Developing bed managers: the why and the how

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Background

Bed management is an area of nursing management which has expanded considerably in the last decade. Day-to-day, the role can be complex and stressful, as it involves dealing with many distinct functions which are both internal and external to a hospital trust, as well as juggling competing demands for resources. In the longer term, the role can play an important part in ongoing efforts to improve an organization’s ability to admit, treat and discharge patients appropriately. Generally, however, there is little training available to bed managers to help them better perform and cope with day-to-day activities, or enable them to fulfil the potential of their roles and the bed management function in improving patient flow and experience.

There is a growing realization that effective management of the flow of inpatients through acute hospitals is fundamental to good quality inpatient care and to achieving the relevant NHS Plan targets. Consequently there has been a renewed interest in bed management, with efforts to increase understanding and support throughout acute trusts, and to highlight the need for training and enhanced scope for the bed management function.
role. This paper describes our response to this need: the Bed Managers’ Development Programme which has been running since 2002. This has been resourced by Greater Manchester SHA with the support of the NHS Modernisation Agency\(^1\) and the Greater Manchester Workforce Development Confederation\(^2\), and accredited by the Royal College of Nursing.

This paper describes and analyses the role of bed managers within hospitals, and how this can be supported through a development programme. The material was drawn from two sources: a review of the literature on bed management, which has been emerging since the 1990s, and the results of the evaluation of a training programme for bed managers.

Most of the literature on bed management is ‘grey’ literature and there are few published academic studies in this area. It was not therefore possible to do a systematic review (in the sense by which this term is normally understood) of literature but all key management and medicine databases were consulted. The literature (including the grey sources) is characterized by a lack of ‘hard’ data about the performance or effects of bed management on patient flow and experience. The need for systematic evidence is recognized as a priority area for future research (Cooke \textit{et al.} 2004). Bed management is one component of a very complex, multi-factorial system, subject to frequent changes from within and without. It also differs in structure and definition from one organization to another, and these two factors make it difficult to carry out and report research which might demonstrate causal links between bed management and patient care, or any other performance measure. We suspect that this complexity is the main factor influencing the lack of empirical quantitative evidence in this area.

Empirical data presented in this paper is drawn from the evaluation questionnaires from the training programme, as well as data from the participants’ assessed portfolios, which contained both quantitative and qualitative data.

**Clarifying the definition of bed management**

The conceptualization of bed management used here is drawn from work by the Audit Commission (1992) who described the inpatient journey as a four-stage process, with bed management involved in all stages (see Figure 1).

It is argued that smooth patient flow through the acute system contributes significantly to the patient experience as well as enabling the efficient (as well as effective and efficacious) use of the limited resources available. The consequences of poor flow management are most visible in terms of weak performance on emergency and elective access targets, but also result in lengths of stay which are longer than necessary. This is often argued to be detrimental to quality of patient care although evidence about this is not conclusive (Clarke & Rosen 2001).

In most hospitals, shortage of beds has been the most commonly cited constraint on emergency and elective access and activity. However, the Audit Commission (2003) point out that in many trusts this should be viewed as a symptom of other underlying issues. As a consequence the organization of day-to-day inpatient flows generally focuses on bed management, which in practice consists of identifying empty beds and allocating waiting patients to them. There are a number of job (and function) titles for bed management, along with a variety of roles undertaken by staff responsible for the day-to-day placement of admissions and collating information on bed availability. There is no one model to suit all hospitals but in recognition of the wider importance of the role in patient flow some are now titled ‘Patient-Flow Coordinator’ or, reflecting additional responsibilities, ‘Clinical Site Coordinator’. However, whatever the title, few of them really manage beds (let alone patient flows) or are responsible for more than a small part of the patient journey. The critical success factor for their role (in their view) is the development of effective relationships with key individuals working at different stages of the patient journey.

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\(^1\)At the time of the programme being first run, although the NHS Modernisation Agency no longer exists.

\(^2\)Subsequently absorbed into Greater Manchester Strategic Health Authority.
The importance of patient flow does not always seem to be fully appreciated (Haraden & Resar 2004), and consequently bed management is often reported (by bed managers) to be undervalued and under-supported. The role requires individuals to ‘juggle’ conflicting objectives, most prominently the competition for beds from elective and emergency streams, and unsynchronized flows of admissions and discharges (Proudlove et al. 2003). Organizational culture and pressures on medical and managerial staff can result in strained relationships over priorities for admission, outlying patients, discharges and quick turnaround of beds. Although bed managers may have responsibility for parts of the process, they rarely have actual power to control it, but have to work co-operatively with the many groups who are each responsible for a part of it. The job is therefore often reported to be stressful, with staff turnover reputedly above average (although there is no formal data collection for this group of staff). Bed managers feel isolated because there is often relatively little opportunity for them to share experience and good practice, either locally or nationally.

The bed management function is usually led by a senior nurse, and front-line bed managers are overwhelmingly nurses. A clinical background is important to enable them to inform patient placement decisions (Proudlove et al. 2003) and to challenge current practices (Department of Health 2004c).

**Trends in bed management**

The importance of performance targets has led to a focus on bed management

The effective management of beds as a resource has always been an issue within the NHS (Green & Armstrong 1994) but in the early 1990s tighter performance measures were imposed on NHS hospitals, which forced them to attempt to improve capacity management (Laing & Shiroyama 1995). A series of well-publicized winter ‘bed crises’ in the late 1990s (The King’s Fund 2001) and the access targets of the NHS Plan (Department of Health 2000) resulted in further emphasis on bed availability as a key constraint on capacity. Consequently bed management, particularly placing patients in beds effectively, grew in prominence and the numbers of bed managers increased [National Audit Office (NAO) 2000]. More recently, Department of Health surveys of A&E performance have highlighted waits for a specialist opinion (from outside A&E) and waits for a bed as the major causes of breaches of the 4-hour A&E-time target, and resulted in new syntheses of guidance (Department of Health 2004a,b).

**Bed availability is a symptom of something else**

Bed shortages could be regarded as a symptom of a root cause; the way in which beds are utilized, rather than the numbers available (or the numbers of staff to support them) and this has been emphasized by a number of studies (Audit Commission 1992, Boaden et al. 1999, NAO 2000, Audit Commission 2003, Proudlove et al. 2003, Proudlove 2004, Proudlove & Black 2004). Improved understanding of the effects of variation in demand and discharge activity (e.g. Bagust et al. 1999) and international comparisons of length of stay (Ham et al. 2003) have also contributed to this by providing robust empirical evidence. The international focus is now on improving patient flow (e.g. Haraden & Resar 2004) and the role of bed managers to deliver and facilitate such improved patient flows within hospitals and in the wider health community (Department of Health 2004c). The (Audit Commission 2003) has also reiterated the importance of this:

‘...it is very important that, before trusts make changes, they have a clear understanding of the very complex interactions and feedback mechanisms that influence their bed usage. Without this, resources may be invested inappropriately and the changes may not bring about the expected improvement in patient outcomes’ (p. 33).

**Managing beds is a multi-level activity**

The concept that bed management may operate on more than one level was suggested by the NAO (2000) who proposed the classification of executive management, operational management, and operational bed managers. This is in line with more recent calls for the development of whole systems approaches (e.g. Bevan 2005).

**Executive management**

Much guidance on bed management emphasizes the importance of executive-level understanding of, support for, and empowerment of the bed management function in a trust (Department of Health 2004a,c). This guidance recommends director-level oversight and day-to-day control of the bed management function, and suggests that many trusts may need to rethink their bed management functions to give them more influence.
Operational management

Despite much hospital activity involving the flow of patients through a series of process steps, the ‘operations management’ function has been weak in hospitals (Mango & Shapiro 2001, Walley 2003). A number of programmes are underway to boost the level of operations management expertise in healthcare organizations, including Pursuing Perfection and other Institute for Healthcare Improvement initiatives (e.g. Institute for Healthcare Improvement 2003, 2005). A major NHS initiative was the Improvement Partnership for Hospitals (IPH) Clinical Systems Improvement Programme (NHS Modernisation Agency 2004), which is now being developed further. These programmes were aimed at key operational managers and change leaders and are likely to be similarly focused when launched by the new NHS Institute for Innovation and Improvement (Nolan 2005). The role of nursing as a profession in this development does not currently appear to be clear, although there are undoubtedly impacts on nursing practice and management from an increased emphasis on patient flow.

Operational bed managers

The NAO (2000) concluded that:

‘To increase its value, the bed management function needs to evolve into a skilled, professional activity that is able to look beyond the immediate daily task of identifying spare beds’ (NAO 2000, p. 43).

However, to date, there has been no training programme designed specifically to support this ‘evolution’. The lack of recognition of bed management as a formal role is also shown by its omission from national job profiles generated under the Agenda for Change pay reforms.

Training is generally ‘learning by doing’

Apart from our own impressions of the lack of training, gained from working with bed managers over a number of years, the NAO survey (NAO 2000) also showed that over 20% of bed managers had not even received training on routine issues such as managing patient placement and bed availability, let alone on principles of managing flows or organizational change. There is some good web-based training material for the discharge co-ordinator role (Department of Health 2003), which is allied to bed management, but nothing specifically for bed managers. In response to this need we set up a development programme for bed managers in adult acute hospitals; the first such programme in the UK.

The training programme

History and development

A bed managers’ network group was established across Greater Manchester in 1996. This provided a useful forum for the bed managers to share problems, knowledge and experience, and these benefits were noted by the NAO (2000). It also fostered a feeling of solidarity and helped reduce suspicion between closely situated trusts. The group realized that it also had the opportunity to share good practice and encourage a consistent approach to the role. One of the main issues raised repeatedly was the lack of any specific training to help them cope with the demands of the job and enable them to make better use of their skills and experience. Repeating the mistakes of others or reinventing the wheel is not the best option. A brief study revealed that, although there is now a wide variety of general management and leadership training available in the NHS, only a few bed managers had undertaken formal study in this area. We had also been involved in studying bed management and related issues from this time through a number of research projects funded by the Greater Manchester Chief Executive’s Group, the (then) NW Region Executive of the NHS, the Modernisation Agency and government research councils. Several of these projects involved the bed managers’ network and had contributed to national initiatives and studies, including those by the NAO and Audit Commission.

An offer of financial assistance from the Modernisation Agency’s Hospital Operational Intelligence Project (Department of Health 2002), and funds from the Greater Manchester Workforce Development Confederation enabled a senior bed manager from one of the Greater Manchester trusts to be appointed as Project Manager to develop such training. This post was hosted and supported by the SHA, and the project began in earnest in May 2002.

Material for the programme was developed, drawing on the team’s knowledge and experience, informal knowledge of initiatives in trusts across the UK, and studies and documents from national bodies (including the NAO, Audit Commission, Department of Health & Modernisation Agency) and the US. We also looked at the core elements of job descriptions for bed managers in a range of hospitals. This showed that there were components which were not explicit or were ambiguous in practice; for example, ‘maximize bed usage’ and
collect and analyse information’. An advisory group made up of senior bed managers from Greater Manchester and beyond, together with several Modernisation Agency staff with a special interest in bed management was established. They contributed to the planning phase and agreed the basic content of the programme, outlined in the next section.

The first cohort of 20 participants took part in the Development Programme from September 2002 to April 2003. A further two cohorts ran in parallel from September 2003 to April 2004 for 52 participants, including 13 from Wales, through an agreement with the Welsh Assembly Government. The programme is now provided through Manchester Business School, University of Manchester, with a further 25 participants currently registered. Interest in taking part in the programme continues to be strong.

**The objectives of the programme**

The main aims of the development programme, which have remained unchanged since its inception, are (Jorgensen et al. 2003):

1. To develop consistent and common approaches to the bed management role.
2. To identify the challenges of the role.
3. To develop an understanding of the tools available to meet the challenges.
4. To identify the key performance measures for the role.

The usual requirement is that an applicant should be working as a bed manager in an NHS hospital, at F Grade or above, or equivalent. So far only one participant has not been a nurse.

The learning outcomes are that course members will be able to:

1. Identify and recommend improvements to the bed management function in their hospital.
2. Understand the challenges of the role and in particular those relevant to them and their organization.
3. Understand and apply appropriate tools to meet challenge within their own organization.
4. Identify key national and local performance measures.
5. Create a portfolio of useful contacts and sources of help.

Participants are expected to build up a portfolio of evidence which is submitted for assessment. Those who are successful receive a certificate from the Royal College of Nursing Accreditation Unit and the Programme team. A number of participants found the compilation of the portfolio and the necessary reflection difficult. This was surprising as they were experienced nurses and this skill has been encouraged in the nursing profession for a number of years. However, all who submitted the portfolio did report improvements to the patient experience and to the working lives of the participants and their colleagues.

**The content of the programme**

The Programme spans 8 days over an 8-month period. Most of these study days are led by lecturers from the University, with experienced health service staff leading some of the more specialist sessions. There are two main themes running through the programme:

- deeper understanding of inpatient flows throughout an acute hospital, and
- personal and professional development.

Table 1 lists the topics under each of these headings.

The concept of patient flow is central to the whole programme, and considerable time is spent discussing characteristics and causes of activity patterns and components of the patient journey. Improvement initiatives and examples from across the UK are discussed, as are practical tools such as forecasting and anticipatory planning.

In addition to increasing the knowledge-base of participants, it is essential that they are supported to develop the skills needed in a management role. Almost all participants report a high level of job satisfaction, but at the same time find the job frustrating and pressured, and so one of the sessions is devoted to the symptoms and management of stress (in oneself and others). Bringing about change and improvement can be particularly difficult in the NHS, and so this is also covered.

The study days also provide a forum to share ideas and working methods and to encourage reflection on practice. For example, sharing experience of who manages the various components of the patient journey and how they could work together more closely. Participants are also encouraged to share experience and information about successful initiatives at their trusts and to visit another participant’s trust to find out more about a way of working in which they are particularly interested.

**Evaluation of the programme: methodology**

It is possible to use the model of evaluation described by Kirkpatrick (1994) to analyse the impact of this programme. Many programmes are only evaluated...
through ‘happy sheets’ circulated at the end of individual sessions or modules, but in addition to being evaluated in this way (reactions), this programme is also evaluated through the knowledge gained by participants; the workplace behaviours they exhibit during and postprogramme; and the impact of those changes on the organization (results). This model has been used for the evaluation of other programmes (Boaden 2005).

The source of the data used for the evaluation is shown in Table 2.

At the start of the programme, participants were asked for their expectations. These have been similar over the three cohorts we have run so far, and can be summarized as shown in Table 3.

Evaluation of the programme: results

Overall the participants felt that the programme was a major success. Feedback included general views that the programme contributed significantly to personal development as well as knowledge, and was delivered by people who ‘really understand what the subject is about’.

Kirkpatrick level 1 – Reactions

This relates to participants’ immediate satisfaction with the programme. Participants were asked, for each session, to rate the extent to which each of the specified learning outcomes was achieved, using a 0–5 scale where 0 = not achieved, 5 = fully achieved.

Taking Cohorts 2 and 3 together, there were only two session outcomes (out of over a hundred in total) which did not score an average of at least 4, and the majority scored between 4.5 and 5. We have not included detail of these ratings in this paper as they add little to the overall argument of the paper and give little insight into the long-term benefits of the programme.

Table 1
Programme Contents

| Day 1 – What is bed management? | Introduction to course, overview of bed management function, comparison of roles across trusts and against NAO recommendations |
| Day 2 – Process mapping and redesign, clinical governance and performance indicators | Introduction to process mapping and redesign; clinical governance issues in bed management; national and local targets and performance indicators |
| Day 3 – Measuring improvement and admission | Demonstrating change in performance (including SPC); Greater Manchester Emergency Admissions Policy, admission pathways, receiving GP referrals, elective vs. emergency, increased use of IT, closer management of emergencies and electives |
| Day 4 – What skills does a bed manager need? and predictive modelling | Analysis of role; identification of skills required, how to gain or improve them; introducing forecasting and capacity planning tools, utilizing bed managers in strategy and planning |
| Day 5 – Infection control and placement/stay | Role of bed managers in reporting and managing infection; the role of admissions units, managing outliers, care management plans, factors affecting length of stay |
| Day 6 – Change management and stress management | Issues and tools for personal and organizational change; identification of stress (in self and others) and tools for stress management and reduction |
| Day 7 – Crisis management vs. anticipation and planning | What is a crisis? causes of crisis, Escalation procedures, planning to avoid crisis, co-operation with neighbours |
| Day 8 – Discharge | Role of Discharge Co-ordinator, discharge planning, intermediate care, repatriation, discharge initiatives, developing bed/flow management |

Table 2
Programme Evaluation-levels and sources

<table>
<thead>
<tr>
<th>Kirkpatrick level</th>
<th>Description</th>
<th>Source of data</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – Reactions</td>
<td>Measure immediate satisfaction with the programme</td>
<td>Feedback questionnaire at the end of each session</td>
</tr>
<tr>
<td>2 – Knowledge</td>
<td>Measure changes in knowledge, skills and attitudes</td>
<td>Detailed participant questionnaire at the end of the Programme</td>
</tr>
<tr>
<td>3 – Behaviours</td>
<td>Measure changes in behaviour</td>
<td>Requests for feedback from the participant’s line-manager at the half-way point and at the end</td>
</tr>
<tr>
<td>4 – Results</td>
<td>Measure the business impact of changes</td>
<td>Continuing contact with the participants after the Programme</td>
</tr>
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However, some participants noted that attending the programme made them realize that, relative to other participants, their organization was performing very poorly and they were less involved in operational clinical issues than others. Another immediate reaction was the realization that there was so much they should be aware of, but were not, which is common for participants on many types of programme.

Kirkpatrick level 2 – Knowledge and skills

This relates to changes in knowledge and skills, and can be difficult to measure unless standard measures of academic achievement are used. However, for this programme participants were asked to report the things they had learned, which included:

- a clearer understanding of their own role and improved knowledge about bed management and the patient journey;
- how to apply theory to their practice;
- an increased ability to manage patient flows, leading to increased credibility and influence in the Trust; plus increased recognition in the Trust due to ideas put forward;
- new contacts and sources of help, and valuable networking and a source of group support;
- a base of learning which they would be able to build on in the future as they assimilate it (which was confirmed through subsequent contacts with individuals who had completed the programme).

Line managers also reported changes they observed in their staff:

- staff having increased commitment, confidence, motivation, positive attitude and reduced feelings of isolation;
- increased analytical and lateral thinking, changes in the way data were collected and used, the use of predictor tools, presentation and implementation of ideas for change.

Participants also indicated that in future programmes they would like to see more consideration of clinical governance issues specific to bed management. This was felt to be poorly understood by those without a clinical background (especially managers), many of whom bed managers interact with regularly.

Kirkpatrick level 3 – Behaviours

This relates to changes in on-the-job behaviour which was not only self-reported but also reported by line managers. Participants reported:

- increased confidence (because of knowledge to back them up), empowerment and decision-making ability, and being more accountable for own actions;
- changes in the way they work and in particular, how they deal with others;
- implementing knowledge gained through the programme: daily bed management meetings, predictor tools, a more proactive approach, more focus on discharge, better management of outliers, process mapping.

Line-managers reported:

- direct benefits to both the team and wider organization, stemming from sharing of the learning and better leadership.

Participants also indicated that they would like more focus on the transition from nurse to manager in future programmes, and the behaviours needed. Although this is addressed in part by other nursing development programmes – the LEO programme was mentioned favourably by those who had been a part of it – by no means all the participants had taken part in such programmes.

Kirkpatrick level 4 – results

This relates to tangible changes in the organization and at an individual level. These were reported from both participants and managers. As there are many concurrent and inter-related initiatives underway to improve the NHS, in particular those related to access targets, it is difficult to establish the specific contribution of any
one component. Although many participants gave examples of specific improvements to patient care or experience which they believed resulted from their own involvement in this programme, it has not proved possible to quantify the outcomes. However, three participants successfully applied for promotion and attributed part of their success to participation in the programme. Line managers reported improved performance (fewer cancellations of operations), and help from participants on the programme in setting up a bed management team on another site. Only 7% of line managers reported no observable benefit to the team.

The majority of the bed managers worked closely with their line managers, but a significant number still reported difficulty implementing change due to lack of support, interest, or financial pressures. This was surprising considering the considerable pressure to improve in order to achieve and sustain performance against national targets.

Seven of the participants from Cohorts 2 and 3 said (at the end of the programme) that they expected to stay in the role longer than they had before coming on the programme. However, there were also four who planned to leave earlier (other than through promotion or illness).

The programme has also had some national impact. Towards the end of the first cohort the Project Manager organized a very well-attended bed management conference to spread many of the messages of the Programme to a wider audience. The Programme has inspired a very similar initiative for southwest England and Wales.

Conclusions and implications

This paper aimed to describe and analyse the role of bed managers within hospitals, and how this can be supported through a development programme.

The role has been shown to be something carried out almost exclusively by nurses – and reported to be stressful and frustrating. Bed managers operate within a context of increased focus on the management of beds at all levels of the organization, but often with little understanding of the causes behind the ‘symptoms’ of poor bed utilization. The importance of key relationships with individuals, including senior nurses as well as other clinicians, is continually emphasized by bed managers themselves.

The results of the evaluation demonstrate the benefit of the training programme in achieving its objectives of increasing knowledge and confidence, which has translated into changed behaviours, improved staff retention and development as well as tangible reductions in cancellations of elective work.

The aspiration of bed management evolving into a skilled, professional activity, supported by appropriate training, is developing but still requires a lot of work to be fully realized. Much of the work is about developing a recognition of the importance of patient flow, and the role which bed management plays in effective flow, in tandem with the development of those in key roles.

We believe that bed management is an entirely appropriate role for senior nurses but that they need to be adequately trained, not only in the ‘technical’ aspects of understanding the dynamics of patient flow, but also in the management skills needed to operate at this level and in this type of environment. However, there is a challenge for all nurses working with patients – primarily within the acute environment, but not exclusively – to better understand what bed management is, why it is important, and how their role can support effective patient flow. Anecdotes of obstruction to the appropriate placement of patients from nursing staff elsewhere in the hospital were common amongst participants, and contributed to the view that good bed management is about managing relationships rather than beds. Relationship with ward and A&E staff were particularly important in this regard.

The implications of our analysis of both theory and practice are that the importance of effective bed and patient flow management is not likely to lessen; if anything it will increase. There is therefore a need for:

- A national framework for bed/patient flow management roles and a clear career structure.
- Development of greater understanding of patient flow management by those at the top of the organization, both in primary and secondary care. New policy initiatives in chronic disease management will serve to highlight the importance of this. It is not enough to train nurses as bed managers – the system they work within has to be improved and recognition of the issues achieved at all levels. Without this recognition, bed managers may be perceived as failing to do their jobs, which is not our experience of working with them.
- Effective training provision for those undertaking those roles. Such programmes should be encouraged and funded appropriately, to better equip nurses for this demanding role.
- Publicising the availability and content of training programmes, which should reassure nurses who
are working (or considering working) in this area. Specialist knowledge and experience on relevant aspects of operations and clinical management and syntheses of latest developments in patient flow improvement are accessible.

Acknowledgements

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