

Delivering surgical services: options for maximising resources

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND

March 2007



The Royal
College
of
Surgeons
of
England

Introduction

This paper provides some insight into ways in which surgical departments within hospitals can maximise the use of available resources by:

- > considering extending the working day;
- > examining the way in which resources are used; and
- > considering service design.

It aims to help Trusts and surgical departments to maximise the utilisation of staff and other resources, provide an extended timeframe for training and meet productivity and waiting list targets. The paper is intended for both surgeons and service managers, and administrators with responsibility for designing services.

The College would support clinicians and Trust management in developing methods for maximising surgical resources whilst improving patient care. This paper presents some ideas on how to achieve this – it does not represent College policy.

I. Extending the working day

Differentiated patterns of cover

It has long been recognised that hospitals require differentiated patterns of cover throughout the 24-hour, 7-day cycle. The Hospital at Night project profiled the workload of hospitals and recognised that significantly fewer staff were required to staff the hospital safely during the ‘out-of-hours’ period, when tiers of cover could be successfully reduced by providing a night team with all of the competencies required to look after patients within the hospital. In order to meet the 2009 requirements of the European Working Time Directive (EWTD), further profiling of hospital units is required, to examine staffing requirements throughout the entire 24-hour period.

Over more recent years the highest staffing level in the hospital has been during the ‘core hours’ of Monday to Friday, 9am to 5pm. While this matches peak staffing levels in administrative and other support areas, there is little evidence to suggest that these are necessarily the most appropriate hours for clinical work. In addition, high staffing levels during this time create a paucity of staff during the evening, which can put extra pressure on the night team.

Demand profiling has found that the level of surgical activity in the hospital drops significantly after midnight. Indeed, in some specialties there is no specific requirement for surgeons to be available on-site after midnight. The National Confidential Enquiry into Patient Outcome and Death (NCEPOD) recommends that only life- and limb-threatening operations be conducted after midnight, thus further minimising the requirement for large numbers of surgeons to work at night.

Extended working day

In some specialties, extending the traditional ‘core hours’ of the working day to run between perhaps 8am and 10pm would provide additional capacity, ensure more even staffing levels throughout the busy daytime and evening periods and ensure senior supervision of trainees throughout this period.

Emergency and more urgent elective operations could be carried out during this twilight period, assuming that other members of the team, (for example anaesthetists, theatre nurses, operating department practitioners) are available and that required support services also operate during the twilight shift (eg radiology, pathology, etc). Consideration must be given to the type of procedures undertaken and the likely step-down facilities and support required (for example, discharge to the ward, appropriate nursing cover to meet patient need, etc).

Clinics and ward rounds could also be undertaken during this period. Experience has shown that outpatient clinics after working hours are well received by patients who have commitments during the day. Ward rounds need to be arranged so that post-operative patients can be appropriately managed and, where feasible, discharged, and preoperative patients can be adequately prepared for their operation the next day. All of these activities carried out during the extended working day are of benefit to patients and can provide an excellent training opportunity for junior doctors.

The twilight period could also be used for more 'administrative' tasks, for example, ensuring tests are returned before the morning, and for the proactive review and risk assessment of patients, information from which can be handed over to the night team.

Making three-session days work

Units will need to:

- > Profile surgical activity accurately throughout the year, day and night.
- > Work out whether introducing three-session days would be of benefit to patients.
- > Consider how to staff the extended day across all staff groups: surgeons, anaesthetists, theatre practitioners, nurses and ward staff; and consider the availability of support services such as radiology and pathology – all must agree with the arrangements.
- > Consider potential demand for the service and match this to available resources – for example, the unit may be able to offer a three-session day on one day per week, or in one theatre only.
- > Foster a willingness among career grade staff to work outside the previously understood core hours. Having a senior member of the team available on-site from 5pm to 10pm would reduce the total number of staff required on call and provide training opportunities outside the normal working day.
- > Ensure there is capacity to deal with the knock-on effects of increased surgical activity during the twilight period (eg ward beds, intensive care unit space, etc).
- > Ensure staffing and other costs have been calculated. Providing career grade staff, especially outside core hours, may be costly both financially and in terms of restricting availability during core hours.
- > Include additional activity in surgical consultant job plans – note that three-session days do not fit easily into the consultant's programmed activities (PAs). Some adjustment may be required in job plans.

2. Resource utilisation

Separating emergency and elective surgical care

In certain circumstances, separating emergency and elective surgical care is a good method of providing high-quality services in both areas. Evidence suggests that such a separation provides better continuity of care for patients and improved training for surgeons and supporting staff. It can also assure faster access to senior surgical opinion for the assessment and admission of surgical emergencies and optimisation of both staff and theatre resources.

Central to the concept of separating emergency and elective work is the availability of a dedicated team for each service. Having a dedicated emergency team (who have no elective duties during their period of duty) is of benefit to patients and the surgical team: to ensure that emergencies are dealt with by the most appropriate clinician, as well as providing excellent training opportunities – especially for 'early years' trainees. Similarly, a dedicated elective team may allow for the concentration of resources and facilities to deal with elective patients – thus providing excellent and protected training opportunities for junior surgeons. The College would suggest that if elective and emergency services are to be separated, they remain on the same site.

The College will produce some 'best practice' guidelines on separating emergency and elective surgical care in Spring 2007.

Elective theatres

Over recent years elective theatres have been used mainly during core working hours (9am to 5pm, Monday to Friday). Theatres are costly to build and run, and appropriate use of the space and time must be facilitated. Many Trusts have recognised this and have attempted to maximise the use of theatres over the course of the entire day, for example, 8am to 10pm. This has several advantages:

- > Theatre space, time and resources are maximised.
- > This allows completion of non-urgent work that cannot be carried out during ‘core’ working hours (9am–5pm), which if left until the following working day or postponed even longer creates bottlenecks and unnecessary delays for patients. Consequently, if such work can be drawn into the extended working day, patients are treated more expeditiously and can thus be discharged earlier. In addition, pressure is reduced on the night team.
- > Parallel or dual operating practices can greatly improve efficiency – infection control policies must be adhered to.
- > Waiting time and productivity targets may be achieved more effectively.

Emergency theatres

Many hospitals provide NCEPOD theatre(s) during normal working hours, but there is good evidence that extending the availability of these between 5pm and 10pm, and where necessary increasing their number, is a very efficient way of dealing with the majority of urgent and emergency work.

Current practice in many hospitals is to run the same surgical and anaesthetic on-call team from 5pm to 8am. However, some units have successfully established additional staff provision between 5pm and 10pm (the ‘twilight shift’). This allows urgent work to continue until 10pm, when staffing reduces to minimal levels. This would mean a true emergency only service after 10pm, but surgeons may still be required to be on-call either residentially or from home.

To succeed, such arrangements require adequate staffing and control of overrunning lists, and involve regular three-session days. They do, however, offer the ability to complete many of the urgent cases which otherwise are required to compete for a slot and potentially ‘clog up’ true emergency theatre provision.

It is also helpful to schedule trauma and emergency lists over the weekend to prevent a build-up of urgent, but non-emergency cases so that Monday morning trauma and emergency lists can continue as planned. There are now models of dedicated emergency lists for smaller specialties which experience has shown to be highly effective.

3. Service design

Co-location of patients

There are obvious advantages to co-locating patients by specialty or at least into ‘medical’ and ‘surgical’ subcategories. Such categorisation ensures the most appropriate deployment of doctors and nurses, and enables the concentration of appropriate equipment in one dedicated area.

Much time is wasted in conducting ‘safari’ ward rounds - trying to find patients who have been admitted to the first available bed and could be on any ward within the hospital. One proven method of controlling admissions is the establishment of a surgical assessment unit (SAU).

Surgical assessment units

Surgical assessment units can provide a dedicated, centralised area where acutely ill surgical patients can be assessed and monitored prior to being admitted to the hospital or receiving appropriate treatment. They can provide speedy access to assessment, diagnosis and treatment, and avoid unnecessary admissions.

Patients admitted at night can generally stay on the SAU under the care of the admitting consultant surgeon until the following morning, when appropriate sub-referral can be arranged (unless their condition requires that this be earlier). This facilitates the co-location of patients and makes it easier for surgeons to assess and treat all acutely ill patients potentially requiring surgical intervention. SAUs can also provide excellent training for junior surgeons (and also on many occasions physicians) when supervised by senior staff. Good practice would suggest that trainees are able to follow up patients admitted via the SAU so that they can gain experience of the entire pathway of care.

Networking services

Trusts may need to network both within and outside their organisational boundaries in order to provide patient care in a safe and EWTD-compliant manner. For example, a Trust may need to transfer its inpatients to a neighbouring hospital over the weekend to ensure continuity of care and maximise the competencies and availability of staff. There is an increasing number of examples of service reconfiguration into confederated units, especially in the smaller surgical specialties. These include managed clinical networks where in-patients are admitted to a single 'hub' hospital (unless their condition precludes transfer) with day care surgery and outpatient clinics undertaken at a number of 'spoke' units. Innovative arrangements are required to ensure maximum utilisation of staff and resources while ensuring safe and timely treatment for patients, and an appropriate work/life balance for staff.

If you have specific queries relating to the issues raised in this paper, please email us at dss@rcseng.ac.uk.

Professional Standards and Regulation
The Royal College of Surgeons of England
35–43 Lincoln's Inn Fields
London
WC2A 3PE

www.rcseng.ac.uk/publications/docs

The Royal College of Surgeons of England © 2007

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of The Royal College of Surgeons of England.

While every effort has been made to ensure the accuracy of the information contained in this publication, no guarantee can be given that all errors and omissions have been excluded. No responsibility for loss occasioned to any person acting or refraining from action as a result of the material in this publication can be accepted by The Royal College of Surgeons of England.

First published 2007



The Royal College of Surgeons of England

35-43 Lincoln's Inn Fields
London WC2A 3PE
T: 020 7405 3474
W: www.rcseng.ac.uk

Registered Charity Number 212808