NEGLIGENCE IN HAND SURGERY: THE UNTOLD STORY

The BSSH Pulvertaft Essay Submission

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Word count: 2452

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1. INTRODUCTION

The moment a surgeon attends to his or her patient, a duty of care is established. A duty to provide all information necessary for informed consent, a duty to respect the patient's confidentiality and a duty to take the appropriate steps to reach the correct diagnosis, offer treatment and provide follow-up. Where duty of care is breached, liability for negligence may rise.

Orthopaedic surgery has been subjected to malpractice claims for over 130 years (Sanger, 2009) and is well recognised as a high-risk speciality for negligence claims (Jena et al., 2011). Over the last two decades, society has experienced a shift in cultural attitudes to medical professions and an extraordinary rise in the legal services industry. This has led to a multitude of awareness campaigns and programmes such as "Sign your Site", "Getting it Right the First Time" (GIRFT), the World Health Organisation (WHO) surgical safety checklist in the UK and the similar universal protocol in the US (Wong et al., 2009; Association, 2002; Cobb, 2012; Briggs, 2015). Despite this, negligence claims in hand surgery remain high.

This essay will present our current understanding on negligence in hand surgery, delve further to explore the untold story of hand surgery negligence and propose solutions to combat it.

2. THE TOLD STORY

2.1 DEFINING NEGLIGENCE

Since the publication of the 1999 Institute of Medicine (IOM) report "To Err is Human: Building a Safer Health System" (Kohn et al., 1999), the importance of distinguishing between concepts of adverse events, system errors and true negligence have been emphasised.

An adverse event is any injury resulting in prolonged hospitalisation, disability or death, caused by healthcare management (Brennan et al., 1991). For example, a patient is prescribed some antibiotics and develops an unforeseeable allergic reaction, resulting in their hospitalisation. A human error is any deviation from expectation or acceptable limits of an action intended by the actor. Medical negligence represents a failure to meet the required standard of knowledge, skill or care (Senders and Moray, 1991). This distinction has been important as only 27% of adverse events occur through medical error, and only a fraction of these are due to medical negligence (T. A. Brennan et al., 1991).

2.2 PREVALENCE OF HAND SURGICAL NEGLIGENCE

Campaigns such as the "Sign your Site", GIRFT, the WHO surgical safety checklist and universal protocol have pushed patient safety to the forefront of healthcare (Wong et al., 2009; Association, 2002; Cobb, 2012). Yet, the prevalence of wrong-site surgery and negligence claims against hand surgery remain on the rise.

NHS Improvement releases its annual "never events report" which includes instances of wrong-site surgery. Out of the annual total wrong-site surgery incidences between April 2017-March 2018, cases related to hand surgery make up 4.5% (NHS Improvement, 2018c). This is an increase from previous years (Figure 1). According to NHS improvement, the rise in wrong-site surgery most likely reflects an improvement in incident reporting in general (NHS Improvement, 2018a). However, this does not explain why the proportion of wrong-site hand surgery increased by 400% between 2015/16 to 2016/17 whereas the total wrong-site surgery between this time increased by only 5.5% (Figure 1).

Just as incident reporting is on the rise, so are malpractice claims for hand surgery. Analysing claims of hand surgery negligence from the National Health Society Litigation Authority (NHSLA), Khan and Giddins discovered that claims had increased over time (Khan and Giddins, 2010). Further, orthopaedic surgeons, many of whom operate on the hand, consistently gain the highest number of negligence claims out of any other specialty (figure 2) (NHS Resolution, 2017).

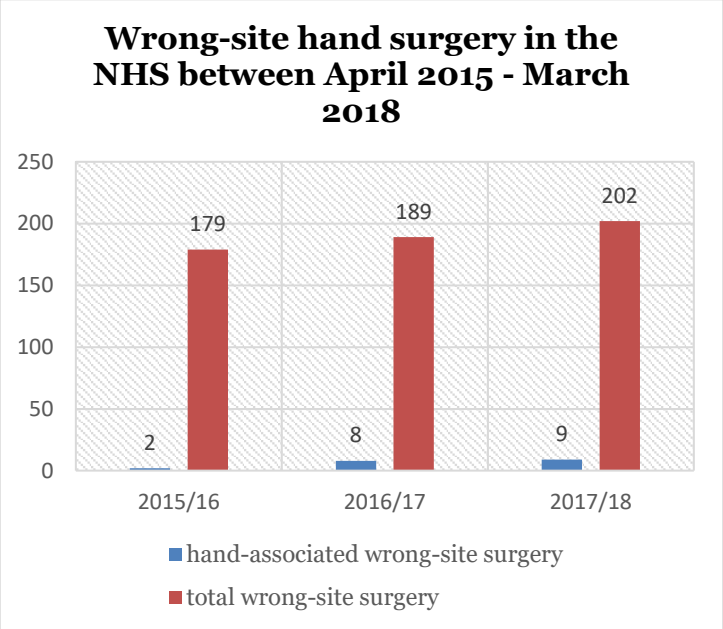

Figure 1 *– Incidence in wrong site hand surgery and total wrong-site surgery incidences in the NHS between April 2015 – March 2018.*

Earlier dates cannot be compared due to the changes in inclusion criteria of wrong site surgery from March 2015 onwards

Data collated from: (NHS Improvement, 2017, 2018b, 2018c)

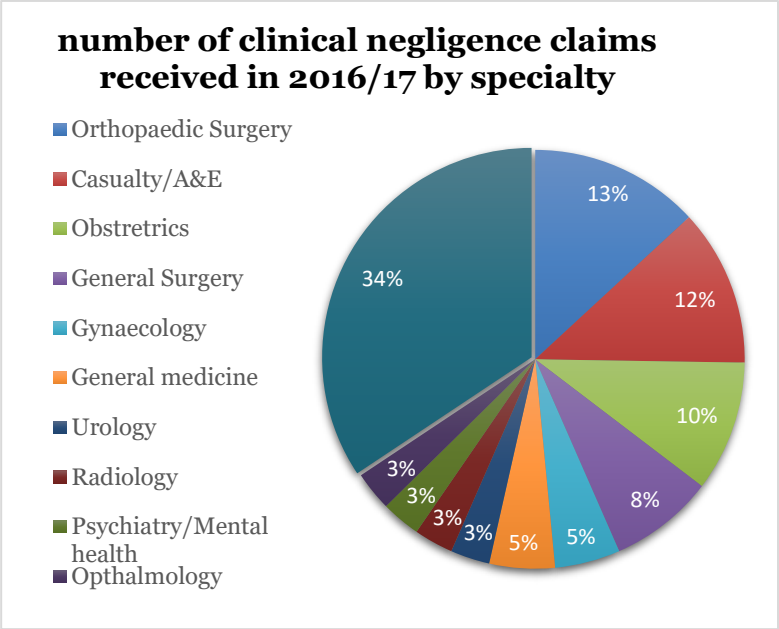

Figure 2 *– As in previous years, orthopaedic surgery receives the highest number of negligence claims*

Data from: (NHS resolution, 2017)

3. THE UNTOLD STORY

3.1 BEHIND THE NUMBERS

Currently, there is no evidence attributing the rise of clinical negligence claims to poorer patient safety (National Audit Office, 2017). In fact, from the available indicators, the National Audit Office has found that the quality and safety of patient care has either improved or remained stable, whilst the number of negligence claims have risen (National Audit Office, 2017). Thus, what is driving this rise and why are we not experiencing an improvement of wrong-site hand surgery and negligence claims?

In reality, a substantial proportion of hand-related cases are not initially seen by specialist hand surgeons. Instead, the first point of contact for hand injuries are often general practitioners, A&E registrars, independent sector treatment centre (ISTC) surgeons and general surgeons.

A study from the Netherlands looking at hand malpractice claims found that general surgeons who occasionally treat hand conditions were the most commonly involved in hand surgery litigation (Delavary et al., 2010). The Netherlands has a vast shortage of fellowship-trained hand surgeons, with only 25 of such surgeons serving ~6 million people at the time of the study (Delavary et al., 2010). As a result, general surgeons not specifically trained in hand surgery are often called upon to treat basic hand conditions, leaving them liable to litigation.

This narrative is also echoed in other countries. Analysing hand surgery negligence claims from NHSLA, Carpal tunnel syndrome and wrist fractures were found to be subjected to the largest number negligence claims (Khan and Giddins, 2010). Interestingly, complications arose more commonly in ‘‘simple’’ operations such as carpal tunnel release and ganglion excision, with no liability claims found involving complex hand surgery (Khan and Giddins, 2010). The authors suggest this may be due to simpler operations being commonly delegated to junior surgeons who have less experience.

A New York study on malpractice claims of distal radial fractures that only four out of 70 cases (5.7%) were initially treated by hand surgeons, with 55 of the fractures being initially treated with closed reduction and casting (Denoble et al., 2014). Subsequently, 97% of the malpractice cases involved malunion. Hand surgeons found themselves instead performing revision procedures on 62% of the cases (Denoble et al., 2014) .

Thus, although hand-related surgery is a high-risk specialty for negligent claims, many of these claims are not actually targeted at specialist hand surgeons themselves. Instead, we have non-specialist clinicians either performing surgery poorly, not arrange appropriate follow up or referral or not performing surgery when indicated at all. This leaves patients exposed to malunion, stiff fingers and wrists, resulting in a rise in negligence claims.

3.2 REDEFINING NEGLIGENT BEHAVIOUR

The importance of distinguishing between adverse events, system error and negligence lies in its consequences. Punishing adverse events per se may have a detrimental effect on treating complex conditions or performing complicated procedures (Thornton, 2008). Punishment of errors instead of true negligence may incentivise workers to hide rather than report and will not lead to a reduction in future errors. However, the silent negligent conduct which permeates our hospitals is often overlooked.

Nonfeasance is the wilful failure to perform an act or duty required by one's position, resulting in harm or damage to a person. The work of a consultant hand surgeon in the NHS is complimented by the additional workforce of general orthopaedic/plastic surgeons, general practitioners, therapists and nurses. If hand surgery was indicated in a patient but faced by a healthcare provider who has little confidence in their ability to perform hand surgery, they may be inclined to leave the injury in a cast instead with the thought they may do them more harm if they operated on the patient. Whilst clinicians may justify this decision with the belief to 'do no harm', not performing or referring a patient to hand surgery when indicated, can cause patients prolonged pain, stiffness, clinical deformity and possible disability. Failure to act when there is duty to can be just as devastating and may be considered negligent conduct. It is important to combat this by promoting collaboration within multidisciplinary teams, with non-specialists being encouraged to seek advice or refer patients to hand surgeons to ensure patient safety and quality of care is protected.

4. SOLUTIONS

4.1 TRAINING

Whilst trained hand surgeons can make errors, non-specialist clinicians treating hand conditions in non-specialised services such as the A&E, walk-in centres and general orthopaedic services may leave the healthcare system predictably exposed to negligent claims. Non-hand specialists such as emergency nurse practitioners are often the first point of contact for patients with a hand or wrist injury. Further, due to the increasing specialisation of orthopaedic and plastic surgeons, the ability for general orthopaedic and plastic surgeons to manage hand injuries effectively is diminishing.

Thus, appropriate training is essential in maintaining standards of care and ensuring that the often-subtle signs of possible severe hand injuries are correctly identified by specialists and non-specialist clinicians alike. The BSSH offers educational and training courses for non-specialists (BSSH, 2017), and is an example of an initiative which can promote knowledge of conditions of the hand, awareness of red flags and when to refer to a specialist.

Training of non-technical skills is also important in improving quality of care. Whereas hand surgery training programmes may focus on technical skills, a major aspect in the surgeon's experience is related to decisions and judgements (Regenbogen et al., 2007). Further behaviour and non-technical skills such as problem-solving, decision making, teamwork and leadership in surgeons are known to affect surgical outcomes (Carthey et al., 2003; de Leval et al., 2000; Mishra et al., 2008).

Overall, training is a sustainable and long-term solution which empowers clinicians to intervene within their competence and identify the need to specialist input.

4.2 INTEGRATED PRACTICE UNITS

Between 2015 to 2016, 22.9 million people attended England's A&E Departments, of which 20% sustained hand injuries (NHS England, 2016). One in five of these hand injuries required specialist care and 240 000 required surgery (Baker, 2015). Yet, specialist hand centres such as the Pulvertaft Hand Centre at the Royal Derby Hospital in the UK are few and far between.

We must shift away from siloed wards organised by speciality, towards modelling healthcare around a patient's medical condition. This may be achieved through integrated practice units (IPUs) which aim to not only treat the disease but also its associated conditions, complications, and circumstances that commonly occur along with it. IPUs have been successful in displaying greater efficiency and fewer errors in healthcare delivery (Porter et al., 2007). Care would be delivered by a dedicated, multidisciplinary team who take responsibility of the full cycle of care.

4.3 RIGOROUS ANALYSIS OF NEGLIGENCE DATA

According to the National Audit Office, data on claims, incidents and complaints cannot yet be linked to gain meaningful insights such as whether the quality of complaints handling in trusts influences the number of clinical negligence claims (National Audit Office, 2017). Healthcare bodies should work together to promote better and more consistent data for complaints, incidents and negligence claims across the system.

Certain initiatives are already established to make better use of negligence claims data. NHS Improvement publishes statistics on national safety incidents to the National Reporting and Learning System (NRLS). The national data collected in the NRLS database allows trends to be identified. This information can inform the development of resources and contribute to a reduction in negligence. The British Society for Surgery of the Hand (BSSH) also encourages both hand-surgeons and non-specialists alike to enter their patients in the hand registry (Ukhandregistry.net) to monitor their outcomes. These avenues are vital in encouraging a greater level of transparency, providing a real opportunity for hand surgeons and non-specialist alike to share experiences in hand-related care and learn from them.

4.4 PROTECTIVE MEASURES

Whilst hand surgeons cannot control the legal and political climate of the country in which they practice, they can take certain steps to protect themselves from negligence claims by ensuring good and safe clinical practice. BSSH has provided a list of considerations in hand surgeons may want to follow to ensure they are protected from negligence claims (Figure 3).

One precaution hand surgeons can easily undertake is to avoid the significant mistake of wrong-site surgery. These can happen particularly easily in hand surgery due to procedures such as trigger finger releases which may involve multiple digits. This may be avoided through engaging with the WHO checklist (figure 3). Honesty and ensuring the patient is kept informed at all stages is vital. Patients are inclined to sue for malpractice if they receive an outcome which they believe was not properly explained to them in the surgical consent process (Ahamed and Haas, 1992).

Finally, documenting should be carried out meticulously. This is especially important as it often serves as the main piece of evidence that the management of a patient was carried out properly. As the old expression goes: "good notes; good defence. Poor notes; poor defence. No notes; no defence"

BSSH CONSIDERATIONS:

- Professional demeanour and empathy at all times
- Meticulous surgical technique with magnifying loupes
- Continuous professional development
- Engaging in GRIFT, specialised commissioning and hub and spoke models, referring on cases beyond one's comfort
- Taking a healthy clinical view of new solutions and implants, which are enthusiastically promoted before proper peer review or longer term follow up or comparative studies
- Respect the obligation for duty of candour
- Engage with the WHO checklist
- In house departmental meetings
- Raising concerns
- Multidisciplinary practice.

Figure 3 Considerations which should be undertaken by hand surgeons according to BSSH to ensure their practice is safe, effective and evidence based.

Source: (BSSH, 2017)

5. SUMMARY

Over the last two decades, distinctions between adverse events, system errors and true negligence have been established. We also know fields within orthopaedic surgery, such as hand surgery, are historically subjected to higher negligence claims. Yet, despite considerable quality assurance efforts to highlight areas of improvement and support a culture of transparency and safety, negligence claims and reported hand-related incidences remain high.

In reality, hand-related negligence claims rarely involve hand surgeons but target non-specialist clinicians who commonly encounter hand-related injuries. We must also be conscious of *nonfeasance*, or wilful negligence, and appreciate its consequences to patient outcomes and its contribution to hand negligent claims.

Thus, more needs to be done to train inexperienced clinicians who commonly encounter hand-related cases in non-specialised services. Whilst hand-related injuries are common, there is a severe lack of specialist units. IPUs are an excellent model which promotes multidisciplinary teams with improved patient outcomes. Finally, hand surgeons can protect themselves by ensuring effective and empathetic communication and ensure documentation is impeccable.

This essay has delineated the untold story of negligence in hand surgery. Further research and efforts into these issues will facilitate the propulsion of hand surgery into better, safer patient care.

6. BIBLIOGRAPHY

Ahamed, S. & Haas, G. (1992) Analysis of lawsuits against general surgeons in Connecticut during the years 1985 to 1990. *Connecticut medicine*. 56 (3), 139–141. [online]. Available from: http://www.ncbi.nlm.nih.gov/pubmed/1582206 (Accessed 20 June 2018).

Association, T. C. O. (2002) An AOA Critical Issue Medical Errors in Orthopaedics : Practical Pointers for Prevention *. *Health Care*. 2002–2005.

Baker, C. (2015) Accident and Emergency Statistics. *House of Commons Library Briefing Paper*. (6964), 1–34.

Brennan, T. et al. (1991) Incidence of adverse events and negligence in hospitalized patients. Results of the Harvard Medical Practice Study I. *The New England journal of medicine*. [Online]

Brennan, T. A. et al. (1991) Incidence of Adverse Events and Negligence in Hospitalized Patients. *New England Journal of Medicine*. [Online] 324 (6), 370–376. [online]. Available from: http://www.nejm.org/doi/abs/10.1056/NEJM199102073240604 (Accessed 25 June 2018).

Briggs, T. (2015) A national review of adult elective orthopaedic services in England GETTING IT RIGHT FIRST TIME. *MBBS (Hons), MD (Res)*. (March), . [online]. Available from: http://gettingitrightfirsttime.co.uk/wp-content/uploads/2017/06/GIRFT-National-Report-Mar15-Web.pdf.

BSSH (2017) *Hand Surgery in the UK*. 44 (0), .

Carthey, J. et al. (2003) Behavioural markers of surgical excellence. *Safety Science*. [Online]

Cobb, T. K. (2012) Wrong site surgery-where are we and what is the next step? *Hand (New York, N.Y.)*. [Online] 7 (2), 229–232. [online]. Available from: http://www.ncbi.nlm.nih.gov/pubmed/23730251 (Accessed 10 June 2018).

Delavary, B. M. et al. (2010) Hand and wrist malpractice claims in the Netherlands: 1993-2008. *Journal of Hand Surgery: European Volume*. [Online] 35 (5), 381–384.

Denoble, P. H. et al. (2014) Malpractice in distal radius fracture management: An analysis of closed claims. *Journal of Hand Surgery*. [Online]

Jena, A. B. et al. (2011) Malpractice Risk According to Physician Specialty. *New England Journal of Medicine*. [Online] 365 (7), 629–636. [online]. Available from: http://www.ncbi.nlm.nih.gov/pubmed/21848463 (Accessed 26 June 2018).

Khan, I. H. & Giddins, G. (2010) Analysis of NHSLA claims in hand and wrist surgery. *Journal of Hand Surgery: European Volume*. [Online] 35 (1), 61–64. [online]. Available from: http://journals.sagepub.com/doi/10.1177/1753193409347422 (Accessed 10 June 2018).

Kohn, L. T. et al. (1999) To Err Is Human. *Medicine*. [Online] 126 (November), 312. [online]. Available from: http://www.journals.cambridge.org/abstract_S095026880100509X.

de Leval, M. R. et al. (2000) Human factors and cardiac surgery: a multicenter study. *The Journal of Thoracic and Cardiovascular Surgery*. [Online]

Mishra, A. et al. (2008) The influence of non-technical performance on technical outcome in laparoscopic cholecystectomy. *Surgical Endoscopy and Other Interventional Techniques*. [Online]

National Audit Office (2017) Managin g the costs of clinical negligence in trusts. Department of Health [online]. Available from: http://parliamentlive.tv/event/index/2b1752ba-10ad-45a7-9319-bf6ce6f5f433?in=16:41:44. (September 2017). [online]. Available from: http://parliamentlive.tv/event/index/2b1752ba-10ad-45a7-9319-bf6ce6f5f433?in=16:41:44.

NHS England (2016) *A&E attendances and emergency admissions*. [online]. Available from: https://www.england.nhs.uk/statistics/statistical-work-areas/ae-waiting-times-and-activity/statistical-work-areasae-waiting-times-and-activityweekly-ae-sitreps-2015-16/ (Accessed 26 June 2018). [online]. Available from: https://www.england.nhs.uk/statistics/statistical-work-areas/ae-waiting-times-and-activity/statistical-work-areasae-waiting-times-and-activityweekly-ae-sitreps-2015-16/ (Accessed 26 June 2018).

NHS Improvement (2018a) *Never Events data* [online]. Available from: https://improvement.nhs.uk/resources/never-events-data/ (Accessed 25 June 2018).

NHS Improvement (2017) *Never Events reported as occurring between 1 April 2015 and 31 March 2016 – final update*. (March 2016), . [online]. Available from: https://improvement.nhs.uk/uploads/documents/NE_data_report_1_April_2015_-_31_March_2016_FINAL_v2.pdf.

NHS Improvement (2018b) *Never Events reported as occurring between 1 April 2016 and 31March 2017 – final update*. (April 2016), .

NHS Improvement (2018c) *Provisional publication of Never Events*. (April 2017), .

NHS Resolution (2017) *Annual report and accounts 2016/17*. [online]. Available from: http://www.nhsla.com/AboutUs/Documents/NHS Resolution - Annual report and accounts 2016-17.pdf.

Porter, M. E. et al. (2007) *The West German Headache Center: Integrated Migraine Care*. [online]. Available from: https://www.hbs.edu/faculty/Pages/item.aspx?num=34498 (Accessed 26 June 2018). [online]. Available from: https://www.hbs.edu/faculty/Pages/item.aspx?num=34498 (Accessed 26 June 2018).

Regenbogen, S. E. et al. (2007) Patterns of technical error among surgical malpractice claims: An analysis of strategies to prevent injury to surgical patients. *Annals of Surgery*. [Online]

Sanger, E. F. (2009) The classic: Report of the Committee on Suits for Malpractice. 1879. *Clinical orthopaedics and related research*. [Online]

Senders, J. W. & Moray, N. P. (1991) *Human error: Cause, prediction, and reduction.* Series in applied psychology. Hillsdale, NJ, US: Lawrence Erlbaum Associates, Inc.

Thornton, T. (2008) The Need for Tort Reform as Part of Health Care Reform. *Journal of Long-Term Effects of Medical Implants*. [Online] 18 (4), 321–327. [online]. Available from: http://www.dl.begellhouse.com/journals/1bef42082d7a0fdf,7a64329a6304ff39,4560a285042b1c96.html (Accessed 13 June 2018).

Wong, D. A. et al. (2009) Medical errors in orthopaedics results of an AAOS member survey. *Journal of Bone and Joint Surgery - Series A*. [Online] 91 (3), 547–557.