

# Hand Surgery in the UK

A resource for those involved in  
organising, delivering and developing services  
for patients  
with conditions of the hand and wrist.

Report of a Working Party (2017)

## Executive Summary

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**BSSH**  
The British Society for Surgery of the Hand



This document has the following intentions

- A resource for those involved in organising, delivering and developing services for patients with conditions of the hand.
- Consistent with its official professional role, an expression of the BSSH's views on the organisation, staffing, resources, standards and training that are required for the safe, effective, efficient delivery of care for patients afflicted by an injury or condition of the hand.
- A description of the British Society for Surgery of the Hand- its foundation, its professional standing, its activities and its future strategy

# 1. What is Hand Surgery

- Hand Surgery is a broad term which encompasses the multidisciplinary management of conditions of the hand. Most conditions do not require surgery and most surgeons manage more than just the hand. The remit is generally defined as: *“Assessment and management of conditions affecting the hand, wrist and peripheral nerves of the upper limb”*.
- It is a specialty that employs combined skills from the overlapping specialties of Orthopaedic Surgery, Plastic surgery and Emergency Medicine. Input may be required from other fields to include Rheumatology, Neurology, Neurophysiology, Pain Medicine and Psychology. Hand Therapists (trained from the allied disciplines of Occupational Therapy and Physiotherapy) are crucial in maintaining or restoring the pain free movement and sensibility upon which a functioning hand depends.
- The surgical treatment of hand conditions employs more diverse skills than many other surgical disciplines, encompassing small bone fixation, microsurgery, arthroscopy, joint replacement, and the reconstruction of skin, muscle, tendon and nerves
- A Hand Surgeon is an experienced clinician with appropriate specialised training, diagnostic capability and surgical dexterity. Some Hand Surgeons subspecialise yet further and manage more complex conditions such as microsurgical reconstruction, peripheral nerve surgery, brachial plexus surgery, joint replacement and congenital hand surgery. Many Hand Surgeons are still engaged in the general workload of their parent speciality, in which case they might be defined as an *“Orthopaedic Surgeon, or Plastic Surgeon, with a special interest in Hand Surgery”*

## 2. Current Hand Surgery delivery in the UK

There are various facilities to provide hand surgery services in the UK from small rooms in GP surgeries through minor injuries units, local hospitals, independent treatment centres and regional centres. Surgery is performed by Orthopaedic Surgeons, Plastic Surgeons and specialised Hand surgeons; some specially trained GPs and nurses may perform certain simpler procedures. With best practice in organisation and communication, these facilities can become complimentary with each other and thus avoid duplication or competition.

The Musculoskeletal Services Framework encourages development of multidisciplinary **Clinical Assessment and Treatment Services** in which patients with hand and wrist conditions are assessed by those less trained and less experienced. Pathways are developed to try and facilitate appropriate, local and expedient treatment.

**Specialist commissioning**, whereby certain procedures are only performed in a limited number of units, is being developed. Certain complex or expensive hand surgery procedures would in this model be directly commissioned by NHS England, to include complex microsurgical reconstruction, tendon grafting, congenital hand deformity, radio-carpal wrist replacement, total distal radio-ulnar joint replacement, ulnar head replacement, small joint replacements, nerve reconstruction, complex soft tissue cover, complex scaphoid reconstruction, brachial plexus reconstruction, soft tissue sarcoma, malignant bone tumour services and hand transplantation. Most of these procedures will be performed in specialised centres, mandating a “*hub and spoke*” referral pattern.

**Hand Trauma** predominantly affects the young working population and are a major source of disability, causing significant costs to the individual and society through time off work. In 2015/2016 there were 22.9 million attendances at England’s Accident and Emergency Departments (1), of whom 20% had hand injuries. In England, this equated to 4.58 million attendances for hand injuries. One in five (916 000) of these injuries require specialist care and 240 000 require surgery (2). Hand trauma care is delivered by GPs, Minor Injury Units, Accident Departments District General orthopaedic services, general plastic surgery services, regional hand centres and Major Trauma Centres. The majority of hand injuries are suitable for management as a day case procedure, under either local or regional anaesthesia.

Elective Hand Surgery faces increasing demands. A 39% increase is predicted in the demand for operations for common hand conditions (eg carpal tunnel syndrome, Dupuytren's Disease, osteoarthritis and trauma) over the next 10 years (Ref 2). Most operations on the hand cause moderate pain that can be controlled by oral analgesic medication and almost are suitable for day surgery. However, some bone and joint procedures such as wrist fusion or wrist replacement cause greater pain that may require inpatient admission for adequate pain control. The majority (90.4%), of NHS hand surgery is still done in NHS hospitals with 8.7% being delivered by private providers and 0.9% in GP surgeries ([http:// www.hesonline.nhs.uk](http://www.hesonline.nhs.uk)).

**Hand therapy** is fundamental to achieving good results from hand surgery, and is also integral to the outpatient management of hand disorders. **Radiology** particularly ultrasound, 3D CT and MRI have improved the care of patients with hand conditions. **Regional Anaesthesia** supports efficient and safe delivery of hand surgery. **Nursing expertise** is required for complicated wound care. **Children's Hand Surgery Services** need particular facilities and expertise. (ref 3).

#### **References**

1. NHS England, A&E Attendances and Emergency Admissions. <https://www.england.nhs.uk/statistics/statistical-work-areas/ae-waiting-times-and-activity/>
2. Bebbington, E., Furniss, D. (2015) Linear regression analysis of Hospital Episode Statistics predicts a large increase in demand for elective hand procedures in England. J Plast Reconstr Aesthet Surg. 68(2): 243-251.
3. Standards for non-specialist emergency surgical care of children, RCS Dec 2015

### 3. BSSH recommendations for delivery and future development

The British Society for Surgery of the Hand, acting as the recognised professional body for care of conditions of the hand and wrist, has developed recommendations for the current and future provision of safe, efficient, clinically effective and cost effective treatment for conditions of the hand and wrist. More comprehensive recommendations are available in the full document.

#### Organisation

Hand surgery is best provided by a “Hub and Spoke” model which should raise standards and reduce cost. Specialised Commissioning and Getting It Right First Time mandates the identification of units with appropriate expertise to provide specialised procedures and dedicated referral pathways which should be developed to facilitate the hub and spoke referral model. The best practice from larger centres with established hub and spoke models should be followed by other areas. The BSSH Professional Standards Committee will engage in this process.

#### Elective Treatment

- As more simple hand surgery procedures move into primary care and to other non-mainstream teaching facilities, steps must be taken to ensure that trainee hand surgeons are not deprived of essential training opportunities.
- Most elective soft-tissue operations on the hand should be carried out in day surgery facilities.
- Wide Awake Local Anaesthetic No Tourniquet (WALANT) techniques should be developed further.
- All-day operating lists are more efficient than half-day lists and should be in place wherever possible.
- The term “Procedures of Limited Clinical Value” should be abandoned if considered in light of fact. The treatment of carpal tunnel syndrome and trigger finger provides *significant* clinical value with demonstrable patient benefit and high satisfaction ratings.
- Dupuytren’s surgery is complex with a risk of debilitating complications and poor outcomes. It should be performed in a hand surgery rather than general orthopaedic environment. This means proper hand surgery training, suitable anaesthesia, mandatory magnification and specialized hand therapy and wound care follow up.
- Whilst assessment by less experienced person (eg GPs or Therapist) in a multidisciplinary **Clinical Assessment and Treatment Services** might appear to offer cost savings and quicker treatment, for every patient whose condition is beyond the diagnostic knowledge or treatment skills of that person and thus needs to see a specialist, there will be duplicated cost and extra delay. There is also the medicolegal risk of missed diagnosis or inappropriate treatment. Integration of the Hand Surgeon into the initial triage of referrals and into the multidisciplinary clinic team is strongly advised.

- Wide Awake Local Anaesthetic No Tourniquet (WALANT) techniques should be developed.
- Hand surgery units should have access to appropriate intra-operative fluoroscopy imaging, such as the mini-C arm, to facilitate fracture manipulation and fixation whilst minimising the radiation dose delivered to the patient and staff. Mini C arms convey the additional advantage of the surgeon operating the machine without the need for a radiographer.

### **Hand Trauma**

- Hand injuries should be treated by surgeons with expertise in hand surgery supported by Hand Therapists
- Most hand emergency cases can be treated as day-cases, especially if there are good arrangements for regional anaesthesia. Hospitals should be encouraged to provide day surgery facilities for hand trauma cases.
- Clean tendon or nerve divisions are suitable for immediate repair. However, irrigation and dressing of the wound in the Emergency Department, followed by operative repair as a day-case on a daytime operating list in the next 5 to 7 days is also appropriate. These cases should be either discussed with the hand surgery team on call on the day of injury or referred into a hand trauma clinic within 72 hours.
- Hand surgery units should have a low threshold for accepting referral from the Emergency Department and Minor Injury Units, where staff may not have the expertise or support to distinguish between a “minor” hand injury of minimal significance and a “minor” injury that leads to a poor outcome without specialist care.
- Direct access to specialist Hand Trauma clinics and Hand Therapy Departments should be provided for Emergency Departments and Minor Injury Units to allow appropriate follow-up care of minor hand injuries whose initial treatment has been performed in the emergency department.
- Protocols for imaging scaphoid fractures should be defined with the Radiology department, with rapid access to MRI scanning; this should help to minimise the risk of litigation which may follow an overlooked scaphoid fracture. It also reduces unnecessary repeated irradiation and prolonged yet unnecessary immobilisation in plaster for those without a fracture.
- The BSSH will work to support practitioners in Emergency Departments and Minor Injury Units, providing education aiming to improve the local care of simple hand injuries which do not require specialist care.
- The BSSH will work to educate the public about hand injury prevention to reduce the impact of hand injuries on the health and economics of the country.

### **Support services**

- Good clinical outcomes depend on skilled hand therapy. All hand surgery units must have the sufficient hand therapy support. Therapists should be present in hand surgery outpatient clinics. The extended roles of hand therapists and specialist nurses in the outpatient clinic should be encouraged

- Combined rheumatologist-hand surgeon clinics are to be encouraged.
- Professional relationships with the radiology and neurophysiology departments are essential

### ***Revalidation and Audit***

The BSSH has a secure web based audit registry [www.ukhandregistry.net](http://www.ukhandregistry.net) of common conditions; all clinicians who practice in hand surgery are encouraged to enter cases in this audit system to compare their practice with current standard practice in the NHS. The BSSH would like the NHS to develop a system for clinicians to have their practice reviewed by external peers to optimise and validate their work.

### ***The medico-legal environment***

The aim of BSSH is to limit the medico-legal burden that follows missed injuries, missed diagnoses and poor surgical treatment by all those who treat patients with conditions of the hand. There are certain hand conditions in which medical negligence appears more prevalent: missed scaphoid fractures, late displacement of distal radius fracture, incomplete carpal tunnel release, missed tendon injuries, complications of Dupuytren's surgery.

Trained hand surgeons make errors, but the NHS may be more exposed when those untrained or inexperienced in hand conditions provide care in accident departments, walk in centres, general orthopaedic services, treatment centres and musculoskeletal triage systems. Training and experience are essential to understand the sometimes subtle physical signs of a significant injury.

The BSSH understands that in the modern NHS, traditional Consultant delivered work has been complimented by a workforce that is adaptable and able to respond to the needs of the country in providing a high quality service for patients. The BSSH is keen to engage in training this alternative workforce within the philosophy of the Hub and Spoke model and GIRFT principles. The BSSH encourages these practitioners to become Allied Members of the BSSH to encourage two-way dialogue and would welcome their attendance at the various educational and training courses run by the BSSH. In addition, the BSSH would encourage all practitioners to enter their patients in to the BSSH UK Hand Registry [www.ukhandregistry.net](http://www.ukhandregistry.net) to monitor their outcomes.

## 4. What is the British Society for Surgery of the Hand

**Membership:** The British Society for Surgery of the Hand (BSSH) is the surgical specialty association that represents hand surgeons in the UK. As a registered charity BSSH promotes, supports and develops Hand Surgery in the United Kingdom and beyond. The great majority of practicing hand surgeons are members of the association. The BSSH has strong links to its parent specialties namely the British Association of Plastic, Reconstructive and Aesthetic Surgeons (BAPRAS) and the British Orthopaedic Association (BOA). BSSH is one of the member organisations of the Federation of European Surgical Societies of the Hand (FESSH) and the International Federation of Surgical Societies of the Hand (IFSSH).

**Organisation:** The wide portfolio of BSSH activities is delivered through a subcommittee structure accountable to the Council and supported by a dedicated secretariat. The Professional and Clinical Standards Committee sets standards for members professional conduct and promotes best clinical practice respectively. The direction of policy is the responsibility of the Strategy Group working with Council. The Education, Research & Audit Committees, Overseas Committee and the Committee of Management of the European Journal of Hand Surgery oversee their respective areas of responsibility. Communications policy exists to promote public understanding of health policy and surgical care related to hand surgery.

**Teaching:** BSSH organises two scientific meetings each year, runs an Instructional Course lecture programme twice a year and supports other courses. The Society runs its own Hand Surgery Diploma and Masters in Hand Surgery (MSc) programmes validated by the University of Manchester. Hand Surgeons can also become qualified with the European Hand Diploma run by FESSH.

**Research:** The BSSH supports a senior academic post in Hand Surgery and a wide range of research projects to include the national clinical trials initiative of the Royal College of Surgeons of England.

### Audit

The UK Hand Registry is an audit database which is designed, managed & funded by the BSSH, available to all practitioners of hand surgery in the UK. It gathers Patient Reported Outcome Measurements (PROMS) before & after hand surgery to demonstrate how patients benefit or otherwise from the intervention. [www.ukhandregistry.net](http://www.ukhandregistry.net)

### ***BSSH Overseas Committee***

The BSSH Overseas subcommittee was formed in 2016 with a vision “To use BSSH resource to deliver maximum possible benefit for patients in need of hand surgery in the developing world.” The committee supports the costs of BSSH members travelling to developing countries to further local education and training in hand surgery, and has developed a portfolio of projects that aim to produce sustainable benefits. Projects have been supported in Malawi, Nepal, Sierra Leone, Sudan, Cambodia

## 5. BSSH Strategy Document

The BSSH has developed a Strategy for the development of hand surgery and the Society. This can be accessed at [www.bssh.ac](http://www.bssh.ac)

## 6. Home Nation Differences

There is no unified British NHS; the National Health Service in Scotland and Northern Ireland have always been separate and NHS Wales was passed to the control of the devolved Welsh Government in 1999. Therefore the delivery of hand Surgery services differs across Britain. There are different treatment targets, training opportunities, referral patterns.

## 7. Future trends in Hand Surgery

Hand surgery is an exciting, diverse and expanding field and it would be impossible to cover all likely future advances in detail in this short chapter. An overview is presented with some specific examples of key areas that we believe will lead to rapid advances in the coming decade(s):

- Outcomes, Networks & Pathways
- Big Data, Genomics & Epidemiology
- Basic Science, scar free healing & Translation into New Therapies
- New Technology, Materials & Surgical Techniques

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