

**Pulvertaft Essay Prize**

**'How can we reduce the postcode lottery of hand services in the  
NHS?'**

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The term 'postcode lottery' implies that some patients lose out through not getting as good care as others living elsewhere. 'Postcode lottery' is essentially a proxy term with negative connotations rather than positive ones. The more technical term in use is 'variation' which is the measurable deviation from an ideal patient pathway or treatment outcome. Where variation impacts negatively on patient care then there is focus on reducing it in the patient pathway.

I will argue in this essay that variation can in fact be a force for good in terms of stimulating development of best practice, and consequently improving outcomes. I will go further and argue that the constant focus on what is 'wrong' with the National Health Service drags down the average performance as it fails to inspire, motivate, empower, support and get the best out of the many staff who are responsible for delivering surgical care either directly or indirectly.

Before focussing on best performance, I will look at what is done to identify less good performance, areas of service deficiency and suboptimal patient pathways. Too often the response from health service planners, under pressure from the public and from government, is to focus completely on minimum service provision. A great deal of institutional and individual effort is then expended on assuring minimum acceptable levels of performance. If, instead of treating all variation as something to be eliminated, we could encourage positive variation then we might succeed in raising standards.

#### *Forms of variation*

Let us examine the case for there being a postcode lottery in the provision of hand surgical care. Variation may occur in the organisation and provision of services and pathways but also exists between individual surgeons in terms of their own practices. With regard to the latter there may be differences in indications for surgery, preferred surgical technique, technical facility of the surgeon as well as differences in the aftercare and therapy provision supporting that service. In addition, there can be variation between what the individual surgeon does within their own practice with different recommendations being made to patients with the same condition.

One example of variation is the rates of carpal tunnel release operations between different services. Are the highest rates of carpal tunnel release surgery indicative of best practice or do they simply reflect streamlined referral pathways, ease of access, surgeon preference and structure of contracts? Are the lower rates indicative of services under pressure that are insufficient for need or do they reflect different thresholds for offering surgery? Either way it is likely that departmental culture has quite a role to play in determining local practice. Deeper study of these types of variation may give insights into and help build a consensus for what actually constitutes best practice.

Another form of variation is that due to commissioning decisions whereby commissioners have the authority to arrange services according to needs of their local community. Sometimes this has led to less generous dispensation of resources for hand surgery services and many of us will be familiar with this having experienced 'blanket'

restrictions on core procedures within hand elective practice. Indeed, recent published evidence has confirmed the wide variation in commissioning of commonly performed hand elective procedures.

One form of variation that is seldom discussed is that which comes from the unconscious bias of the clinician who brings their own set of beliefs and experiences to bear on each and every clinical situation. For example, we may all recognise the oft-stated maxim that zone 2 flexor tendon injuries occur in uncooperative young men who don't follow their rehabilitation programs leading to ruptures and poor outcomes from their repair surgery. The facts are that the mean age for isolated flexor tendon injury is in the early thirties and this group will typically cooperate in their own interest. Were we as surgeons to believe the former statement to be true then we would not work so hard to try and improve rehabilitation regimens believing that poor outcomes are simply not within our control. The possibility of improving results is then lost to us.

Finally, there may be variation in the particular expertise of the local hand surgeons. There is still a significant part of hand surgery that is undertaken by practitioners who would not identify themselves as hand surgeons. For example, a patient with Dupuytren's contracture who needs a dermofasciectomy may not receive this from an orthopaedic surgeon who is uncomfortable with performing skin grafts. Patients with hand fractures may not receive optimal fracture fixation from the generic plastic surgery hand trauma service. There may, therefore, be variation in care depending on whether the patient is referred to a plastic surgeon or an orthopaedic surgeon. The long-term commitment of organisations, most notably British Society for Surgery of the Hand (BSSH), to fostering collaboration between plastic and orthopaedic surgery is clearly a benchmark of best practice.

### *Toolkit for measuring variation and responding with change in practice*

The profession has a number of tools at its disposal to develop, deliver and embed best practice solutions. In the first instance it is necessary to measure variation in the subject of interest.

#### *a. GIRFT*

The GIRFT initiative identifies then mandates best practice solutions for a wide range of surgical conditions, having initially focussed on orthopaedics and joint arthroplasty. Centralisation of specialist services is part of this project. GIRFT has its strengths in reducing variation and promoting what is best practice at this moment in time. Its weakness is that it will make it difficult to incorporate, and in future adopt, any innovation that is not specifically within the context of a clinical trial. It is difficult to see how practice will move forward in the UK unless global comparators are incorporated in the GIRFT consideration. Innovation is essential if hand surgery practice is to progress over time but needs to be encouraged somewhere within the wider surgical network. There therefore needs to be some supported variation in practice of this type. Innovation in practice is inherently risky and may be detrimental at least until refined to the point of representing a net benefit. Innovation can include discarding treatments that don't work even when everyone else still does them. Abandoning an innovation quickly if it

doesn't produce results is necessary for the surgeon who seeks to disrupt the accepted paradigm. 'The fastest way to success is to double your failure rate.'

b. *Audit.*

Regular audit with a robust system of feedback for outliers has been a powerful tool in the past for improving results within the wider surgical community. Audit can shine a light on what is being done well and not so well. The publication of individual surgeon results has taken place in other specialties such as cardiac surgery but looking at the results that the particular team can produce may have greater impact and discussions are ongoing in this area. BSSH promotes use of the Amplitude database for documenting outcomes in hand surgery. We could also promote best practice were a joint registry database for hand and wrist prosthetic arthroplasties to be developed, along the lines of the National Joint Registry.

Clearly it is important to have something to audit against and this is where published standards, protocols and evidence-based practice have an important role to play.

*Published standards*

There are a number of standards which typically specify minimum behaviours but can also signpost more aspirational standards as something we should all be working towards. An example of the latter is the publication of HandStands for hand trauma practice. This raft of recommendations specifically aims to improve practice in hand trauma surgery. There are many examples to be found in the publications from BSSH, BAPRAS, BOA, Royal Colleges and the GMC.

*Protocols and guidelines*

National Institute for Health and Care Excellence (NICE) guidelines are published as reference for a selected number of conditions and treatment options. For example, recommended practice with respect to a number of hand and wrist arthroplasties have been published.

*Evidence-based practice*

Great efforts are made by individuals and our professional societies to promote best practice through sharing the evidence base of hand surgery, not least through our scientific conferences and our European Journal of Hand Surgery. However, surgical management of common hand surgery conditions often lacks a clear evidence base. National Institute for Health Research (NIHR) funded studies are expensive and there are so many more questions that could usefully be asked than there will ever be funding to answer them. For rare conditions there are insufficient cases to power a clinical trial on treatment alternatives. Even once published there is unfortunately often a time lag of many years for some clearly beneficial treatments to be widely adopted. Everyone supports the concept of evidence-based practice, but we don't all do it all of the time and need to be nudged every so often in this direction. Clearly, failure to adopt best practice will lead to unwanted variation in patient management and outcomes. In response, we need to put in place the enablers to that best practice at the same time as overcoming barriers to their adoption.

c. *Quality Improvement (QI)*

Direct measurement of variation from published standards or protocols is another tool for, improving specific aspects of care provision. At its core, effective QI depends on surgeons asking good questions. Use of the Plan-Do-Study-Act (PDSA cycle) method is a powerful way to introduce rapid change based on observation and modification of practice. 'What gets measured is then what gets done.' The HandsFirst initiative is an example of a QI project with which the hand surgery community (BSSH/RCSEng) is currently engaged. Specifically, HandsFirst seeks to reduce the waiting times for patients between injury and definitive surgical treatment.

### *Drivers of positive variation*

In addition to measuring variation and modifying intervention there are a number of other drivers for improving clinical care that can simultaneously work to reduce poor practice and promote good practice.

#### a. Education of hand surgeons

Fostering aspiration within the next generation of hand surgeons so that they will be better than the current generation is one of the most powerful means we have to improve hand surgical practice. The Hand TIG fellowship program which fosters crossover skills acquisition and mutual understanding between orthopaedic and plastic surgeons has been a flagship helping to develop our community as 'hand surgeons' and reducing the variation for treatment of one condition depending on whether a patient is referred to a plastic surgeon or an orthopaedic surgeon.

Seeking to then make each hand surgeon the best they could be was the motivation behind development of the Postgraduate Diploma in Hand Surgery and Masters in Hand Surgery programmes of BSSH/University of Manchester. These programmes have defined the clinical standard of the consultant hand surgeon in our country.

#### b. Service organisation

Opportunities exist in terms of service organisation to promote cross specialty working with benefit to patients particularly those requiring more specialist input. Plastic and orthopaedic hand surgeons can work side by side in both the multidisciplinary clinic setting with hand therapists, and in theatre on complex cases. For example, some units have shown excellent results from combined orthopaedic and plastic surgery input on vascularised free bone tissue transfer for scaphoid non-union that would be difficult to achieve with single discipline input alone.

Centralisation of specialist services is a well-recognised approach for driving quality. Within our own discipline this has been achieved to some extent in the fields of congenital hand, brachial plexus and wrist/distal radioulnar joint replacement arthroplasty. Specifically, the provision of clearly designed patient pathways, and agreed protocols as well as clinical referral networks has been helpful from this perspective.

#### c. Professional organisations

At a national level the BSSH has the responsibility, opportunity and ambition to promote best practice in hand surgery care. At local level individuals can also play their part in setting an example of excellence in practice within their own organisations.

#### d. Communications

The power of modern communications means that good practice solutions can rapidly be shared with fellow professionals. However, that does not guarantee the uptake of those

ideas. Translating knowledge and 'know how' into definitive change in practice and pathways is a multifaceted process that has at its heart engagement with individuals. Social media has been a powerful disrupter in the way we obtain information and has allowed the individual to influence her/his colleagues independent of received wisdom. While all novel approaches are unlikely to stand the test of time the ability to share and critique new ideas within the profession is a useful tool for rapid innovation and positive change.

### *Barriers to promoting positive variation*

- a. *Funding.* One of the key constraints to addressing variation and bringing in positive change is the current funding model within the NHS. Funding mechanisms are constructed around the founding principles of the NHS to prevent mortality and serious morbidity – a dispensation which often does no favours to hand surgery. Our model is not required to factor in the socioeconomic benefits of hand surgery. Consequently, it can be difficult to improve the quality of local services. Ideally funding would follow demonstration of improvement of care. By way of example, radius osteotomy for complex anatomical realignment may be best done using 3d printing technology. Lack of funds may mean carrying on doing this operation by traditional methods. This scenario then leads to variation through failure to keep up with developments that should have been adopted.
- b. *Change management* We know that most improvements in practice performance come through applying what we already know in a consistent manner rather than through new discoveries. Surgeons own psychological factors impact on adoption of desirable change. We know that there are early and late adopters as well as those who seldom if ever adopt new practices. Hand surgery departments should probably do more to understand and work with the individuals who form their group. Perhaps we should do more to gently challenge these individual biases.

### *Concluding comments*

There is little doubt that there is significant variation in hand surgery services representing the 'postcode lottery' of common parlance. Ironically, the mechanisms that have been developed to eliminate poor performance could be redirected for the opposite effect. Indeed, exceptional performance and innovation are stifled by a continuing focus on eliminating poor performance.

So how do we engineer the desirable balance of making use of what we already know, promote best practice and encourage innovation? The model would include several key elements. Firstly, surgeons working to published standards should share these with service planners such that there is alignment of service goals. Appropriate tools should be made available to clinicians and service planners to measure, evaluate and positively impact on variation. Barriers to change and improvement have to be identified and addressed while enablers that prevent poor practice and facilitate best practice are put in place. Above all, a change in culture that obsesses over poor practice is now due.

