Royal College of Anaesthetists

February 2018

Royal College of Anaesthetists' response to the Call for Contributions for the Commission on the Future of Surgery

About the Royal College of Anaesthetists

- Sixteen per cent of all hospital consultants are anaesthetists making anaesthesia the single largest hospital specialty in the UK[1,2,3]
- Anaesthetists play a critical role in the care of two-thirds of all hospital patients[4] and 99% of patients would recommend their hospital's anaesthesia service to family and friends[5]
- With a combined membership of 22,000 fellows and members, representing the three specialties of anaesthesia, intensive care and pain medicine, we are the third largest Medical Royal College by UK membership.

The Royal College of Anaesthetists (RCoA) welcomes this important and ambitious piece of work. We offer a narrative comment that we hope will help shape the work of the Commission. We confirm that we would be happy for our contribution to be featured in future media coverage about the Commission.

Our response to the consultation questions, in full, is provided below. Should you have any questions regarding this, please contact Natalie Bell at nbell@rcoa.ac.uk or by phone on 020 7092 1681.

General comments

1. The innovations that the Commission lists as having potential significant impact on surgery seem apposite, and we anticipate that the relevant experts in the field will be able to offer a summary under each heading of how, and in what form, that impact might be realised.

2. However, there should be appropriate caution (of which the Commission seems well aware) that this should not be just a 'commission for the future of surgical technology' but rather a review of how that technology might have an impact on the wider issues of team structures, working practices, training, and the patient pathway.

3. We note that the Commission has excluded from its terms of reference, analysis of future NHS funding arrangements or government policy. That is understandable, yet both of these are crucial to enable the translation of any of the Commission's recommendations into practice. We would suggest that the funding implications of any recommendations are explicitly addressed, so that policy makers, informed by the expertise of Commissions such as this, are clear of what is needed to resource the anticipated or desired developments.

4. In that regard, we note that many of the developments considered are highly innovative. We anticipate that before they are fully implemented, organisations like the National Institute for Health and Care Excellence (NICE) will need to be involved through the relevant guidelines, and that funding models will need to identify and support the introduction of 'best practice'. Some interventions may remain at the level of 'innovations' rather than 'best practice'. How, and on what evidence the two are distinguished may remain a challenge.

5. We would like to see explicit comment on patient safety in the context of the anticipated developments. We appreciate that the safety aspects of technologies will have been considered 'automatically' in their development. Yet, there is now a sophisticated literature base in the science of safety and how principles of safety need to adapt to changing technologies. In other words, the emerging technologies will need to be managed in a way that ensures safety and this should remain a stated priority. Expressed from a slightly different perspective, the Commission will need to place the surgical innovations within the context of other, lower risk treatments, which form part of the care pathway.

Comments from the anaesthetic perspective

Anaesthesia facilitates surgery and our specific specialty perspective on the Commission's work is summarised in the following observations:

6. Our main comment relates to the need for the Commission to investigate the changing nature of the 'team' in the surgical process, and the changing roles of individual components of it. For a number of years, the RCoA has emphasised the concept of perioperative medicine (POM) as integral to our approach.[6] This enshrines the notion that the anaesthetist has an essential role to play beyond the confines of the operating theatre. This includes work in preparing and assessing the patient for surgery ('fitness for surgery'); including preoperative exercise training or iron therapy, risk assessment, postoperative care; not only in intensive care or high dependency units, but also through the pain service, and ward care; including the training of staff. It would be impossible for the Royal College of Surgeons of England (RCS) to present an assessment of the optimum composition of that team without direct representation from the RCoA.

7. We anticipate that many of the innovations being considered by the Commission will have an important impact on the nature and composition of the 'team' and of the ranges of skills required. For example, if something like immunotherapy will form an important part of surgical management then the surgical ward will serve very different functions from what we regard as traditional (eg, less focus on things like drain care to more monitoring of blood counts). Consequently, we would expect a significant part of the Commission's report to discuss how the emerging technologies will transform traditional roles within surgery, to the benefit of standards of patient care. In turn, this will have implications for other specialties like anaesthesia, as alluded to in point 6 (above).

8. We would like to see explicit comment on the 'operations management' and 'health economics' aspects of the Commission's terms of reference. We note that the changes to surgery since the Darzi report (Saws and Scalpels to Lasers and Robots 2007[7]) with the emphasis on endoscopic, laser and robotic, and day case surgery has caused a shift in where the bottlenecks in the surgical pathway arise. Hitherto, when patients spent days or weeks on the ward, the rate-limiting step was ward bed capacity. This is no longer the case. Whereas we used to undertake around four cases per list we now undertake only one or two (who are discharged the same or the next day) the bottleneck may have shifted to theatre capacity.[8 9] Coupled with an evaluation of the demand for surgery, this inevitably leads to a necessary analysis of (a) the number of surgeons needed and (b) the timings of surgical lists.[10] In brief, if fewer but longer operations become the norm (a process which has already begun) then we need more operating lists overall. And, if we need more lists, then we need more surgeons.

There is a dissonance between the ambitions for what hospital services can provide and what system-wide efficiencies will be embedded through transformation. For example, research from the Nuffield Trust found that some Sustainability and Transformation Partnerships (STPs) are targeting up to 30% reductions in selected areas of hospital activity, including outpatient care, A&E attendances and emergency inpatient care.[11] These reductions are being planned in the face of steady growth in all areas of hospital activity, including the doubling of elective care over the past thirty years.[12]

There is a supplementary point to make, which is that if each operation takes longer, then the standard 'eight hour' model for a surgical list may be inappropriate. Therefore, we need to consider different organisational models for a list (eg, not just ten or twelve hour lists, but perhaps longer durations of access to theatres, including weekend working for elective surgery). All this will have cost implications and making these as explicit as possible will assist policy makers (see point 3 above). The RCS Taskforce on the impact of the European Working Time Directive (EU WTD) found that the EU WTD was in some ways prohibitive to specialties including surgery, but not for anaesthesia. [13] Changes in the length of procedures may demand a review of the feasibility of the existing regulations.

The overarching point to make is that operations management is an important dimension to include in any review of the future of surgery, and in particular, the need to identify where the bottlenecks are in the patient pathway. Another potential bottleneck to consider, not explicitly discussed above, is delayed discharges (DTOCs). This might be currently affecting medical patients more than surgical discharges, but nevertheless is another example of the importance of these operations management analyses.

9. We would like to see included some mention of the role of 'big data' and national level audits as both drivers to change and monitors of that change. The Commission's terms of reference do indeed refer to the use of information technology. Not only should this apply to personalised medicine, but also to population medicine. The RCoA has pioneered learning from large National Audit Projects (NAPs) and with improved national databases we anticipate and hope that these projects will be even easier to undertake at scale. The development of NHS England's STP dashboard and NHS Improvement's model hospital suggest the direction of travel in the use of data analytics to measure system performance, which is likely to become more granular over time.

10. We anticipate that the Commission will need to discuss issues around the training of surgeons on at least two levels. One is the numbers needed. We recognise that the demand for surgical services has continued to grow and this is something that has importance for RCoA workforce planning. This (and the points made in section 7 above), would appear - at least at a superficial analysis - to require an expansion of surgical training posts. Second is the content and nature of training. Given the areas where the Commission expects surgical innovations to develop, it would seem that the traditional form of surgical training will need to change. The RCoA is not in a position to comment on detail, but what is implied is a broader generic training programme, followed by much more focussed specialist training. We recognise that this may have implications for postgraduate training in general, with the possibility of greater flexibility in tasks across the traditional specialties than has hitherto been the case. An existing example of this is in intensive care training that now includes physicians and some surgeons - in addition to anaesthetists.

11. There are several comments we can make relating to the technical aspects of anaesthesia in the context of the surgical innovations being considered. We recognise that surgical approaches determine the type of anaesthesia. Positively, there is now a wider range of anaesthetic interventions based around shorter acting drugs, better targeted regional anaesthesia and improved monitoring that we think will help facilitate much of what is proposed. There is also the exciting possibility of personalised medicine through improved genomic knowledge and the RCoA has direct representation on the Academy of Medical Royal College's *Genomics Champions* network. However, at present, the emphasis of the RCoA remains on things like human factors and safety. In other words, we are not currently limited by a lack of specific technology in delivering better anaesthesia care, but rather we need to disseminate better ways of using the technology we already have at our disposal.

12. One important aspect of the point made in section 11 (above), is our role as anaesthetists in patient optimisation for surgery and risk management. The changing demographics (older, less healthy population) will determine greatly how surgery changes over the years to come. Coupled with our enhanced role as perioperative practitioners, we envisage a growing responsibility with regard to patient preparation and selection for the various surgical options of the future.

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[2] Stats Wales. Medical and dental staff by specialty and year. March 2017
[3] Information Services Division Scotland. HSHS Medical and Dental Staff by Specialty. December 2016
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[5] EMK Walker, M Bell, TM Cook, MPW Grocott, and SR Moonesinghe for the SNAP-1 investigators. Patient reported outcome of adult perioperative anaesthesia in the United Kingdom: a cross-sectional observational study. *British Journal of Anaesthesia*. 2016
[6] Royal College of Anaesthetists. Perioperative medicine: The pathway to better surgical care. 2014
[7] Darzi, A. Saws and Scalpels to Lasers and Robots – Advances in Surgery Clinical Case for Change. Department of Health. 2007
[8] Pandit JJ, Carey A. Estimating the duration of common elective operations: implications for operating list management. *Anaesthesia*. 2006 Aug;61(8):768-76
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[10] Pandit JJ, Tavare A. Using mean duration and variation of procedure times to plan a list of surgical operations to fit into the scheduled list time. *Eur J Anaesthesiol*. 2011 Jul;28(7):493-501
[11] Imison, et al. 'Shifting the balance of care: Great expectations'. Nuffield Trust. March 2017
[12] Imison, et al. 'Shifting the balance of care: Great expectations'. Nuffield Trust. March 2017
[13] Report of the Independent Working Time Regulations Taskforce to the Department of Health. The Implementation of the Working Time Directive, and its impact on the NHS and Health Professionals. March 2014