general ward but do not require the intensive and expensive care of an ICU. In addition, they have been shown to reduce the number of major operations cancelled due to lack

of monitoring beds significantly (Peacock and Edbrooke 1995, Ryan *et al* 1997). Step-down beds also encourage more appropriate referrals to ICU and help reduce pressures on ICU beds (Fox *et al* 1999). They have also been proven to be a cost effective solution (Helm and Newman 1992, Singer *et al* 1994).

Change process

The change process was staff driven, from identifying the problem to devising and implementing the project plan. We have worked hard in the

Figure 1. Linking ward projects to staff development



department to create a climate that encourages, supports and offers staff the opportunity to effect real change. A number of methods are used to enable this including a values-based development tool, a process that links development opportunities to department based projects (Figure 1). This process reinforces the concept of an open learning environment and highlights the value placed in the department of asking questions about how we do things and, more importantly, if we can do it better.

The growing demands that a centralised head and neck service placed on intensive care beds, and the results of a needs analysis, convinced the surgical service manager of the short-term and long-term benefits to the service and, more importantly, to patient care. A business case was completed with input from the ward team and service co-ordinator. Medical staff were keen to support the project, as were intensive care staff who recognised the potential benefits. Presentation to the trust board followed and the proposal to convert two existing beds into step-down beds, at level 1 with the aim of reaching level 2 within 12 months, was accepted and included in the trust's implementation plan.

Once the project was funded by the Lanarkshire Health Board, a number of core implementation groups were established comprising nursing staff from the ward. These groups looked at a number of areas including equipment purchase, documentation, policy and training. Once again, staff participation was seen as essential for the long-term success of the project. Staff from other disciplines and specialties were co-opted onto these groups as required to provide specialist advice. Their purpose was not just to make recommendations but, in most cases, devise and implement policy.

Space in the hospital was at a premium and there was no conceivable way that a stand-alone unit could be made viable. The nursing staff had identified early on the benefits of converting existing beds on the ward. These included reduced costs, access to an experienced cohort of nurses and also ensured continuity of care within the service. In addition, staff were keen to continue providing the care to these patients and there were benefits not only in improving quality of care, but also of job satisfaction and improving the skills of ward-based nurses. ICU beds in Lanarkshire, and nationally, are in great demand. Projections from existing practice demonstrated that the department usage of ICU beds could be substantially reduced by placing these patients in a much more suitable facility in the department.

Equipment

Some compromises had to be made. We were unable to make any major structural changes to the existing rooms, but were able to gain a wide range of equipment including electrically powered beds, monitors and infusion pumps. In addition,

the ward resuscitation trolley was replaced and a new defibrillator installed.

Staffing the beds was part of the negotiations and it was argued that the beds should be staffed in line with national guidelines for high dependency at 2:1 ratio (Scottish Executive 2000). Ultimately, it was agreed to employ four whole-time equivalent (WTE) E grade staff nurses and absorb the costs of additional cover from the existing ward complement. This was possible as no overall increase in inpatients was predicted as a result of this initiative: rather the project was planned as a quality initiative for existing patients undergoing treatment in the unit. Everyone involved was clear that maintaining adequate staffing levels was essential for success.

Training

All the staff were in post eight weeks before the beds opening and this provided the opportunity to provide in-house training and orientation. Not all staff had experience of high-dependency nursing and there was little time and few financial resources for training in the ward. It was agreed that, initially, all E grades in the department would rotate round these beds and, in the future, it was planned to extend this to all staff.

An in-house training programme was put together that enabled all the E grades in the department to spend seconded time on the surgical high-dependency, intensive care, A&E and medical critical care units. In addition, seminars and workshops were held on relevant topics such as post anaesthetic complications, patient monitoring and ECG recognition. Skills were attained in venepuncture, cannulation, intravenous (IV) therapy and use of infusion devices in accordance with trust policy.

Lanarkshire Acute Hospital Trust has recently established a practice development centre and skills laboratory that should provide a valuable resource for nurses. The development of critical care skills has been highlighted as a priority in the centre and, in conjunction with Bell College, Hamilton, a critical care course has been introduced. All ward staff who indicate they are keen to participate in this course will be supported in their efforts to do so. The concept of 'clinical communities', which bring together nurses in the trust with similar professional interests and experience to form policy and provide a local support and good practice network, has also been implemented. This is a valuable resource in the context of critical care, as well as many other areas of nursing practice.

Evaluation


The step-down beds have been operational for more than 12 months and much work has yet to be done on evaluating what has been achieved. However, feedback suggests the beds have proved

popular with both patients and staff. Patients reported that they felt much more at ease having the same nurses looking after them during their stay in the department. During staff development reviews, nurses indicated that they now have the time to provide the care that these patients require. As reported by Haines *et al* (2001), nurses commented they felt far less pressure when allocated to the step-down beds, as they no longer had to juggle their time between dependent patients and other patients on the ward. As a result, nurses expressed increased satisfaction with their role.

Overall, an occupancy rate of 75 per cent has been achieved and initial indications highlight a 50 per cent reduction in the use of intensive care beds. Since the step-down beds were made available no major head and neck operations have been cancelled because of lack of appropriate monitoring beds. Some problems have been encountered, particularly in establishing admission and discharge criteria that reflect the care that can be provided in the specialty. Blocked beds are not a new problem, however, we underestimated the likelihood of the step-down beds becoming blocked because of difficulties in transferring patients into the main ward. This has been addressed through the admission and discharge criteria, but can still prove challenging at times. In addition, it was initially found that there were some gaps in skills, particularly in dealing with areas such as epidural anaesthetic post-operatively and updated modules for the monitoring system, which arrived just as the beds were made operational. Additional training has been provided.

Ongoing training is constantly under review. The original intention was for all staff to have the opportunity to work in this area. This has proved more difficult than expected because of other demands on staff, including workload pressures and statutory training, however, training is ongoing to achieve this objective. Work is also in progress to identify suitable nursing and multidisciplinary indicators that will provide a measure of care outcomes. Current audit tools have demonstrated that the level of dependency has been variable between levels 1 and 2. The focus for the future is to continue improving skills, training and facilities to ensure continual development. The provision of critical care is under review nationally and at Monklands Hospital the existing ICU and HDU facilities are undergoing considerable redevelopment and investment. This has created some uncertainty about how the service will develop in the future.

Conclusion

The introduction of this facility to the specialty of ENT and maxillofacial surgery demonstrates how the ward team can highlight problem areas in care and devise solutions. With proper support, staff can put these solutions into practice, enabling real improvements in care. Having step-down beds on the ward enabled us to provide an increased level of nursing care, additional monitoring facilities and advanced nursing skills to those patients in the specialty who need it. In addition, this has brought new challenges and greater job satisfaction to nurses and medical staff. It is of great satisfaction to everyone in the department that, as a result of staff driven change, we are able to provide this service to patients 

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