NATIONAL AUDIT OFFICE

Report by the
Comptroller and Auditor General

NHS Executive

Inpatient Admissions and Bed management in NHS acute hospitals

HC 254 Session 1999-2000
24 February 2000

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Ordered by the
House of Commons
to be printed 21 February 2000

LONDON: The Stationery Office
£0.00

HC 254 Session 1999–2000
Published 24 February 2000

This report has been prepared under Section 6 of the National Audit Act 1983 for presentation to the House of Commons in accordance with Section 9 of the Act.

John Bourn
Comptroller and Auditor General

National Audit Office
18 February 2000

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Preface

This report examines inpatient admissions and bed management in NHS acute hospitals in England. These are hospitals providing diagnostic and treatment facilities beyond those provided in the community or by the patient's general practitioner.

We examine how, in recent years, NHS acute hospitals have been developing new ways of managing inpatient admissions, beds and patient discharge to meet the growing demands placed on their resources. For some - elective patients - admission is planned in advance, for example, following referral by their general practitioner. For others, admission comes as an emergency patient, perhaps following an accident or sudden illness. For many patients the process of admission, the period in hospital, and subsequent discharge can be a stressful experience.

In our examination we found considerable evidence of good practice which, if disseminated more widely, could help to improve the overall quality of service provided to patients. Our report considers how widely these good practices have been taken up within NHS acute hospitals and the impacts they have had. We also look at the opportunities open to NHS acute hospitals to improve further the quality of service. There are significant variations in performance across NHS acute hospitals. And there are risks for NHS acute hospitals in terms of the quality of care provided to patients, and in the efficient use of resources, if they fail to place patients promptly in the most appropriate facilities, cancel their admission, or delay their discharge from hospital.

Our report focuses specifically on patients expected to stay in hospital at least one night (ordinary admissions) and their time in NHS acute hospitals. It does not examine the management of outpatient services or day case services, or the quality of clinical care provided, such as the accuracy of clinical diagnosis or the appropriateness of the decision to admit. However, it recognises the great importance of relationships between hospitals, and other care providers and organisers, such as general practitioners and social services, in ensuring that a patient's treatment and rehabilitation are as well co-ordinated as possible.

Executive summary

1 In recent years the NHS has treated record numbers of patients. There has been growing demand for admission to hospital, and these pressures are likely to continue. As part of their response to this, NHS trusts, social services, and other agencies, have developed a range of practices and facilities. These are designed to improve the way in which patients are admitted to hospital, and cared for during their stay. They are also designed to ensure patients are discharged in a timely and appropriate manner to receive, where necessary, ongoing care in the community. This examination focuses on how NHS acute trusts are managing the increasing demand for inpatient care. It concludes that many NHS acute trusts are achieving significant improvements in the use of their resources, reducing lengths of inpatient stay and levels of cancelled operations, and more generally enhancing the quality of patient care.

2 However, there is still scope for more NHS acute trusts to introduce and develop the good practice examined in this report, thus offering the prospect of further improvements in the ways in which NHS resources are used. In addition we consider that further across-the-board improvements will depend on:

- the development of significantly improved information systems to allow hospitals to monitor and plan better the use of key resources such as beds and theatre time;
- enhancing the roles and responsibilities of bed managers; and
- improved co-ordination between different professional groups within hospitals, and between hospitals and other external care agencies.

Our detailed findings and recommendations are outlined below.

Patient admissions to hospital are at record levels

3 In 1998-99 a record number of people - some 5.75 million - were admitted to hospitals in England as inpatients expected to stay in hospital at least one night (ordinary admissions). Patient admissions to hospital in the first half of 1999-2000 indicate the growth is continuing. About one third enter as elective patients (those whose admission is booked in advance). The other two thirds are admitted as

emergency patients, perhaps following an accident or acute or sudden illness. For many patients, admission to hospital can be a significant event in their life, and they may be in pain or shock, as well as anxious at the prospect of treatment.

4 The handling of each patient is different, and the time that each patient stays in hospital depends on the type and severity of their condition, the treatment required, their rate of recovery, and the hospital's skills in service delivery and organisation. However, there are common features to both elective and emergency patients' time in hospital. Figure 1 on the foldout page shows the key stages in patient admission, bed management and patient discharge in an effectively managed system.

The National Health Service seeks to ensure elective and emergency patients receive high standards of care

5 The National Health Service aims to provide high standards of care to both elective and emergency patients. Specific standards have, since 1992, been contained in the Patient's Charter[1]. Although the Government is currently reviewing the Patient's Charter, NHS bodies are still required to meet existing Charter standards in admitting, treating and discharging patients. Figure 2 below sets out the current standards and guarantees relevant to this examination.

Figure 2

The Patient's Charter sets out standards and guarantees designed to ensure that all patients receive high quality care. In particular:

Elective patients can expect:

- (in 9 out of 10 cases) to be seen for their first outpatient appointment within 13 weeks of written referral by a general practitioner, with all patients to be seen within 26 weeks;
- admission to be within 18 months of inpatient or day case treatment, and within 12 months for coronary artery bypass grafts and some associated procedures;
- an operation should not be cancelled on the day the patient is due to arrive in hospital;
- priority treatment to be within one month if an operation is cancelled at the last minute.

Emergency patients can expect:

- to be given a bed within 2 hours if admitted through an Accident and Emergency department.

All hospital inpatients can expect:

- before discharge from hospital, a decision should be made about any continuing health or social care required by the patient. This includes arrangements for meeting these needs with community nursing services and local authority social services before the patient is discharged. The patient and, with agreement, the patient's carers will be consulted and informed at all stages.

Source: The Patient's Charter NHS Executive[1]

Figure 1 overleaf

Figure 1 is available to view as a separate file. To view, please click here.

While general and acute patient admissions have been increasing, the total number of general and acute hospital beds has fallen

6 The number of general (mainly older patients) and acute patients admitted to hospital and total hospital activity have increased steadily in recent years. Total emergency patient admissions have increased from 3.3 million in 1993-94 to nearly 4 million in 1998-99. The increase in the total number of elective patients admitted to hospital for one night or more has been smaller, as more people are treated as day cases each year. However, in 1998-99 the total number of elective patients receiving inpatient treatment for one night or more increased by some eight per cent over 1997-98 levels to 1.8 million. This was partly as a result of the Government's initiative to reduce the total number of patients waiting for admission by 100,000 from the level in March 1997 (paragraph 9). Both elective and emergency patient admissions during the first half of 1999-2000 were at higher levels than in the first half of 1998-99.

7 At the same time, the total number of hospital general and acute beds has fallen, mainly due to a reduction in general beds for older patients, which reflects changes in their care. In 1993-94 there were over 37,000 general beds for older patients. This had fallen to 30,240 (a drop of 18 per cent) in 1997-98. Over the same time, the number of acute beds was broadly stable - from 109,700 in 1993-94 to 107,800 in 1997-98. The increase in hospital activity at a time when the number of general beds has fallen and the number of acute beds has been broadly stable has been possible because of developments in clinical treatments, as well as the introduction of techniques and care arrangements that enable patients to recover faster, or to be discharged more quickly into community based care services.

8 The continuing downward trend in overall bed numbers (general and acute) has been an issue of considerable debate within the NHS. In September 1998, the Government set up, within the Department of Health, a National Beds Inquiry to review assumptions about growth in the volume of general and acute health services, and their implications for health services and hospital bed numbers looking 10-20 years ahead. The Inquiry's findings were published for consultation in February 2000[(2)].

The Department of Health have launched initiatives to improve access to patient treatment and to spread good practice

9 Over £12 billion a year is spent on the acute care of patients by hospitals and community health services[3]. The Department of Health have also allocated additional funding to reduce the number of patients waiting for treatment, and enable hospitals to admit increasing numbers of emergency patients[3]. For example they allocated:

- £269 million in 1997-98 and £209 million in 1998-99 to meet additional winter pressures for emergency patient admissions;
- £115 million to fund a programme of modernising Accident and Emergency departments; and
- £417 million in 1998-99 and £320 million in 1999-2000 to increase elective activity and reduce waiting lists.

10 The NHS Executive have also established initiatives to encourage good practice across the National Health Service. These include:

- the Emergency Services Action Team, established in August 1996, to identify and spread good practice and advise on the handling of winter emergency pressures;
- the Waiting List Action Team, established in November 1997, to secure the success of the national waiting list initiative and achieve the sustained reduction in patient waiting lists by 100,000 from the level in March 1997. It also aims to secure effective implementation of national policies that improve services for elective patients; and
- the National Patients' Access Team, established in April 1998, to complement the work of the Waiting List Action Team by extending the use of best practice, to work locally to solve bottlenecks that slow patient care, and to develop new and innovative approaches to patient care.

11 These initiatives all sit within the Government's overall strategy aimed at improving clinical practice and the quality of service to NHS patients. This strategy includes, most notably, the introduction of Clinical Governance, the National Institute for Clinical Excellence, the Commission for Health Improvement and National Service Frameworks.

The National Audit Office examination

12 Against this background, we examined three issues. These were:

- Whether hospitals admitted patients promptly and employed best practice in admissions management;
- Whether hospitals utilised beds efficiently and employed best practice in bed management; and
- Whether hospitals managed patient discharge well and employed best practice in discharge management.

The report focuses on inpatient services, and does not examine the management of day case services or outpatient services for patients referred for consultations by their general practitioner. However, to set the trends in inpatient admissions and elective and emergency treatment in context, it does include key information on the number of patients seen at outpatient consultations, as well as information on the number of patients treated as day cases. The report also does not look at waiting lists, which is to be the subject of a separate National Audit Office examination.

13 The methodology for the study is described in detail in Appendix 1. In particular, we surveyed all health authorities and 163 NHS acute trusts in England with at least 300 general and acute beds, visited 10 NHS acute trusts and consulted widely with a range of practitioners and other experts in the field. A summary of the responsibilities of the organisations involved is at Appendix 2.

14 Our main findings and recommendations are set out below.

On admitting patients to hospital

15 Hospitals are admitting record numbers of patients. In 1998-99 some four million general and acute emergency patients and nearly two million general and acute elective patients were admitted to hospital as inpatients, and a further 3.5 million day case patients were treated. Over this time, the number of patients waiting for admission fell to just over one million, and the number waiting over a year fell below 50,000. The number of patients treated in the first half of 1999-2000 was higher than the same period in 1998-99, but the number waiting for treatment was also slightly higher than at the end of 1998-99.

16 Between September 1998 and September 1999, nearly 57,000 patients had operations cancelled by their hospitals for non-medical reasons on the day of, or following, admission - the highest number reported since the Patient's Charter standard on cancellations was introduced. In addition, around 20 per cent of emergency patients waited longer than the Patient's Charter maximum of two hours to be admitted to hospital. Long waiting times jeopardise the quality of care provided to patients. These can be signs of significant pressures within hospitals.

A patient receiving assessment and care on admission to hospital

17 Against this background, many NHS acute trusts have improved the way they admit patients, and have developed a range of good practices and facilities. But there is still scope for further improvement. More NHS acute trusts could use their knowledge of patterns of emergency admissions to help plan more effectively the number and type of elective patient admissions. While most NHS acute trusts have agreed admissions policies on how they respond to patient needs, only half cover how resources such as beds and theatre time are co-ordinated with the

arrival of the patients. Fewer than half of NHS acute trusts communicate their admissions policies to health authorities and referring general practitioners, which would help these agencies better understand hospital admission practices.

18 There is also scope for improvements in ensuring patients are fit for their operation. In nearly a fifth of NHS acute trusts elective patients were assessed only at the time of admission, increasing the risk of cancelled operations for medical reasons. In addition, many hospitals have yet to realise the full potential of same day admission (rather than admitting patients a day before their operation), with large variations between NHS acute trusts in the proportion of patients admitted in this way. We estimate that bringing in a further 10 per cent of elective patients on the day of their operation could release around 180,000 bed days a year for alternative use. And patients admitted on the day of their procedure do not necessarily need to be placed in a bed while waiting for theatre, but at present only eight per cent of NHS acute trusts we surveyed used facilities other than an acute ward in which to prepare patients for theatre.

On managing hospital beds

19 Placing patients promptly in appropriate beds is increasingly challenging and complex as a result of falling bed numbers, high overall bed occupancy levels, and a high and variable demand for emergency admission. Hospitals have a daily task of balancing the demands of treating an unknown and variable number of patients and ensuring that sufficient, but not excessive, resources are available, in terms of beds for patients with differing care needs, clinical and nursing staff and other facilities.

20 Average inpatient occupancy levels in general and acute beds vary widely between trusts – from around 50 per cent to around 99 per cent on average during 1997-98 (the most recent year for which the NHS Executive have data available). But most NHS acute trusts report facing times when the demand for inpatient beds exceeds availability. At such times, new emergency patients are more likely to be assessed and begin to receive treatment in Accident and Emergency departments before they can be moved on to an inpatient ward than in normal circumstances. Our survey showed that hospitals with higher levels of average bed occupancy cancel significantly higher proportions of elective operations and keep emergency patients waiting significantly longer in Accident and Emergency departments. Recent research indicates that, hospitals with average occupancy levels above 85 per cent can expect to have regular bed shortages and periodic bed crises.

21 Almost all NHS acute trusts now have designated bed managers, in many cases overseeing all inpatient beds – for both elective and emergency patients. The number has grown significantly since 1997. In nearly 80 per cent of NHS acute trusts bed managers have received specific training on managing patient placement in appropriate beds and managing bed availability. But in nearly half of NHS acute trusts, bed managers were not part of any network with neighbouring trusts, despite the benefits to be derived from sharing good practice. There is considerable scope to develop the bed management function in order to handle better the demands on beds, and to minimise the extent to which this work is primarily about the immediate daily task of identifying spare beds.

22 In common with the Government's Emergency Services Action Team, we found that most bed managers do not have access to information systems that provide up to date information on bed occupancy and availability, or information on short-term patient admissions and discharges. In over 90 per cent of NHS acute trusts, bed managers obtain information on bed state by physical inspection or telephoning wards. As a result, they spend considerable time each day dealing with the immediate needs of finding appropriate beds for new patients requiring admission. Moreover, despite their detailed knowledge of patterns of admission and discharge, bed managers are not yet extensively involved in planning elective admissions, or in strategic assessments of bed needs.

23 Hospitals have to think carefully about their short and long term bed needs. Currently, around a quarter of NHS acute trusts make no assessment of likely bed availability for more than a day ahead, but many others have developed approaches that consider the anticipated length of stay, gender mix and specific bed needs of patients. Longer term, there are clear benefits in regularly reviewing bed complement and configuration to ensure that they match patient needs.

On discharging patients from hospital

24 Discharge from hospital can be a major event for patients and their carers, which must be managed well. Good co-ordination inside and outside the hospital, as well as early planning of patient discharge, is crucial, as patients cannot be discharged until arrangements for appropriate after-care are in place. This is particularly relevant to older patients, whose discharge arrangements are often more complex and more likely to require a package of ongoing care services.

25 Delays in discharging patients who are fit to leave hospital prevent patients being cared for in a more appropriate environment. They also prevent the admission of new patients who are more in need of the services the acute hospital

provides. NHS data show that each day, delayed discharge affects nearly 6,000 older patients (12 - 13 per cent of all older patients in hospital) resulting in the loss of nearly 2.2 million bed days each year.

26 NHS acute trusts in our survey considered that internal causes of delay were often due to the time of day that the hospital consultant decides to discharge a patient, and poor co-ordination of support services, for example, drugs not being ready for the patient to take home or a lack of transport. These problems are normally within the hospital's control, and underline the importance of co-ordination between different groups of staff. Other causes of delay are outside the direct control of NHS acute trusts. NHS acute trusts considered that external causes of delay were often due to waits for social services assessment and for social services funding, the lack of a place in a nursing or residential care home, and delays in the provision of home care services. This underlines the importance of early planning and contact with other agencies to make arrangements. Other causes reported were delays in reaching agreement with the patient and family over the nature of continuing care services to be provided. A move to a residential or nursing home is an important step for a patient. They may require some time in reaching such a key decision and in making their choice.

27 Many hospitals have introduced ways of improving the quality and promptness of patient discharge. Around 70 per cent of NHS acute trusts have now appointed a discharge co-ordinator to work closely with a wide range of staff inside and outside the hospital in overcoming obstacles to appropriate and prompt discharge. This compares with 42 per cent in 1997. Nearly 60 per cent of NHS acute trusts now make use of a discharge lounge, designed to provide a suitable environment in which patients can wait before leaving hospital, while releasing beds promptly for patients being admitted. This is a three-fold increase in two years.

28 Our survey suggests that more acute trusts could bring forward planning for patient discharge. Many could notify social services of their patient's requirement for assessment at an earlier stage. For example, currently only around 40 per cent of NHS acute trusts first notify social services of an emergency patient's need for assessment at the time of their admission, rather than during their stay in hospital. If information were shared more widely and earlier, social services might find it easier to initiate patient assessment and ongoing care services.

Recommendations for the NHS Executive

29 The NHS Executive should:

- provide a lead in encouraging NHS trusts to develop the use of information technology systems (including the related organisational change likely to be necessary) that would enable them to monitor and plan better the use of inpatient beds and other key resources, and manage better inpatient admission to hospital;

- promote the development of the role and responsibilities of bed managers through issuing good practice guidance to NHS trusts (along the lines of the NHS Executive's recent good practice booklet on the role of discharge liaison nurses) and encouraging the provision of training in bed management functions;

- encourage NHS trusts to play their part in improving co-ordination between different professional groups within hospitals, and between hospitals and external care agencies, so that collectively, they provide a prompt and integrated progression of appropriate care;

- make use of the data from the first national survey of admissions, bed management and discharge practices, undertaken for this examination by the National Audit Office, to encourage progress amongst NHS acute trusts towards fuller implementation of good practice, where appropriate. Such work could be taken forward by the Department of Health's action teams; and

- encourage further the evaluation of initiatives within the NHS trusts, and the dissemination of information about successful practice throughout the service by exploiting the NHS's web-site and the national database of good practice on the NHS Learning Network.

Recommendations for NHS acute trusts

On improving the planning of patients' stay in hospital and liaison with other agencies

30 Our work suggests that more NHS acute trusts could:

- ensure their admissions policies – which set out clearly good practice and how resources can be used optimally - focus on how the hospital will schedule resources, such as beds and theatre time, for elective patients (paragraphs 1.19 to 1.20);

- agree and circulate their admissions, bed management and discharge policies more extensively outside the NHS acute trust. This would enable others, such as general practitioners, to influence, understand better, and comment on how the hospital plans to admit the patients they refer to them, and how they deal with peaks in demand for beds. Agreeing and circulating discharge policies allows local authorities, general practitioners, social services and others to influence and have a clear understanding of, the hospital's arrangements for planning and co-ordinating discharge (paragraph 1.20);

- make use of integrated care pathways – spelling out clearly the agreed roles and responsibilities of all involved in the handling of patients with particular conditions - in order to avoid duplication or delay in the provision of patient care, and co-ordinate more fully the roles played by the different care professionals in the treatment of patients (paragraph 1.21); and

- make more effective use of their knowledge of patterns of emergency admissions to assess likely demands on their resources, and better use of tools to improve planning of the number and type of elective admissions they can accept (paragraph 1.17).

On improving the scheduling of patient admission to hospital

31 Many NHS acute trusts could improve their arrangements for scheduling patient admission by:

- developing improved systems for maintaining records of all resources, such as beds and theatre time committed to date, and for scheduling beds for elective patients from the time they are invited in and throughout their expected length of stay. This would help to reduce the risk of cancelled operations (paragraph 1.22);

- gathering more detailed information about elective patients and the resources needed for their care when adding a patient to the waiting list in order to help hospital consultants in planning patient admissions (paragraph 1.23); and

- involving other professionals, such as bed managers, in the decisions about the number and type of patients to invite in on each day to ensure that the full impact of these decisions on hospital resources is understood (paragraph 1.24).

On improving the admission of patients

32 In order to reduce the number of cancelled operations and the length of stay for some patients, more NHS acute trusts should:

- make use of pre-assessment clinics to assess elective patients' fitness for treatment, reduce patient anxiety before admission, and facilitate same day admission (paragraphs 1.27 to 1.29);

- routinely admit more elective patients on the day of their procedure, where appropriate, to reduce length of stay and release hospital beds (paragraphs 1.30 to 1.32);

- find ways of preparing elective patients for theatre at a place other than on an acute ward, for example, by introducing admissions lounges (paragraph 1.33); and

- introduce admissions and observation units to smooth the flow of emergency patients into hospital, improve patient care, and enable those patients not requiring acute care to be discharged appropriately. As part of the Department of Health's Accident and Emergency Modernisation Programme, almost all hospital Accident and Emergency Departments will have an admissions unit or observation ward by the end of July 2000 (paragraphs 1.36 to 1.38).

On developing the role of bed managers

33 In many NHS acute trusts there is substantial scope to develop the role of bed managers by:

- introducing information systems to provide bed managers with timely and accurate information on current bed occupancy and utilisation, as well as short-term levels of planned elective admissions, likely emergency patient admissions, and likely patient discharges (paragraphs 2.27 to 2.29);

- making better use of their detailed knowledge of patterns of patient admissions and discharge, patterns of patient outliers (patients of one specialty placed in a ward designated for patients of other specialties) and bed utilisation, to help plan elective patient admissions, and, in the longer term, the bed complement and configuration within the hospital (paragraph 2.24);

- ensuring that they have sufficient authority and reporting powers, and are given sufficient support from senior management so they can take necessary action to resolve bed crises (paragraph 2.23); and

- developing their training and professional status, and encouraging the growth of networking between bed managers in neighbouring NHS trusts to help disseminate good practice, tackle generic problems and help manage bed demand pressures across the NHS trusts in their area (paragraph 2.25).

On tackling delays in discharges

34 There is scope for more NHS acute trusts to follow the lead set by others by:

- planning patient discharge earlier – before or at the time of the patient's admission – and by examining on a regular basis the internal causes of delayed discharges and working to resolve the obstacles identified (paragraph 3.15);

- tackling external causes of delay, for example, by notifying social services more promptly of a patient's need for assessment which may help them initiate patient assessment and ongoing care services (paragraphs 3.11 and 3.15);

- developing the role of the discharge co-ordinators to ensure that any internal causes of delayed discharge are addressed, and to secure the maximum degree of co-operation between health and social services to meet the needs of discharged patients (paragraphs 3.16 to 3.19);

- providing suitably situated and staffed discharge lounges for patients ready to leave hospital, to enable them to vacate beds promptly and allow new patients to be admitted to them (paragraphs 3.20 to 3.23); and

- providing alternative services, such as home support, to allow patients to return home promptly, as well as step-down care beds, to be used where there are delays in the provision of services from other care providers and where occupation of an acute ward bed is no longer appropriate (paragraphs 3.24 to 3.25).

Part 1: Admitting patients to hospital

1.1 This part examines the admission of patients to acute hospitals for inpatient care. It focuses on emergency patient admission to hospital and on those elective patients for whom a consultant has already decided that admission is required. Firstly, it looks at the key trends in patient admissions in recent years. To set inpatient activity trends in context, we also include key trends in day case and outpatient services. We then examine the extent to which acute hospitals have adopted measures to improve their management of hospital inpatient admissions, as well as their success and the impact on patients.

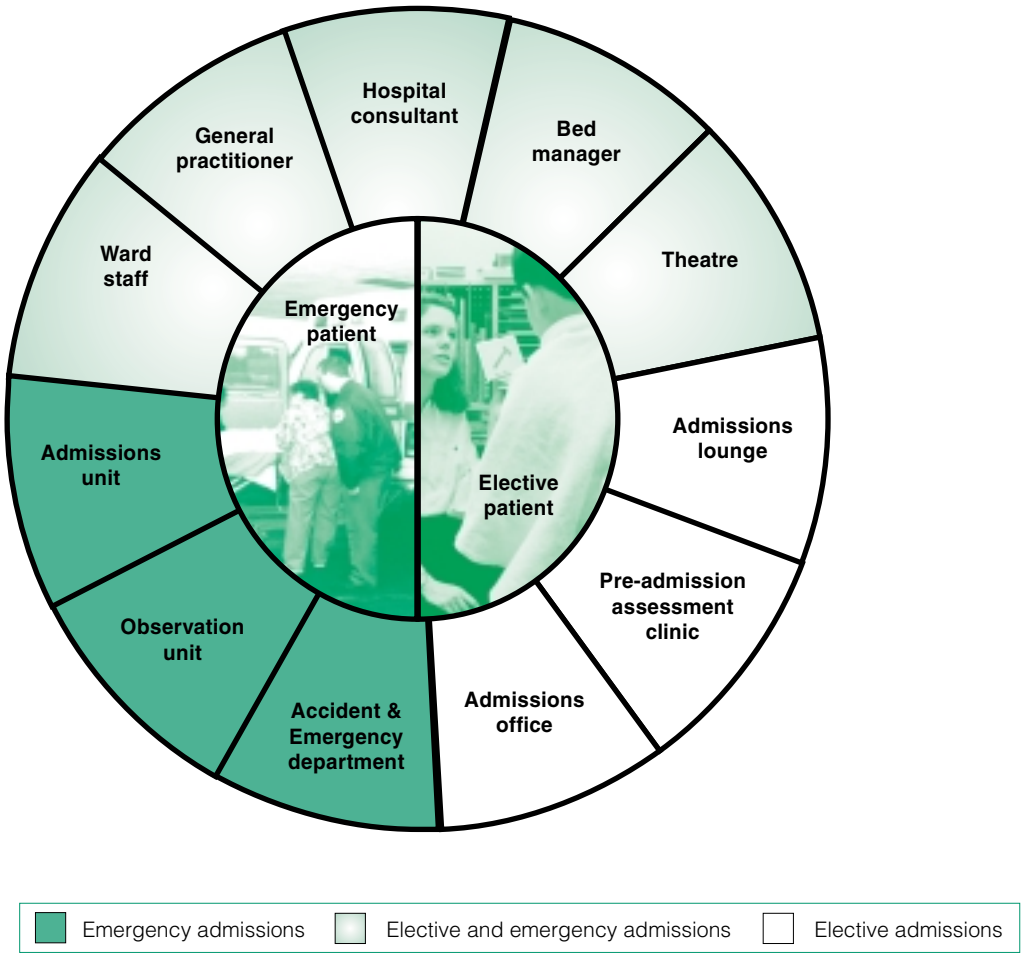
Hospitals have to balance the demands of treating planned patients promptly and making adequate provision for emergency patients

1.2 Inpatients are admitted to hospital as either elective or emergency cases. An elective patient's admission is planned by the hospital, following a decision by a consultant to admit. The hospital will have details of these patients, their diagnoses, and the procedures planned for them. In contrast, an emergency admission comes suddenly, following an accident or the onset of an acute illness. Most emergency patients arrive at an Accident and Emergency Department following self-referral, or urgent referral from their general practitioner. Hospital staff need to assess the situation quickly, diagnose the patient's condition, and agree on what action to take.

1.3 Hospitals have a daily task of balancing the demands of treating an unknown and a variable number of emergency patients, at the same time as admitting and treating scheduled elective patients. In doing this, hospitals have to ensure that sufficient, but not excessive, resources are available, in terms of beds, clinical and nursing staff and other facilities, to meet the demands of new and existing patients and to co-ordinate their admission. A wide circle of staff and facilities are involved in admitting and treating emergency and elective patients. These are shown in Figure 3 overleaf.

Figure 3

A wide circle of staff and facilities are involved in admitting and treating emergency and elective patients



Source: National Audit Office

Hospitals are treating more patients than ever before

1.4 In recent years the National Health Service has treated an increasing number of patients. The key figures for admission of general (mainly older patients) and acute patients and for waiting lists are summarised below, and further details of the reported trends are shown in Appendix 3. In particular, in 1998-99:

An emergency patient is brought into hospital

- nearly four million emergency patients received inpatient treatment (an increase of nearly four per cent over the number in 1997-98)[4], and in the first half of 1999-2000 more emergency patients were treated than in the same period in 1998-99[5];

- around 1.8 million elective patients received inpatient treatment (an increase of around eight per cent over the number in 1997-98)[4], and in the first half of 1999-2000 more elective patients were treated than in the same period in 1998-99[5];

- the number of patients on NHS waiting lists reduced by 17 per cent to 1,073,000 patients waiting for admission in March 1999[4], but increased again to 1,085,000 by September 1999[5];

- the number of elective patients waiting more than 12 months for treatment reduced by 35 per cent to 46,800 by March 1999[4], but increased again to 50,900 by September 1999[5];

- the Patient's Charter standard that no patient should wait longer than 18 months for treatment was achieved in 1998-99, but by September 1999, 99 patients had waited longer than 18 months for treatment [5]; and

- around two thirds of elective patients were treated within three months of the decision to admit, similar to levels achieved in the previous two years[6].

1.5 The rise in inpatient general and acute admissions should also be seen in the context of day case and outpatient activity. In 1998-99, around 3.5 million elective patients received day case treatment (an increase of around 11 per cent over the number in 1997-98)[4]. And in the first half of 1999-2000 more day case elective patients were treated than in the same period in 1998-99[7]. In 1998-99, there were around 42 million outpatient attendances in total, and the NHS saw nearly 11 million new outpatients[4], an increase of around two per cent over the figure in 1997-98. During 1998-99, increasing numbers of patients waited for outpatient consultations, reflecting the increasing number of outpatient referrals from general practitioners[5].

1.6 Meeting Patient's Charter standards on waiting times and cancellations helps to ensure a high quality of service for patients. For example, shorter waiting times for consultations and admission can reduce the time that elective patients experience pain and the risk of their conditions worsening[8]. By the end of September 1999, around 76 per cent of patients had been waiting less than 13 weeks for an outpatient consultation, compared to the standard of 90 per cent. And 149, 000 patients were still waiting 26 weeks or more after referral[5].

Emergency patients have made up an increasing proportion of hospital admissions in recent years

1.7 The Government have stated that the first priority, above all other, for NHS trusts and health authorities, is to make adequate provision for emergency care [9]. Emergency patients now make up an increasing proportion of hospital admissions as more elective patients are treated on a day case basis. The demand for emergency treatment peaks between January and March each year, but the seasonal demands can differ markedly from year to year (Appendix 3, Figure 38) and from hospital to hospital. This makes it difficult to plan with precision for emergency admissions. In addition, peaks in demand may be due to extreme weather conditions or outbreaks of influenza, which may coincide with higher staff sickness levels.

1.8 The Patient's Charter includes a standard that emergency patients be admitted to hospital within two hours from the decision to admit (Figure 2). In July to September 1999, 18 per cent waited more than two hours, and seven per cent of all emergency patients waited more than four hours (Appendix 3, Figure 45). Where they cannot be admitted to ward beds, patients are often assessed, tests done, and treatment begun whilst in the Accident and Emergency Department. Figure 4 explains why a lengthy wait for admission in an Accident and Emergency Department is not appropriate for an emergency patient.

Figure 4

A lengthy wait in an Accident and Emergency Department prior to being admitted to a hospital ward is not appropriate for an emergency patient

In particular:

- long waiting times in Accident and Emergency departments can result in congestion, with patients filling every available space, including cubicles, corridors, theatres and resuscitation rooms;
- congestion in Accident and Emergency departments increases demands on medical and nursing staff. It can also hinder the effectiveness of the department and the speed, supervision and quality of care provided to all patients; and
- congestion and delay can lead to a higher risk for patients developing pressure sores, adding to the patient's care needs, extending their length of stay, and so increasing the costs of inpatient care.

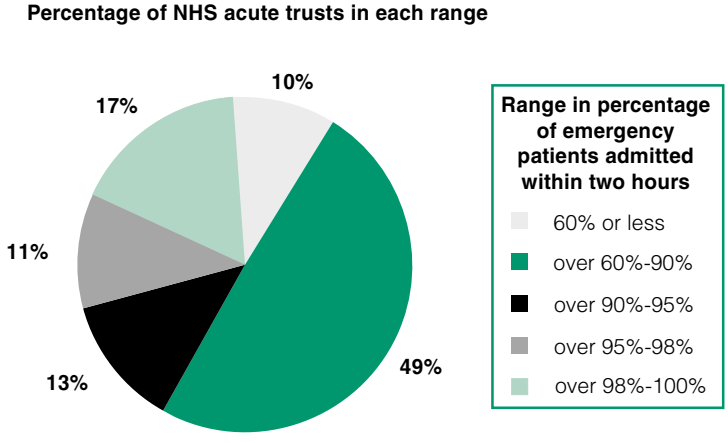
Source: National Audit Office

1.9 Hospital performance in admitting emergency patients promptly varies. Around 17 per cent of NHS acute trusts admit 98 per cent or more of their emergency patients within two hours, but 10 per cent admit 60 per cent or fewer (Figure 5). Inner city and university teaching hospitals admitted on average around 72 per cent of emergency patients within two hours, but rural hospitals admitted on average nearly 90 per cent.

Figure 5

Hospitals show variable performance against the Patient's Charter standard of admitting emergency cases within two hours of the decision to admit

The figure shows the percentage bands of emergency patients admitted within two hours of the decision to admit and the proportion of NHS acute trusts whose performance lay within each percentage band. The figures cover the survey period July 1997 to December 1998. The proportions are of NHS acute trusts that provided data.



Source: National Audit Office survey of NHS acute trusts, 1999

The number of operations cancelled on the planned day of admission has increased in the last two years

1.10 The Patient's Charter states that a patient's elective operation should not be cancelled by the hospital on or after admission, for non-medical reasons[1]. Non-medical reasons include an inpatient bed not being available, insufficient theatre time, and shortages of staff and equipment. Cancellation of an operation may be a distressing and disruptive experience for elective patients (see Figure 6). Where it does occur, the hospital is required under the Patient's Charter to treat the patient within one month from the date of cancellation[1].

Cancellation of an operation may be a distressing and disruptive experience for elective patients

Figure 6

The patient may have:

- built up considerable expectations about improvement to health and quality of life following successful treatment. Patients may feel let down when the operation is cancelled;
- already waited some time for their operation, possibly in pain, or immobile, and with a reduced quality of life. Their condition may have deteriorated, making their prognosis less favourable and requiring more intensive treatment; and
- made detailed or expensive arrangements, including plans to be absent from work during their stay in hospital and during their recovery. Cancellation of the operation may make these plans redundant.

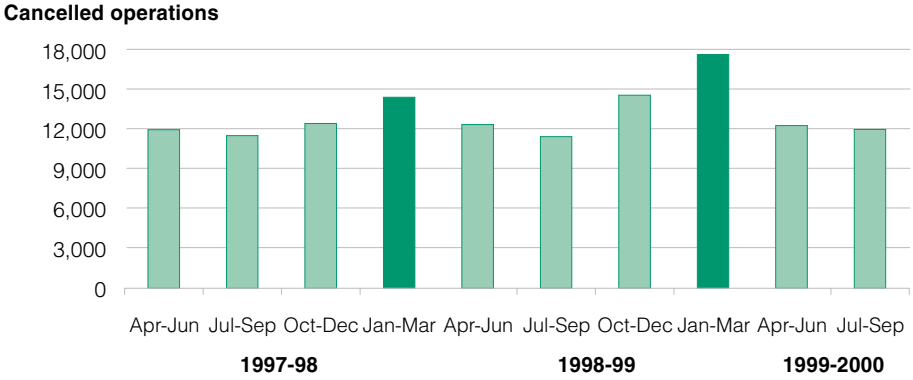
Source: National Audit Office

1.11 Total elective inpatient and day case activity increased by 9 per cent between 1997-98 and 1998-99 to record numbers[4]. Over the same period, the number of cancelled operations increased by 12 per cent [7]. Figure 7 shows that in 1998-99, over 56,000 people had their operations cancelled - the highest number reported since the standard was introduced. In 1998-99, hospitals also failed to treat 9,380 patients within one month of their cancelled operation, as required by the Patient's Charter[1, 4]. This was 29 per cent more than the year before. Over 24,000 operations were cancelled between April and September 1999[7]. And hospitals failed to treat over 4,550 patients within one month of their cancelled operation between April and September 1999[7]. Figure 4, in Appendix 3, shows that each year, cancellations peak in the period between January and March, suggesting that hospitals over-estimate the number of elective patients they can treat alongside the simultaneous peaks in emergency patient admissions.

The number of elective patient operations cancelled by hospitals on the day of admission peaks in the final quarter of each year

Figure 7

The pattern of elective operations cancelled by the hospital for non-medical reasons matches the pattern of emergency admissions to hospital (see Appendix 3). Quarter 4 (January to March) has the highest numbers of cancelled operations and the highest numbers of emergency admissions



Source: NHS Executive Performance Analysis Branch[7]

Note : Data include the cancelled operations of both intended inpatient and day case elective patients. The NHS Executive do not collect separately data on the cancelled operations of intended inpatient elective patients.

1.12 Although growing numbers of operations were cancelled at the last minute, they still represent a small proportion of elective operations carried out. Overall, the NHS acute trusts in our survey cancelled around 1.7 per cent of elective patient operations at the last minute for non-medical reasons. But the pattern of cancellations varies across the country. Figure 8 shows that 35 per cent of NHS acute trusts surveyed cancelled fewer than one per cent of their elective patients operations. However, one in six cancelled over three per cent, and a very small number of NHS acute trusts cancelled as many as eight per cent.

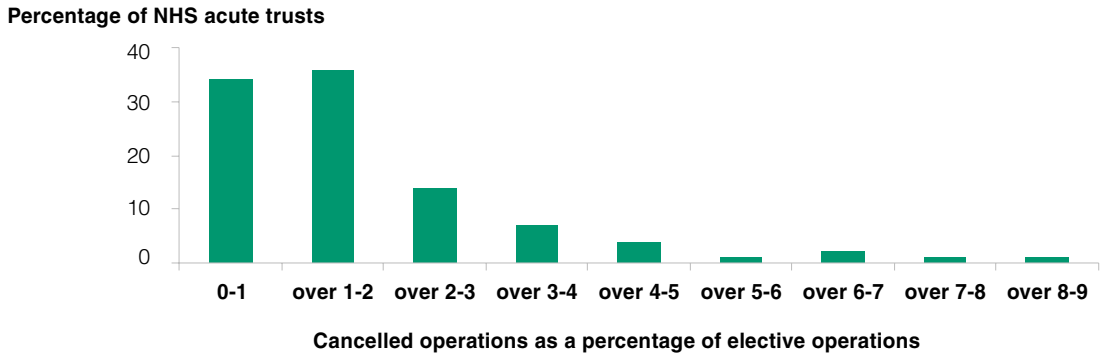
Operations are also cancelled before the planned day of admission

1.13 Hospitals also cancel operations before the patient's date of admission. The Patient's Charter does not cover this. Earlier notice of cancellation (such as more than a week ahead) may be less disruptive to patients, giving them more time to alter arrangements they have made. Hospital policies on how long in advance to cancel an operation vary. Some aim to avoid cancellation whenever possible and only decide to cancel on the day of admission when they are sure there is no chance that the patient can have their operation. Others cancel in advance of the day of admission when it seems likely that the operation cannot go ahead. Hospitals are not required to record cancellations in advance of the day of admission or to treat the patient within one month of the cancellation.

Figure 8

The proportion of operations cancelled varies across NHS acute trusts

The data show operations cancelled by the hospital, at the last minute, measured against the number of operations carried out on elective patients, during the period July 1997 to December 1998 inclusive. Percentages are based on the NHS acute trusts that provided data.



Source: National Audit Office survey of NHS acute trusts, 1999

1.14 There are no national data on the number of operations cancelled before the date of admission. However, some hospitals do collect this information. For example, the Royal Shrewsbury Hospitals NHS Trust cancels around five operations before the day of admission for every one operation it cancels on the day. The Trust checks in advance to identify whether necessary resources will be available on the day, and if not, aims to give patients early notice of cancellation and to reschedule the operation. In contrast, Birmingham Heartlands and Solihull NHS Trust strives to ensure all patients can be admitted right up to the planned day of admission. It cancels around two operations before the day of admission for every one operation cancelled on the day.

Trusts reported that bed unavailability is the most common cause of cancelled operations

1.15 Trusts reported that bed unavailability is the main cause of operations being cancelled. Some 70 per cent of NHS acute trusts told us that the intended bed being occupied by a new emergency admission was the most common cause of a cancelled elective operation. And 19 per cent told us it was because a previous patient awaiting discharge was still occupying the intended bed. In Part 2 of this report we examine how hospitals can reduce the risk of bed unavailability leading to a cancelled operation. And in Part 3 we examine how hospitals can reduce delays in discharging patients.

Hospitals have enhanced admissions practices, but there is scope for further improvement

1.16 Hospitals are improving their admissions practices in response to rising patient admissions, and in order to utilise resources efficiently. There is, however, scope for further improvement and wider application of the good practices already in place in many hospitals. Our survey of NHS acute trusts looked at the extent to which good practices have been implemented locally. In particular, it concentrated on:

- how well NHS acute trusts planned and scheduled the admission of elective patients;
- whether they co-ordinated elective and emergency admissions;
- whether NHS acute trusts gave elective patients sufficient notice of their admission date and confirmed their ability to attend;
- how NHS acute trusts ensured that elective patients are medically fit and ready for their operation;
- whether NHS acute trusts made optimal use of the practice of same day admissions; and
- whether they had introduced dedicated facilities to improve the admission of emergency patients.

1.17 The integrated planning and co-ordination of elective and emergency admissions is of fundamental importance. It is difficult for hospitals to predict emergency admissions with precision. However, there is scope for them to use their knowledge of patterns of emergency admissions to assess likely demands on their resources. And hospitals can plan the number and type of elective patients they invite in, to balance against assessed emergency admissions.

1.18 Commonly, hospital consultants plan the list of elective patients to invite in on any given day around their allocated theatre sessions. This system may help in ensuring that theatre time is fully used, but does not recognise fully the demands these patients will place on beds, nursing and other clinical staff and hospital equipment, nor whether these resources are actually available. Some hospitals have improved their planning of patient admissions by adopting a hospital wide policy or strategy, and by providing information and professional support to hospital consultants. This helps them decide which and how many elective patients to invite in based on the resources available.

Admissions policies should focus on both elective and emergency patient admissions and how to balance resources against patients' needs

1.19 We consider that hospital policies for managing inpatient admissions should address how the hospital will respond to the needs of both elective and emergency patient admissions, and set out the optimal arrangements to balance resources available with patients' needs. The policy should draw on the expertise of professionals across the hospital to formulate good practice on patient admission and, by widespread circulation, ensure a wide awareness of how good practice will be applied. In Appendix 4 we have summarised the essential features of an admissions policy, based on best practice found in our examination and as set out in research[10-15].

1.20 Most NHS acute trusts have such policies, and many address how the NHS acute trust responds to the joint demands of elective and emergency patients on its resources. Around half cover how the NHS acute trust schedules resources, such as beds and theatre time, required by elective patients admitted. There are opportunities for more NHS acute trusts to agree and circulate policies more extensively outside to enable others, such as general practitioners, to better understand how the hospital plans to admit the patients they refer (Figure 9).

There are further opportunities for admissions policies to focus on scheduling resources for elective patients and for policies to be circulated and agreed more widely

Figure 9

Our survey found that:

- 87 per cent of NHS acute trusts reported having them, including almost 100 per cent of inner city and university teaching hospitals;
- 95 per cent of policies set out the protocol for managing peaks in demand for emergency patients;
- 75 per cent of policies cover both elective and emergency patient admissions;
- 55 per cent of policies address arrangements for booking a bed for elective patients, and 41 per cent address arrangements for booking a theatre slot for elective patients; and
- circulation of policies is extensive within NHS acute trusts, but far less so outside – only 39 per cent of NHS acute trusts agree them with, and circulate them to, health authority commissioners, and only 35 per cent to referring general practitioners.

Source: National Audit Office survey of NHS acute trusts, 1999

Patient care pathways can help to optimise length of hospital stay and efficient use of resources

1.21 Patient care pathways (or protocols) help to map out the whole sequence of good quality care that the patient will receive on admission to hospital and afterwards. And they help optimise patient length of stay and contribute to the efficient use of hospital resources by avoiding duplication or delay in provision of services to patients. Protocols recognise that many aspects of patient care are predictable and their adoption encourages hospitals to schedule in advance and co-ordinate the resources patients will need throughout their stay. Figure 10 outlines the gains achieved at Central Middlesex Hospital from introducing patient care pathways.

Figure 10

Central Middlesex Hospital has improved patient care, reduced inpatient length of stay and improved hospital efficiency through developing care plans that map out the whole sequence of good quality care a patient will receive

Developing patient care pathways

- The Hospital recognised that a patient's treatment involves many people and a complex series of procedures. However, for many patients, the stages of care are predictable.
- The Hospital mapped services for conditions that affect a high number of patients and that were relatively straightforward, with most likelihood of success. At each stage they established the most appropriate activity and its timing, and the best person to do it.
- They identified activities that did not contribute to patient care or were wasteful, and achieved a consensus on a pathway of care for all patients with a given condition. Pathways were made flexible to suit individual patient's needs, and allowed for variations if the patient responded slowly or not at all to treatment, and clinical judgement indicated the patient required different procedures or drugs.
- The Hospital includes the documented care pathway in a patient's medical record. This covers a forward plan of expected treatment with prompts and reminders to those completing it. It is available to the whole team providing care to the patient, and to the patient. All staff use the single shared medical record, which avoids duplication of care or documentation, and encourages close team working.

Lengths of hospital stay have fallen and quality of care has risen

- Now the Hospital report that the average length of inpatient stay for many groups of patients has fallen by up to four days. In the past, inpatient stay was prolonged due to poor management of the care process.
- Traditionally, care professionals only saw their part of the care process and a key achievement has been to enable each professional to appreciate how their contribution fitted into the series of care provided, and had to be co-ordinated with that provided by others.

Coverage of patient care pathways is now extensive

- The Hospital manages about 85 per cent of inpatient surgery, 40 per cent of medicine and 70 per cent of accident and emergency admissions using patient care pathways.

Source: National Audit Office

There is considerable scope to improve the collection and use of patient information

1.22 In Appendix 4 we have summarised best practice relating to the information needed to support consultants in co-ordinating elective admission lists with the hospital resources available. This is drawn from existing research[10-15] and findings from our examination. Almost all NHS acute trusts surveyed record the clinical urgency, the procedure required, dates a patient is unable to come in, and whether or not he or she can come in at short notice. And 64 per cent of NHS acute trusts record the ward, intensive care or high dependency care requirements for the patient.

1.23 However, other information was less frequently included. For example, only 28 per cent of NHS acute trusts surveyed estimated a patient's required length of stay, and only 24 per cent estimated the required time in theatre. This information would be helpful indicators of the resources the hospital is likely to need to have available for the patient to enable the admission to proceed. The Royal Shrewsbury Hospitals NHS Trust has won an NHS Beacon Award for a system for co-ordinating elective patient admissions with resources available (Figure 11). In 1997 the Trust introduced the CALM (Clinical Applications for Logistics Management) system to maintain a record of all bed and theatre resources committed to date and to provide a real time information on the current bed state, and a projection of future bed states.

1.24 As well as reliable information, consultants need to be supported by other staff so that a broad view can be taken of the implications on hospital resources of decisions to admit particular patients. Admissions office and bed manager staff may be able to assist an individual consultant plan how many, and which, patients to invite in each day by using their knowledge of the hospital wide position on daily patient admissions and bed availability. We found that admissions office staff were involved in supporting consultants' decisions in 52 per cent of NHS acute trusts surveyed, and bed managers were involved in 49 per cent of the NHS acute trusts.

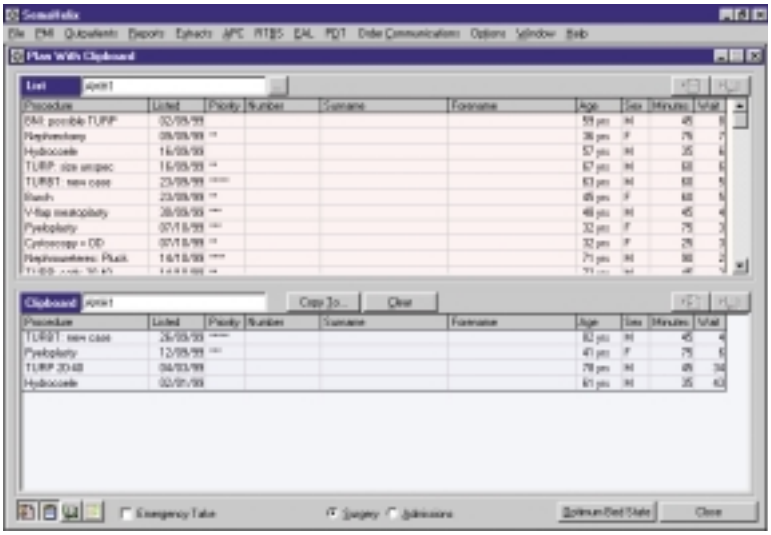
Hospitals should give elective patients sufficient notice of their admission date and confirm their ability to attend

1.25 Giving patients sufficient notice of their admission date allows them to make arrangements for their absence from home and work. The notice period given by NHS acute trusts to patients varies, with the most frequent being two to four weeks, although many specialties give six weeks notice or more. In 44 per cent

Figure 11

The Royal Shrewsbury Hospitals NHS Trust has won a Beacon Award for a system for co-ordinating elective patient admissions with resources available

This screen shows a view of an urology waiting list. Information about clinical priority and the anticipated length of operating time is clearly displayed. The surgeon uses the mouse to select and move patients from the list to the clipboard for a particular session.



This view shows the projected bed occupancy for a single ward. The bed manager and surgeons can use this display to detect and resolve demand/resource conflicts involving current or future admissions.

The CALM system shows details of patients on the waiting list and their intended procedure, with a score of relative clinical priority. The consultant surgeon, working directly at the computer keyboard, can compile a theatre list for patients on the waiting list. The system displays the time available for the theatre session and books an amount of theatre time for each patient. The time booked is automatically set from information about how long the planned procedure is likely to take. In practice, the system reserves some spare theatre time, allowing urgent patients to be scheduled at short notice, without cancelling others. Each time the consultant adds a patient to the waiting list, and books time in theatre, the system checks there is a bed available and other resources such as theatre equipment. The system only allows an offer of admission to be made to the patient if all resources are available.

NHS Beacon Award winners demonstrate innovative or best practice. They share their experiences with the NHS through a range of practical learning activities.

Source: Royal Shrewsbury Hospitals NHS Trust

of NHS acute trusts surveyed, a provisional date for admission is recorded when the patient is placed on the waiting list. Figure 12 shows two ways in which the admission of patients is being developed further.

There is scope for developing the way in which inpatient admissions are booked.

Figure 12

The Central Middlesex Hospitals has won a Nye Bevan award for Britain's first airline-style booking system for patient appointments. The hospital has, as a result, been able to reduce inpatient and outpatient waiting lists and times.

The Department of Health are currently piloting systems to allow hospital consultants to book firm operation dates while a patient is with them in an outpatient consultation. With the planned expansion of the scheme, the Department expect there to be an increase in firm admission dates being set when patients are added to the waiting list. This will help both the patient and the hospital plan for the admission.

Source: National Audit Office and Department of Health[16]

1.26 Patients need to fulfil their responsibility to inform the hospital if they are unable to attend, so that resources are not wasted. According to data from the NHS Executive, around 170,000 patients, nearly five per cent, failed to attend for inpatient and day case treatment in 1998-99[7]. However, hospitals should also seek positive confirmation from patients that they can attend on the proposed date. We found that NHS acute trusts use a variety of means to seek confirmation of attendance. The most common way is to ask the patient during a pre-admission assessment, which checks their medical fitness for their procedure. In other cases, NHS acute trusts ask patients to telephone the hospital or return a reply slip to confirm they can attend.

Hospitals should confirm in advance that routine elective patients are medically fit for their procedure

1.27 Hospitals need to confirm in advance that patients are medically fit for their procedure. Although hospitals are not required to record levels of cancellations for medical reasons, early confirmation of a patient's medical fitness reduces the risk of late notice cancellation for medical reasons, and provides the opportunity to invite in a replacement patient if needed at short notice. A comprehensive pre-admission patient assessment programme:

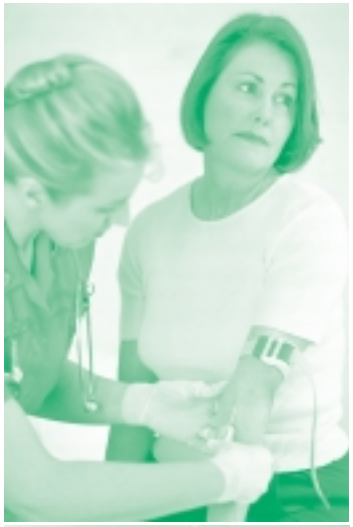
- allows the complete range of routine tests, including blood tests, x-rays, electro-cardiogram, blood pressure, pulse and urine analysis, to be undertaken in advance;
- facilitates admission on the day of treatment rather than the day before; and

- enables assessment and early planning of the patient's needs after discharge.

1.28 Pre-assessment staff can also provide patients with necessary information on preparing for admission at home, and on pre-operative fasting and medication. Patients can also ask questions and raise any concerns about their admission. Reducing the patient's anxiety about their treatment in this way can also minimise the risk of nervous patients failing to attend for treatment. Figure 13 shows how Harrogate District Hospital and its patients have benefited from the introduction of pre-admission assessment.

Figure 13

Patients and staff at Harrogate District Hospital have benefited from pre-admission assessment



In particular:

- The hospital introduced a nurse led pre-admission clinic for elective surgery in 1997.
- Patients are assessed in a relaxed, informal atmosphere and have the opportunity to discuss all aspects of their planned stay in hospital.
- The nurses are trained to perform a complete medical, nursing and social assessment, ensuring that all patients admitted for surgery are prepared for their operation.
- The nurses record all information in a care pathway document which is then used by all the healthcare professionals involved during the patient's stay in hospital. The nurses take decisions on the patient's fitness for anaesthetic using guidelines agreed by both surgical and anaesthetic departments.
- In its first six months, the use of pre-admissions assessment resulted in the total percentage of patients admitted on the day of their procedure increasing by 8 per cent.
- The number of patients who cancelled their operation on their day of admission fell.
- Patients who did not attend for pre-admission assessment were replaced on the theatre list, preventing the wastage of a bed and theatre slot.
- Patients who needed urgent operations, but who were found to be unfit for anaesthetic, had a week to receive care to improve their fitness.
- In a patient survey, around two thirds reported they were reassured by pre-admission assessment.

Source: National Audit Office survey of NHS acute trusts, 1999

1.29 Hospital practice as to when routine elective patients undergo a pre-admission assessment for fitness varies widely. Some hospitals are failing to achieve the full potential of pre-admission assessment. Our survey found that in 41 per cent of the NHS acute trusts, all specialties that treated elective patients assessed routine patients before they were admitted. This most commonly

occurred up to two weeks before the intended admission date, which ensures results are still valid at the time of admission, and gives time for the hospital to fill any cancelled admissions. In another 41 per cent of NHS acute trusts, some specialties assessed routine patients before admission. However, 18 per cent of the NHS acute trusts only assessed patients' medical fitness at the time of admission. This reduces the opportunity for early cancellation for medical reasons, and the opportunity to invite in a replacement patient if needed at short notice.

Hospitals should aim to admit patients, where appropriate, on the same day as their procedure

1.30 It may be necessary to admit some patients the day before their operation or procedure if, for example, the patient has to travel some distance or the hospital needs to carry out final checks on the patient's fitness. However, hospitals can make more efficient use of their beds and reduce the associated costs of inpatient stays if, where appropriate, they admit elective patients on the same day as their procedure.

1.31 There has been a substantial increase in the number of NHS acute trusts that practise same day admissions for some of their elective surgical patients. Our survey found an increase from 63 per cent in 1997 to 88 per cent in 1999, with a further three per cent planning to introduce this approach. This demonstrates a wide acceptance of the benefits to be gained. Where patients were admitted on the same day, almost all NHS acute trusts considered that pre-admission assessment was the most successful mechanism to facilitate it. And rural hospitals are as likely to practise same day admissions as city hospitals, suggesting that patient transport to hospital is not a constraining factor.

1.32 Many NHS acute trusts have yet to achieve the full potential of same day admissions. On average, we found that around 50 per cent of elective patients are admitted on the same day as their procedure. However, 18 per cent of NHS acute trusts surveyed admit 80 per cent or more elective patients in this way. We estimate that if hospitals as a whole were to increase the level of same day inpatient admissions by around 10 per cent of all elective admissions, this would release around 180,000 bed days a year for alternative use. This is the equivalent to the bed days occupied by around 12,500 patients receiving total hip replacements, based on the current average length of inpatient stay.

1.33 Patients admitted on the day of their procedure do not necessarily need to be placed in a bed while they are waiting for theatre. Figure 14 shows how Birmingham Heartlands Hospital is establishing an admissions lounge to assist same day admissions, and reduce bed unavailability as a cause of cancelled operations. However, in our survey of NHS acute trusts, we found that only eight per cent of respondents prepared patients for theatre at any other place than at their bedside on a ward.

Figure 14

Birmingham Heartlands Hospital is establishing an admissions lounge to prepare same day admission patients for theatre

- The hospital now has a policy to admit elective patients on the day of their procedure.
- In the past, existing patients who were due to be discharged that day were still occupying their beds at the time that new patients arrived for treatment later that day.
- As a result, these beds were not available for new patients while they were being prepared for theatre.
- The hospital is establishing an admissions lounge. New patients will arrive at the admissions lounge to be prepared for and taken directly to theatre, without initially needing to use beds on inpatient wards.
- After their theatre procedure, when they are ready to go to the ward, beds will be vacant and prepared for them. The patients to be discharged, who were occupying these beds earlier in the day, will be waiting in the discharge lounge before leaving hospital.

Source: National Audit Office

Dedicated operating theatre sessions for urgent and emergency surgery can help reduce cancellation of elective surgery

1.34 Elective operations may be cancelled when urgent and emergency surgery takes place in theatres planned for elective surgery. Around eight per cent of NHS acute trusts identified this as a prime cause of cancelled elective operations. Elective surgical patients can benefit from a reduction in cancelled operations by provision of dedicated operating theatre sessions for urgent and emergency surgery.

1.35 We found that in 1999, 90 per cent of NHS acute trusts had dedicated operating theatre sessions for emergency surgical procedures. This has risen from 75 per cent in 1997. In 53 per cent of NHS acute trusts, these facilities were available 24 hours a day, seven days a week. While this may lead to lower levels of utilisation of dedicated emergency theatre sessions, it helps to alleviate some of the problems that can arise from emergency surgery out of daytime hours that were highlighted by the National Confidential Enquiry on Peri-operative Deaths[17]. This recommended the strict control of urgent and emergency operations and the provision of dedicated operating theatre sessions for urgent and emergency surgery. Emergency patients requiring surgery also benefit from dedicated emergency theatre sessions with the presence of a consultant surgeon and anaesthetist, the same as for elective theatre sessions.

Admissions and observation units can help to improve waiting times for admission by emergency patients

A nurse takes a patient's details after arriving at an Accident and Emergency department

1.36 Admissions and observation units can help to reduce patient waiting times in Accident and Emergency departments and reduce the overall level of inpatient emergency admissions. These units provide a centralised location for initial assessment and treatment for those patients who may require subsequent admission to hospital and observation of the condition of those who may be able to leave the hospital. They often have a higher qualified staff to patient ratio than inpatient wards, and benefit from being in close proximity to the Accident and Emergency department and theatres.

1.37 We found that a large majority of NHS acute trusts with an Accident and Emergency department have an admissions unit for medical emergency patients. This has increased from around half in 1997. In addition, many NHS acute trusts with an Accident and Emergency department had a separate unit for surgical emergency patients. Virtually all admissions units are kept open at all times. As part of the Department of Health's Accident and Emergency Modernisation Programme[18] all but five departments (those where hospital rebuilding plans are in place) will have an admissions unit or observation ward in operation by the end of July 2000.

1.38 Admissions and observation units need to have beds available for new emergency arrivals. And the prompt placement of patients on inpatient wards, or discharge of patients from the hospital, following completion of assessment or observation, frees up these beds for new arrivals. However, we found the length of time that patients stay on the units before either discharge or transfer to an inpatient ward varied considerably. In a small number of cases patients stay 48 hours or longer. This may lead to congestion in these units and result in beds not being available for new emergency admissions requiring assessment. Better bed management practices (examined in Part 2) may help in enabling patients to be placed in ward beds as soon as appropriate, to allow new emergency patients to have access to admissions units.

Part 2: Managing hospital beds

2.1 According to the Government's Emergency Services Action Team, the capacity of a hospital to admit emergency patients and still manage to deliver on waiting list targets depends crucially on how well it organises and utilises, its staffed bed stock - in other words - its bed management[10]. Failing in this not only impacts on the numbers of cancelled operations, but also leaves patients who should be admitted to a ward in a less appropriate and more stressful care environment. It also adds to the pressures on staff. In our survey of NHS acute trusts we found that the lack of a bed was the most common cause of cancelled operations, and the most commonly reported difficulty in managing patient admissions.

Placing a patient promptly in an appropriate bed has become increasingly challenging and complex

2.2 Ensuring that patients are placed promptly in an appropriate bed has become increasingly challenging and complex. Figure 15 on page 34 summarises the constraints faced by hospitals. And Figure 16 on page 35 shows the circle of staff involved in co-ordinating a patient's placement on an inpatient ward. In this part we examine how the number of inpatient beds and their utilisation has changed over recent times. We look at the frequency and consequences of bed shortages in NHS acute trusts, and go on to consider how NHS acute trusts can manage their beds most effectively.

Hospitals have to balance ensuring the availability of beds against the efficient utilisation of an expensive hospital resource

2.3 A feature common to all inpatient admissions is the requirement for an appropriate bed for the patient. Inpatient beds have commonly been used as a currency within the NHS to measure resources, capacity and activity. They have also been a focal point for providing care to the patient. Usually, they are allocated to particular specialties in medicine and surgery, and, in some cases, to individual hospital consultants within each specialty. In order to meet their obligations, some hospitals have ring fenced a number of beds for elective patients to protect them from cancelled admissions, others have pooled inpatient beds with the aim of maximising access to beds for emergency patients requiring admission.

Figure 15 **Placing patients promptly in an appropriate bed is an increasingly challenging and complex activity.**

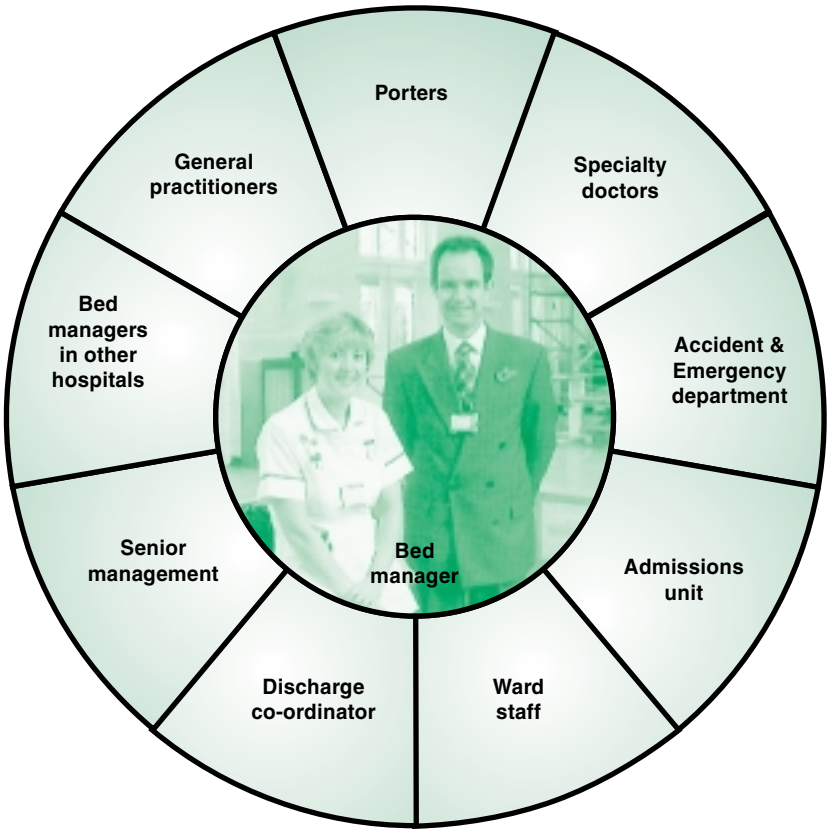
In particular:

- Total bed numbers have fallen, giving fewer options for placing new patients (paragraph 2.5).
- Bed usage is not fully flexible and patient requirements are closely defined as a result of:
  - a national requirement for single sex adult patient bays (excluding intensive or high dependency care and admissions units for emergency arrivals);
  - a national requirement for separate beds for children;
  - the requirement for separate rooms for patients with infections, particularly those resistant to antibiotics, to prevent the spread of hospital acquired or other infections;
  - the long established requirement for separate wards for particular specialties to group patients with similar care needs; and
  - the long recognised need to avoid patients outlying on wards for other specialties to improve quality of service to patients and hospital efficiency.
- Total patient admissions are increasing, adding to the total workload for bed managers.
- Average lengths of inpatient stay are falling, leading to an increased number of separate admissions per bed over the year, each of which has to be planned by bed managers. Our survey of NHS acute trusts found a range of 50 to 80 patient admissions per acute bed over a year. This compares with the most recent (1997-98) departmental figures of an average of around 56 admissions per acute bed[19].
- Decreasing proportions of admissions are elective patients, whose needs are known in advance and bed requirements can be planned. This means that bed managers' work has to focus on the placement of more difficult and less predictable emergency admissions.

2.4 Hospitals have to balance the availability of beds against the efficient utilisation of an expensive hospital resource. Opening or closing staffed beds to respond to changing patient demand is often difficult in the short term. However, hospitals with closed wards or bays of beds, and with access to additional agency nursing may be able to operate flexible numbers of inpatient beds. Any decision to invest in permanent additional numbers of inpatient beds needs to consider the gains from investment in this NHS resource against investments in other NHS patient services. For many hospitals, therefore, the primary issue is managing their current bed complement and configuration (the type of beds and where they are located) effectively.

Figure 16

A wide circle of staff and functions are involved in co-ordinating a patient's move on from admission to placement in an appropriate bed



Source: National Audit Office

The total number of hospital beds for general and acute patients has fallen by six per cent in the last four years

2.5 The total number of hospital inpatient beds has been falling for many years. In 1986, there were nearly 200,000 general and acute beds. By 1993-94, this had fallen to 147,000 and by 1997-98 to 138,000[19]. The number of acute beds has remained relatively stable at around 108,000, and the reduction has come almost entirely in hospital general beds, mainly used for the care of older patients (see Figure 17 on page 36). There are several reasons for this, including:

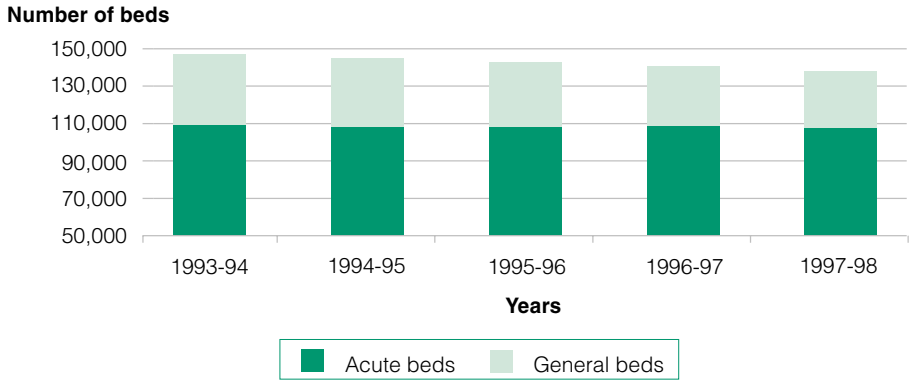
- changes in clinical practice and procedures which have contributed to shorter periods of stay in hospital, thereby reducing the demand for inpatient beds; and

- a significant expansion of day case treatment so that some patients who would previously have stayed overnight in hospital, now attend only for the day, and so do not require an inpatient bed.

The number of hospital general and acute beds has fallen by six per cent in the last four years, almost all in general beds

Figure 17

This is the most recent time period for which the NHS Executive have data available. General beds are mainly used for the care of older patients. The reduction reflects changes in the care of older patients.



Source: Bed availability and occupancy, England, 1997-98 Department of Health[19]

2.6 The expansion of day case activity has meant that an increasing proportion of elective inpatient activity has focused on patients who require more intensive nursing care, therapies and other hospital resources. And the growing number of emergency patient admissions has resulted in an increasing proportion of inpatient beds being occupied by emergency patients (around 70 per cent in our survey of NHS acute trusts).

The Government are examining NHS bed requirements

2.7 In September 1998, the Government set up a National Beds Inquiry within the Department of Health to review assumptions about growth in the demand for general and acute health services, and their implications for the supply of health services and hospital bed numbers, looking 10 to 20 years ahead[20]. The Inquiry team has drawn together existing evidence and data from this country and other parts of the world, and has taken into account established trends and best practice in patient care. A key issue in the Inquiry has been assessing the future need for acute hospital beds by older people, and the scope for alternative models of care, including the further development of community and intermediate care services.

2.8 The findings of the National Beds Inquiry were published for consultation in February 2000[2]. The Inquiry found that the number of staffed hospital beds per head of population for acute, general and maternity care had fallen by over 2 per cent per annum since 1980, although this decline had slowed since about 1994, and for acute beds may have come to a halt in absolute terms. It found that there had been growth in the number of admissions over the same period, but that this had been more than offset by a fall in the average length of stay in hospital. The Inquiry found evidence of significant local variations in bed availability, admission rates, bed use, lengths of stay and day case rates. Consultation will now focus on how health services, and specifically hospital beds, should be developed over the next 10 to 20 years.

There are wide variations between hospitals in bed occupancy levels

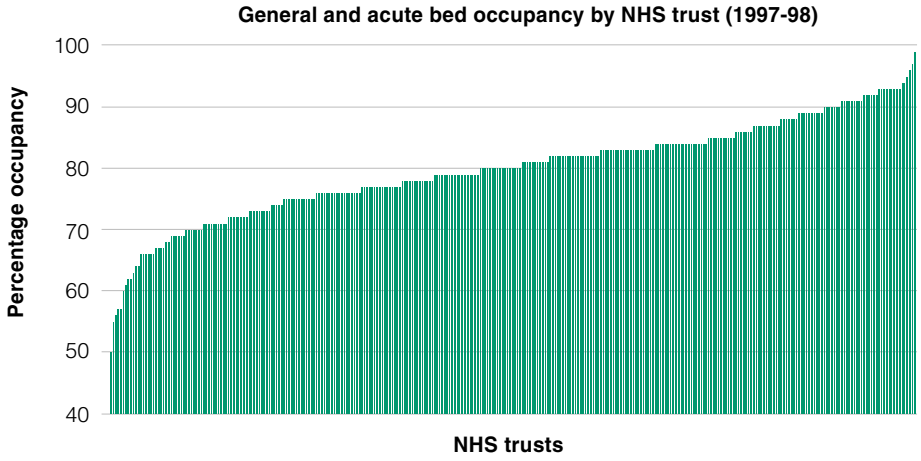
2.9 Average inpatient bed occupancy varies widely between hospitals and within hospitals over time (see paragraphs 2.12-2.15). Figure 18 shows a range in the annual average occupancy of general and acute beds for 1997-98 from 50 per cent to 99 per cent, based on an official count of occupied beds taken each night at midnight [19]. The average occupancy rate was 81 per cent, unchanged from the previous year. However, individual hospitals reported much higher levels. For example, St Mary's Hospital in London, with nearly 700 general and acute beds, is recorded as showing almost complete occupancy over the whole year - 99 per cent. St Helens and Knowsley Hospital in Merseyside, with nearly 800 general and acute beds, recorded 95 per cent occupancy in 1997-98.

2.10 On the other hand, five NHS hospitals had occupancy levels below 60 per cent. Several NHS hospitals with the lowest bed occupancy rates were small or specialist centres. For example, the Royal London Homeopathic Hospital (50 per cent occupancy) and Moorfields Eye Hospital (56 per cent occupancy) are specialist sites in London with a very low number of beds due to a focus on day case treatment and keeping hospital stays to a minimum. The Royal London Homeopathic Hospital, which provides a national service, is reviewing its use of inpatient beds, which are provided for patients who may have travelled long distances. Moorfields Eye Hospital attribute lower levels of average bed occupancy to low utilisation of beds open at the weekends when they do not schedule the admission of elective patients

Occupancy of general and acute beds varies widely across NHS trusts in England

Figure 18

Figure 18 shows the average percentage occupancy of inpatient general and acute beds ranged from 50 per cent to 99 per cent across NHS trusts in England in 1997-98. This is the most recent time period for which the NHS Executive have data available.



For each NHS trust, the percentages are measured by the number of beds occupied by patients at midnight in wards open overnight, against the number of beds available. These have been converted to an annual average figure for each NHS trust. Midnight bed state counts are directly comparable across NHS trusts and are a consistent method of measuring the number of inpatients within hospitals. However, as paragraph 2.14 explains, they are not able to take account of variances of short-term bed availability within each day.

Source: Bed availability and occupancy, England, 1997-98, Department of Health [19]

2.11 Very high levels of bed occupancy can have serious effects. Research for the NHS Executive suggests that hospitals with average bed occupancy rates above 85 per cent are at risk of regular bed shortages and periodic bed crises[21]. And shorter intervals between the discharge of one patient from a bed and the admission of a new patient may increase the risk to patients of hospital acquired infection. Hospital acquired infection affects the quality of care to the patient and can extend their length of stay in hospital. Because of the susceptibility of many patients undergoing treatment, much of this is not preventable. Attributing costs to hospital acquired infection is a complex and uncertain task. A comprehensive study commissioned by the Department of Health suggests that hospital acquired infection may be costing the NHS as much as £1 billion a year[22]. This is based on an extrapolation of the results from one hospital to the rest of the NHS, which make it very difficult to derive an exact estimate. Of the £1 billion, a separate report published by the National Audit Office suggests that about £150 million a year may be avoidable[23], although this excludes the cost of measures that might be needed to achieve this, and assumes achievable reductions are across the full range of reductions. Conversely, very low levels of bed occupancy can indicate an inefficient use of hospital resources, such as the skilled nurses deployed to care for patients occupying inpatient beds.

Most hospitals report facing times when the demand for beds outweighs availability

2.12 Annual average bed occupancy rates do not reveal how demand for beds varies within a hospital at different times of the year, week or day. There is some seasonal variation. Our survey found that during 1998, 19 per cent of NHS acute trusts reported bed occupancy of over 90 per cent between January to March, whilst 12 per cent reported bed occupancy of over 90 per cent during the spring and summer months.

2.13 The demand for inpatient beds and bed occupancy levels can also vary during the week. In the NHS acute trusts we visited, bed managers told us that the highest numbers of admissions were experienced on Mondays. This was when they had the greatest difficulty placing new patients in beds. In contrast, patient discharge peaked towards the end of the week. This reflects a greater tendency to admit elective patients and discharge patients on weekdays.

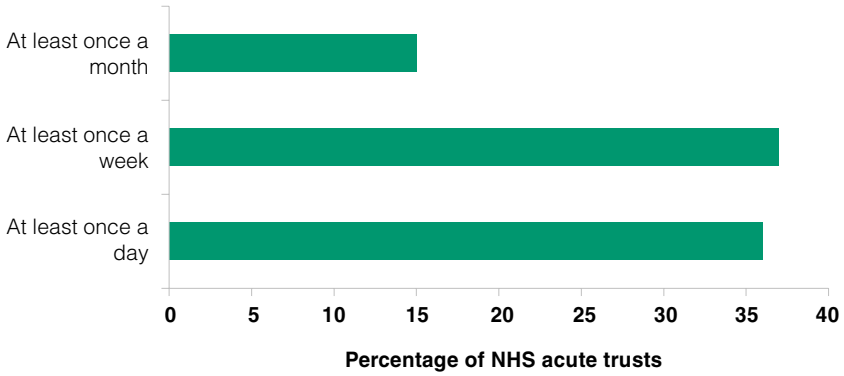
2.14 The demand for inpatient beds can also vary widely through the day. Elective patients may be asked to arrive in the morning, particularly if their procedure is to be carried out that day. Emergency referrals by general practitioners may also peak during the morning. And admissions or assessment units that have cared for emergency patients overnight may wish to transfer patients to hospital wards in the morning. However, consultants' decisions on which patients are medically fit to be discharged may not be made until later in the day, and patients may not leave until the evening. This imbalance between the morning peak in arrivals and the later discharge of patients can cause problems of short-term bed availability during each day.

2.15 As a result of these variations, some hospitals internally report bed occupancy levels in excess of 100 per cent within a day. This count includes inpatients that are in the hospital, for example in admissions units, waiting on trolleys, or receiving treatment, but who are not in inpatient beds. We asked the NHS acute trusts surveyed to estimate how often demand for inpatient beds exceeded known availability of the types of beds needed at that time, across each of the previous four quarter years. Figure 19 shows that even though the annual average rate of bed occupancy varies widely across hospitals, most report facing times when the demand for beds exceeds availability.

Most NHS acute trusts report facing times when the demand for beds exceeds availability at that time

Figure 19

Figure 19 shows that, in total, 88 per cent of NHS acute trusts reported they face situations when the demand for beds exceeds availability at least once a month or more. The percentages are of all NHS acute trusts that provided data.



Source: National Audit Office survey of NHS acute trusts 1999

Bed shortages disrupt patient care and hospital services

2.16 Almost all NHS acute trusts (92 per cent) reported that they had responded to a bed shortage at times by cancelling operations of elective patients. And 72 per cent had, on occasion, extended the period that emergency patients wait in the Accident and Emergency department or in an assessment unit before being transferred to an inpatient ward.

2.17 Shortage of beds may mean that hospitals need to transfer patients to another hospital. This may be some distance away and may be a tense and undesirable experience for the patient. It may cause problems for families and carers wishing to visit. Transferring patients may also lead to problems of bed shortages in other hospitals. Research for the NHS Executive suggests that it can take some time for a hospital to return to normal working when they have experienced a day in which no further admissions can be accommodated. It also suggests that, at 85 per cent average occupancy, a hospital that runs out of beds four days a year may be affected for up to eight weeks in total[21].

2.18 Against this background, we examined whether hospitals followed good practice in bed management for elective and emergency patients. Appendix 5 summarises good practice set out in existing research[10-13, 15] and found during our examination. This involves:

- a clear and comprehensive bed management policy covering all inpatient beds;

- a dedicated bed management team placing both elective and emergency patients;
- appropriate information on bed utilisation and availability; and
- regular strategic review and planning of bed complement and configuration.

Bed management policies should set out good practice in placing patients promptly in appropriate beds

2.19 Bed management policies can help to bring together expertise across the hospital. They should set out strategies for prompt and appropriate placement to be applied to each patient admitted. And they should detail how the hospital will secure efficient use of its inpatient beds. While a policy cannot guarantee that patient placement will be managed promptly, it should help to clarify roles and responsibilities. It represents a documented agreement about practices, which is particularly important where there needs to be co-ordination between a number of parties.

2.20 Around 81 per cent of the NHS acute trusts in our survey had a policy for managing the utilisation of inpatient beds, and a further eight per cent propose to develop one. In 73 per cent of these NHS acute trusts, the policy covers all inpatient beds, which can help manage the links between elective and emergency patient admissions on demand for hospital beds. The circulation of policies within NHS acute trusts varies. Most commonly it is agreed with and provided to the bed manager service, hospital consultants and the Accident and Emergency department. It was less likely to be agreed and circulated externally with commissioning health authorities and referring general practitioners. However, doing this might help them understand and influence how the NHS acute trust will respond to peaks in demand for inpatient beds.

2.21 The content of policies also varied. Eighty eight per cent of policies addressed the arrangements to be followed for placing emergency admissions in beds, whilst 69 per cent did so for elective patients. And 82 per cent set out the policy on placing patients in outlying beds of another specialty. Around 74 per cent addressed hospital information on bed utilisation and availability, but just fewer than half covered information systems to enable beds to be booked for elective admissions. This reflects the absence of scheduling systems and real time information systems on bed utilisation in many hospitals.

There has been significant progress in the introduction of designated bed managers

2.22 We found that there has been significant progress in the introduction of designated bed managers, whose role is to ensure that patients are placed promptly in appropriate beds. Ninety per cent of NHS acute trusts surveyed now have designated bed managers. This is 19 per cent more than in 1997. In the NHS acute trusts surveyed, 30 per cent of bed manager services are available 24 hours a day, seven days a week, but the service is more commonly provided five days a week, morning and afternoons (38 per cent of NHS acute trusts with a bed manager service). Outside these times, senior nurses are most commonly used to carry out the bed management function.

2.23 In 60 per cent of NHS acute trusts surveyed with a bed management service, bed managers oversee all the hospital's inpatient beds, for elective and emergency patients. In the other cases, their cover is confined to particular directorates (focusing on elective or emergency patients only), which the Government's Emergency Services Action Team considered could frustrate bed management practices [10]. We found no pattern in reporting arrangements for the bed manager service, either in terms of to whom they report directly, or how frequently. Some bed managers report directly to the Chief Executive or to a clinical director. In our view it is important that bed managers have senior level support, and are able to report directly to them at all times to ensure that necessary action is taken to resolve any crises in bed availability.

There is considerable scope to develop the bed manager role

2.24 Bed managers spend a considerable amount of time every day in dealing with the immediate problems of finding a bed for each new patient, particularly those waiting in Accident and Emergency. As a result, many bed managers characterised their work as permanent crisis management, with each day bringing similar time consuming difficulties as the one before. Bed managers develop detailed operational knowledge of patterns of patient admissions and discharges, their placement on wards, and bed usage across wards and specialties. Despite this, they are not extensively involved in planning admissions or in strategic assessments of the number and types of beds the hospitals need. Appendix 6 summarises the findings from detailed research in Greater Manchester[24], which mirrors the picture gained from our national survey.

2.25 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. There is scope for development in some NHS acute trusts. While 78 per cent of bed managers have received training on managing patient placement in appropriate beds and managing bed availability, the remainder have not. And in 47 per cent of the NHS acute trusts surveyed, bed managers operate outside of a network with neighbouring NHS trusts, despite the benefits in terms of sharing of knowledge and experience. These benefits were strongly apparent when we attended a meeting of bed managers in Manchester.

2.26 In Appendix 5 we summarise the key features of an expanded bed manager role, drawn from our examination and from existing research[10-13, 15]. We consider there is scope for the NHS Executive to promote the development of the role and responsibilities of bed managers. As part of this, the NHS Executive should consider issuing good practice guidance to NHS trusts (along the lines of the NHS Executive's recent good practice booklet on the role of discharge liaison nurses[25]) and encouraging the provision of training in bed management functions. Ideally, this would include use of systems that provide information on current and planned future bed utilisation, providing support to consultants in planning elective inpatient admissions and adopting a strategic approach to the hospital's bed complement and configuration.

Most bed managers have to rely on inadequate information systems

2.27 Improving the quality of information available to bed managers is essential. We found that most bed managers have to rely on information systems that are often inadequate. In particular, information within NHS acute trusts on which beds are currently occupied, who is in them, and which are currently available, is often inaccurate, out of date and time consuming to obtain. And 92 per cent of the NHS acute trusts in our survey reported that bed managers obtain information on whether beds are occupied from physical inspection and from telephoning wards. This can involve lengthy walks around the large hospitals and numerous telephone calls.

2.28 A small number of NHS acute trusts have developed more sophisticated information systems. These can be used to empower bed managers, consultants and ward nursing staff, to achieve benefits for patients, and to secure improvements in resource use although, as with other reporting mechanisms, computerised systems are dependent upon ward staff updating the information accurately and promptly. Eight per cent of NHS acute trusts in our survey used a

Hospital Information Support System (HISS) to obtain such information. These are comprehensive and integrated computer systems covering all aspects of a hospital's management and functions, that require data to be entered only once and are available to staff across the hospital. Three per cent of the NHS acute trusts surveyed had a separate computerised system for monitoring bed usage.

2.29 Figure 20 describes the work of one trust - the Royal Shrewsbury Hospitals NHS Trust - that has created an award winning real time information system on bed utilisation (see also Figure 11). This system provides real time information on the current state of each bed in the hospital, and projections of expected future bed states. Since it was introduced in 1997, the system has brought about at least a 50 per cent reduction in cancellations of admission. The incidence of moving patients from one theatre list to another has been reduced, and the quality of bed occupancy has been increased by reducing lengths of stay that are not clinically appropriate.

Figure 20

A computerised real time bed information system shows utilisation and availability of each bed in each ward of the hospital, at a glance

A view of the current bed state for the whole of Royal Shrewsbury Hospitals NHS Trust. A similar view may be obtained for the projected bed state on any future date.

The CALM system presents information about each bed. It automatically calculates the optimal distribution of patients into available beds on a ward so as to maximise the opportunity to admit further male and female patients. This may involve reconfiguring the gender allocation for differing size bays on a ward. The system automatically alerts the bed manager and other personnel to any demand/resource conflicts, either current or impending, and provides on-screen tools for their resolution. There are 150 terminals available so staff can plan and monitor current and future patient activity, and update the system with details of annual leave or absences for training. Nursing staff on wards can update the system immediately to give bed managers real time information on bed availability.

Source: Royal Shrewsbury Hospitals NHS Trust

Assessing the availability of beds in the short term can provide an early indication of likely bed shortages and help plan the placement of new patients

2.30 Hospitals need to know their current bed state and the likely availability of beds in the immediate future. This provides a useful early indication of possible bed shortages, and helps plan the placement of new patients to available beds. Although many NHS acute trusts do this, they often make little assessment of patient length of stay or characteristics about patients and the types of beds they may need.

2.31 We asked NHS acute trusts what degree of assurance they had overall, that a bed would be available for an elective patient on the day of their planned admission, at the time that they invited the patient in. We found that 28 per cent of NHS acute trusts surveyed considered they had no or low assurance that a bed would be available for the patient.

2.32 Figure 21 on page 46 shows that most NHS acute trusts surveyed consider some of the characteristics of future patient admissions or their needs when assessing short-term bed availability and utilisation. However, a quarter of NHS acute trusts in our survey make no assessment of likely bed availability and utilisation for more than one day ahead. Of those that do, the most common mechanism is to keep a manual diary of estimated bed availability and use. Two thirds of NHS acute trusts surveyed assess the likely date of discharge of existing inpatients in considering short-term bed availability.

2.33 A bed booking diary for elective patients for their day of admission and expected length of stay, combined with a number of beds reserved for an expected level of emergency patients, is a useful way of matching patient admissions to resources available. A system such as that operated by the Royal Shrewsbury Hospitals NHS Trust (Figure 20) provides a high level of assurance that an elective patient will have a bed available when they are planned to be admitted and reduces cancelled elective admissions.

Almost all hospitals have strategies to respond to short-term bed shortages

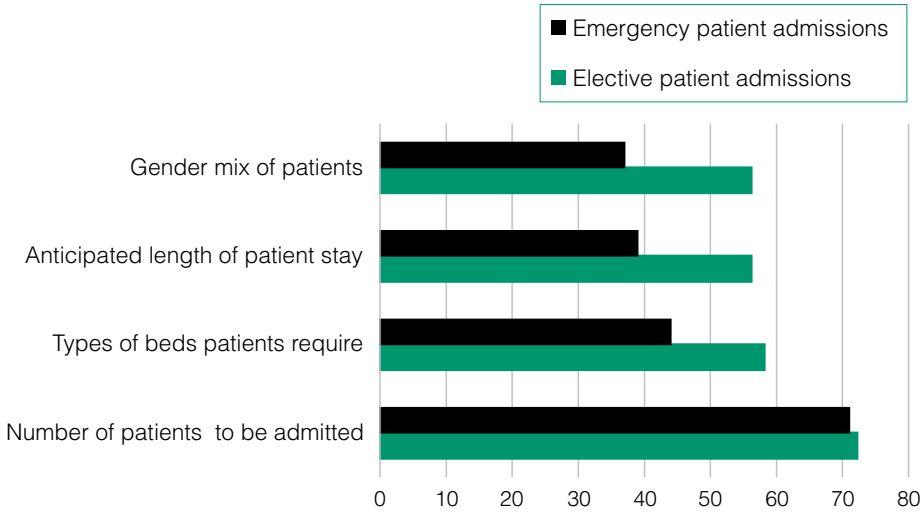
2.34 To avoid short-term shortages of the types of beds needed, 87 per cent of NHS acute trusts surveyed reported that they re-designate available beds to match patient categories. This may include changing the configuration of single sex bays in wards to match the gender mix of patients requiring admission. And 30 per cent

of NHS acute trusts in our survey have closed (unstaffed) beds that can be temporarily reopened and staffed when demand requires. Figure 22 shows how Birmingham Heartlands Hospital tries to provide a flexible number of beds.

Most NHS acute trusts consider some patient factors when assessing short-term bed availability and utilisation

Figure 21

The NHS acute trusts surveyed are less likely to assess short-term bed availability for, and consider the characteristics and resource needs of, emergency admissions, than they are for elective patients. Around a quarter of the Trusts surveyed made no assessment of short-term bed availability.



Source: National Audit Office survey of NHS acute trusts, 1999

Figure 22

Birmingham Heartlands Hospital aims to provide a flexible number of beds to meet patient demand and avoid patient cancellations and delayed admissions

- The Admissions and Discharge Manager and Bed Managers at Birmingham Heartlands Hospital meet three times during each working day to review the bed state, known and likely patient admissions and discharges. They identify any shortfall in available staffed beds and plan the most appropriate response using an agreed "traffic light" system.
- The traffic light system details levels of pressure, recommended action points to be implemented and lines of communication.
- An option available to the managers is to open temporarily a number of beds to accommodate additional patients. They discuss the patients' nursing needs with senior nurses and how they may optimally provide nursing staff for the additional beds. Other options explored are relocating experienced staff nurses from other wards to the temporarily opened beds, and bringing in a number of agency nurses at short notice to provide necessary support on the existing wards and temporarily opened beds.

Source: National Audit Office

2.35 Nearly nine out of ten NHS acute trusts in our survey implement an agreed internal escalation policy. These set out the series of agreed actions to be taken when bed shortages arise. Almost all (98 per cent) expedite decisions on the fitness

of existing patients for discharge in order to vacate beds for new patient admissions. We discuss this further in Part 3. In addition, almost all place patients in wards designated for patients of other specialties (`outliers`) if these are the only beds available, as a pragmatic response to ensure that the patient is placed in hospital. However, the Government's Emergency Services Action Team have reported that quality of care and staff morale can be affected as the number of outlying patients increases [10]. Some outlying patients may also experience longer lengths of inpatient stay or care that is less tailored to their particular needs.

A strategic assessment of bed complement can help hospitals plan their bed complement and configuration to meet future needs

2.36 The bed complement and configuration that hospitals require will continue to change over time. Changes in the number of elective and emergency patients admitted to hospital and changes in the treatment and care provided influence the numbers of beds needed within and across hospital specialties. We consider that hospitals should aim to ensure they align the total bed complement and the configuration within wards and across specialties to their changing patterns of care and activity over time. However, as the experience of Addenbrooke's Hospital NHS Trust shows (Figure 23), this may require a period of considerable organisational change over a number of months to achieve.

2.37 We asked NHS acute trusts about their long-term strategic assessment of inpatient bed needs. Of the large majority that had done it, the most common assessment period was up to one year ahead, and their most recent assessment had most commonly been undertaken within the previous six months. However, 11 per cent assess their bed needs for three or more years ahead. Nearly half of the NHS acute trusts in our survey used a computer model to help them forecast bed requirements, based on data on patient admissions and bed occupancy. But 13 per cent of NHS acute trusts in our survey had not assessed bed needs one or more years ahead.

2.38 There are clear benefits to the utilisation of resources and the quality of patient care where hospitals have made a thorough assessment of their needs and devised a strategy to meet them. Figure 23 on page 48 shows how Addenbrooke's Hospital NHS Trust has derived a number of benefits from matching bed configuration to patient needs, and by ensuring that bed managers place patients in the most appropriate bed to reduce outlying patients, and extended lengths of stay. However, this process took eight months to complete and required detailed planning.

Figure 23

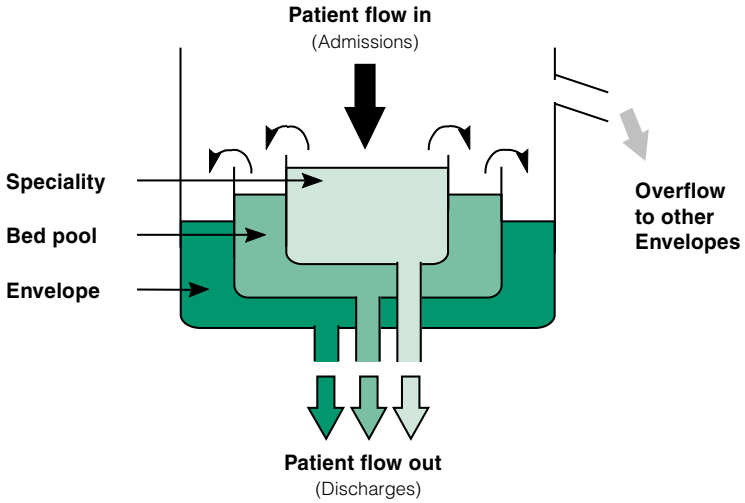
Addenbrooke's Hospital NHS Trust has freed up 4,500 bed days a year by matching bed configuration to patient needs and by ensuring that bed managers place patients in the most appropriate bed

The problem

- In 1997, Addenbrooke's Hospital carried out a strategic review of bed complement and configuration. They found that, at any one time, 35-45 medical patients were in non- medical beds, and 25 per cent of emergency patients were not in the most suitable bed for their condition, leading to extended lengths of patient stay.
- They concluded that there was little relationship between bed capacity and patient activity. The increase in emergency activity and the switch to day case for much elective activity had led to bed configuration being poorly aligned to patient needs.
- They found it difficult to control activity as patients could be admitted to wards from many entry routes, including, other hospitals, Accident and Emergency, the assessment unit, and from planned elective admissions.

The solution

- The Trust made large scale changes to bed configuration to place patients with similar needs together, match patients' bed needs to bed configurations, pool scarce resources to maximise efficient utilisation, place diagnostic services near to the most appropriate bed pools, and allow for further changes in demand by providing flexible layout of services.
- To do this, they examined patient admissions and stay by specialty to determine bed numbers required, and developed the concept of bed pools and bed envelopes to improve the flexibility of bed use for patients with similar care needs.
- As a result, all medical beds were physically located in the same part of the hospital, and medical specialties for patients with similar needs were brought close together. They changed bed complements in each specialty to match bed needs. This process was completed on time over an eight month period.
- It also established a bed placement strategy. This outlines how patients should first be placed in a ward for their specialty, then if this is not possible, within the adjacent ward or bed pool that contains their specialty and those of other similar specialties, or finally, as close as possible to this pool, within the appropriate bed envelope (medical or surgical). This is illustrated below.



The impacts

- The Trust estimates it has released 4,500 bed days per year by these measures (around 1.5 per cent of total inpatient bed days). In addition, the number of medical patients outlying in surgical beds has fallen to fewer than 10 at any one time.
- The average lengths of inpatient stay have fallen for a wide range of medical patients, including by 29 per cent for Cardiology and 19 per cent for General Medicine.
- Other benefits identified by the Trust include reduced cancellation of patient admissions and more effective discharge planning.

Source: National Audit Office

Part 3: Discharging patients

3.1 A key objective for a hospital is to ensure that patients are discharged promptly, but only when they are medically fit, and when arrangements are in place to meet any continuing needs for health or social care. Discharge management must focus on the patient and their condition, and the needs of their family and carers. Discharge also requires good co-ordination between different health and social care staff, as well as others with an interest in the patient's on-going care arrangements. Where unnecessary, delays in discharge (after a clinical decision has been made) are costly to hospitals, can be disruptive to patients, and can affect the capacity of hospitals to care for new patients.

3.2 Figure 24 on page 50 shows the wide circle of staff and services involved in ensuring patients who are medically fit are discharged promptly from hospital and in providing on-going care. In this part we examine how NHS acute trusts manage and co-ordinate the discharge of patients from hospital, including the level and causes of delayed discharge; the impact on patient care and efficient use of hospital resources; and the success of measures open to NHS acute trusts to manage patient discharge more effectively.

Good discharge management is essential for ensuring the success of a patient's time in hospital

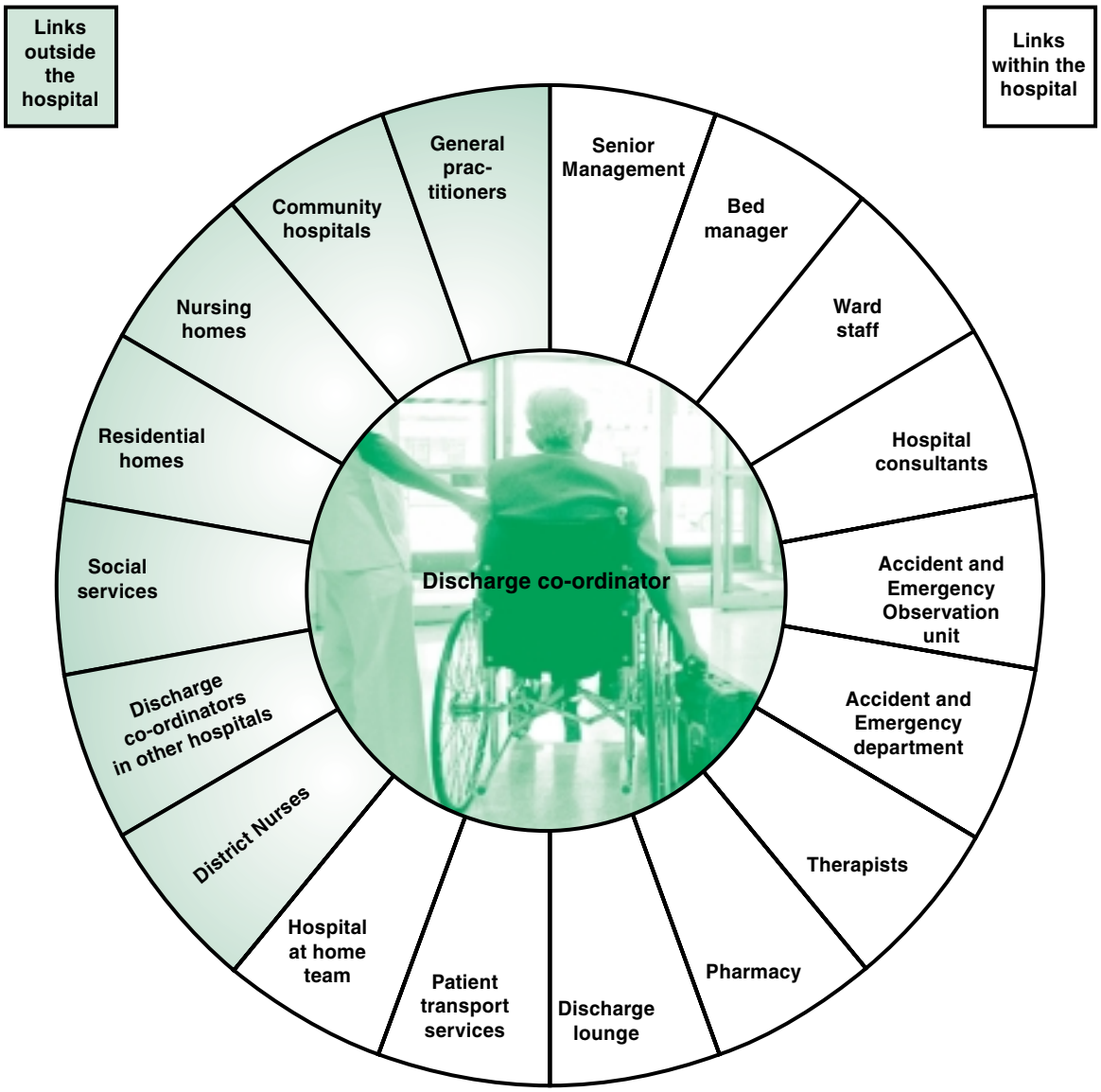
3.3 Discharge from hospital after a period of inpatient stay can be a significant experience for patients, their carers, and their family. Some patients may have been in hospital for a long time. They may have been acutely ill or injured when admitted, and so anxious about how life may change on leaving hospital. And they may need to be assured that appropriate care will be available to meet their continuing needs.

3.4 A common factor for all inpatients being discharged should be that the inpatient services of an acute hospital are no longer the most appropriate form of care. Good discharge management and planning for discharge before or on admission is, therefore, essential to ensure that the success of hospital treatment is not jeopardised, for example by the patient becoming dependent on hospital services, or exposed, unnecessarily, to the risk of hospital acquired infection. In addition, from the hospital's point of view, a delay in discharging a patient blocks the bed they are occupying. This prevents the admission of new patients, and

delays delivery of the treatment and care they require. In our survey of NHS acute trusts we found that delayed patient discharge was the most frequent cause of cancelled admission of elective patients in 19 per cent of NHS acute trusts.

Figure 24

A wide circle of staff and services are involved in discharging patients from hospital and in providing on-going care



Source: National Audit Office

Good co-ordination and planning of patient discharge is crucial to enable patients to receive ongoing care

3.5 Successful patient discharge requires considerable co-ordination and planning. The Patient's Charter sets out standards for patient discharge from hospital [1]. Before patients leave hospital, decisions should be made as to whether or not they need continuing care. And if required, the hospital will agree arrangements for meeting these needs with agencies such as community nursing services and local authority social services departments before discharge. For some patients, life after their spell in hospital may involve significant changes. Important decisions must be made in consultation with the patient, and family and carers, as to what further care is most appropriate for their needs as well as where it should be delivered. In addition, before departure, hospitals usually provide patients with written information about their further care needs and the arrangements for their follow up, and any medication that they need to take home.

3.6 The discharge of some older patients can be more complex and thus potentially more problematic. Older patients are less likely to be fully independent once discharged, and the care they need after discharge is more likely to be long term and involve social services, and nursing or residential homes. For some older patients, discharge from hospital may mean a permanent end to living in their own home. Planning the right nursing or residential home should focus on their needs and preferences, and those of their carer and family, as well as the availability of places and funding.

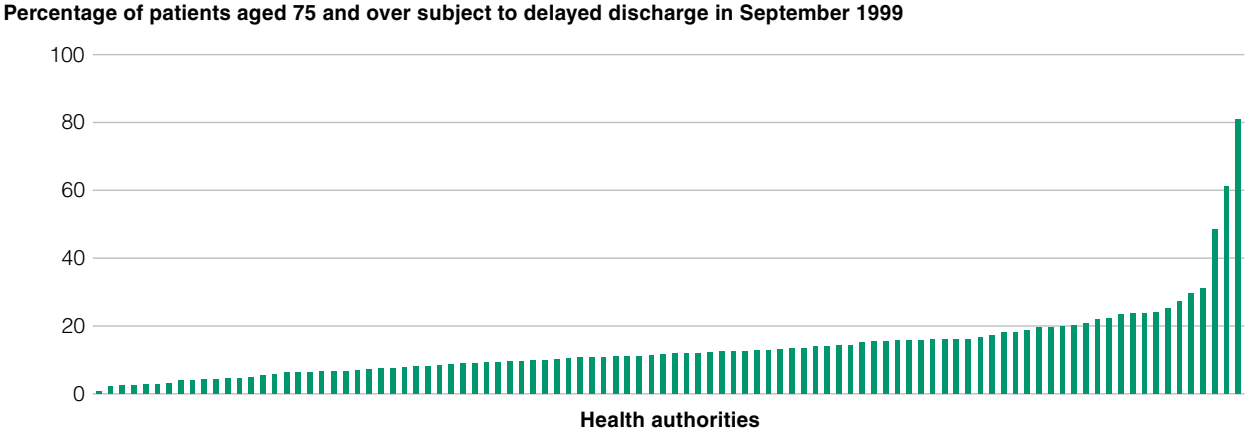
On any given day, delayed discharge affects on average nearly 6,000 older patients

3.7 Delays in discharging patients are a problem throughout the year and across almost all hospitals, and, according to NHS data, affect nearly 6,000 older patients on any given day [7]. Health authorities report the levels of delayed discharge of patients aged 75 and over by carrying out surveys on four days a year. In September 1999, of the 43,500 plus patients aged 75 and over occupying acute inpatient beds, some 5,550 (12.8 per cent) were ready for discharge but were delayed in leaving hospital and remained in acute ward beds [7]. The figure has remained broadly the same for the last two years. Figure 25 shows that almost all health authorities reported delays in the discharge of elderly patients in September 1999, but the proportion of patients affected varied considerably, from one per cent to around 30 per cent (with two health authorities exceptionally reporting 61 and 81 per cent). It is not clear from the data collected by the NHS

Executive to what extent the delays were due to circumstances inside or outside the control of hospitals. Data on the delays in discharge for other patients, or the length of the delays are not collected nationally.

Figure 25

All health authorities report delays in the discharge of older patients from hospitals, but the proportion of patients affected varies widely



Notes:
1. The percentage of older patients with discharge delayed ranged from 1 per cent in Portsmouth and South East Hampshire Health Authority to 81 per cent in Hillingdon Health Authority, where a very high proportion of patients were awaiting Social Services Directorate funding for nursing/residential care home placement.
2. The numbers of older patients with delayed discharge ranged from three in Portsmouth and South East Hampshire Health Authority to 188 in Cambridgeshire Health Authority, where a high number of patients were awaiting assessment and Social Services Directorate funding for nursing/residential care home placement.

Source: Quarterly Monitoring Activity Data, NHS Executive Performance Analysis Branch[7]

Delays in discharge of older patients cost hospitals around £1 million a day

3.8 Delays in discharging a patient add to the length of their stay on acute wards and the costs of their hospital care. We estimate that nearly 2.2 million bed days are lost each year due to delays in discharging older patients. Based on average daily costs of inpatient care, we consider that the cost within NHS trusts of continuing to accommodate these patients is around £1 million a day. However, we recognise that reducing the number of patients with delayed discharge will transfer the costs of their ongoing care from hospitals to other commissioners of community based care. Studies at a local level also show that delayed patient discharge has considerable costs (Figures 26 and 27 on page 53).

Figure 26

A Kensington, Chelsea and Westminster Health Authority review of delayed discharges at St Mary's NHS Trust in 1997 suggested that:

- some 16,451 bed days had been lost due to delayed discharges during 1996-97; and
- costs of delayed discharges were more than £4 million.

Source: National Audit Office census of health authorities, 1999

Figure 27

Kettering General Hospital's study of 'bed blocking' by medical patients in 1996 suggested that:

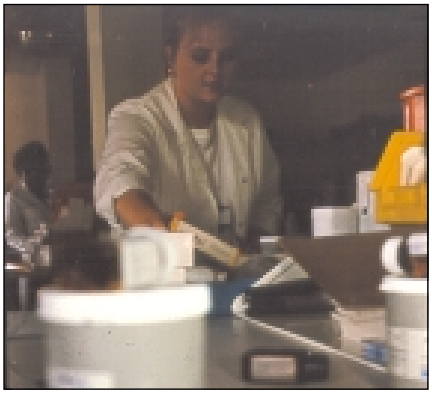
- delayed discharges cost the hospital around £700,000 a year;
- the number of patients with delayed discharge across the hospital at any one time represented the average capacity of one of the hospital's inpatient wards;
- some 65 per cent of delays were for more than a week and 24 per cent for more than a month; and
- prolonged hospital stay inhibited the admission and consequent treatment of more needy patients, and could lead to psychological, social and physical problems for those remaining in hospital when "medically stable" and fit for discharge.

Source: National Audit Office survey of NHS acute trusts, 1999

Trusts reported that the most common causes of delayed patient discharge were the timing of consultants' decisions and poor scheduling of support services

3.9 Poor co-ordination within the hospital can delay the discharge of all types of patients, even those with no need for further care after they leave hospital. These delays tend to be fairly short term, perhaps a day, or over a weekend. We asked NHS acute trusts to indicate the most significant internal factors delaying patients' discharge. Figure 28 on page 54 shows that 52 per cent of respondents ranked the timing of the discharge decision by the hospital consultant within the day as the most significant internal factor delaying patients' discharge.

A pharmacist prepares drugs for patients to take home with them



NHS acute trusts reported that the most significant internal factor delaying a patient's discharge is the timing of the consultant's decision to discharge

Figure 28

Note: Respondents were able to identify factor as equal ranking, so that the figures in the table total more than 100 per cent.

Factor delaying patient discharge	Percentage of NHS acute trusts reporting factor as a prime cause of delayed discharge
Timing of consultant decision to discharge	52 per cent
"To take home" drugs not ready	30 per cent
Availability of patient transport services	24 per cent

Source: National Audit Office survey of NHS acute trusts, 1999

3.10 When the decision that the patient can be discharged is taken late in the day, the patient may not be discharged until the following day when ongoing care services are in place for them. Delaying discharge may then be the most appropriate decision in these circumstances. But steps can be taken to reduce reliance on the availability of consultants. In some hospitals medical approval for patient discharges which are straightforward and included within a patient's discharge plan can be given by a junior member of a clinical team. This helps to overcome the risk of internal delay whilst gaining approval for discharge from a hospital consultant.

Trusts reported that external delays are often due to the wait for social services assessment and to ongoing care services not being available

3.11 External causes of delay arise from appropriate after care arrangements not being in place when the patient is ready to be discharged. Figure 29 shows that the most common factor, ranked as the most important by 34 per cent of respondents to our survey of NHS acute trusts, was delays in social services assessment for patients requiring ongoing care. While hospitals cannot control the

provision of on-going care services, these figures highlight the importance of early notification by hospitals of patients' needs for further care and for close working with other care providers. These is discussed in paragraph 3.15.

NHS acute trusts reported that the most significant external factors delaying patient's discharge are delays in social services assessment and the unavailability of ongoing care services

Figure 29

Note: Respondents were able to identify factors as equal ranking, so that the figures in the table total more than 100 per cent.

	Factor delaying patient discharge	Percentage of NHS acute trusts reporting factor as a prime cause of delayed discharge
	Delays in social services assessment/funding for ongoing care	34 per cent
	Lack of nursing/ residential care places	31 per cent
	Lack of beds in hospital to which patient is referred	23 per cent
	Delays in provision of home care services or equipment	21 per cent

Source: National Audit Office survey of NHS acute trusts, 1999

Many hospitals have introduced ways of improving the quality and promptness of patient discharge

3.12 We examined how hospitals managed the discharge of patients, focusing on whether they have:

- a comprehensive patient discharge policy
- early planning of patient discharge, with links with external providers of ongoing care
- a fully developed discharge co-ordinator function

- discharge lounges and home support arrangements to facilitate the prompt release of ward beds.

Hospital patient discharge policies should be integrated with their local health authority's policy for continuing health care

3.13 NHS Executive guidance advises that hospital policies on managing patient discharge should be integrated with their local health authority's policy for continuing health care[25]. There is also considerable benefit to be gained, wherever possible, from integrating policies with those of other local agencies, such as social services. In Appendix 7 we have summarised the essential features of an effective hospital patient discharge policy, based on existing research[10-14, 25-26] and from best practice we found in our work. We found that 77 per cent of NHS acute trusts have policies on patient discharge, and in two thirds of cases these covered all inpatients. Policies are circulated extensively within the NHS acute trusts, but are less widely agreed and circulated outside. Wider discussion may help external organisations (such as social services, to whom patients with ongoing care needs are referred) influence and identify with the hospital's targets and procedures for discharging patients promptly and appropriately.

3.14 In our survey of NHS acute trusts, 61 per cent had set out the procedures for planning the discharge of patients. Birmingham Heartlands and Solihull NHS Trust has a comprehensive policy on patient discharge. It has also written procedures that detail the responsibilities of clinical, nursing and therapy staff and the arrangements for monitoring patient discharge. Figure 30 sets out key aspects of their policy.

Figure 30

Birmingham Heartlands and Solihull NHS Trust has a comprehensive discharge policy. Key statements include:

- The aim of the policy is to ensure robust arrangements are in place to facilitate a safe discharge for all patients.
- Good discharge is dependent upon effective communication with patients and their carers and liaison between a variety of health and social care managers and practitioners.
- Patients and carers are central to the process and the Trust will identify their requirements to maintain their quality of life in the community.
- Discharge planning will commence before or on the patient's admission by a multi-disciplinary team.
- Discharge planning is an integral part and prime objective of nursing care and the multi-disciplinary team.
- The discharge co-ordinator will ensure that all actions are taken to guarantee transition from hospital to the community, providing continuity of care.
- The patient will be given written information, and sufficient prescribed treatment on discharge.

Source: National Audit Office and Birmingham Heartlands and Solihull NHS Trust

Hospitals should plan a patient's discharge before or at the time of admission

3.15 The Department of Health have advised NHS trusts to begin planning a patient's discharge at the time of pre-admission assessment for elective patients, and on admission for emergency patients[26]. This is to ensure that the patient knows what to expect and to reduce the risk of the patient's discharge being delayed. Hospitals need good relationships with other care providers to ensure a seamless provision of ongoing care services for the patient. Our survey of NHS acute trusts suggests that the majority plan patient discharge at the earliest opportunity (Figure 31 on page 58). However, more could do so, and could usefully notify social services at an earlier stage of the patient's requirement for assessment. This gives social services more time to complete an assessment of the patient's ongoing care needs and decide how these will be best met. In particular, university teaching hospitals and inner city hospitals were less likely to contact social services at an early stage than other types of hospitals.

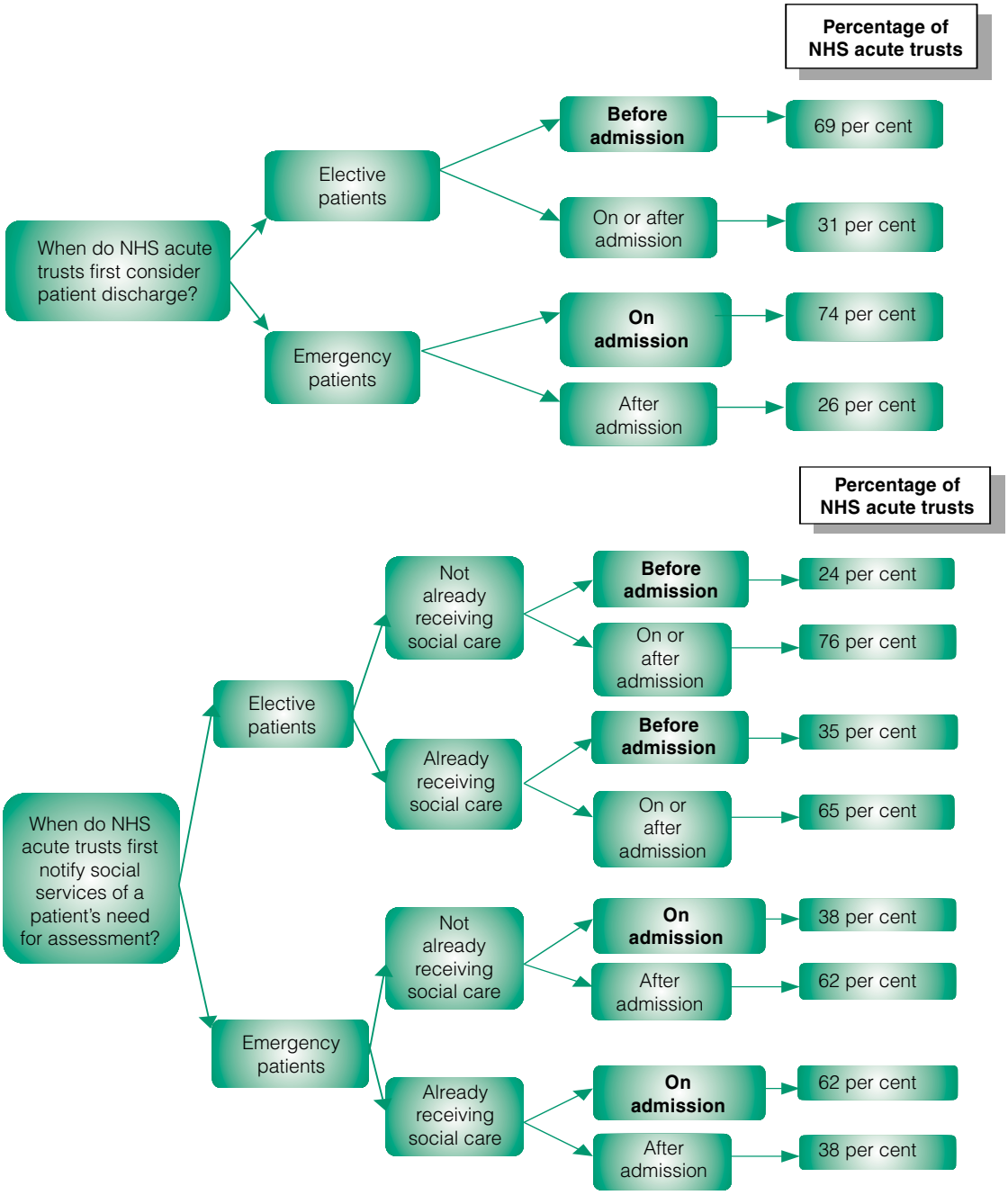
Discharge co-ordinators can help to achieve appropriate and prompt patient discharge

3.16 Many of the delays in discharging patients stem from problems of co-ordination. Discharge (or care) co-ordinators can act as an advocate for patients and their carers, and bridge effectively the gap between health and social services by bringing together key people and information, and avoiding and tackling blockages and delays.

A discharge co-ordinator discusses with a patient her needs on discharge

Figure 31

There are opportunities for more NHS acute trusts to plan patient discharge and to notify social services of a patient's need for assessment before, or on, admission of the patient



Note: The Department of Health have advised NHS trusts to begin planning a patient's discharge at the time of pre-admission assessment for elective patients, and on admission for emergency patients[26]. The options shown in bold reflect the recommended approach.

Source: National Audit Office survey of NHS acute trusts, 1999

3.17 The proportion of NHS acute trusts with designated discharge (or care) co-ordinator posts has increased greatly over the last two years, although many have been in post for only a short time. In our survey, 71 per cent of all respondents (and around 80 per cent of university teaching hospital NHS acute trusts and inner city hospital acute trusts) now have discharge co-ordinator posts, compared to only 42 per cent two years previously. A further four per cent propose to introduce these posts shortly. Figure 32 shows how care co-ordinators at Barts and The London NHS Trust in London have contributed to reduced numbers of both delayed discharges and average lengths of patient stay.

Figure 32

General Medical Care Co-ordinators at Barts and The London Trust have contributed to reduced numbers of delayed discharges and average lengths of patient stay

- At Barts and The London Trust (previously the Royal Hospitals) three inpatient Care Co-ordinators work in the General and Emergency Medicine Service. Their main purpose is to ensure that the patient's stay in hospital is only as long as is clinically necessary.
- The Care Co-ordinators attempt to clear any obstacles in the path of patient care and discharge, by acting as problem-solvers, and by having a lot of direct patient contact. They gather detailed information about the patient's living circumstances, clinical and investigational needs, and likely discharge delays. Throughout the patient stay they seek to deal with any delays, and co-ordinate the different health professionals and the discharge process.
- Delayed discharges are reviewed at a weekly meeting with management, lead nurses and social work team leaders to formulate action plans.
- The maximum number of delayed discharges in the winter of 1998-99 was 15 compared to 40 for the same period in 1995-96.
- The average length of stay in General and Emergency Medicine has fallen from 8.5 to 5.9 days in two years.
- The Trust attributes this improved performance to a number of initiatives, but in particular, to the introduction of Care Co-ordinators. However, their introduction has thrown up some tensions over professional boundaries and the Trust has set up a major research project with City University to understand and resolve these issues.

Source: National Audit Office survey of NHS acute trusts, 1999

3.18 Discharge co-ordinators work closely with a wide range of staff groups inside and outside the hospital (Figure 24). However, a constraint that discharge co-ordinators face is the lack of accurate, comprehensive and timely information within hospitals on patients close to or overdue for discharge, or with long inpatient stays.

3.19 In March 1999 the NHS Executive issued guidance to NHS trusts on the role of discharge co-ordinators and advice on how to develop fully their role and to promote good practice[25]. In Appendix 7 we summarise the essential duties and features of the role of discharge co-ordinators. These are drawn from existing research[10-14], NHS Executive and Department of Health guidance[25-26], and the findings from our examination.

Discharge lounges allow the prompt release of inpatient ward beds for new patient admissions

3.20 Discharge lounges are a facility where patients may spend a short time before they leave the hospital, thereby releasing inpatient ward beds for new patient admissions. In our survey, we found that 58 per cent of NHS acute trusts have a discharge lounge compared with only 19 per cent two years previously. A further three per cent intend to introduce one shortly. They are now most common in inner city hospitals. Almost all discharge lounges are open for five days a week, and from morning until the end of the afternoon, reflecting the general pattern of patient discharge and the intended short time use of such facilities.

3.21 Figure 33 shows that the discharge lounge in Barnsley District General Hospital has released beds promptly for incoming emergencies and elective admissions and reduced the problems of outlying patients.

Figure 33

The discharge lounge in Barnsley District General Hospital NHS Trust released beds promptly for incoming emergencies and elective admissions, and reduced the problems of outlying patients

The problem:

- peaks in admissions occurred earlier in the day than the peak in discharges;
- increasing numbers of medical patients were placed in surgical beds;
- the admissions unit became blocked;
- waiting times in Accident and Emergency increased; and
- patients awaiting discharge were often sent to sit in day rooms on the wards, but staff considered they had little chance to give them the attention they required.

The response:

- the hospital established a discharge lounge;
- patients awaiting discharge can now stay in a dedicated lounge with nursing support;
- beds are released for incoming emergencies and elective admissions as early as possible, reducing waiting times in Accident and Emergency and releasing beds in the admissions unit; and
- fewer patients have to be placed in inappropriate outlying beds on admission.

Source: National Audit Office survey of NHS acute trusts, 1999

3.22 Around 90 per cent of NHS acute trusts surveyed with a discharge lounge considered that their biggest single benefit was the prompt release of inpatient ward beds for new patient admissions. Other benefits were that providing a single location helped in the collection of patients for leaving the hospital, and in the delivery of drugs to patients to take home. Some NHS acute trusts considered that the successful operation of a discharge lounge required someone specific to act as a 'champion' for the facility.

3.23 NHS acute trusts considered that the main problem in utilising discharge lounges effectively was the slowness or reluctance of ward nursing staff to transfer patients to the discharge lounge before their departure from hospital. The second, and closely related, problem reported was that discharge lounges add to the existing workload of ward nursing staff. Patients who are ready for discharge require less intensive nursing care and their continued presence on the ward adds relatively little to the nursing workload. When these patients transfer to the discharge lounge, new patients who are more acutely ill and highly dependent may be quickly admitted to the bed, and the nursing workload on the ward is increased. Therefore, hospitals need to review the nursing cover required to meet the likely changes in workload associated with operating a discharge lounge.

Home support schemes allow patients to return home promptly and receive appropriate care at home

3.24 Home support schemes also facilitate the prompt release of beds when patients are ready to be discharged, by allowing patients to receive nursing and social care in their own homes. While individual schemes may differ, in general, patients receive care from a team of qualified nurses and therapists within their homes, whilst remaining under the care of a hospital consultant. Around 40 per cent of the NHS acute trusts we surveyed reported that they have established a home support service for patients. While there continue to be costs to the NHS from providing this kind of support, the service enables patients to live at home, when their discharge would otherwise be delayed for external reasons. Home support schemes are most commonly used in hospitals in urban locations. We found that a quarter of the NHS acute trusts surveyed planned to introduce or to expand their use of such schemes. Figure 34 on page 62 shows how the collaborative care team at the Central Middlesex Hospital has enabled patients to return home more quickly, saved hospital resources, and has been popular with patients.

3.25 Some NHS acute trusts are also using a variety of other mechanisms to facilitate the prompt release of beds on acute wards. These include beds elsewhere in the hospital for patients who are ready or overdue for discharge, and for those for whom occupation of an acute ward bed is no longer appropriate.

Figure 34

The collaborative care team at the Central Middlesex Hospital has enabled patients to return home more quickly, saved hospital resources and appears popular with patients

- The Collaborative Care Team aims to: facilitate the discharge of patients into the community who might otherwise have a longer and unnecessary stay in hospital; prevent the admission of patients whose medical and social circumstances would allow them to be cared for at home; enable bed closures; and reduce the costs of inpatient care.
- The scheme began initially within the elderly care unit to identify medically fit patients who could be discharged from hospital, but who did not have a community care package in place. It was later extended to include elective orthopaedic and gynaecology patients.
- Audits in early 1997 found that:
  - delayed patient discharges were due to poor discharge planning and no one person being accountable for patient discharge
  - nearly 60 per cent of patients with delayed discharge could leave hospital under the services of the Collaborative CareTeam.
- The Team is made up of a team manager, nursing staff, physiotherapist, occupational therapist, health care assistants and an administrative assistant. They each see around six patients a day. Until the patient is formally discharged from the Team, they remain under the care of the hospital consultant, whilst at home.
- An evaluation by Brent and Harrow Health Authority in 1998 found that the Team had cost around £200,000 a year, but had:
  - achieved estimated net savings of around £475,000
  - accepted around 1,300 new patients a year
  - allowed the closure of 26 inpatient beds
  - reduced average length of inpatient stay for the patients who were cared for at home
  - been popular with patients.

Source: National Audit Office

A partnership approach between hospitals and other agencies can help discharge patients promptly

3.26 Hospitals should adopt a partnership approach with other agencies such as social services and community hospitals to co-ordinate the appropriate discharge of patients and the delivery of the on-going care they require. Appendix 7 sets out the features of good quality working relationships with other agencies, drawn from existing research[10-14, 25-26] and findings from our examination. Health authorities are responsible for ensuring satisfactory collaboration and joint planning with local authorities and other agencies. In our census of health authorities, they reported regular contact as a key means of promoting sharing of good practice and encouraging acute hospitals to work together with other agencies. Around 40 per cent reported holding joint workshops to identify good practice and promote its use, and around one in three surveyed had issued a good practice guide.

3.27 Several health authorities reported providing specific funding for schemes to improve care at home. These aim to enable earlier discharge to free hospital beds, as well as to avoid some admissions to hospital. And one in four health authorities reported making funding available for rapid response teams to provide patients with care in their own homes. Measures taken by health authorities to address difficulties hospitals face in achieving prompt and appropriate patient discharge are included in Appendix 8, along with other key findings from our census of health authorities. Figure 35 outlines the role of Birmingham Heartlands and Solihull NHS Trust in a multi-agency group, which aims to ensure patients are discharged appropriately, and that the on-going care they need is in place.

Figure 35

Birmingham Heartlands and Solihull NHS Trust has established, in the interests of collaborative working, a multi-agency partnership group to ensure patients' discharge and after care arrangements are co-ordinated and implemented in the most efficient and effective manner possible

- The group includes representatives from the acute hospital, two health authorities, two community NHS trusts, and two social services departments.
- The group meets regularly to examine practice and performance in patient discharge. They review the delivery of care and equipment after discharge and assess overall demands.
- Monitoring practice has helped ensure that all essential information about a patient is communicated swiftly to those who assess the patient and who determine the availability of further care services needed.
- Members hold case meetings for individual patients to assess their particular needs and rehabilitation, the needs of carers, the timing and appropriate location for further care, equipment needed and its availability.
- The group also takes forward a strategic role in reviewing practice and exploring areas of joint working and common service delivery.

Source: National Audit Office

Appendix 1: Audit methodology

1 We used a variety of methods to examine the issues identified for this study, including two self-completion questionnaires, visits to a number of NHS acute trusts, and a range of interviews and discussions. The methods were chosen to:

- provide a mix of quantitative and qualitative data with which to assess the performance of NHS acute trusts;
- allow us to obtain examples of good practice; and
- allow us to assess the extent of developments in the National Health Service in recent years.

Self-completion questionnaire survey of NHS acute trusts

2 We prepared a self-completion questionnaire for NHS acute trusts covering recognised good practice in patient admissions, discharge and bed management. This was designed to identify the local application of these measures. Where applicable, the questionnaire also asked about their existence two years previously, and of plans to introduce the measures where not yet in place. This allowed us to determine the changing picture across NHS acute trusts. The questionnaire included a section to allow open text responses for further information about the difficulties faced in the areas examined, the most effective measures introduced to address these difficulties, and any evaluation of the impacts of these measures.

3 The questionnaire covered the application of good practice already commended to NHS trusts. We established good practice measures through discussions with practitioners, observation on visits to NHS acute trusts, and by reviewing relevant research material, including documents produced by:

- the Emergency Services Action Team[10];
- the Council of International Hospitals[11];
- the Audit Commission[12-13] and Accounts Commission[14];
- the Clinical Standards Advisory Group[27-28];
- the NHS Confederation and the Royal College of Physicians[15]; and the Kings Fund[29-30].

4 We refined our draft questionnaire by:

- visiting four NHS acute trusts and 'workshadowing' a bed manager in one of the trusts;
- piloting it with 20 NHS acute trusts;
- consulting with members of our reference panel, which included representatives of the National Patients' Access Team, and the Emergency Services Action Team ;
- obtaining the views of twelve professional organisations and the NHS Executive; and
- visiting two pilot sites - Frenchay Healthcare NHS Trust (now part of North Bristol NHS Trust) and the Royal West Sussex NHS Trust, Chichester - to observe completion of the questionnaire. This provided a very useful insight into the dynamics of tackling the document and gave us instant feedback on the process of completion, and on the merits and clarity of each question. This enabled us to provide guidance within the questionnaire on who would be the most suitable staff to complete it.

5 All 163 NHS acute Trusts in England with at least 300 general and acute beds received the questionnaire. We excluded sites where we piloted the questionnaire, as well as smaller NHS trusts where we found the questions were less applicable. NHS acute trusts with more than one site that had at least 300 general and acute beds received separate copies for each site, requiring each to complete and return the questionnaire separately. We achieved a response rate of 97 per cent. This is more than sufficient to allow us to draw sound conclusions.

6 We produced an explanatory leaflet to accompany the questionnaire, outlining the reason for the examination and methodology. It contained contact points for telephone enquiries, definitions for terms used, advice to NHS acute trusts with multiple sites and recently merged NHS acute trusts, as well as illustrative answers to some questions.

Self-completion questionnaire survey of health authorities

7 We prepared a shorter self-completion questionnaire for all health authorities in England to complement our survey of NHS acute trusts. We designed this to obtain:

- their views on the main difficulties that NHS trusts in their area faced in managing patient admissions, inpatient beds and patient discharge;
- details of initiatives taken by health authorities to help address these difficulties, to promote shared good practice, and to encourage local NHS acute and community trusts to work together in addressing them;
- details of the impacts of initiatives taken by health authorities in these areas; and
- details of measures taken by health authorities to facilitate effective joint working with primary care services, acute and community NHS trusts and social services for those patients requiring ongoing care services after discharge from acute hospitals.

8 We refined the draft questionnaire by piloting it with five health authorities. All the remaining 95 health authorities received the final questionnaire. We provided health authorities with the questionnaire for NHS acute trusts for their information. We achieved a response rate of 98 per cent. This is more than sufficient to allow us to draw sound conclusions.

Administering the surveys

9 We notified NHS acute trusts and health authorities of the forthcoming questionnaires in advance and asked them each to identify a co-ordinator. We appointed BMRB International to administer the surveys. They issued the final questionnaires in spring 1999. The survey administrators maintained regular telephone and e-mail contact with the nominated co-ordinators at each health authority and NHS acute trust to assist with completion, and to facilitate prompt and comprehensive responses and returns. We provided further direct assistance through a telephone helpline, a service taken up on over 250 occasions.

Visits to NHS acute trusts

10 We visited a number of NHS acute trusts to follow up particularly interesting approaches to managing inpatient admissions, bed utilisation, and patient discharge. We visited four NHS acute trusts during preliminary study work, and six during the full examination. They were:

Preliminary study visits:

- Frenchay Healthcare NHS Trust (now part of North Bristol NHS Trust)
- Leicester General Hospital NHS Trust
- Mayday Healthcare NHS Trust in Croydon
- Royal West Sussex Hospitals NHS Trust in Chichester

Full study visits:

- Addenbrooke's Hospital NHS Trust in Cambridge
- Birmingham Heartlands and Solihull Hospitals NHS Trust
- Central Middlesex Hospital (part of North West London Hospitals NHS Trust)
- Salford Royal Hospitals NHS Trust
- Royal Shrewsbury Hospitals NHS Trust
- West Suffolk NHS Trust in Bury St Edmunds.

11 We carried out interviews with a wide range of staff, including chief executives, medical and clinical directors, business managers, nurses, admissions staff, bed managers and discharge co-ordinators. We are grateful to everyone who took the time to talk to us during our visits and for their enthusiastic help.

Workshops

12 We convened three workshops in order to extend our understanding in key areas of the examination, and to allow us to discuss issues of co-ordination and co-operation between agencies. These involved:

- a group of 17 bed managers in Manchester to discuss current bed management practice, as indicated by our survey findings, as well as obtain their views on the current role of bed management, and how it should develop further;
- the multi-agency group of representatives from Birmingham Social Services Department, Solihull Social Services Department, Solihull Health Authority, Birmingham Health Authority, Solihull Healthcare NHS Trust, North Birmingham Community Health NHS Trust, and Birmingham Heartlands and Solihull Hospital NHS Trust to discuss external communications between the hospital and the other organisations and ways to improve patient discharge; and
- members of the NHS Confederation, from NHS trusts and health authorities.

Discussions with a wide range of specialists in the field

13 We held discussions with a wide range of relevant parties, both in developing the study methodology, and following completion of our fieldwork. The bodies with whom we held discussions during the study were:

- Association of Community Health Councils in England and Wales
- Audit Commission
- British Medical Association
- Emergency Services Action Team
- Health Services Management Unit
- Institute of Health Services Management
- King's Fund
- National Patients' Access Team
- NHS Confederation

- Royal College of Nursing
- Royal College of Physicians
- Royal College of Surgeons

In addition, we had discussions with the Department of Health's Chief Economic Adviser.

Consultation with our reference panel

14 Throughout the course of the study we obtained feedback on the scope and methodology for our examination, the validity of our findings and the reasonableness of our recommendations from a reference panel of people from all parts of the NHS:

- Tony Andrews, Director, Resource for Change, Addenbrooke's NHS Trust, Cambridge
- Ruth Boaden, Senior Lecturer in Operations Management, Manchester School of Management, University of Manchester Institute of Science and Technology
- Christopher Bunch, Medical Director, Oxford Radcliffe Hospital
- Jill Ellison, Director of Nursing, Birmingham Heartlands Hospital and Mark Houghton, Admissions and Discharge Manager, Birmingham Heartlands Hospital
- Andrew Hay, Clinical Director for Information, Royal Shrewsbury Hospitals NHS Trust
- Peter Homa, Director, and Nick Patten, National Patients' Access Team
- Anita Houghton, Associate Director, Health Studies, Audit Commission
- Ann Lloyd, Chief Executive, and Julie Burgess, Director of Nursing, North Bristol NHS Trust
- Marianne Rigge, Director, College of Health
- Amanda Skull, Director of Operations, West Suffolk Hospital NHS Trust
- Lillie Vaughan, Admissions Manager, Leicester General Hospital, and Cathy Morgan, Deputy Business Manager, Leicester General Hospital
- John Llewellyn Williams, Consultant Oral Maxillo-facial Surgeon, St Richard's Hospital, Chichester.

Appendix 2: Key NHS responsibilities

1 The Department of Health and NHS organisations aim to provide fast and convenient access to high quality health care for all those who need it. The responsibilities of each are outlined in Figure 36 below.

Figure 36

The Department of Health and NHS organisations aim to provide fast and convenient access to high quality health care for all those who need it

Department of Health
The Department's aim is to improve the health and well-being of the people of England, through the resources available. One of their priorities for the NHS is to meet the public's expectations for faster and more convenient access to modern and dependable services by reducing waiting lists and times.

NHS Executive
Within the Department, the NHS Executive are responsible for hospitals, community health services and primary care policy in England, and for managing the performance of the NHS, including holding health authorities and NHS trusts accountable for performance against their statutory responsbilities. Through its eight regional offices, the NHS Executive are responsible for developing the commissioning function in the health service and for monitoring the financial performance of NHS trusts.

Health authorities
Health authorities are responsible, within the resources available, for identifying the health care needs of their resident populations, for improving their health, and for securing through providers a package of hospital and community health services to reflect their needs. Health authorities have a responsibility for ensuring satisfactory collaboration and joint planning with local authorities and other agencies.

Primary care groups
The 481 primary care groups are responsible for the healthcare of populations ranging from 46,000 to 257,000 people. They bring together general practitioners, community nurses and others in the locality. They were introduced in April 1999 and are expected to commission health services for their population, monitor the performance of NHS trusts, and to work more closely with social services on the planning and delivery of care.

NHS trusts
NHS trusts are hospitals, community health services, mental health services and ambulance services which are managed by their own board of directors. NHS trusts are part of the NHS and provide services based on the requirements of patients as represented by health authorities and general practitioners.

Social Services Inspectorate
This Department of Health Inspectorate runs a national programme of inspection, evaluating the quality of social services for users and carers. It assists local government, voluntary organisations and private agencies in planning and delivery of effective and efficient social care services, monitors implementation of policy and provides advice to government.

Source: Department of Health[3]

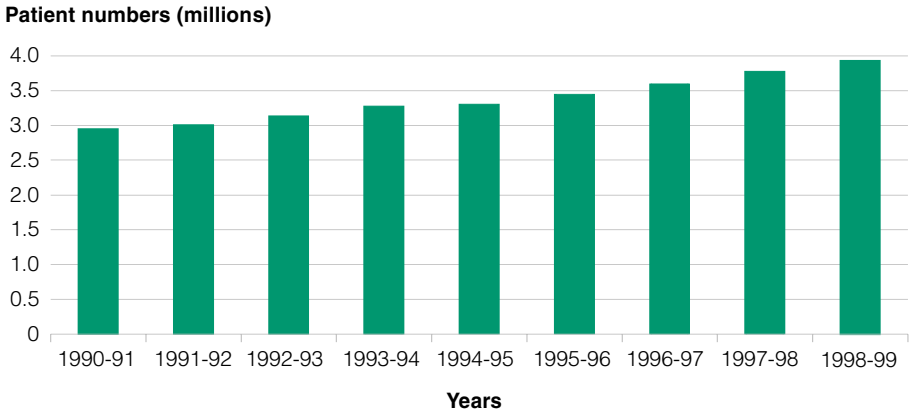
Appendix 3: Key trends in patient admissions

Emergency patient admissions have increased each year during the 1990s

1 The number of general and acute patients requiring emergency treatment has grown yearly during the 1990s. In 1998-99, nearly four million people were admitted to hospital as emergencies[7]. Figure 37 shows that successive years have seen higher levels of emergency admissions.

Figure 37

Each year, general and acute emergency patient admissions have increased



Source: Emergency Services Action Team[10] and NHS Executive Performance Analysis Branch[7]

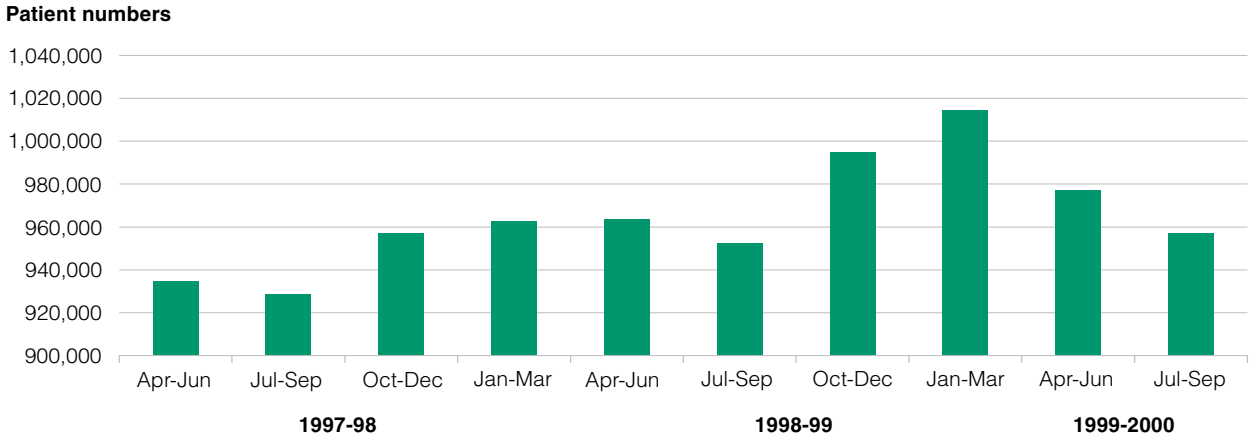
2 There is no single reason for this rise, although it is noticeable that many patients are elderly. Changes in patient expectations and general practitioner referral patterns may be contributing to the increase. The growing elderly population, changes in household structures, and erosion of care and support available at home are also considered to be increasing the demands on hospital care.

3 The rate of increase in demand has not been constant. In 1997-98 and 1998-99, demand was highest between January and March. However, the increase between the same periods within each year is markedly different, as shown in Figure 38 on page 72.

Figure 38

Demand for emergency patient admissions varies widely through the year, but has increased over time

Figure 38 shows that demand for emergency inpatient admissions was 6.5 per cent higher in January to March 1999 than in July to September 1998, and was 5.4 per cent higher than in the same period the year previously. The figures shown are in first finished consultant episodes, which closely reflects the total number of emergency patients admitted to hospital.



Source: NHS Executive Performance Analysis Branch[7]

Elective patient admissions are increasing

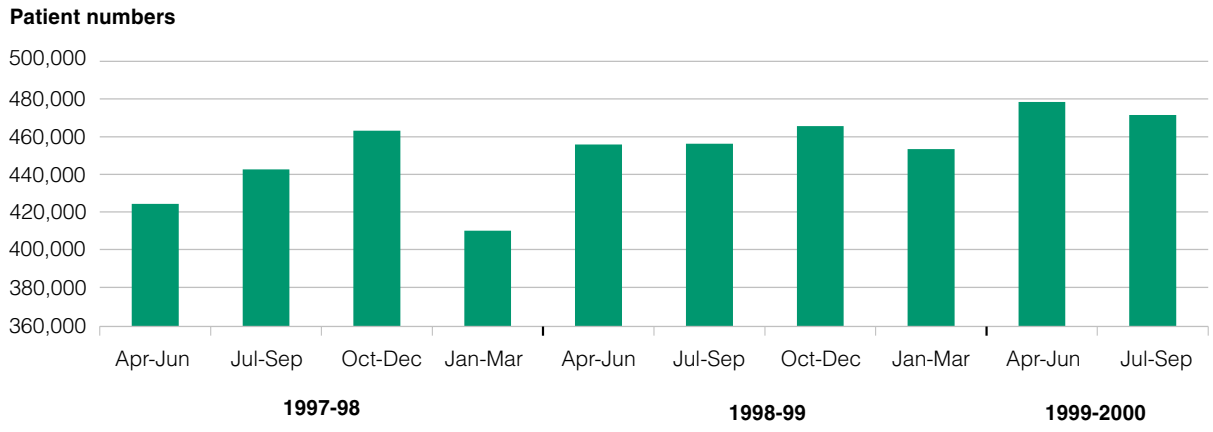
4 The number of general and acute elective patients receiving inpatient treatment in 1998-99 increased by around eight per cent over the number in 1997-98[4, 7]. This may be partly attributable to the Government's waiting list initiative, which aims to reduce the number on NHS waiting lists by 100,000 from the level in March 1997, and make these reductions sustainable. The initiative also seeks to reduce average waiting times. Figure 39 on page 73 shows the numbers of general and acute elective patient admissions. The lower number of elective treatments carried out in the winter quarter for each year reflects the heavy demand on hospitals to treat emergency patients during this period. The increase in elective treatments continued in 1999-2000[5].

5 In 1998-99, the number of general and acute elective patients receiving day case treatment increased by around 11 per cent on 1997-98 figures and continued to increase in 1999-2000[4, 5, 7]. This may also be partly attributable to the waiting list initiative. This expansion of day case treatment has centred on patients requiring more minor procedures and those who can readily return home. Elective admissions still treated as inpatients are now those likely to require more significant procedures, or who have social needs that prohibit day case treatment. They may require higher levels of nursing and clinical care and resources.

Figure 39

General and acute elective inpatient admissions increased during 1998-99 and into 1999-2000

Figure 39 shows the total number of finished first consultant episodes on ordinary elective patients admitted to hospital, which closely reflects the total number of elective patients admitted to hospital.



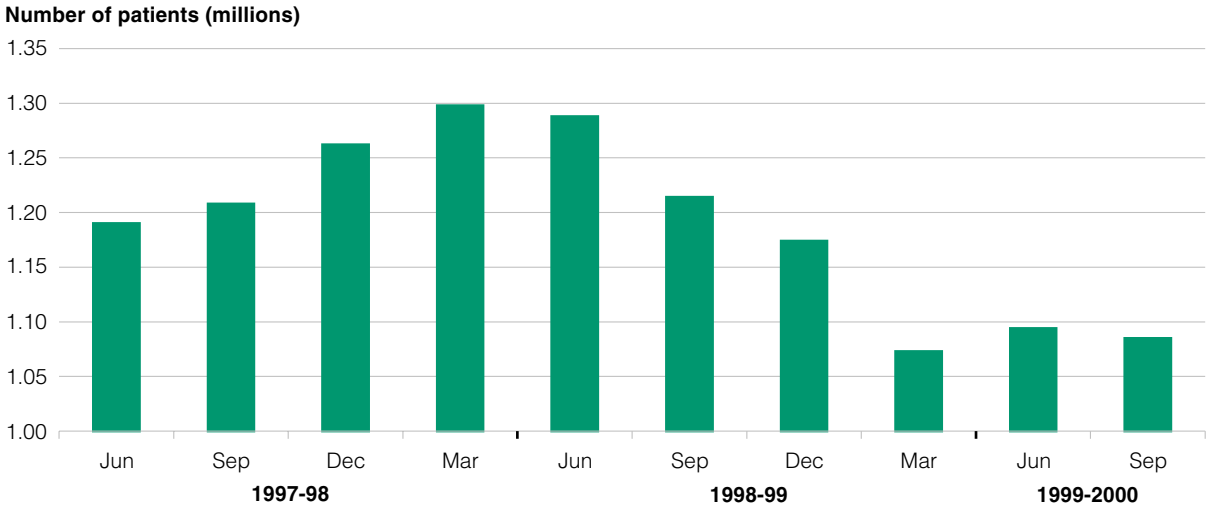
Source: NHS Executive Performance Analysis Branch[7]

The number of elective patients waiting for treatment fell during 1998-99

6 The increase in elective treatments (both inpatient and day case) was accompanied by a reduction in the numbers of elective patients on NHS waiting lists during 1998-99[4]. There have been slightly higher levels in the first half of 1999-2000[5], (Figure 40).

Figure 40

The number of elective patients waiting for treatment peaked at the end of 1997-98, and fell during 1998-99, but has been slightly higher in the first half of 1999-2000



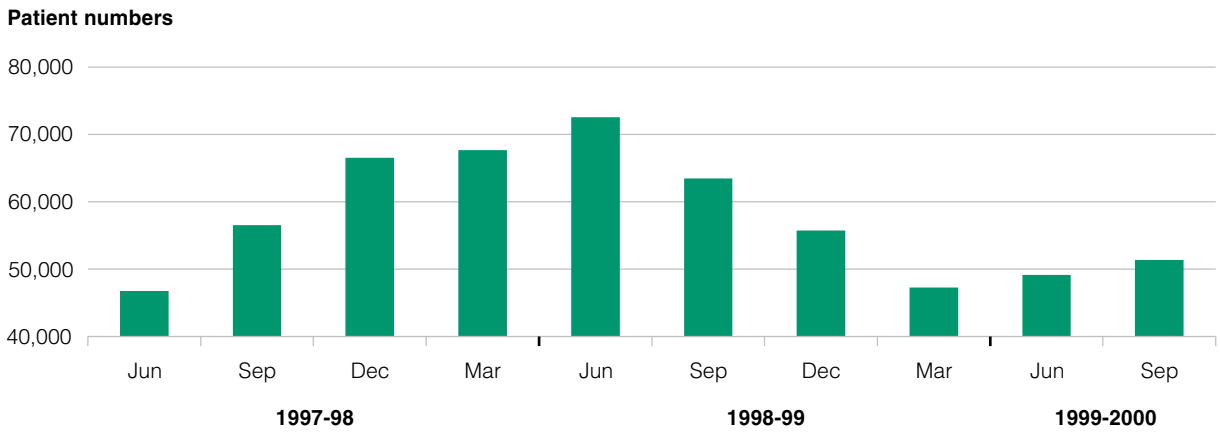
Source: NHS Executive Performance Analysis Branch[7]

More patients are waiting for over a year for elective admission

7 Figure 41 shows that the number of elective patients waiting more than 12 months for treatment rose throughout 1997-98 to 72,100, but fell to 46,800 by the end of 1998-99[4]. It rose again to 50,900 by the end of September 1999[5]. No patient waited more than 18 months for treatment during 1998-99[4]. However, by the end of September 1999, 99 patients had been waiting more than 18 months[5]. The length of time patients wait for treatment depends upon the type of hospital, and hospital maximum waiting times vary widely. By 31 March 1999, around 25 per cent of hospitals had maximum waiting times of 12 months or less. But 64 per cent of hospitals had maximum waiting times from 15 months to up to 18 months[6].

Figure 41

The number of elective patients waiting more than 12 months for treatment is rising again



Source: NHS Executive Performance Analysis Branch[7]

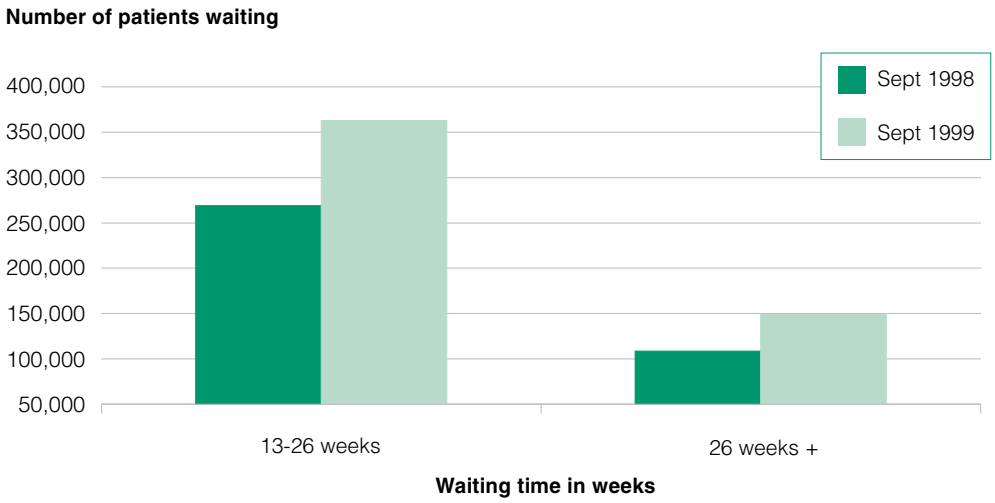
8 The average of the maximum waiting times for treatment across the NHS acute trusts included in our survey was 15.6 months at 31 March 1999, compared with 16.0 months at 31 March 1998. The longest waiting time fell from over 36 months at 31 March 1997 to under 18 months two years later. During 1998-99, around two thirds of elective patients were treated within three months of the decision to admit, a similar performance to that in the previous two years.

More people are waiting for longer times for outpatient consultations

9 In 1998-99, general practitioners made 9.1 million written referrals for outpatient consultations, an increase of 148,000 on 1997-98 and a record number[31]. In 1998-99, the NHS saw nearly 11 million new outpatients, an increase of 175,000 on 1997-98, also a record number[31]. However, Figure 42 shows that growing numbers of patients are waiting 13 weeks or more for an outpatient consultation, following referral by general practitioner. Figure 43 shows that proportionately fewer patients are now seen at an outpatient consultation within 13 weeks of referral from their general practitioner than a year previously.

Figure 42

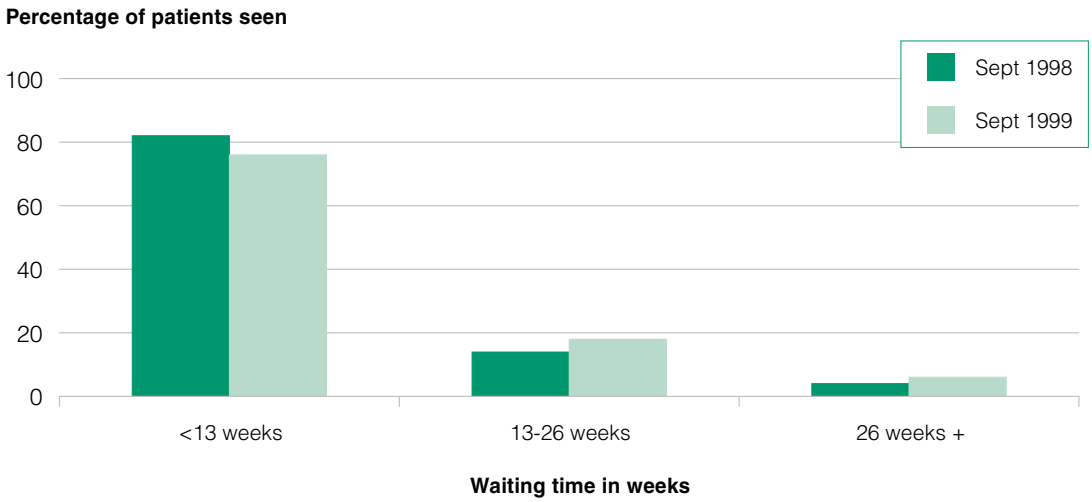
Growing numbers of patients waited 13 weeks or more for an outpatient consultation following referral by the general practititioner



Source: NHS Executive Performance Analysis Branch [7]

Figure 43

Proportionately fewer patients were seen at an outpatient consultation within 13 weeks of referral from their general practitioner in 1999 than in 1998



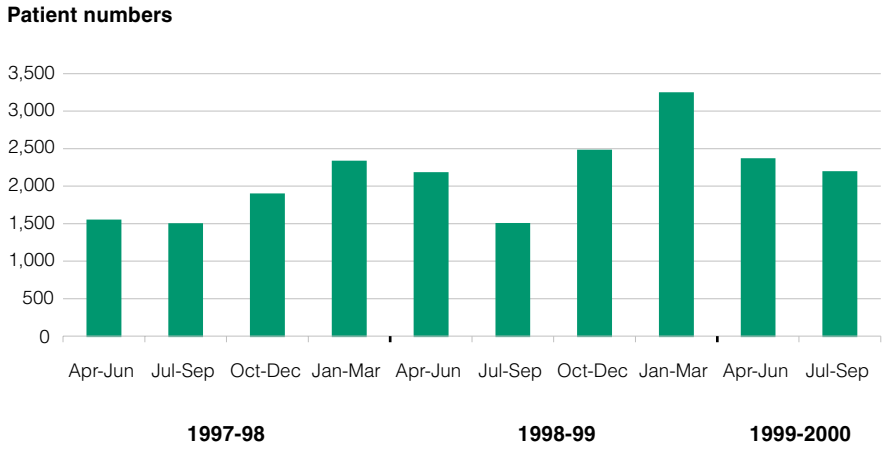
Source: NHS Executive Performance Analysis Branch [7]

The number of cancelled operations is increasing

10 The number of patients suffering a cancelled operation increased to over 56,000 in 1998-99, around 6,000 more than in 1997-98 [4]. Figure 44 on page 77 shows that in 1998-99, hospitals failed to treat 9,380 elective patients, whose operations they had cancelled for non-medical reasons, within one month of their cancelled operation. This is in breach of the Patient's Charter, and is some 2,100 more than the year before, and the highest reported figure recorded [4]. Cancelled operations in the first half of 1999-2000 were again higher than in the first half of 1998-99 [5].

Figure 44

The number of elective patients suffering a cancelled operation by the hospital and not treated within one month, in breach of the Patient's Charter, has increased over the last two years



Source: NHS Executive Performance Analysis Branch [7]

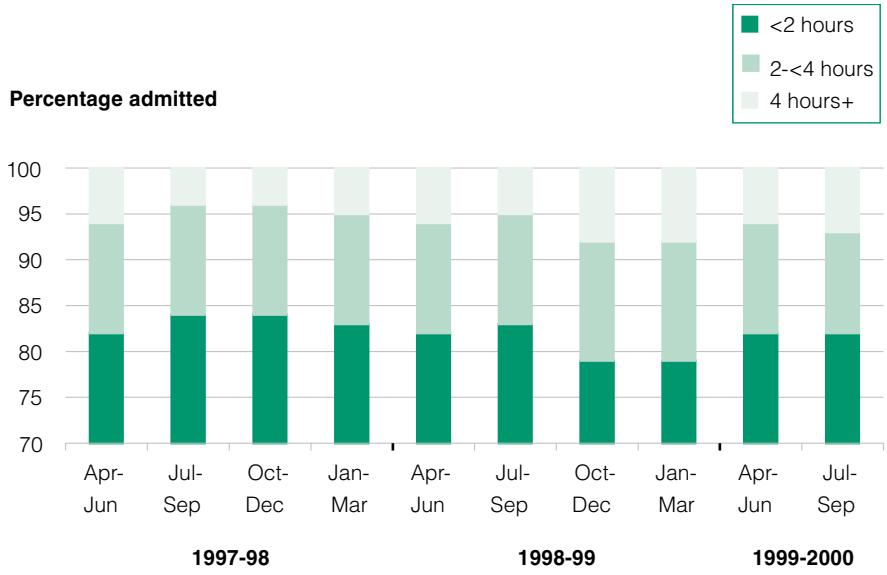
Around one in six emergency patients wait longer than the Patient's Charter standard of two hours from the decision to admit

11 The Patient's Charter includes a standard that emergency patients should be admitted to hospital within two hours from the decision to admit [1]. Figure 45 shows that in 1998-99, around 80 per cent of emergency patients were admitted within this time. However, by the end of 1998-99, eight per cent of emergency patients waited more than four hours in Accident and Emergency to be admitted [4]. In our survey of NHS acute trusts, we found that inner city and university teaching hospitals admitted around 72 per cent of emergency patients within two hours, while rural hospitals admitted nearly 90 per cent.

Around one in six emergency patients wait longer than the Patient's Charter standard of two hours from the decision to admit

Figure 45

The standard time to admit emergency patients was originally set at four hours from the decision to admit, and in April 1996 was reduced to two hours.



Source: NHS Executive Performance Analysis Branch [7]

Appendix 4: Good practice in admitting patients to hospital

1 This Appendix describes a suggested model of good practice in admitting patients to hospital, drawn from our examination, and from existing research work by the NHS Executive, the Emergency Services Action Team[10], the Council of International Hospitals[11], the Audit Commission[12, 13] and Accounts Commission[14] and the NHS Confederation with the Royal College of Physicians[15].

Admissions policies

2 Admissions policies help set out how the hospital will respond to the needs of both elective and emergency patient admissions, and describe the optimal arrangements to balance resources available with patients' needs.

Essential features of a hospital policy or strategy for inpatient admissions

- Covers the whole hospital and all inpatient admissions, elective and emergency and critical care patients.
- Includes a protocol for managing peaks in demand for emergency patient admissions.
- Is based on consultation and agreement with key interest groups within the hospital, such as hospital consultants, admissions co-ordinators, bed managers and nursing, theatre and Accident & Emergency department staff.
- Is agreed and communicated widely within the hospital, and beyond the hospital to key parties such as referring general practitioners and commissioning health authorities and primary care groups or trusts.
- Defines the arrangements for deciding which elective patients to invite in for each day and for scheduling the hospital resources, including intensive care unit and high dependency unit resources, necessary for their care.

Information and scheduling resources

3 Consultants benefit from good information and scheduling systems.

Key information to hospital consultants in drawing up lists of elective patients to invite in.

- A schedule of time available in the planned theatre session and data on likely theatre time required for each patient's procedure(s). This allows necessary theatre resources to be booked for each patient within the total available in the session.
- Identification of theatre staffing and equipment requirements for each patient's procedure(s). This allows these to be booked in advance and available at the time needed.
- A schedule of inpatient beds available for routine elective patients on the planned day of admission and on future days following admission, along with data on each patient's likely length of stay required. This allows necessary bed resources to be booked for each patient within the total bed availability for routine elective patients (see Part 2).
- A schedule of inpatient beds reserved for urgent elective and emergency patient admissions each day, based on analysis of demand for urgent and emergency care (see Part 2).
- Identification of any intensive care or high dependency care bed requirements for each patient after their procedure(s). This allows these to be booked in advance if possible.

Appendix 5: Good practice in managing beds

1 This Appendix describes a suggested model of good practice in managing beds. It is based on findings from our examination, and on existing research work by the Emergency Services Action Team[10], the Council of International Hospitals[11], the Audit Commission[12, 13] and the NHS Confederation with the Royal College of Physicians[15].

Bed management policies

2 Hospital bed management policies draw together good practice on prompt and appropriate placement of each patient admitted and efficient utilisation of inpatient beds.

Essential features of a hospital bed management policy

- Covers the whole hospital and all inpatient beds including intensive care unit and high dependency unit beds.
- Establishes a protocol for placement of patients during escalating demand for emergency patient admissions.
- Is based on consultation with key interest groups within the hospitals, such as bed managers, hospital consultants, admissions co-ordinators and discharge co-ordinators.
- Is communicated widely within the hospital and beyond the hospital to key parties such as referring general practitioners and commissioning health authorities and primary care groups or trusts.
- Defines the arrangements for scheduling inpatient beds to elective patients invited in for each day and for allocating beds for likely emergency patient admissions.

The bed management team

3 Bed managers can help place patients promptly in an appropriate bed, help plan elective patient admissions and contribute to the hospital's strategy on bed complement and configuration.

Essential features of an effective and fully developed dedicated bed management team

Key duties:

- Overall responsibility for the placement of all elective and emergency patients admitted.
- Supports hospital consultants in deciding which and how many elective patients to invite in for each day.
- Contributes to strategic assessments of hospital bed complement and configuration.

Key features of the role of bed manager:

- Has clear lines of accountability to, and involvement of, senior managers through to Chief Executive.
- 24 hour a day cover.
- Sufficient seniority.
- Widespread recognition of the role of bed manager by clinical and nursing staff.
- Receives training and support internally.
- Has operational links with other bed managers in local NHS trusts.

Information systems on bed utilisation and availability

4 Bed managers should be supported by well developed information systems on bed utilisation and availability.

Essential features of an effective and fully developed information system on bed utilisation and availability

The system:

- provides rapid access to comprehensive, timely and accurate data on current bed utilisation and availability across every inpatient bed. This will include:
  - whether a bed is occupied or available;
  - who is occupying the bed, their date of admission and their expected date of discharge and whether discharge is overdue
  - whether the bed is occupied by an outlying patient
  - the type of ward on which the bed is located (eg medical or surgical)
  - whether the bed is in a bay or in a single room
  - whether the bed is in a male or female bay
  - whether the bed is in an elderly / adult or paediatric facility
- is linked to a diary facility for scheduling inpatient beds for elective patients when they are invited in, for their day of admission and their expected lengths of inpatient stay
- records patterns of bed utilisation and availability over time to allow strategic review of bed complement and configuration.

Strategic review of bed complement and configuration

5 Reviewing the number of beds the hospital needs for each specialty and in total can help place patients promptly in the beds most appropriate to their needs.

Essential features of an effective and fully developed strategic review and planning of bed complement and configuration

- Bed requirements and configuration across directorates and specialities reviewed at least yearly.
- Hospital bed configuration designed to place patients in the most appropriate bed first, and patients with similar care needs together.
- Planning of inpatient bed requirements across the hospital, between medicine and surgery, and across wards is informed by the day to day experiences of the bed management team and by number and trend data on:
  - patient admissions
  - cancelled operations
  - waiting times in the Accident and Emergency department
  - number of patients outlying on wards of another specialty
  - bed occupancy percentages
- Bed requirements assessed to meet the needs identified within local Health Improvement Programmes, the impact of national initiatives and additional funding such as the national waiting list initiatives and winter pressure funding, and the impact of seasonal fluctuations and staff availability.

Appendix 6: Research in Greater Manchester on bed management

1 In 1998, the North West region of the NHS Executive commissioned the Manchester School of Management at the University of Manchester Institute of Science and Technology to examine bed management in fourteen NHS acute trusts across Greater Manchester[24]. The main findings are summarised below.

The role of bed managers and availability of data on beds across Greater Manchester

The practice of bed management:

- No bed managers had a proactive role in linking planning for elective work with demand for emergency admissions.
- The focus of their work was very operational with little strategic involvement.
- Bed managers commented that their role had no end as each day's problems were repeated the next.
- They had few formal objectives against which to judge their performance.
- Some considered that senior staff did not have an interest or gave support in their function.
- Some bed managers were not involved in planning elective admissions or in the placement of elective patients admitted.
- The line manager to whom the bed manager service reported varied widely.
- The bed manager service was not usually 24 hour a day and daily coverage differed across hospitals.
- Bed managers reported that their main aim was to try to control situations.

The methods and problems of collecting bed data:

- Data were usually maintained on paper records.
- Demand for beds was usually notified by ongoing telephone calls from Accident and Emergency, other hospitals which wished to transfer a patient, calls from clinicians or general practitioners, and elective lists drawn up by consultants.
- Bed managers usually gathered data on bed utilisation and availability from visiting wards and from making and receiving telephone calls, to and from wards. Data on patient administrations systems was considered to be out of date.
- Bed managers had concerns about the accuracy of information provided to them and the concealment of available beds by staff.
- Demand for patient admissions was considered highest on Mondays and Tuesdays. There were peaks in demand within each day. Emergency patients who had stayed in an assessment unit overnight had to be placed in the morning. Patient referrals from general practitioners peaked at midday.

Source: Manchester School of Management at the University of Manchester Insititute of Science and Technology [24]

Appendix 7: Good practice in discharging patients

1 This Appendix describes a suggested model of good practice in discharging patients. It is drawn from the findings of our examination, and from existing research work by the NHS Executive[25] and the Department of Health[26], the Emergency Services Action Team [10], the Council of International Hospitals[11], the Audit Commission[12, 13] and Accounts Commission[14].

Discharge policies

2 Hospital discharge policies draw together professional expertise to set out the good practice that will be applied to all patients discharged.

Essential features of an effective hospital patient discharge policy

The key features of a hospital discharge policy are that it:

- is integrated with the continuing care policies and criteria set out within their local health authority's policy and eligibility criteria for continuing health care (Since April 1996, all health authorities have been required to develop such a policy)
- covers the whole hospital and all patients discharged
- establishes a protocol for management of patients whose discharge is delayed
- is based on consultation with key interest groups within the hospitals, such as hospital consultants, discharge liaison nurses or co-ordinators and bed managers
- is developed in consultation with users and carers
- includes the need to involve the patient and their carers from the outset in planning for the patient's discharge, including the provision of any training the carer may need to take over the patient's care
- is agreed and circulated widely within and outside the hospital to help ensure that:
  - good practice is applied consistently within the hospital to all patients discharged
  - the local health authority, general practitioners, social services, community hospitals and nursing and residential homes who continue to care for their patients after discharge, have an input into, and clear understanding of, the hospital's arrangements for planning patient discharge, and co-ordinating discharge with other care providers.

Early planning of patient discharge

3 Hospitals should plan patient discharge early and maintain good quality relationships with providers of on-going care to reduce the risk of patient discharge being delayed.

Early planning of patient discharge within NHS trusts should be combined with good quality external relationships to reduce the risk of delayed patient discharges.

- early assessment of a patients' likely care needs after discharge:
  - at pre-assessment for elective patients
  - on admission for emergency patients
- early liaison with external organisations such as:
  - social services (to give advance notice to them that a patient will need assessment)
  - community hospitals
  - primary care groups (and community health services, to ensure that general practitioners and community health teams know when their patients will be discharged and to give them time to plan to meet any ongoing needs they may have)
  - nursing and residential homes, and
  - voluntary agencies that are involved in patient assessment and provision of ongoing care required
- good quality working relationships with these agencies, evidenced by:
  - each organisation placing the patient's and carer's needs first
  - a willingness to co-operate with other organisations to provide the patient with a well managed discharge and seamless provision of ongoing care services
- understanding of the timescale to which each organisation operates.

Discharge co-ordinators

4 Discharge co-ordinators can co-ordinate, or ensure the co-ordination of, appropriate and prompt patient discharge.

Discharge co-ordinators can act as an advocate for patients and bridge health and social services to achieve appropriate and prompt patient discharge

Essential features of an effective and fully developed discharge co-ordinator role

Key duties:

- Acts as an advocate and supporter for the patient and carer(s) and family to promote the maximum possible independence of the patient after discharge.
- Identifies, at an early stage, patients who are likely to have complex care needs for ongoing health and social care support following their discharge from hospital.
- Has rapid access to comprehensive, timely and accurate data on current patients in hospital, including expected patient discharge dates, long stay patients and patients with discharge delayed.
- Co-ordinates patient assessment and care planning by drawing together those involved in care of the patient in hospital and in the aftercare of patients in the community.
- Acts as a two way bridge between the hospital and social services, community hospitals, primary care services and nursing and residential homes as well as with voluntary agencies, whether the co-ordinator works within NHS trusts, or within social services or primary care groups.

Key features of the role of discharge co-ordinator

- Has overall responsibility for the discharge of all patients across all specialties.
- Has clear lines of accountability to senior managers.
- Sufficient seniority.
- Widespread recognition of the role of discharge co-ordinator by clinical and nursing staff, physiotherapists, occupational therapists, social work staff and dieticians.
- Receives training and support internally and jointly with social services.
- Has operational links with other discharge co-ordinators in local NHS trusts.

Appendix 8: Key findings from our census of health authorities

1 Our census of health authorities demonstrated that health authorities have a detailed understanding of the challenges hospitals face in managing patient admissions, inpatient beds and patient discharge. Key responses are included below.

Health authorities' views on managing inpatient admissions

- The upward trend in patient admissions is causing difficulties and indicates that problems will become more acute.
- High bed occupancy and lack of reserve beds leads to problems in finding beds for new patients when there are unpredictable peaks in demand for emergency admission.
- The difficulty in scheduling resources for elective admissions when emergency demand and bed occupancy is high, leading to problems of cancelled elective admissions.
- The increased patient activity needed to reduce elective waiting lists, and the increased planning needed to achieve waiting list targets are additional difficulties in admitting patients.
- Hospitals are faced with a shortage of staff and other resources to deal with increasing numbers of patients admitted, and there are difficulties in recruitment.

Health authorities' views on managing inpatient beds

- The lack of a bed management system in some hospitals, and the lack of accurate information on current bed availability, makes bed utilisation less effective.
- Hospitals need a round the clock bed manager service.
- Bed use is often inflexible and hospitals are unable to match patients to wards appropriate to their needs, which makes it more difficult to admit patients promptly.
- The need to keep Accident and Emergency departments clear and to place emergency patients promptly in appropriate beds puts pressures on bed managers.
- Forward planning for the number of beds needed has generally been a difficult process.

Health authorities' views on managing patient discharge

- Delays in patient discharge and "blocked beds" on inpatient wards mean many beds are not available for new admissions.
- Lengthy waiting periods for patient assessment by social services for placement in nursing homes and for rehabilitation services in the community increase inpatient stay and make admission of new patients more difficult.
- There are problems in communication and co-ordination between acute hospitals and community hospitals and social services, and within acute hospitals, which delays patient discharge.
- Lack of resources and lack of access to support services cause difficulties in patient discharge.

2 Health authorities have put in place a series of measures to help address and overcome these problems and difficulties. A number of these are included below.

Measures taken by health authorities to address difficulties in inpatient admission, managing beds and patient discharge

- Using additional monies to meet greater winter pressures for emergency care to help counter problems. These include:
  - Increasing bed capacity, particularly step-down beds before patient discharge
  - Facilitating the introduction of discharge co-ordinators, discharge lounges, and admissions units and observation units in Accident and Emergency departments
- Providing good support for patients in the community to reduce patient admissions and to bring forward patient discharge, thereby reducing pressures within hospitals, for example by assisting the introduction of rapid response teams.
- Using some of their resources to tackle shortages in supply of support services, for example by funding an increase in places in residential homes for discharged patients.
- Encouraging co-operation and communication between hospitals, for example, by facilitating meetings of bed managers and meetings of discharge co-ordinators.
- Encouraging communications between hospitals and other agencies through holding workshops and seminars, establishing multi-agency groups and holding regular meetings with members.
- Encouraging the development and issue of good practice guidance and examples to hospitals and other agencies, particularly on patient discharge.
- Helping with staff recruitment in hospitals where there are difficult to fill vacancies.
- Monitoring delayed patient discharges to identify and help address the causes of delay.

3 Some health authorities considered that these measures were helping to contain growing problems in cancelled or delayed patient admissions, caused by lack of hospital beds and delayed patient discharges. Other health authorities considered that the measures taken so far were still unable to prevent increases in cancellations and delays when the demand for emergency care peaked. However, most health authorities could point to a reduction in average waiting times for elective admission, despite rising pressures from emergency cases.

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