EDITORIAL I

Publication of surgical outcomes-data: whose team are we on?

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The truth will set you free, but first it will make you miserable
James Garfield, Former US President
... assassinated

In 2013, the Royal College of Surgeons of England (RCS), in partnership with the National Health Service of England (NHSE) began public disclosure of outcomes-data for individual hospitals and named surgeons. Data have been published for the following surgical disciplines: adult cardiac, bariatric, colorectal, head and neck, thyroid and endocrine, gastrointestinal, urological, vascular (plus interventional cardiology).1 Politicians may argue that this is a ‘revolution in transparency’.2 The public might applaud this as a way to empower patients and facilitate their decision-making. Surgeons might, albeit with trepidation, welcome the opportunity for comparison with peers. Those of us in anaesthesia and intensive care, however, might want to ask: ‘what does it mean to us?’ and ‘are we on the team or not?’

Public disclosure: nothing to fear?

In 2001, a public inquiry into high mortality associated with paediatric cardiac surgery at the Bristol Royal Infirmary recommended that the public ‘be able to obtain information as to the relative performance [of] services and consultant units’.3 In 2006, the Society for Cardiothoracic Surgery in Great Britain and Ireland began openly publishing mortality data. Other surgical societies have followed suit, and data once only collected for internal peer-review are being made public. This is, in part, due to pressure from politicians and the media (the publication of cardiothoracic surgical mortality data was itself preceded by an investigation by the Guardian newspaper). This has increased following the recent Mid Staffordshire Hospital Inquiry and the decision of the Keogh report to publicly identify and investigate low-performing institutions.4–6 In short, there is momentum in the UK towards disclosure, and less tolerance of ‘hiding in plain sight’.

It is possible that publishing data (raw or adjusted) will fail to tell the whole story. It could increase (rather than allay) public fear, create ‘pariah’ hospitals, or encourage surgeons to operate only on the relatively healthy (‘hit the target, but miss the point’). These concerns are understandable but not backed by empiric data. The aforementioned 2001 Bristol Inquiry report highlighted potential benefits of disclosure, citing the example of New York State in the 1990s, where mortality rates after coronary artery bypass grafting were publicly associated with individual hospitals and named surgeons. The result was not ‘a mass desertion of the poorly performing hospitals’, instead, ‘there was a rapid improvement in their mortality rates’.3 Recent UK data also seem to suggest that we have less to fear and more to gain.7

What of intensive care and anaesthesia?

The Intensive Care National Audit and Research centre (ICNARC) case mix programme database (CPMD) already allows participating UK intensive care units (ICUs) to compare their outcomes-data. Currently, this is neither publicly available nor linked to specific practitioners. This lack of traceability might be excused because of the shared model of critical care delivery (‘I was only his intensivist the day he was admitted’), the fact that ICU doctors do not personally administer all therapies (we direct nurses to do so), and because complexity mandates co-management within still larger teams (there is no ‘I’ in ‘ICU’).

Variation between ICUs is understandable and to be expected. A review of severe brain injury (a pertinent disease given co-management by intensivists and surgeons) from six...
Canadian trauma centres published in 2011 reported a wide range in both hospital mortality (10.8–44.2%) and death after the decision to withdraw life-sustaining therapy (45.0–86.8%). Notably, the six centres agreed a priori not to unblind (even privately). This important national audit has certainly promoted discussion (and guess work)! However, lack of identification means that lower-survival sites are not provoked into action. Similarly, higher-survival sites are less likely to identify, preserve, and share whatever ‘worked’.

How uncertainty is managed and communicated influences both therapeutic choices and how long we persist at them. In turn, this substantially influences mortality. Therefore, even if mortality is routinely disclosed, there are important follow-up questions: what are acceptable survival rates? (let alone acceptable survival quality?), and what is acceptable variation between sites? Are those that come last always underperforming?

When prognostication tools are imperfect, we need unbiased judgement, experience, and a sense of the patient’s wishes. Only then do we know what it is reasonable to offer. This is difficult if surgeons worry that any therapy that is withheld or withdrawn could impair their statistics, livelihood, or referral-base. Evidence also shows that we do ration in ICU based upon what resources exist at any given time. Moreover, this occurs whether we are aware of it or not. It may be difficult for surgeons to collaborate if they suspect colleagues base decisions on what the system can accommodate, rather than solely what is best for the individual patient.

Even with a strong evidence-base, there are substantial variations in practice associated with geography, ethnicity, religious, and cultural beliefs; even insurance status. Microcultures also exist within medical centres, which influence decision-making (and therefore mortality). With this background noise, it is noteworthy that surgeons and intensivists/anaesthetists function in the same healthcare system but with different approaches to accountability. We should explore which serves the patient best.

**Building trust and building teams**

Creating a ‘culture of patient safety’ is usually understood to mean strengthening the team, encouraging shared responsibility, and striving for systems that improve complex decision-making (so-called ‘cognitive ergonomics’), This also means using checks and fail-safes to prevent dominance by one (fallible) person. Therefore, it is usually argued that we need to reduce hierarchy (so all relevant viewpoints are considered), and encourage blame-free reporting (so that we learn from mistakes, no matter their source).

This sounds ideal in theory. However, by encouraging shared decision-making, do we de-emphasize individual responsibility? Linking mortality data to a name (or several names) should preserve patient ownership and provide a powerful incentive to improve. There is evidence that taking individual responsibility can improve patient outcome. However, we also have growing evidence that the team approach, and a blame-free culture, also improves outcome. The provocative (and unanswered) question is whether one approach is superior, or is it possible to harness the best of both? In other words, we want to build safer teams but also bolster responsibility. Can we have our cake and eat it?

The World Health Organization’s Surgical Safety Checklist has been widely promoted with the goal of improving surgical safety. However, its philosophy is at odds with having only surgeons linked to outcome. For example, the implementation manual states that the operating team ‘is all persons involved’ and that each ‘plays a role ensuring safety and success’. Given that surgeons are not invited to dictate many determinants of the checklist (e.g. the preoperative equipment check or the mode of anaesthesia itself), it seems incompatible to give them sole public accountability. If we all desire credit for good outcomes, then surely we must share responsibility for the bad.

We no longer tolerate the overbearing surgeon, or the anaesthetist afraid to speak up. However, linking surgical mortality to the surgeon may bolster this outmoded stereotype. The surgeon is no longer the ‘sole commander’, nor is the anaesthetist (or intensivist) a disenfranchised subordinate. When difficult decisions must be made (i.e. whether to pursue surgery despite risk, or withdraw after catastrophic surgical complications), then each member must ‘own’ their decisions. Presumably, we should remove any perception of ‘hiding behind’ the mortality data of our surgical colleagues?

**Embracing change**

Regardless of how we feel about disclosure, it is hard to imagine the policy being reversed. Moreover, the Royal College of Surgeons has stated that this ‘is the beginning’ not the end. They expect more published outcomes from the 10 specialties, and for others such as obstetrics and gynaecology to be included. The Rubicon has been crossed and, soon enough, the focus will move to anaesthetists and intensivists.

Sharing our results might promote a dialogue to ensure we have the resources and public support to do our job properly. ICU transparency would also be more apparent with dictated summaries for all patients transferred from critical care areas. We could involve more family members on ICU rounds, thereby demonstrating all that is being done. Similarly, anaesthesia would be more transparent with notes dictated after difficult cases, just as surgeons do even for routine cases. Devices that automatically record vital signs (rather than written vitals: which can be accused of inaccuracy) would demonstrate that we have nothing to hide. If the philosopher Schopenhauer is correct, such changes will be initially ‘ridiculed’, then ‘violently opposed’, but ultimately accepted as ‘self-evident’.

Yet even if these, and other, measures are adopted, it surely cannot be long before anaesthetists and intensivists are also asked to collect and publish morbidity data. The Keogh report has suggested that every physician has a ‘duty of candour’, and momentum suggests that the current state (‘don’t ask, don’t tell’) will not last. We should reflect on the sort of teams in which we currently work, and in which we want to work. For example, if you are not prepared to publish your name alongside your surgeon, then why not? Similarly, would they welcome your name alongside theirs, and if not, why not?
Fluid responsiveness: an evolution of our understanding

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Decisions regarding fluid therapy, whether this be in the operating theatre (OT), intensive care unit (ICU), emergency department (ED), or general ward, are among the most challenging and important tasks that clinicians face on a daily basis. Specifically, almost all clinicians would agree that both hypovolaemia and volume overload increase the morbidity and mortality of patients. What is not widely appreciated is that when a fluid challenge is given on ‘clinical grounds’, only 50% of haemodynamically unstable patients (in the OT, ICU, or ED) are volume responders [i.e. they will increase their stroke volume (SV) by >10–15%].1 This emphasizes that clinicians have great difficulty in estimating the preload condition of their patients.

Fundamentally, the only reason to give any patient a fluid challenge is to increase their SV; if this does not happen, the fluid administration serves no useful purpose and is likely to be harmful.2 Furthermore, the increase in SV (and thus cardiac output) must be judged to be beneficial. Fluid loading per se is not always the correct therapy for hypotension or a reduced urine production. Fluid therapy acts by increasing

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