

Evolution of a specialism: how new techniques are lending a hand with elective recovery

With an ever-growing list of patients waiting for elective hand surgery, it is increasingly recognised that considerable benefit can be gained from carrying out certain procedures in a less clinical environment, away from a traditional operating theatre/room setting.

Statistics show the demand for four of the most common operations (Dupuytren's, Carpal Tunnel, Cubital Tunnel and Trigger Finger) are predicted to grow from 104,652 in 2015, to 170,166 by 2030¹.

And, as of April 2025, the elective surgery waiting list for England stood at 7.39 million, with many waiting longer than the 18-week target for 92% of patients².



So, what changes by leading surgeons are helping to drive throughput of cases and facilitate patient recovery?

There are three specifics:

- Ambulatory setting
- Wide Awake Local Anaesthesia No Tourniquet (WALANT) technique
- Upright / sitting patient position

...but let's look back at how this has come about...

A change begins...

Following the Second World War, a keener focus on orthopaedic and plastic surgeries of the hand started to develop – on both sides of the Atlantic – utilising the knowledge gained in treating hand injuries in military personnel.

Two of the key figures behind these changes were **Sterling Bunnell**³ in the US, whose work led to the founding of The American Society for Surgery of the Hand in 1946, and **Guy Pulvertaft**⁴ in the UK, whose experience drew on his treatment of local fishermen in Grimsby eventually resulted in the formation of The British Society for Surgery of the Hand in 1968.



Sterling Bunnell



Guy Pulvertaft

Between 1944 and 1947, Sterling Bunnell, in collaboration with US Army Surgeon General, Dr Norman T. Kirk, helped to establish nine military hand surgery centres across the US. The Kleinert Kutz Hand Care Centre, Louisville, Kentucky and Northwestern Medicine Center for Surgery of the Hand, Chicago, Illinois are regarded as the oldest publicly available within the United States, with centres appearing around the same time in places like Skåne University Hospital in Malmö, Sweden.

The International Federation of the Societies for Surgery of the Hand was formed in 1966, and to date has 65 members from around the world.

Ambulatory setting

But back to 1951: it was then that the first hospital-based day (ambulatory) surgery unit opened in Michigan in the US, and this, in the period between the 1960s and 1980s, heralded a growing acceptance of this new 'walk in' approach and the opportunities it presented for hand surgery.

The key benefits were saving on expensive theatre time – and quicker recovery for patients who would not have required a General Anaesthetic. Identified by The National Audit Commission in 1990, the UK's first 'basket' of 25-day (ambulatory) procedures included excision of Dupuytren's contracture and Carpal tunnel decompression.

WALANT: a natural extension

Wide Awake Local Anaesthesia No Tourniquet (WALANT) is a technique involving local anaesthesia (typically lidocaine and epinephrine), without sedation or a tourniquet, during hand surgery.

The term was first introduced by Dr Jerry Rubin (USA), a hand and plastic surgeon, in 2011, but the method was developed by D. Donald Lalonde (Canada), who had proposed the concept a few years earlier in 2005.

As with any new technique, it took time to become broadly accepted and grow in popularity, but since 2017, its use has become increasingly widespread, with many healthcare societies and associations promoting the approach. A key benefit is that undertaking procedures with wide awake patients (with no motor blockade) allows soft tissue repairs and fracture fixations to be tested for adequacy, motion and alignment immediately with intra-operative adjustments as necessary. This allows finessing of function in a way that would not be possible otherwise.

Other WALANT technique advantages, include⁵:

Patient

- Lack of sedation avoids complications resulting from comorbidities, or side-effects including nausea and actual vomiting
- Reduced anxiety associated with general or regional anaesthesia
- No motor block – patient is more engaged with their care, including intra-operative decision making. Intra-operatively, the patient can reflect on the progress of their treatment and offer feedback
- Effective haemostasis reduces chance of haematoma, scarring and reopening of wounds (dehiscence)
- Enhanced post-operative recovery with the patient able to demonstrate active movement intra-operatively and post-operatively

Perioperative pathway

- Simpler, with reduced need for pre-operative assessment, intra-operative anaesthetic professionals or post-anaesthetic recovery
- Field sterility level sufficient, so reduced requirement for traditional operating theatre (room) time with the majority of procedures being undertaken in a day (ambulatory) surgery setting...
- ...or going one step further, presents an opportunity to perform the surgery in an outpatient, minor treatment, healthcare centre setting

Cost reduction

- Having no tourniquet reduces equipment and consumables (cuffs, liners) costs
- Reduced costs in anaesthetic drugs (general or regional)
- Reduced staffing requirements (e.g. anaesthetist)
- Increases operating theatre (room) efficiency by taking these cases out of that environment
- No post-operative recovery – so reduced staffing costs

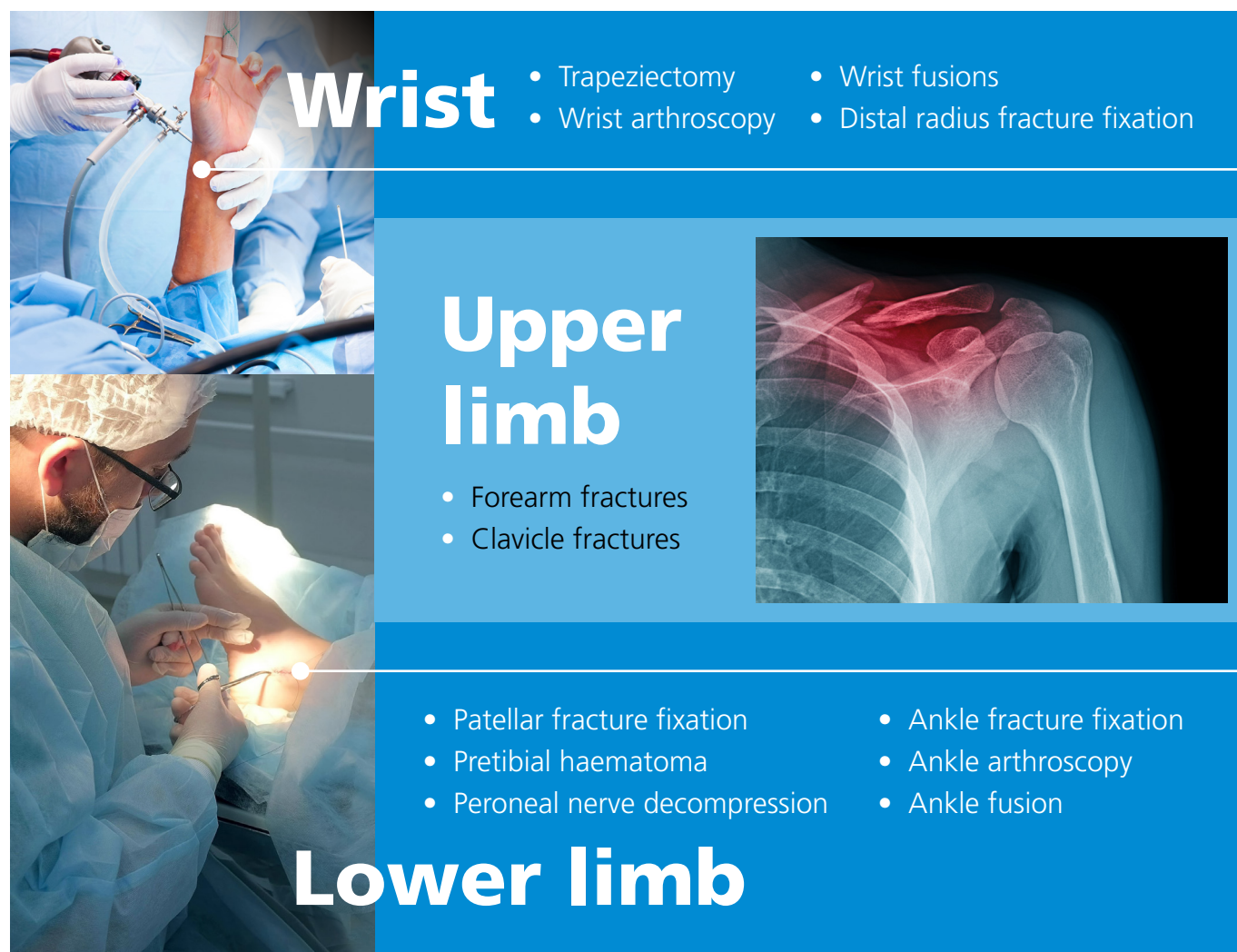
These are common procedures in the hand and wrist which may be performed under WALANT:

- Tendon decompression
- Flexor and extensor tendon repair, tenolysis and transfer
- Nerve decompression
- Carpal tunnel
- Cubital tunnel
- Radial nerve and median nerve decompression in the forearm
- Nerve repair
- Dupuytren fasciectomy / dermofasciectomy
- Soft tissue procedures including ganglion and other mass excision / biopsy
- Finger joint arthroplasty or fusion
- Phalangeal fracture fixation

In addition, WALANT has now been accepted for use in a range of other upper and lower limb procedures, including those on the wrist, or involving the long bones and lower limbs.

However, these cases are highly advanced techniques, and it is recommended that they should be carried out only by those with sufficient training and experience in WALANT procedures.

Here are some examples:



Wrist

- Trapeziectomy
- Wrist arthroscopy
- Wrist fusions
- Distal radius fracture fixation

Upper limb

- Forearm fractures
- Clavicle fractures

Lower limb

- Patellar fracture fixation
- Pretibial haematoma
- Peroneal nerve decompression
- Ankle fracture fixation
- Ankle arthroscopy
- Ankle fusion

And it didn't stop there...

Once elements of hand surgery had left the traditional setting of a main hospital operating theatre (room), and with day (ambulatory) surgery centres appearing as stand-alone units more frequently, clinicians looked for even more innovations.

Many had already moved to mobile operating platforms rather than operating tables, but then came the realisation that dispensing with an operating platform altogether, and instead opting for a patient transport stretcher could offer additional benefits:

- decreasing manual handling (which carries less risk for patients and healthcare staff alike)
- reducing costs (the equipment is less expensive than any operating platform)
- simple surgeries, such as Carpal tunnel release, could even be carried out in primary care health centres

Time to sit up

And then the focus turned to patient positioning: although operating on a patient partially or fully sat up is not a new concept (for example to avoid acute respiratory compromise), most hand surgery had traditionally been undertaken with the patient in the supine position (lying flat).



Then, in 2022, **Professor Matthew Gardiner**, Consultant Hand and Plastic surgeon of Frimley Health NHS Foundation Trust, developed a technique for performing WALANT hand surgery with a distinct difference – with the patient in an almost fully upright, seated position.

This not only caters for patients with respiratory concerns, it can reduce anxiety – the vulnerability a patient may feel – and also enables greater communication with the surgeon before, during and post-operatively. The patient can even watch their surgery should they choose to, offering them a greater level of engagement and sense of control.

Post-operatively, a patient who had been lying flat would need time to reorientate, to avoid orthostatic (postural) hypotension (light headedness / dizziness on standing, possible fainting, blurred vision etc.) especially in the elderly.

Prof. Gardiner's walk-in, walk-out patients avoided this, and potential complications (such as additional treatment being required, delay to their discharge and potential delay for other patients awaiting their turn on the list).



Procedures now being undertaken (utilising this 'sitting up' approach) are:



The patient feedback Prof. Gardiner has received to date has been overwhelmingly favourable: according to a survey carried out after his first series of operations, no patients would have chosen to lie flat instead. All agreed that it was comfortable, made it easy to communicate, kept them relaxed and gave them control over watching the procedure.⁶

The Future

When healthcare resources are under pressure, hand surgery is often 'out-competed' for operating theatre (room) and anaesthetic resources.

The adoption of the WALANT technique therefore presents a significant opportunity to mitigate this issue, expanding the scope of healthcare facilities where hand surgery could be undertaken, including outpatient, minor treatment and healthcare centre settings.

It may also be that such locations are more convenient to a patient, being within their community, compared to a main hospital, day (ambulatory) surgery centre or private healthcare provider which might mean travelling further from home.

A paper by Sue Fullilove – President, British Society for Surgery of the Hand (2021) and Consultant Orthopaedic Hand Surgeon at Plymouth Hospitals NHS Trust focuses specifically on this subject.⁷

Potential yet to be realised

However, despite the fact that hand surgery is classified in many instances as being high volume, low complexity, forms part of the NHS Recovery Plan and is included in the GIRFT surgical specialty pathways, the UK Government and the NHS are yet to make plans to initiate sites dedicated to hand surgery, beyond those already in existence.

Hand surgery is not one of the five treatments made available outside of the hospital to be provided via secondary care in the community, and it therefore falls under the remit of surgical hubs as the additional resource to facilitate treatment.

And in the absence of a national scheme dedicated to hand surgery to deliver fast, efficient and effective treatment – private healthcare providers have already stepped in, with healthcare provider groups and private entities offering hand surgery as a dedicated service or alongside existing treatments, often referred by the NHS.

Minor Surgery Scheme – a possible option

Directed enhanced services have been nationally agreed and offered to all GP practices in England. Called the Minor Surgery Scheme⁸, it came into effect on 1st April 2025 and allows GP practices to expand the range of minor treatments they can offer in their a medical centre setting and so could offer scope to include hand surgery.



It could also fall under the emerging 'one-stop treatment', where the patient is diagnosed and undergoes surgery on the same day via the WALANT technique. As detailed in 2012, a retrospective review of this practice demonstrated a 50-75% national tariff cost-saving to the NHS – £750,00 for the 1,000 cases presented.⁹

Summary

Although there is no Government or NHS dedicated strategy in relation to offering hand surgery services outside of hospital settings, the future for it seems to be developing organically – and that direction of travel currently appears to be away from main hospitals, day (ambulatory) surgery centres and potentially surgical hubs too, moving closer to the patient and their community.

The adoption of WALANT – and the seated position for surgery – both facilitate this further, with potential benefits to patients and stretched NHS budgets alike.

References

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- 9 Journal of the Royal Society of Medicine – Transition to total one-stop wide-awake hand surgery service-audit: a retrospective review

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