Strategy 10: Improving elective care through separating acute and elective surgery

‘Matching demand and capacity and improving the flow of patients through the system is an essential first step’ (NHS Modernisation Agency. 2004. 10 High impact changes for service improvement and delivery).

Introduction

Optimising elective productivity in a mixed acute and elective environment is challenging. Disruption to elective operating schedules can result from the reallocation of operating time to acute patients, or because of bed shortages arising in part from acute admissions.

Increases in both medical and surgical acute presentations due to population growth could affect the ability of DHBs to optimise elective delivery. Because targets for elective surgery are also increasing, there is a greater need than ever to consider how surgical resources can best be configured.

Separating elective from acute care through the use of dedicated beds, theatres and staff has been shown to create efficiencies, provide a better patient experience and enhance patient outcomes.

The model of separation must:
be designed based on a detailed analysis of projected acute and elective demand
be flexible enough to accommodate ebbs and flows in acute presentations
be clinically led, to achieve the necessary change in surgical and hospital culture
be supported by good processes along the peri-operative pathway
include full clinical risk assessment.

Definition

Separating acute and elective surgery streams can broadly be done in two ways:
geographic separation: this limits the scope of surgery undertaken in particular facilities and directs particular types of work to designated facilities

creating separate streams for acute surgery patients and elective surgery patients within the same facility: this involves the setting aside of dedicated operating theatre time, beds and workforce for each activity.
Benefits

The separation of acute and elective surgical streams has recently been endorsed by the Royal Australasian College of Surgeons (RACS 2011):

If elective surgery waiting lists are to be reduced, the separation of surgical streams should be introduced wherever possible. The introduction of such arrangements can be achieved with minimal extra cost, while experience indicates that it leads to cost-saving efficiencies. Significantly, no Australian or New Zealand hospital that has made this change has ever opted to revert to previous arrangements.

The table below is taken from *The case for the separation of elective and emergency surgery* (RACS 2011), and describes the range of benefits that can be achieved. These benefits have been reported by a range of sources, such as Biant et al (2004), Haddock et al (2001), Lowthian et al (2011), Middtun and Martinussen (2005) and the Royal College of Surgeons of England (2007).

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Patient</th>
<th>Surgeons</th>
<th>Governments</th>
</tr>
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<tbody>
<tr>
<td>Enhanced patient outcomes</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>More rapid assessment and better management of the acute surgical patient</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>More timely care</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>The more efficient throughput of patients</td>
<td>✓</td>
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<tr>
<td>Reduced elective surgery waiting lists, due in part to the more efficient use of operating theatres and in part to fewer hospital admissions</td>
<td>✓</td>
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<tr>
<td>Reduced costs due to reduced hospital stays, reduced complication rates and fewer call backs of surgeons</td>
<td>✓</td>
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<td>✓</td>
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<tr>
<td>A more predictable workload with safer and more predictable working hours for surgeons and other health professionals</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Ongoing peer review of surgeons’ work</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Improved surgical training</td>
<td>✓</td>
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The greatest benefits to the patient are the reduction in hospital-initiated cancellations and improved timeliness of care. Cancellation of surgery creates great hardship for patients, who plan their working and family lives around proposed operation dates. Most such cancellations occur with less than 24 hours’ notice (Nasr et al 2004).
Geographic separation in comparison with separation within a single facility

Geographic separation of elective and acute surgery can prevent the costly duplication of services and resources on multiple sites. A geographic separation can also help facilitate changes to the surgical and hospital culture to support the new model. However, appropriate access needs to be maintained to acute services, and geographic separation may only be practical in large metropolitan areas.

High-volume, non-complex elective cases are particularly suited to geographic separation of the two streams of work. For more complex electives, consideration will need to be given to post-operative arrangements for recovery, depending on the 'level' of elective surgery provided. Units providing complex elective surgery or surgery for patients with co-morbidities will require sufficient post-operative support appropriate to patient need. Selection processes for patients must be robust to match the level of care available.

Separation within a single facility can work well if clear protocols are in place to ensure one stream does not encroach upon the other. Such separation can happen through separate staff rostering, ring-fenced theatres, ring-fenced theatre time, or ring-fenced elective beds (Royal College of Surgeons of England 2007).

Within a single facility, the most critical element is enforcing the boundaries between the two streams (RACS 2011). These boundaries may be physical (such as dedicated operating theatres) or they might be temporal boundaries (ie, hours dedicated exclusively to elective or acute surgery).

Critical success factors

Patient safety must be at the forefront of any decision to separate services. Clinicians will need to be involved in the rigorous risk-assessment process for any proposals to alter the delivery of surgical services. Clinicians should take the lead in making the clinical case for service change.

A decision to separate acute and elective streams needs careful consideration. It is imperative that workload is measured and resources allocated accordingly. Surgical workload, including acute surgery, is largely predictable. Once workflows have been analysed and measured, appropriate resources can be identified and, if appropriate, a model for the separation of elective and acute surgery can be designed which matches measured need.

Separating acute and elective streams is not a universal solution for hospital productivity. Such restructuring needs to be supported by good processes along the peri-operative pathway, including patient preparation and streamlined clinical pathways. Hospitals that have successfully streamed acute and elective surgery have done so as a central feature of a wider set of reforms.

Processes to manage acute flows are critical enablers. Regardless of size, models need to include processes for prioritising acute operations and contingency planning for the ability to 'flex' acute resources to meet service pressures. Surgical assessment units and medical assessment planning units can improve triage and manage acute admissions (Perry et al 2010).
Separating acute and elective work streams may require a fundamental change in the way that clinicians and other staff work. Clinical engagement is essential to support a change in surgical and hospital culture. Particular concerns that have been expressed in the literature (Royal College of Surgeons of England 2007) include:

the training requirements of surgeons
the maintenance of surgical skills across both elective and acute streams
clinician resistance to the removal of existing specialties or procedures from the facility in which they work
clinician resistance to the idea of dividing their time between two or more facilities.

Risks and mitigation

There is a risk of duplication of some services where acute and elective work is streamed, especially if this occurs over separate sites. Economies of scale should be exploited, in the form of centralising ‘back office’ functions such as administration.

When separating services, often there are increased costs initially, which overtime may become cost neutral. These may include:
expanding the specialist base (surgeons and anaesthetists)
expanding support staff (such as nurses, theatre technicians and administrative staff)
more surgical equipment
setting up surgical assessment units (resources, facilities and equipment)
setting up additional theatres so that services can be separated
additional support services (such as radiology and pathology).

Possible downsides of separating acute and elective flows include: less elective and outpatient throughput, given some rostered surgeons will only have acute duties; idle theatres if there is not sufficient volume to require dedicated theatres. Thorough analysis of workload and resource requirements will identify the impact of these issues.

References


