

Improving surgical practice

Learning from the experience of RCS invited reviews

ACKNOWLEDGEMENTS

The RCS Invited Review Mechanism (IRM) is provided by the RCS working in partnership with the surgical specialty associations. We would therefore like to thank and acknowledge the support and assistance of the following organisations:

Association of Surgeons of Great Britain and Ireland

British Association of Oral and Maxillofacial Surgeons

British Association of Otorhinolaryngology – Head & Neck Surgery

British Association of Paediatric Surgeons

British Association of Plastic Reconstructive and Aesthetic Surgeons

The British Association of Urological Surgeons

British Orthopaedic Association

Society for Cardiothoracic Surgery in Great Britain and Ireland

Society of British Neurological Surgeons

The Vascular Society of Great Britain and Ireland

We would also like to thank Louise Higgins for her work as the IRM RCS Patient Liaison Group representative, and all the surgeons and lay people who act on our reviews teams.

FURTHER INFORMATION

This document was written by Ralph Tomlinson, Head of Invited Reviews, working with Miss Clare Marx, RCS Council Lead for Invited Reviews.

For more information on the RCS invited review services, including details of how to commission an invited review, please visit

www.rcseng.ac.uk/providers-commissioners/support-services/irm

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The purpose of this document

The aim of this document is to improve the quality of discussion about surgical practice, and the action that takes place in response to it.

Surgery is a highly demanding and critically important part of patient care. It can involve challenging and emotive circumstances for patients and their surgeons. Providing the highest quality of surgical care can be difficult and complex. In many areas of surgical activity, patient outcomes are of a consistently high standard and surgeons are leading the way in delivering major improvements to the quality of peoples' lives.¹⁻³ In a smaller number of other areas, more needs to be done to improve the quality, and to reduce the variability, of surgical outcomes and the overall standards of patient care provided by the NHS.⁴ It is also clear that when problems occur in surgery the outcomes can be tragic⁵ and that more generally across healthcare the failure to address difficulties with care can on some occasions be catastrophic.⁶

This document describes the difficulties that can arise from the practice of an individual surgeon or within a surgical service. It is based on the RCS's experience of undertaking invited reviews. We propose a new approach to thinking about surgical services and the challenges that can arise when delivering them. We have developed a surgical services Self-assessment questionnaire (page 8) to help surgeons and those responsible for surgical services to use our approach to assure and improve the quality of their care.

We hope that this document can be used to improve the discussion of the challenges of surgical practice and ensure they are addressed at an early stage, before they lead to problems that have an impact on the quality of patient care.

About The Royal College of Surgeons of England

The Royal College of Surgeons of England is a professional body committed to enabling surgeons to achieve and maintain the highest standards of surgical practice and patient care. Our expertise, authority and independence allow us to act in the best interests of patients and to support those who provide their surgical care.

The medical profession holds a unique role in society. As doctors, surgeons abide by a set of values and behaviours that merits the trust of the public. The College is an independent, charitable organisation that is non-political. It is this independence, coupled with our expertise and a clear focus on quality that enables us to act in the best interests of patients.

SURGERY IN NUMBERS - THE CONTEXT FOR THIS DOCUMENT

- In England and Wales there were 4.9 million NHS hospital admissions resulting in surgical care in 2011–2012, which equates to nearly 1 in 3 (31%) of all patient admissions to hospitals.^{7,8}
- The number of hospital bed-days relating to surgery in the NHS in England in 2011–2012 was 18.6 million.⁷
- There are 15,000 practising surgeons in the NHS in England and Wales, ^{9,10} with many more health professionals working as part of the surgical team, including anaesthetists, intensivists, theatre staff, surgical care practitioners and nurses. Surgeons are also a key part of many multidisciplinary teams that come together to coordinate patient care.
- Clinical audits of surgical practice are now in place for many areas of surgical practice.
 These audits have been important in improving standards, patient outcomes and quality of lives following surgery.¹⁻³

Executive summary

Caring for patients and ensuring that they receive the highest possible standard of surgical treatment is at the core of our values as a College. The delivery of good surgical care is not straightforward, however, and there are many daily challenges for surgeons and their teams that can be difficult to resolve.

This makes it all the more important that any concerns about the performance of an individual surgeon or surgical unit are reviewed and resolved as soon as possible.

Since 1998, the College has run a service known as the Invited Review Mechanism (IRM), which provides hospital trusts an independent, external and professional review of an individual surgeon or surgical service. This typically involves two senior surgeons and one lay person being invited into a hospital to talk to staff on a confidential basis and examine relevant documents over the course of two to three days to determine whether there is a cause for concern and make recommendations for improvements.

We believe that the IRM, as a form of peer review, is a highly valuable resource to help the NHS deal with concerns before they develop into more serious problems, and one that can offer practical solutions. Surgical teams work in high-pressure environments, and it is through reliable and trustworthy peer review processes that the answers to emerging problems can be found.

The reports of our reviews become the property of the trust to address, but we are keen to highlight the problems that are regularly identified in the reviews so they can help surgeons, managers and other healthcare staff to promote action being taken at an early stage. With this in mind, the College is for the first time publishing the recurring themes of our invited reviews to see what lessons can be learned. We have surveyed a sample of 30 consecutive reviews that have taken place within the past 3 years (2010–2012) and drawn from them lessons about how problems occur and where improvements need to happen.

Alongside specific clinical recommendations aimed at improving surgical practice, the two most commonly occurring non-clinical areas for improvement are team working and responding to concerns:

TEAM WORKING

There is often a need to improve working relationships between consultant surgeons. While many surgeons recognise the importance of the surgical team within the theatre, the extent to which the working relationships with consultant colleagues affect the delivery of the overall surgical service is often not acknowledged.

RESPONDING TO CONCERNS

It can be very difficult for an individual or a group to voice their concerns. It can also be difficult for an organisation to know how to respond in the right way. The manner in which surgeons and managers respond to concerns about surgical practice is an important factor in resolving problems at an early stage.

The survey also showed that improvements are needed in individual behaviours of surgeons, the clinical leadership of surgical teams, the quality of morbidity and mortality meetings, surgical facilities, and participation in surgical audits. In our Key findings (page 6) we highlight other themes.

The IRM shows that the challenges that can arise in the delivery of surgical care are multifactorial. They need a robust approach that demonstrates an appreciation of the circumstances in question, the environment in which they have occurred, the personnel involved and the time and resources required to resolve them. They demand a patient-centred approach that ensures that any concerns about the quality and safety of patient care are addressed at the earliest opportunity and that safe surgical practice is maintained.

To help surgical teams promote a constructive discussion of performance we set out a new way of thinking about the delivery of surgical care. We have organised our learning into a one-page Self-assessment questionnaire (page 8) to help hospitals review the quality of their surgical care and to understand better the challenges they may experience. This checklist should be used to enable surgeons and other healthcare professionals to both assure quality and improve standards of care, and to take early action where any potential concerns may exist.

NOTE

The number of invited reviews considered by this study represents an extremely small proportion of the surgical care being provided in healthcare today. This sample should in no way be considered reflective of wider standards of surgical practice and care.

Key findings

We looked at a sample of 30 consecutive invited reviews, carried out in hospitals within a 3-year period (2010–2012).

The sample included reviews of individual surgeons and of specific surgical services and departments. Most of the reviews took place after a trust medical director identified a potential cause for concern that necessitated an external review of surgical practice, although a small number were provided to a hospital as a matter of clinical governance good practice.

The reviews took on average 2-3 days to complete on site, and the hospitals were sent a full report after the visit. From our survey we found the following:

In over three-quarters of the reviews there was a need for improvement in:

- an aspect of the quality of the surgical care being provided;
- the team-working between surgeons; and
- the way the hospital responded to concerns being raised.

In over half of the reviews there was a need for improvements in:

- the behaviour displayed by individual surgeons;
- the functioning of multidisciplinary team meetings:
- the quality of activity and outcome data available;
- the quality of the support provided to junior surgical staff;
- the quality of individual surgeon performance appraisal; and
- the management of the impact of service changes on surgical service delivery.

In over a quarter of the reviews there was a need for improvements in:

- the clinical director-level leadership of surgical teams;
- the quality of morbidity and mortality meetings;
- the learning demonstrated from patients' complaints;
- surgical audit (to ensure it assures quality and drives improvement);
- the facilities and resources provided to surgeons when delivering their care;
- the clinical governance supporting the introduction of new surgical techniques and technologies; and
- the process of patient consent to surgery.

All reports are delivered to the medical director of the trust commissioning the review. The College follows up with the trust at one to three months, and six months, and encourages the publication of trust action plans detailing the progress made in implementing the recommendations of IRM reports. In this review period we have seen the publication of a number of action plans and hope this trend will continue.

Using the findings from the reviews we have developed the following surgical services self-assessment questionnaire to support trusts, surgeons and other healthcare professionals in identifying and raising concerns at an early stage.

Self-assessment questionnaire

The working environment in which you provide surgical care	YES	NO
Do you have facilities and resources that enable you to undertake your surgery safely?		
Do you work in an environment in which you feel confident raising a concern?		
Are you part of an organisation that manages service change well?		
The delivery of the surgical care you provide	YES	NO
Are you confident that you and all your surgical colleagues provide safe care?		
Are you confident in the leadership and management of your surgical service?		
Do the multidisciplinary teams that you are part of work effectively?		
Are you confident in your service's processes for obtaining informed patient consent?		
Do you have confidence in the way your surgical team introduces new techniques and technologies?		
The behaviours and team-working underpinning your surgical care	YES	NO
Are the individual behaviours exhibited by the surgeons in your team appropriate?		
Do you and your consultant surgical colleagues work together well?		
Would your juniors describe the way you and your consultant surgical colleagues work together as appropriate?		
Quality of performance improvement processes within the surgical care you provide	YES	NO
Do your service's morbidity and mortality processes help you to reflect on and improve your surgical practice?		
Do your service's surgical audit processes help you to reflect on and improve your surgical practice?		
Do you have confidence in the quality of appraisal taking place within your surgical service?		
Do you have confidence in the way that your surgical service learns from patient experience?		
Information about the surgical care you provide	YES	NO
Can you immediately quantify the number of operations that you and your surgical service have undertaken in the last year?		
Can you immediately provide independently verified data to demonstrate the quality of the outcomes of your (and your service's) surgical care?		

Background

WHAT IS AN RCS INVITED REVIEW?

Invited reviews offer an independent and professional review process to determine whether there is a cause for concern about surgical practice and make recommendations for improvement.

The College believes that action should be taken locally at the earliest possible stage with the aim of remedying problems before they affect patient safety or fitness to practise.

Concerns about performance may be highlighted from a number of sources. The College recommends a staged response to investigating concerns.

Employers already have pathways for dealing with performance concerns. RCS invited reviews are a confidential service to support, but not replace, existing procedures.

Three types of invited review are offered to healthcare organisations

Individual reviews

Individual reviews help hospitals decide whether there is a case to be answered with regard to an allegation of inappropriate or unsatisfactory surgical performance on the part of a surgeon.

Case note reviews

Case note reviews provide an independent expert opinion on whether the management of a specific case or series of cases has met College/specialty association standards.

Service reviews

Service reviews provide an independent expert opinion on an aspect of a surgical department/unit. We are flexible in our approach, and the College can work with the healthcare organisation who commissioned the review to develop appropriate terms of reference.

COMMISSIONING AN INVITED REVIEW

Invited reviews are undertaken by the RCS in partnership with the surgical specialty associations and a group of lay personnel representing the patient and public interest. They are a confidential service that can be commissioned directly by any healthcare organisation, provided the organisation makes a formal request and agrees to indemnify our review teams.

Once a request has been received it is considered by the Chair of the RCS IRM (a College Council member) and a senior member of the surgical specialty association concerned. If we feel an invited review might be of assistance, we will inform those making the request that we are able to help. A review team is then appointed. This will normally involve two senior surgeons from the specialty under review and one lay person representing the patient and public interest. A member of College staff will support the review.

PLANNING AND DELIVERING AN INVITED REVIEW VISIT

The review team will work together to plan their review visit by clarifying and agreeing the terms of reference with the healthcare organisation commissioning the review, and asking for information about the circumstances under review.

A review visit will be held – normally two days at the hospital(s) concerned – and interviews will be conducted with the key personnel involved in the delivery of the surgical service (or individual surgical practice) under review. At the end of the review visit immediate feedback will be provided to the medical director and/or chief executive of the organisation requesting the review, including details of any immediate action that needs to be taken in the interests of patient safety.

THE INVITED REVIEW REPORT

After their visit is complete the invited review team will provide a comprehensive invited review report setting out the information gathered about the terms of reference and the conclusions reached. The report will also make recommendations for addressing any concerns.

THE COLLEGE'S ADVISORY ROLE

The role played by the College in providing invited reviews is advisory and not regulatory. It is for the senior managers responsible for the organisation commissioning the review to consider an invited review's recommendations and act.

FOLLOW-UP

Once an organisation has received our report we will normally follow it up at one to three months, and six months. When doing so, we ask for details of the steps taken by the healthcare organisation to address our recommendations and the progress made toward improvements. We cannot compel an organisation to act on our advice. However, we will contact appropriate external bodies (such as the General Medical Council or the Care Quality Commission) for advice if we identify a

situation that we think requires regulator involvement and the organisation commissioning a review has not sought it.

We will first provide advice to the healthcare organisation responsible for the surgical activity, setting out the steps that need to be taken and the timescale. We normally find that the organisation concerned acts on this advice. We will act if they do not.

FEEDBACK FROM SERVICE USERS

We also request feedback from our service users and review team members to ensure that the quality of our invited review service can be developed to meet the needs of the commissioners and providers of surgical services.

NUMBERS OF INVITED REVIEWS UNDERTAKEN ANNUALLY

The RCS has been undertaking invited reviews since 1998. During this time the College has completed an average of 13–14 invited reviews a year.

Recently, the number of reviews we perform each year has been increasing: 19 were completed in 2011, and 30 in 2012. There has also been a shift from requests for individual reviews towards requests for service reviews.

The number of invited reviews undertaken is determined by the healthcare organisations using our services. We are therefore monitoring whether this increase is a short term spike or a longer-term trend.

Our survey

LEARNING FROM OUR REVIEWS

We want to share our experiences of invited reviews to help surgeons and healthcare professionals think about the challenges that can be encountered within surgical practice in a more systematic way, and to act to resolve these challenges at an early stage.

We have taken a sample of 30 consecutive reports provided to senior managers of healthcare organisations following an invited review of an individual surgeon, surgical service or case note review.

There is often 'practice wisdom' among healthcare professionals about the issues that can affect the capacity of surgical services to deliver high-quality care. There are also many surgical and non-surgical healthcare professionals who have significant practical experience of providing high-quality surgical care and of managing the challenges that occur when doing so.

We are building on this 'practice wisdom' and using the lessons from invited reviews to better structure the way we think about these challenges.

A NEW WAY OF THINKING ABOUT DELIVERING SURGICAL CARE

We have identified 17 key areas that frequently recur when considering concerns about the delivery of surgical care. For the purposes of this survey these can be organised under the following five headings:

- 1. The surgical working environment.
- The quality of surgical service delivery.
- 3. The standards of individual surgeon behaviour and team-working.
- 4. The quality of performance improvement processes within the surgical service.
- 5. The information available about surgical activity and outcomes.

The following pages describe our experiences under each of these headings in detail.

The surgical working environment

Working environment is critical for any employee, and surgery is no different. The culture created by a healthcare provider, the resources available and the physical environment are all key to delivering high-quality patient outcomes.

FACILITIES AND RESOURCES SUPPORTING SURGICAL SERVICES

The first area where our experience suggests challenges can occur is in ensuring that individual surgeons and surgical services have access to the appropriate levels of support to deliver care safely. It is also crucial that this care takes place within appropriate facilities, using suitable equipment.

Our experience suggests that the facilities and resources provided to surgical staff are generally good. However, there are some recurring themes where problems occur, including:

- having appropriate instrumentation available;
- ensuring that this instrumentation is suitably sterilised;
- ensuring that hospital facilities have been appropriately designed for the surgery being undertaken (for example to support day case surgery, or enhanced recovery);
- having appropriate access to the expertise provided by other healthcare professionals, such as clinical nurse specialists or specialist physiotherapy;
- having appropriate access to specialist high-dependency and intensive-care units;
- having properly timetabled access to appropriate operating theatres for elective and emergency surgical care;
- the capacity of a service to recruit the specialist surgical and non-surgical personnel required;
- the number of administrative staff available to support the running of the surgical service;
- the quality and consistency of management support;
- the design and review of surgical job plans; and
- access to appropriate hospital IT systems.

In our experience, many hospital personnel will be aware of the shortcomings of their working environment and will have suggestions for improvement. The challenge is ensuring that these suggestions can be put into practice and that healthcare professionals do not get into the habit of accepting the status quo. Without careful attention, facilities and resources can significantly reduce the quality of surgical care.

MANAGING CHANGES TO SURGICAL SERVICES

A number of recent invited reviews have involved surgical services that have recently undergone a significant change. This might include, for example, the merger of a number of previously independent surgical teams working across two or three previously independent hospitals.

Such mergers can occur at considerable speed and for multiple different purposes, and an unintended consequence is that little concerted thought is given to how the component services will be delivered within the new organisational environment. This can have a particular impact on complex services such as surgery where dramatic changes can be instituted almost overnight with little consideration to how these changes will affect those consultant and middle-grade surgical staff 'on the ground'.

There are of course many instances in healthcare where such complex change is managed well. We are not suggesting that changes to service delivery necessarily lead to concerns about surgical practice. Many of the improvements required in healthcare in the future will require substantial changes to the configuration of hospital services nationally.¹¹

What our experience suggests is that where such substantial reorganisations take place, clearer thought needs to be given to the way the change will impact on day-to-day provision of surgical practice, and how changes can be achieved without compromising quality of care.

Throughout any change process the central focus of those delivering the change needs to be:

- How is this change affecting the immediate patient experience at my hospital today?
- How is this change being experienced by the individuals and teams delivering my hospital's surgical care?
- How are our surgical teams coming together within the new service?
- How effectively are these newly merged groups interacting?
- Who is leading this?
- Who is retaining oversight of clinical quality?
- How is this being measured?
- How is surgical safety being reviewed?
- What action is being taken in response to any challenges identified?

SENIOR MANAGEMENT RESPONSES TO CONCERNS ABOUT SURGICAL PRACTICE

A defining characteristic of the way a healthcare organisation manages the challenges of providing complex surgical services is the manner in which it responds when an individual (or individuals) raise concerns about surgical practice.

Managing the organisational response to these concerns can be highly complex. Problems can occur in very specialised and technical areas of surgical care in which the medical manager responsible may not have direct clinical experience. It may also be the first time this medical manager has encountered such a situation within surgery and this lack of experience (and any wider corporate knowledge) can affect the quality of response.

Our experience is that those responsible for managing the immediate responses to concerns about surgical practice do not always manage these situations effectively. Potential concerns may be known about by healthcare staff for some time through 'informal' hospital networks, without effective early resolution. This happens more often when concerns do not relate to direct clinical care and involve poor standards of individual or team behaviour.

In some cases, efforts are made to address concerns as they arise, but these attempts are not always sustained and the longer-term change required is not achieved. This can often lead to related concerns arising at a later stage.

Our sample of invited reviews is significantly distorted as each case represents a set of circumstances that a hospital has not been able to resolve without the external assistance of an independent review. It will therefore contain cases where difficult situations have existed for some time and will not necessarily be reflective of wider healthcare practice. Nevertheless, a core feature of our sample is that where concerns exist healthcare organisations do not address them as quickly as they could, and this lack of effective early resolution means the circumstances involved become far more entrenched and difficult. These unresolved situations then have significant potential to affect the quality of surgical care being provided to patients.

Another regular experience of invited review work is that concerns are often raised in strong and emotive terms. This can sometimes lead to equally strong and emotive responses from the individual(s) about whom the concerns have been raised. The consequence is that the raising of concerns begins to overlap with the management of interpersonal or organisational grievance

and grudge. The danger is that the response to the concerns raised becomes highly procedurally focused and process based. This means that organisations risk failing to focus on the critical priority: is this situation affecting the quality of the surgical care being provided to our hospital's patients?

It is also our experience that in a small number of cases an individual may raise concerns that are not substantiated and instead reflect a personal agenda. This is an extremely challenging situation to manage. While it is very important to support people to raise concerns, it is vital that careful distinction is made between legitimate matters of clinical concern and problems with interpersonal interactions.

Overall our experience in this area shows that concerns about surgical practice are not resolved as quickly and effectively as they could be and that this can impact on the quality of care.

More work should be undertaken across healthcare to improve the quality and frequency of discussion of surgical performance and to normalise the early discussion of the challenges that arise, before they become full-blown concerns. We also believe that organisations should seek external advice and support at an earlier stage so they have a better chance of resolving such problems before they affect patients. To promote this the RCS has published detailed guidance in *Acting on Concerns: your professional responsibility.*¹²

The quality of surgical service delivery

The purpose of our invited reviews is to review the clinical practice of an individual surgeon or surgical service and give a view on whether there are any causes for concern. It is not surprising therefore that the most frequent outcome of our reviews is to identify ways in which individual consultant surgeons, or surgical teams, can improve their delivery of care.

PROVIDING AN APPROPRIATE STANDARD OF SAFE SURGICAL PRACTICE

The issues that can arise about the delivery of safe surgical practice can be multifaceted. They can be highly technical and specialty specific. The sample size reviewed here is too small to draw definitive conclusions about what causes concerns within specialty-specific areas of surgical work. Our experience does show, however, that concerns about surgical practice can be broadly grouped within generic themes. These include:

Surgical training and experience

- The nature of training undertaken by an individual surgeon before undertaking independent practice/adopting a new technique.
- How regularly a surgeon undertakes an operation and how it is ensured that they are carrying out procedures with sufficient frequency to maintain competence.

Preoperative care

- The preoperative assessment given to patients.
- The type and range of investigations undertaken prior to surgery.
- The way a patient is selected for surgery.
- The multidisciplinary team processes supporting this decision.
- The management of the surgical care pathway and patient waiting lists.

Perioperative care

- The specific surgical approaches followed and how decisions about this are made.
- The anaesthetic, nursing and operating department practitioner resources available.
- The technical ability of the surgeon concerned.
- The quality of individual surgical decision-making during operations.
- The management of perioperative complications and the team-working that supports that management.
- The length of time taken to complete operations (it is recognised that this is not a reliable determinant of the quality of surgery and will vary).

- The quality of perioperative care.
- The quality and timeliness of the identification of patient deterioration preoperatively when a patient is admitted in an emergency.

Postoperative care

- The quality of the immediate postoperative care.
- The high-dependency and intensive-care unit resources that can be offered postoperatively.
- The quality of the postoperative recovery facilities.
- The quality of the nursing support available to patients on hospital wards.
- The early identification of and response to postoperative complications.

Surgical resources supporting surgical care

- The quality of junior and non-consultant-grade surgical staff available.
- The level of consultant surgeon input into care, particularly out of hours.

The quality of systems, processes and leadership supporting surgical care

- The consistency of protocols for pre, peri and postoperative care at the hospital and how these are applied in practice by the consultant surgical group.
- The quality of handover of patients between consultant surgeons and other staff.
- The management of regular consultant surgical ward rounds and the quality of surgical leadership provided during them.

This list represents our experience of areas where challenges can arise in relation to the delivery of safe surgical practice. These challenges may occur in isolation or a number of them might arise in relation to an individual surgeon or a consultant surgical team. Where such challenges arise and are not responded to effectively, the quality and safety of care can be affected. To avoid this, consultant surgical teams need a high level of awareness of the quality of their surgical practice and should review it systematically at regular intervals. This process needs to be strongly led and well managed and supported. Early action also needs to be taken when concerns arise.

THE CLINICAL LEADERSHIP AND MANAGEMENT OF SURGICAL SERVICES

An unfortunate feature of situations where concerns have arisen is that the individual surgeon or surgical service concerned has not had access to strong and effective clinical leadership or good quality service management. All too often clinicians and managers are perceived as operating in

separate worlds and this perpetuates an environment where personnel think in terms of 'them' and 'us', with the two groups apparently serving differing priorities and not being able to work together.

It is also sadly sometimes the case that consultant surgeons do not want the role of clinical director. This often leads to a rotation of this key role among a group of 'reluctant leaders' who 'take their turn' but do not enjoy it and do not feel they have enough support to make a proper impact. Little non-clinical time is made available for this critical leadership role, and little training is provided.

When concerns arise, this individual is often left responsible for managing the immediate response but has little access to experienced support when doing so. While some trusts may appoint an individual from outside the surgical team to take forward an investigation, the clinical director will retain responsibility for managing the day-to-day impact of the issues.

Given that the majority of surgeons will say they went into surgery to do active operative work, the role of clinical director can be perceived as one undertaken by an individual who 'doesn't like doing surgery'. Even where this is not the case the time the role takes away from core surgical activity leads to it being considered detrimental to the development of a surgeon's career. Furthermore, consultant surgeons are trained with the specific aim of becoming highly skilled autonomous clinical professionals, and much of the training focuses on being a team leader rather than a team member. Consultant surgeons may therefore lack experience of being a follower rather than a leader, and as a consequence decisions made by a clinical director are not always followed through by the consultant surgeons within the team.

This can be exacerbated where a surgical service does not have access to consistent and effective service management support. Invited review experience suggests that, within surgery, service management arrangements can change regularly and be subject to frequent reorganisations. Given the complexity of surgical services, it can often take time for a new service manager to understand the services being provided. This can have a significant impact on the capacity of the surgical service to meet its targets and to maintain an effective infrastructure that supports high-quality reflective practice and service improvement. Where a newly appointed and inexperienced clinical director comes into post at the same time as a hospital reorganisation of service managers, the safe delivery of a surgical service can be put at risk while these individuals gain experience.

Lack of access to experienced and effective clinical leadership and service management can have a significant impact on the quality and safety of surgical service provision. Our experience suggests that senior hospital managers need to retain a constant oversight of the experience levels, skills mix and training of those appointed to these important positions.

Early action should also be taken where senior managers are concerned that the right balance of skills and experience are not in place, before the quality of a surgical service starts deteriorating.

MULTIDISCIPLINARY TEAM WORKING

A central component of the delivery of modern surgical care is the multidisciplinary team (MDT), and the way this team meets to discuss and agree the approaches taken to an individual patient's care. The development of multidisciplinary team-working has been of great benefit to the delivery of surgical services, and it is generally accepted that it has improved patient outcomes.

It is also apparent that for this group to be effective it must be well managed and led. Where this is not the case concerns can arise about the quality of patient care. Our experience through invited reviews shows that there are a number of problems that can occur when managing a multidisciplinary team and coordinating an effective multidisciplinary team meeting, including:

- poor administration of the meeting (lack of timely distribution of details of patients to be discussed and the information that supports the discussion);
- an attempt to discuss more patients than it is feasible within the time available;
- poor attendance by key personnel;
- lack of specialist input from key clinical areas (for example radiology, pathology and oncology);
- a lack of dedicated and job-planned non-patient time to support this activity;
- poor chairing of the MDT discussion and poor management of decision-making processes;
- ineffective documentation of decisions;
- poor management of disagreements over appropriate treatment routes for patients;
- poor behaviours and lack of respect between members of the group;
- difficulties with technologies required to support an effective meeting (video conferencing, access to computerised patient records, pathology and radiology results);
- poor follow-through of MDT decisions and how these are communicated to patients; and
- low-quality reflection on and audit of MDT activity.

Such problems can be difficult to resolve and lead to a significant amount of time being spent ineffectively on an MDT that is not focused on what should be its key priority: enabling a widely trained and highly experienced group of healthcare professionals to consider the options for the most suitable treatment of a patient's condition.

If not addressed at an early stage a poorly functioning MDT can be detrimental to the quality of a surgical service.

PATIENT CONSENT PROCESSES

Concerns also sometimes arise around the process for obtaining patient consent. Issues include, for example, whether or not the individual obtaining consent has sufficient surgical experience to ensure that the patient is fully informed about the procedure proposed and the risks and benefits of it. Good quality consultant-level oversight of this process is crucial. Concerns in this area can sometimes be indicative of wider issues with an individual surgeon or surgical team.

When undertaking an invited review it is interesting to discuss the approach taken to obtaining patient consent, and the information given to patients. This might include discussion of:

- the patient's relative risk of complication;
- the patient group against which this risk has been measured;
- the information available to the patient about the individual surgeon's results when undertaking the procedure;
- the number of times the surgeon has undertaken the procedure (and across what period);
- the extent to which the procedure proposed is an established approach;
- the surgeon's recent results; and
- how these compare to national outcomes data.

The extent to which personnel report confidence in the patient consent process, and the ability of those involved to provide data to support their confidence, is a useful indicator of the quality of the surgical service being offered. Absence of this information can be indicative of a wider problem requiring more detailed exploration.

THE DEVELOPMENT AND INTRODUCTION OF NEW TECHNIQUES

It is also useful to understand the way in which an individual surgeon or surgical service develops new surgical techniques and introduces new surgical technologies. New techniques and technologies have always been crucial to the advancement of surgical care and the improvement of outcomes. However, such developments must be underpinned by rigorous clinical governance processes, appropriate training and tight scrutiny of outcomes. Changes to practice should be well managed, with those involved having considered the relative risks and benefits and discussed the options for surgery with the patient(s) concerned.

Problems can occur where new techniques and technologies are introduced without appropriate clinical governance arrangements and where senior leaders do not maintain effective oversight. Where there is no oversight, no governance systems, and a lack of appropriate reflection, difficulties can arise. These difficulties can be challenging to resolve, and if not addressed can affect the quality of clinical care.

Our experience shows that the introduction of minimally invasive operative techniques – and in particular the use of laparoscopic surgical methods, especially in colorectal surgery – can cause problems. Key issues are: the processes by which an individual trains in the new approach; the oversight and quality assurance underpinning the training; the way in which the individual introduces his or her new approach; the learning curve he or she experiences; how patients are selected for the new approach; how consent is obtained; how these patients are managed postoperatively; and how the outcomes of the new approach are audited. Problems can arise if any of these factors are not appropriately managed.

Our sample size is not large enough to comment on the relative safety of laparoscopic techniques and more traditional open surgical approaches. The sample is composed mostly of cases in which a healthcare organisation has asked for assistance to decide if concerns exist: these organisations have already identified the need for external support and are therefore not representative of wider standards of surgical care. It is possible to say, however, that when introducing new techniques such as laparoscopic colorectal surgery, those undertaking the work must ensure that these techniques are only adopted after an appropriate period of training and mentorship, and that the adoption is underpinned by appropriate clinical governance mechanisms and effective multidisciplinary team-working arrangements, and is subject to a rigorous outcome audit. Without such systems, problems can occur and patient care can be affected.

Standards of individual surgeon behaviour and team-working

Appropriate standards of individual behaviour and team working between consultant surgeons are central to the delivery of safe surgical care. Sadly, inappropriate individual behaviour and a lack of respect within teams are regularly occurring themes in invited review work and can lead to significant causes for concern about the delivery of a safe surgical service.

INDIVIDUAL BEHAVIOUR

A regular feature of our experience is that the insight that an individual surgeon has into the strengths and weaknesses of his or her own surgical practice, and the impact of his or her own behaviour on the people around them, are crucial to enabling concerns about performance to be addressed. In particular, individuals about whom concerns are raised often demonstrate little self-awareness or appreciation of the significance of the situation they are in and the seriousness of the concerns raised. They can often be unwilling or unable to accept challenge and criticism of their performance and find it extremely difficult to be dispassionate about their circumstances and see them from the perspective of those raising concerns (or indeed from the point of view of an objective, neutral observer). They can be highly dismissive of the concerns that are raised about them and often will seek to challenge the individual or organisation that are raising concerns rather than engaging with a process of clarifying them and giving assurance about the quality of the care they are providing. They are poor at accepting feedback and become increasingly entrenched in their position. During this process they can come across as being 'difficult to manage', 'controlling', or arrogant in their approach.

It is also our experience that individuals experiencing difficulty can become isolated within their surgical team. They may respond defensively when concerns are raised, and data to judge the quality of the individual's surgical outcomes may be difficult to find. Without appropriate reflective practice, some of the qualities an individual will have relied on to become a highly trained autonomous surgical professional (such as strong, independent decision-making) can be magnified and manifest themselves in personality traits that make the individual difficult to engage with. Individuals may become arrogant and dismissive of other healthcare professionals. Their behaviour can become highly variable, and range from being compliant and non-confrontational to being difficult and demanding.

Individuals may also be reluctant to accept and deal with complications in their surgical practice, and may attempt to explain these complications away without acknowledging their significance. A tendency to blame other staff emerges and relationships with other colleagues can be affected.

Difficulties arise in maintaining appropriately professional working relationships and frustrations can develop, with colleagues believing that they are 'carrying' their team mate and that this is affecting the outcomes and reputation of their surgical team. Confidence is lost in the individual and this can often lead to further deterioration in other aspects of team-working.

Individuals under pressure can often also behave in ways that are not appropriate to a 'normal' working environment. This behaviour can take an enormous amount of time to manage and address. Without effective resolution this behaviour can significantly compromise the quality of patient care.

TEAM WORKING

Aside from concerns about aspects of the quality of surgical practice, the issue that arises most frequently during invited reviews is team working between consultant surgeons. The teamworking problems identified in invited reviews are extremely varied, and the issues they identify also illustrate the attitudes that some surgeons have to working in teams.

Many surgeons will report that the team that they work in most regularly is the team that they work with in theatre. The importance of the wider consultant surgical team is less well recognised, and the quality of interaction that is reported in this group is often a key indicator of how the surgical service is delivering care.

In our experience it is often a considerable challenge to identify a well-defined consultant surgical team within a service. In some organisations the team will be identified by the specialty to which the consultant surgeons belong (such as general surgery or orthopaedic surgery) but in many organisations the team is increasingly defined by either the sub-specialty (for example colorectal surgery, or upper gastrointestinal surgery) or the area of the body being operated on (for example thyroid surgery or spinal surgery). Such team definitions appear to have evolved as the services provided by the organisation have developed, and it often seems that little consideration has been given to how the consultant surgical team concerned might come together. Instead of operating as a coherent unit, this team all too often works as a group of independent autonomous surgical professionals with their own individual 'sub-teams'.

Difficulties can also arise if a group of surgeons needs to come together in a different way to support another key aspect of surgical care, such as providing an emergency surgical service and organising emergency on-call work. A regular challenge is that groups that have otherwise

sub-specialised, and have become used to working in specific sub-specialty groups (for example breast, upper gastrointestinal or colorectal surgery), are required to reorganise themselves to provide the services required to deliver emergency surgical care (for example providing cover for an unselected general surgery emergency on-call take).

Providing complex surgical services requires effective team-working within and between teams, but in our experience little thought is given to how these surgical teams are created and work together as a group, and how it is ensured that they are well managed and led. Little consideration is also given to the way such teams are structured, how these teams will interact, and the way these teams meet to review their performance and improve their standards of care.

We often find that the surgeons under review do not meet regularly or effectively as a consultant surgical team, and that these consultant surgeons have little appreciation or practical experience of the way such meetings could be used to assure the quality of surgical services, and develop and improve them.

Even when a consultant surgical team has been well identified, clearly defined and given the opportunity to meet regularly, the success of this group will still be determined by the level of engagement demonstrated by the individual consultant surgeons, and the behaviour of those involved. The nature of team-working behaviours reported can vary considerably, but in our experience the team-working behaviour of the consultant surgical group can leave much to be desired.

The way these behaviours manifest depends on the circumstances of the review and the situation faced by the consultant surgeons. However, common themes are:

- a lack of recognition of the need to operate effectively within a consultant surgical team;
- a lack of respect for the designated leader of the team (and little acknowledgement of how important it is to follow the decisions made by that leader);
- a lack of appreciation of the skills and abilities of other consultant surgical colleagues;
- difficulties in relationships with junior medical staff;
- a lack of understanding of the relevance and value of other clinical staff;
- reported problems in relationships with administrative support staff;
- a negative attitude towards non-clinical middle managers; and
- an adversarial relationship with senior management.

The pressure generated when concerns are raised about the quality of surgical practice can have a significantly detrimental impact on the day-to-day interactions of consultant surgical personnel. As a result, we often hear accounts of inappropriate and unacceptable interpersonal behaviour from consultant surgical staff. Interviewees may report rudeness, a lack of respect, anger and aggression, a lack of perspective or capacity to take a dispassionate view on circumstances, withdrawal and isolation from the group, or other behaviours that are unacceptable in a workplace. We recognise that our experiences represent circumstances in which personnel are working under significant pressure, and these will not be reflective of the good team-working practices displayed in many healthcare organisations. Nevertheless, in our experience, understanding the quality of team-working within a surgical service is critical to determining the quality of the surgical care being provided. It is also our experience that where potential concerns arise, too little consideration is given to the way the consultant surgical team works together to respond to these circumstances. Not enough attention is given to the way the situation affects the wider surgical group, and the pressures generated can lead to significant and sometimes serious deterioration in team-working practices.

Our strong recommendation from these experiences is that those responsible for surgical services should give constant attention to the way their consultant surgical teams are identified and defined, how these services are led and managed, the manner in which their consultant surgeons meet and at what intervals, and the way in which this group interacts when delivering care. They should also consider ways in which this group can demonstrate it is working together to assure and improve the quality of care. Without such oversight, difficult circumstances can develop which potentially affect the overall quality and safety of surgical practice.

RELATIONSHIPS WITH JUNIOR STAFF

A number of invited reviews have shown that the experiences of the junior staff working with surgeons are very useful in assessing the quality of team-working and the standards of individual behaviour in a surgical service. Where these staff describe a poor standard of training experience and a poor-quality interaction and level of teamwork between consultant surgeons, problems with the quality of surgical service delivery may occur.

We recommend that healthcare organisations have well-structured processes for ensuring the views of junior staff are taken into account. When these junior staff members report concerns they should be acted upon.

The quality of performance improvement processes

Another determinant of the quality of a surgical service is the quality of reflection on surgical practice. Reflection can take many forms but in our experience the most important features are morbidity and mortality meetings, audits, responses to patient-experience information, and appraisal of surgeons.

MORBIDITY AND MORTALITY MEETINGS

The open discussion of patient deaths (mortality) and complications with operative outcomes (morbidity) has long been a cornerstone of high-quality surgical care. The capacity of individual consultant surgeons, and others involved in surgical services, to reflect on and evaluate the quality of care is critical to retaining an oversight of how well surgery is being performed, and how any complications can be avoided in the future. Having appropriate time and support to undertake proper reviews of patient deaths and complications is crucial to ensuring that surgeons reflect on and learn from their experiences and hence improve the quality of their care.

In our experience, surgical services do not always undertake this type of morbidity and mortality review as effectively as they could. There may be insufficient time or resources, or on occasions when time and resources are available the quality of discussion may not be appropriately structured or sufficiently challenging to ensure suitable learning. In these circumstances, morbidity and mortality meetings are reported to be ineffectively chaired and led, and the capacity of those surgeons in attendance to learn from their own and their colleagues' experiences can be compromised. Patient deaths and complications may be discussed a long time after they happened and key information may be lacking. The activity is not given appropriate priority, and colleagues are not supported to undertake this type of difficult and sensitive discussion in an effective way.

Our experiences underline how critical this area of reflective practice is to providing a safe, high-quality surgical service, and why it should be prioritised.

USING CLINICAL AUDIT TO DRIVE SURGICAL SAFETY AND QUALITY IMPROVEMENT

Clinical audit has always been a critical part of surgical practice and is vital in assuring quality of care. Used appropriately, it can also be a valuable way of assuring outcomes and safety and can be used to drive quality improvement.

Our experience of how such work is undertaken varies, with a range of quality of audit practice in evidence. Crucially, the way an organisation's audit processes have evolved can be erratic, and

may represent the individual research interests of an organisation's personnel, rather than being used in a systematic manner to assure quality and drive service improvement. This activity can be under-resourced, both in terms of clinical time and other staffing resource. Our experience is that this activity can need to be better focused and led, otherwise concerns can arise. Organisations may also miss opportunities to maximise the benefits that can be brought about by good quality clinical audit.

RESPONSES TO INFORMATION ABOUT PATIENT EXPERIENCE

Another key element of reflection within a surgical service is whether or not it is able to learn from patients' experiences. We routinely request information about complaints and the responses provided to patients from trusts in preparation for an invited review, as it provides a valuable perspective on how the service is managed.

In our experience, while most complaints are responded to and resolved, what is missing is for the individuals and services concerned to get together to ask what can be learned from the situation and how they can use that learning to ensure a similar situation does not recur. Practice can be variable and our experience is that while on some occasions appropriate lessons may be learned, there are not always sufficiently well-organised systems to ensure this happens every time.

APPRAISAL

The introduction of revalidation was imminent throughout the period within which our sample of invited reviews took place. However, we often found that the standard of appraisal of consultant surgeons was poor.

We routinely requested appraisal documentation as part of our preparation for an invited review, but the documentation we received was often out of date, scantly completed and demonstrated little evidence of reflective practice or effective challenge of performance. Concerns about the performance of individuals or teams demonstrated by the invited review were often not highlighted or addressed through a trust's annual appraisal process.

Although revalidation has the capacity to drive improvements in this area, our experience underlines how much these improvements are needed. It also shows that the quality of appraisal taking place can be a measure of how successfully a service is being managed, and of the quality of senior leadership being given to consultant surgeons.

The information available about surgical activity and outcomes

A regular feature of invited reviews where concerns are identified about surgical practice is the absence of good quality information on surgical activity and outcomes. Our experience shows that the quality of data in critical areas such as the numbers of operations completed by surgeons or surgical services can be poor. It is also our experience that data available within trusts on the quality of the surgical outcomes of an individual surgeon or surgical service can also be poor.

We have found from invited reviews that trusts and surgeons can be poor at maintaining upto-date 'live' activity and outcome information. A likely reason for this is that such work is not given sufficient priority or attention. Unfortunately, the time at which this deficit in information is identified is often the time when concerns are raised. This leaves the organisation and individual(s) in a difficult position: concerns about quality are alleged but clear information is not immediately available to provide reassurance or substantiate concern. This can generate confusion and mutual lack of trust among those involved.

The quality of data available to a trust can dramatically affect their capacity to respond effectively to concerns. It also provides a clear indicator of the overall quality of management and leadership in a surgical service.

THE IMPORTANCE OF ACTIVITY DATA

Any service providing healthcare should have access to good activity data. In our experience, this is unfortunately not always the case. For example, there may be a lack of reliable data on: the number and type of operations undertaken by a surgical service; the number of patients referred to and discharged from the surgical service; the number of outpatients appointments completed; and other details about patient interactions.

These data are critical for a number of reasons. Crucially, they enable the trust and its surgeons to demonstrate that they are undertaking a sufficient number of any particular type of procedure. Without these data it is difficult for an organisation to know if they are undertaking appropriate numbers of operations, or if their surgeons are doing these operations sufficiently frequently to ensure that suitable outcomes can be achieved. Other benefits of such data are that those with responsibility for leading and managing the service have a clear and consistent understanding of what their service is achieving annually, and that the organisation can ensure that it is being appropriately reimbursed for the services it is providing.

We are not suggesting that such information does not exist somewhere within the organisation under review. Rather, it is our experience that the personnel providing these services cannot routinely access the data as part of their preparation for an invited review visit. These same personnel also often do not have complete confidence in the accuracy of the data available to them.

In our experience, trusts do not prioritise and support the development of systems that enable the accurate collation of such data, and only become aware of the critical importance of doing so when concerns arise. At this point, consideration is given to investing in such systems for the future. Although this will clearly be of some benefit, it does not help the trust manage the situation at hand.

THE IMPORTANCE OF OUTCOME DATA

In addition to the absence of clear activity information, it is also our experience that trusts requesting reviews do not always have clear, accurate and universally accepted data on the outcomes of the individual surgeons that they employ, or the surgical services that they provide. There is often a shortage of data on common surgical complications, leak rates, readmission rates, resection margins, lengths of stay and other indicators of clinical quality. Again, this shortage of information prevents the trust from immediately providing assurance when concerns are raised.

The quality of individually held data can also be highly variable, with some surgeons providing detailed information about their activity and outcomes, but with the majority of surgeons not being able to do so.

The maintenance of good quality information about activity, quality of outcome and rates of complication is, in our experience, a very clear indicator of the standard of management and leadership of a surgical service and, more often than not, can reflect the quality of surgical care being provided. We believe very strongly that the collation of such data should be a higher priority for trusts and surgeons.

Recommendations

The challenges of delivering surgical services can be multifaceted and complex. Our experience from invited reviews is that early action to address these challenges is critical. We hope that the way of analysing surgical services described in this document and our Self-assessment questionnaire (page 8) will help surgeons and those with responsibility for surgical services to do this. We also make the following recommendations:

- 1. The quality of surgical performance should be regularly discussed by individual surgeons and their teams.
- 2. Concerns should be acted on at an early stage and addressed before they affect patient care.
- 3. Those responding to concerns should consider the value of an independent external perspective on the situation.
- 4. Surgeons should have access to appropriate services and resources to help them deliver safe care; any shortcomings should be addressed.
- 5. When a surgical service goes through a significant organisational change, those involved should clearly identify the ways in which they will monitor the impact of the change on the quality of surgical outcomes, and how they will ensure that any change does not affect patient care.
- 6. Surgical services should have clearly identified clinical leaders, who should be given training and ongoing support and resources to fulfill their roles.
- The performance of multidisciplinary teams and the effectiveness of their meetings should be kept under regular review and routinely audited to assess the quality of care they are delivering.
- 8. The way in which a surgical service obtains informed patient consent should be regularly reviewed and carefully audited to ensure appropriate quality of practice.

- 9. Any new techniques and technologies that are introduced into an individual surgeon's or surgical team's practice should be developed in a structured and carefully managed way, ensuring that appropriate training and experience is obtained by the individuals concerned, and that the new techniques or technologies are adopted in compliance with a trust's clinical governance structures.
- 10. The behaviour displayed by consultant surgeons should support the delivery of safe surgical care and inappropriate behaviour should be addressed at an early stage.
- 11. The standard of team-working between groups of consultant surgeons should be regularly reviewed to ensure that it supports the delivery of high-quality surgical care.
- 12. The experience of juniors should be used to inform the regular review of team working between consultant surgeons.
- 13. Regular reflective practice should be used to assure the quality of surgical care. In particular, through:
 - a. appropriate time and resources being dedicated to high-quality morbidity and mortality review meetings;
 - b. appropriate time and resources being dedicated to programmes of clinical audit that demonstrate surgical safety and promote improvements in quality;
 - appropriate time and resources being dedicated to comprehensive appraisal of individual surgical practice and the use of this appraisal to improve performance, where necessary; and
 - d. appropriate time and resources being dedicated to structured and effective learning from patient experience and patient complaints.
- 14. Appropriately designed systems should be used by surgical services to collate detailed, accurate and timely data on surgical activity and surgical outcomes. This work should be given high priority and sufficient resource for it to be used comprehensively across healthcare to assure standards and improve quality.

Our Self-assessment questionnaire (page 8) has been developed to help healthcare professionals to assure the quality of surgical services.

References

- Heart Surgery Sees Dramatic Improvement Since Mortality Data Publication. July 2009. http://www.rcseng.ac.uk/media/medianews/heart-surgery-sees-dramatic-improvement-since-mortality-data-publication (cited 20 May 2013).
- First ever vascular aneurysm audit shows commitment to improving patient safety, say surgeons.
 February 2012. http://www.rcseng.ac.uk/media/medianews/first-ever-vascular-aneurysm-audit-shows-commitment-to-improving-patient-safety-say-surgeons (cited 20 May 2013).
- 3. National Hip Fracture Database. http://www.nhfd.co.uk/ (cited 20 May 2013).
- 4. The Royal College of Surgeons of England. *The Higher Risk General Surgical Patient: towards improved care for a forgotten group.* London: RCSE; 2011. http://www.rcseng.ac.uk/publications/docs/higher-risk-surgical-patient/
- 5. The report of the public inquiry into children's heart surgery at the Bristol Royal Infirmary 1984-1995: learning from Bristol. Department of Health. http://webarchive.nationalarchives.gov.uk/+/www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4005620 (cited 20 May 2013).
- 6. The Mid Staffordshire NHS Foundation Trust Public Inquiry. http://www.midstaffspublicinquiry.com/ (cited 20 May 2013).
- 7. Main Specialty. HESonline (Hospital Episode Statistics). http://www.hesonline.nhs.uk/Ease/servlet/ContentServer?siteID=1937&categoryID=207 (cited 20 May 2013).
- 8. Annual PEDW Data Tables. NHS Wales Informatics Service. http://www.infoandstats.wales.nhs.uk/page.cfm?pid=41010&orgid=869 (cited 20 May 2013).
- NHS Staff 2001–2011, Medical and dental. NHS Information Centre. http://www.ic.nhs.uk/searchcatalogue?productid=4876&topics=2%2fWorkforce%2fStaff+numbers%2fMedical+and+dental+staff&page=1 (cited 20 May 2013).
- Hospital medical and dental staff by specialty and year. StatsWales (Welsh Government).
 https://statswales.wales.gov.uk/Catalogue/Health-and-Social-Care/NHS-Staff/Medical-and-Dental-Staff/HospitalMedicalAndDentalStaff-by-Specialty-Year (cited 20 May 2013).
- 11. The Royal College of Surgeons of England. *Reshaping surgical services: principles for change*. London: RCSE; 2013. http://www.rcseng.ac.uk/publications/docs/reshaping-surgical-services/
- The Royal College of Surgeons of England. *Acting on Concerns: your professional responsibility*. London: RCSE: 2013. http://www.rcseng.ac.uk/publications/docs/acting-on-concerns



Produced by RCS Publishing

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

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