

## The New Normal the Recovery Plan to Create Capacity

Asim Saleemi, Danial Shah, Kishen Parekh, Muhammad Umair Asim,  
Anthony Burgess and Munawar Shah\*

Department of Trauma and Orthopaedics, Manor Teaching Hospital Walsall, UK

\*Corresponding Author: Munawar Shah, Department of Trauma and Orthopaedics,  
Manor Teaching Hospital Walsall, UK.

Received: April 12, 2021

Published: April 30, 2021

© All rights are reserved by Munawar Shah,  
et al.

### Abstract

**Introduction:** The COVID-19 pandemic has led to a cessation of non-urgent elective surgery and a reduction in trauma surgery. The disease results from infection by a novel coronavirus first detected in China in 2019 (SARS-CoV-2). Its detection and transmission has led to an international emergency response. As part of recovery Green Areas are being developed to implicate a recovery plan affected Trauma and Orthopaedic Surgery.

**Methods:** The NHS, along with the British Orthopaedic Association (BOA) like the rest of the world produced a BOAST guideline to help guide management of orthopaedic patients during the pandemic. Patients requiring surgery in this pandemic were sub grouped into 5 distinct categories [1].

There are plans afloat to think beyond the peak of this pandemic and divert attention to the Planned Surgery. Plans have to be put in place on the basis of COVID-19 being endemic. Until we better understand these, in order to ensure patient safety, it will be vital to establish COVID free 'green' pathways. These arrangements will require changes in service delivery that will extend beyond individual hospitals or Trusts. There is high-quality local data on deferred surgery and pre-existing waiting lists to enable an accurate assessment of the surgical workload by specialty. (Prioritising the forgotten few) SOP has been developed for Green zones. To create capacity all minor procedures that can be done safely under local anaesthesia or no anaesthesia were relocated to a local GP minor surgery services.

**Result:** The planned surgery is being done in a local independent sector (Green Covid Free) as an extension of our facilities as per NHS England Guidelines. We also have relocated our local anaesthetic procedures to a GP service minor Surgery. Infrastructure for green pathways/Local anaesthesia was developed locally. SOP was formulated and questionnaire was developed.

Initially all injections were transferred to this facility than carpal tunnel release were added and finally ultrasound guided injections were carried out in place of x-ray guided injections. We used PRP instead of steroid were indicated and did use some steroids in guidance with Protocols. We did over 300 injections as illustrated in the 2 charts below predominantly us guided shoulder injections and over 50 carpal tunnel releases to create capacity for planned surgery.

**Conclusion:** We report that green areas created at a local GP practice with robust SOP and protocols is a viable option and possible the new normal future.

**Keywords:** COVID-19; SARS-CoV-2; British Orthopaedic Association (BOA)

### Introduction

The coronavirus (COVID-19) pandemic has resulted in millions of confirmed cases and over 500,000 deaths worldwide. WHO has

declared this novel coronavirus outbreak a global health emergency. It is a challenge to NHS and surgical practice has readily changed. Medical resources have been stretched in an attempt to contain the

spread. The SARS-CoV-2 pandemic has placed significant stress over health care systems and frontline health care workers. It has limitations on all surgical specialities from man power, nosocomial transmission, procedural prioritisation, intra operative risk, facilities and equipment. Surgeons have witnessed rapidly decreasing number of elective surgeries [1].

It has recognised the need to re-adjust orthopaedic management and post-operative care.

The year 2020 is likely to be defined by novel coronavirus disease (COVID-19). Orthopaedic surgeons at all levels were deployed to frontline after a crash course. All elective and non-urgent procedures were postponed surgeons were tasked with a key role to contribute in an alternative strategy [2-4]. The postponement of elective operations has led to a significant back log. Our aim is to outline a successful strategy that our department employed to reduce elective case overload.

A paper published in the *Bone and Joint Journal* [5] has highlighted grave concerns about the very poor quality of life experienced by a proportion of patients waiting for hip and knee surgery during the Covid-19 pandemic. Covid-19 has meant that the maintenance of normal levels of elective surgery has not been possible within the NHS, with orthopaedics disproportionately affected. The patients involved in the study were asked to respond to a standard set of questions about their quality of life (called an EQ5D), and a concerning proportion reported very poor quality of life as a result of the pain, immobility and loss of function that end stage arthritis typically causes. In this study, over one-third of patients waiting for total hip replacement and nearly one-quarter waiting for a knee replacement scored less than zero. Scores of zero is equated to a position that is worse than death [5].

These levels are almost double what they were prior to the pandemic. Increasing length of time on the waiting list was associated with decreasing quality of life. This paper is a graphic demonstration of the awful situation that a significant number of patients awaiting major joint replacement are experiencing. For these patients, the only effective solution is surgery, as this can alleviate their suffering and dramatically improve their quality of life. To do this in a humane timescale will require appropriate prioritisation, organisation and resource [5].

Patients waiting 18+ weeks at the end of October rose from 100,000 at the start of 2020 to 244,536. The number of patients waiting over a year rose from 436 in January and to 34,978 in October [6].

This paper seeks to suggest and demonstrate alternative pathways to reduce elective orthopaedic waiting list and create capacity to do more at the same time. We present the outline of the implemented principles in our orthopaedic department to reduce orthopaedic waiting list load and mitigate in hospital transmission of SARS-CoV-2. This model will help surgeons a guideline and template to provide safe and proven effective surgical care during this pandemic [6].

## Materials and Methods

We have identified key areas where surgical care can be provided to reduce elective waiting list. Prioritisation of surgical services during this pandemic must be a careful balance of patient needs and availability of resources [7].

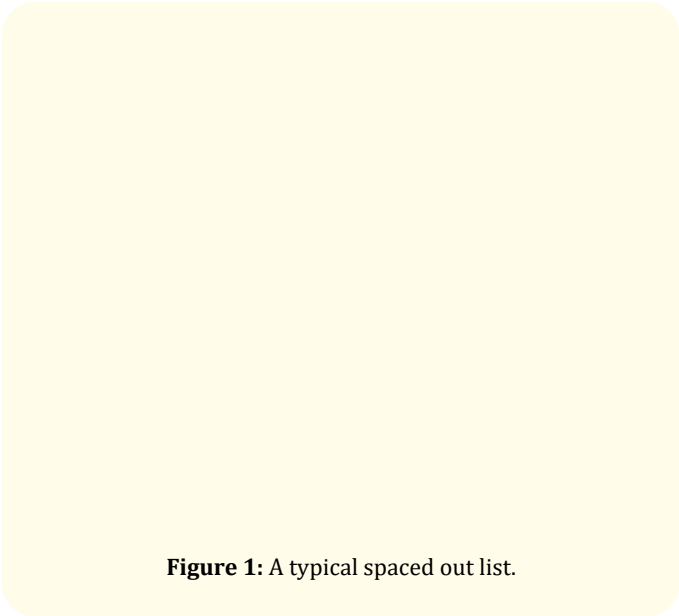
Re-designing of orthopaedic hubs and operating in day surgery clinics with a special attention to tackle waiting list overload and control in hospital transmission [8]. Ambulatory Surgical Centres (ASCs) may be suitable for routine elective procedures [9]. It is now possible for day surgical and minor surgical patients to be up-loaded to this pathway to improve capacity for planned surgery. Appropriate planning prior to resumption of elective orthopaedic procedures is critical. It will rely on volume of waiting list, regional COVID-19 prevalence, hospital capacity and availability of hospital affiliated orthopaedic practices.

The restart of the procedures should be done safely without exposing patients or healthcare workers to unnecessary risk. Surgical candidates and health care workers should be tested routinely for COVID-19. Healthcare systems and qualifying ASCs participating in elective orthopaedic surgical procedures need redesigning their current facilities and patient flow. Every patient should come at a different allocated time to reduce waiting room gathering and allow social distancing.

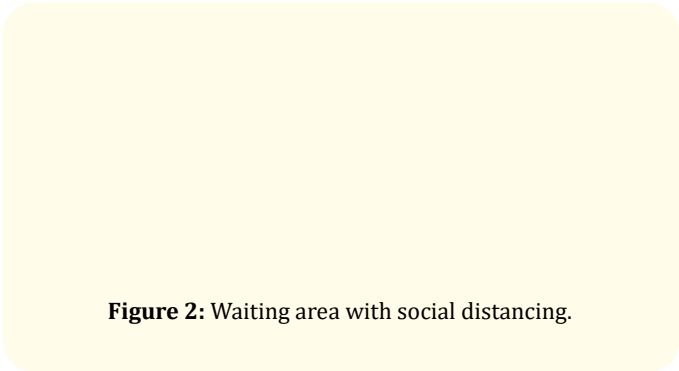
The local Health centre was prepared to do day case minor surgery with COVID guidelines, with social distancing timed slots and risk assessments.

Seating area was rearranged safe distancing was marked and instruction were put up for safety of staff and Patients. We Determined their travel and contact history to access for fever cough, sore throat and anosmia. Social distancing has been identified as one of the best strategy to mitigate COVID-19 transmission. Patients came at different allocated time to reduce waiting room gathering and allow social distancing Transitioning patients away from the larger hospitals in a COVID-19 free facility is ideal for patients. Healthcare systems would be implementing New Normal protocols

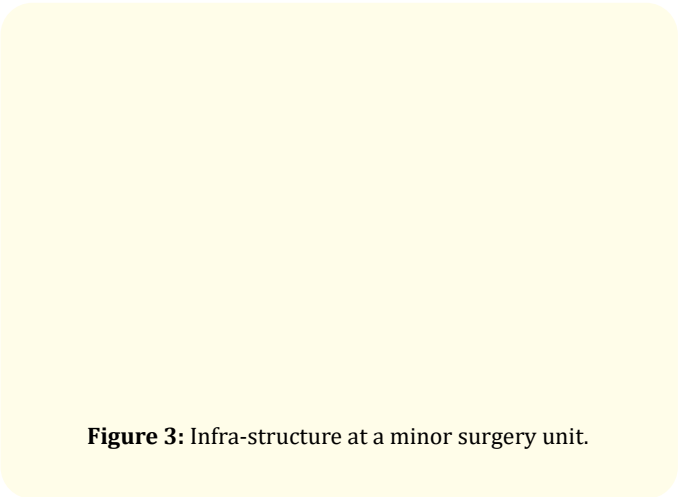
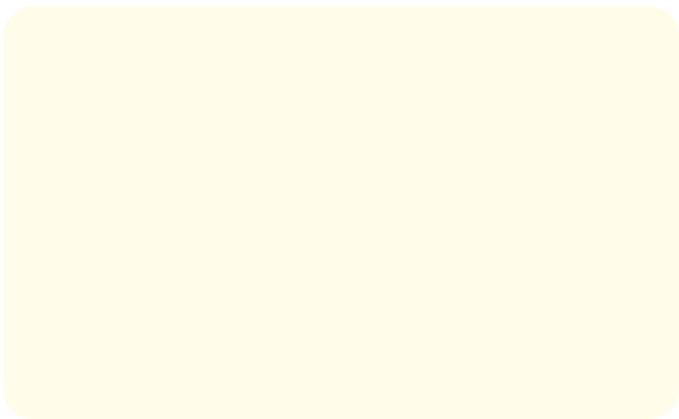
to reduce waiting list load and individual hospitals will create their own frameworks [1]. All patients were contacted before the surgical procedure and checked for respiratory symptoms and travel history within 14 days. On arrival to surgical day case unit patients temperature and risk factors were checked again.



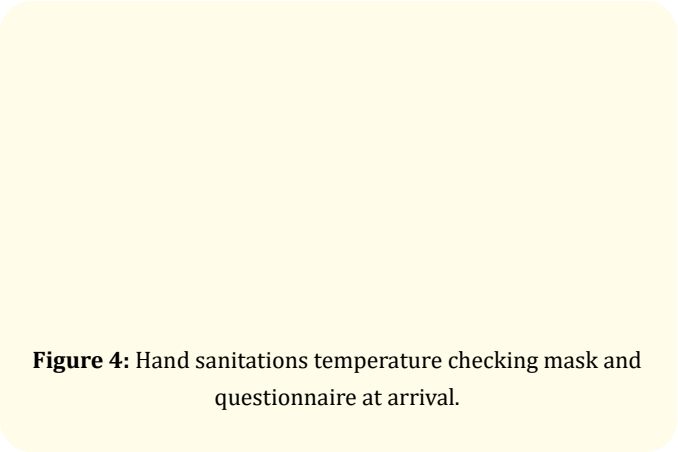
**Figure 1:** A typical spaced out list.



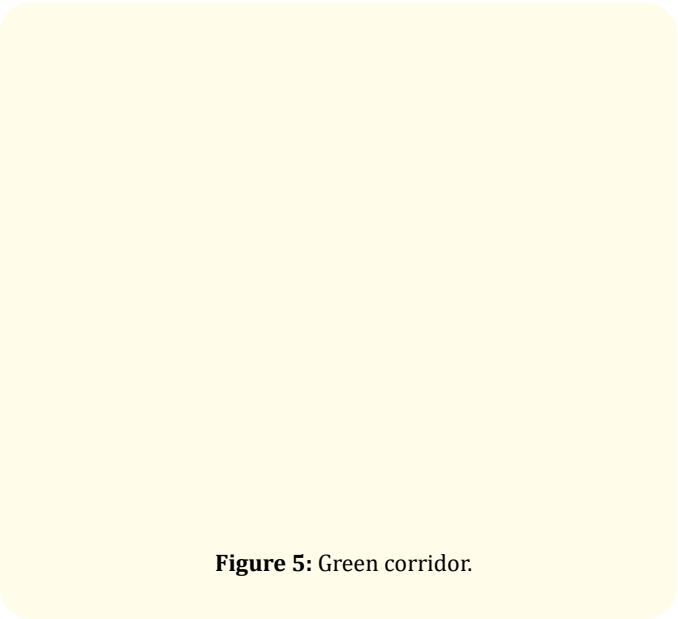
**Figure 2:** Waiting area with social distancing.



**Figure 3:** Infra-structure at a minor surgery unit.



**Figure 4:** Hand sanitations temperature checking mask and questionnaire at arrival.



**Figure 5:** Green corridor.

**Figure 6:** Scrub and prep area.

**Figure 7:** 2 clean minor surgery areas consent area and recovery area.

After SOP was discussed the department moved essential kit and disposables to the Green Minor surgery site.

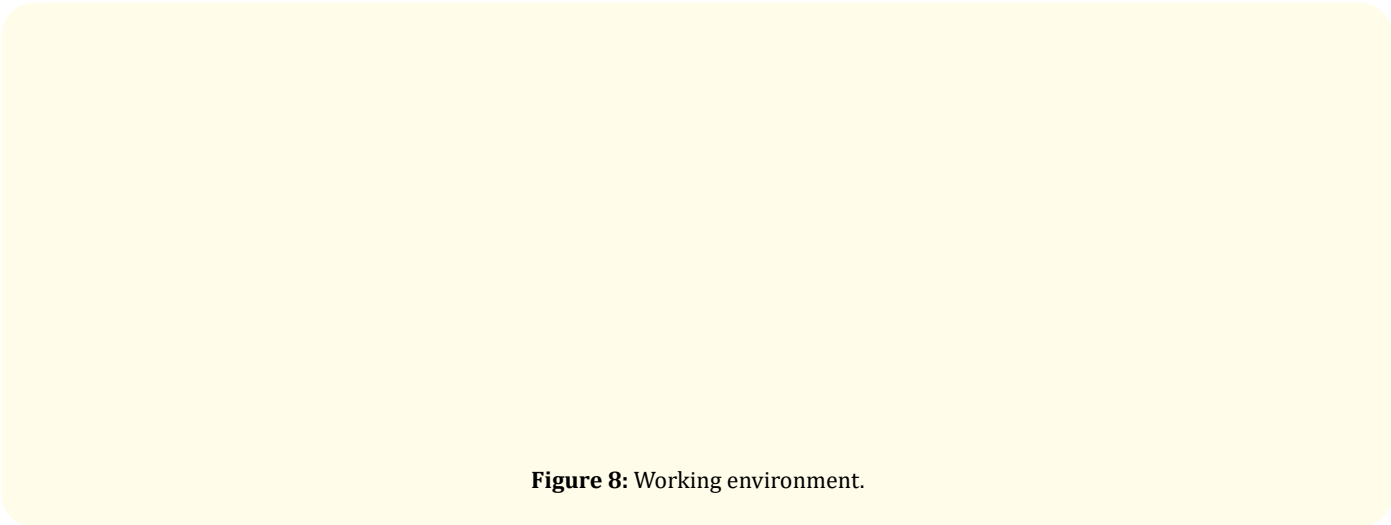
The relevant supplier was also forward thinking and prepared one use sterile kits for utilization.

## Results

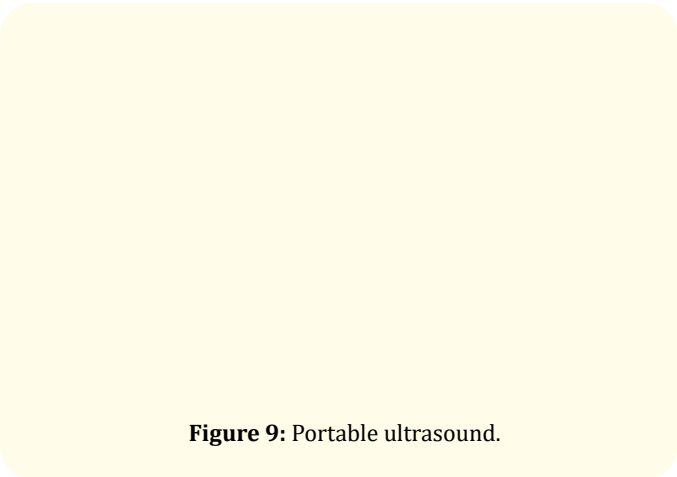
The clinic for planned day surgery minor procedures started on 1<sup>st</sup> of June 2020.

Initially we did 2 all day clinics a week. It was decided to run it as one clinic per week as the team was needed in the main hospital after restarting planned surgery.

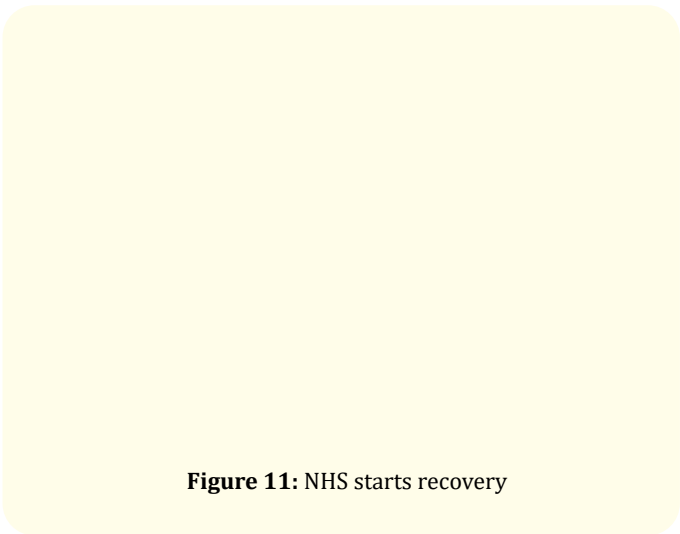




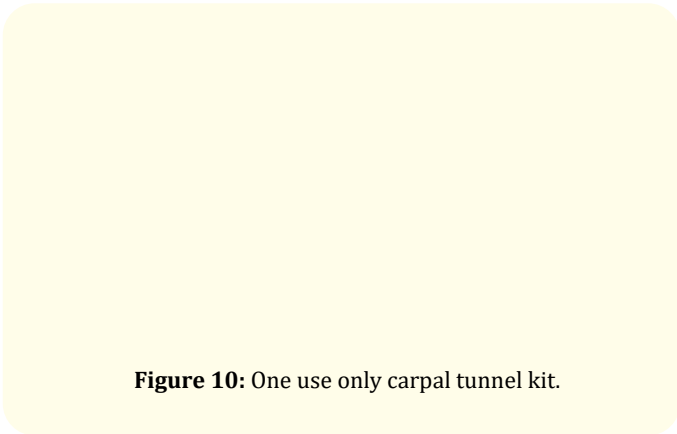
**Figure 8:** Working environment.



**Figure 9:** Portable ultrasound.



**Figure 11:** NHS starts recovery



**Figure 10:** One use only carpal tunnel kit.

From 24.08.20 it was converted to one full day clinic a week with no change in SOP.

So far 411 procedures have been done with average of 69 per month. If we calibrate as 30 min per procedure in main theater there is a capacity created of 205 hours if we now equate this in Arthroplasty currency we have created a capacity of 100 joints. Or 200 intermediate procedures.

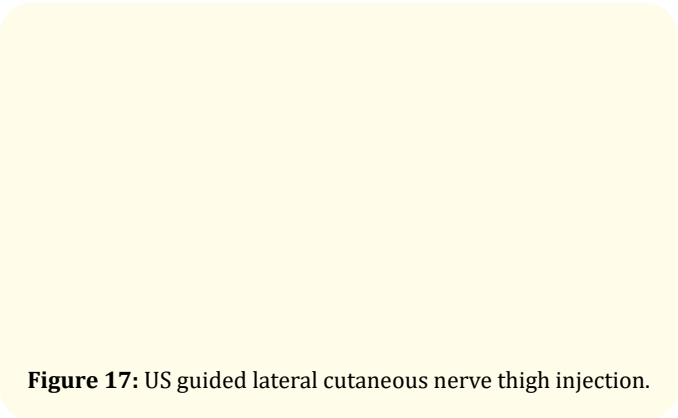
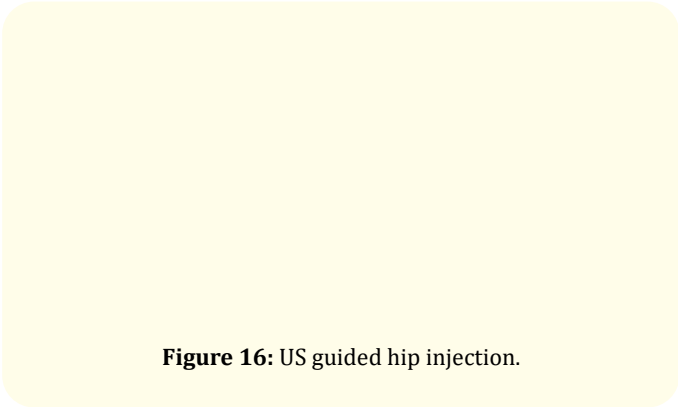
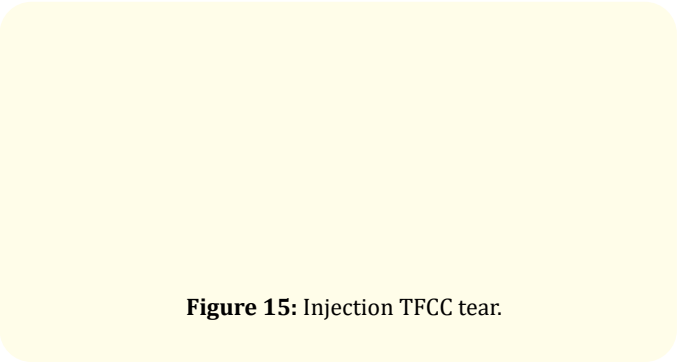
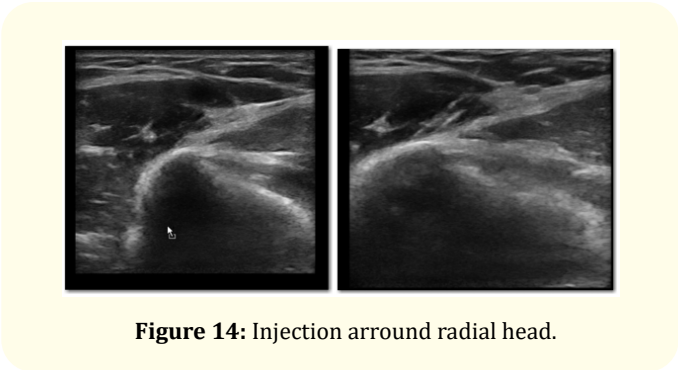
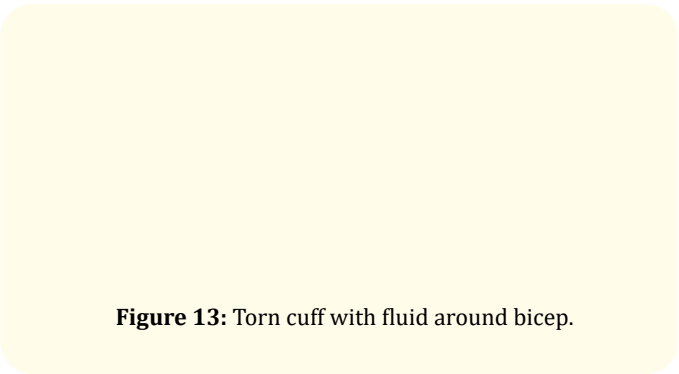
The breakdown of the 411 procedures is as follows.

Majority were us guided shoulder injections 149. 59 carpal tunnel and 6 trigger finger release under LA, 31 ACP (PRP) injections

for Epicondylitis. 23 US guided hip injections with 32 us guided wrist injections with some other US guided joint injections. There were 3 needle arthroscopy procedures.



Some examples of US guided injections



**Figure 18:** Tendo ACP collagen scaffold with growth factor in planter fasciitis.

**Figure 19:** Nanoscope.

**Figure 20:** Monocyte injection.

with COVID around the time of surgery. Until we better understand these in order to ensure patient safety, it will be vital to establish COVID free 'green' pathways. These arrangements will require changes in service delivery that will extend beyond individual hospitals or Trusts. As mentioned above, initially these green pathways are needed to treat Priority 2 and 3 patients, and in future they will be needed for wider Priority 4 elective care. Until that is fully in operation minor surgery units can be off site to create capacity. We advise that great care should be taken to reduce the chances of this occurring. Outline a frame work that will increase the efficiency and reduce a workload [2].

Temporary field hospitals and private sector facilities and setup COVID-19 free surgical hubs Due to evolving circumstances surgeons may have to adopt new guidelines to provide surgical care within their specialties to reduce elective work overload We restarted non-emergency elective orthopaedic cases after making sure that procedures will be done in a safe manner. These practices help the trust to remerge from this crisis [10].

The NHS, along with the British Orthopaedic Association (BOA) like the rest of the world produced a BOAST guideline to help guide management of orthopaedic patients during the pandemic. During this unprecedented time, departments have a responsibility to ensure that NHS resources, including the availability of clinical staff, are utilized efficiently to ensure safe and effective patient care. Patients requiring surgery in this pandemic were sub grouped into 5 distinct categories [11].

Free standing ambulatory or outpatient surgery centres should be developed. American college of surgeons have suggested that lower acuity surgery may be performed at ambulatory surgical centres. These centres will work closely with their local public health department.

There are plans afloat to think beyond the peak of this pandemic and divert attention to the Planned Surgery. These patients were discouraged to attend hospitals for fear of getting infected with viruses. Although few surgeries have continued in local private hospitals to contain the so-called 'collateral damage', the existing infrastructure has not allowed dealing with all non-urgent cases [12]. This delay of all non urgent cases and their reaction has already been highlighted in a recent paper in JBJS [5]. There is no to date published evidence on patient undergoing surgery after delay but we assume there must be joy and a sense of relief. We have also

## Discussion

After emergence of a vaccine, plans have to be put in place on the basis of COVID-19 being endemic. This would mean that, unless precautions are taken, there will be risks of patients being infected



done a satisfaction survey by one of the team member calling all of the first 100 patients 2 weeks post procedure of our minor surgery patients and there is a general satisfaction and appreciation and of praise for the team and the place. And a general sense of relief and being grateful.

## Conclusion

Hospital surgical de-escalation in response to COVID-19 has greatly reduced access to surgical care and result in longer elective waiting list. Elective orthopaedic surgery need to begin. Great care must be taken to ensure the safety of patients, surgical staff and teams. A new normal will be established that disrupt the past paradigms of surgical practice and reduce waiting list.

Surgical practice and procedures should be altered to minimise pathogen transfer and reduce orthopaedic waiting list. Recognise orthopaedic Hubs and internal protocols could help to reduce the risk of overload to general hospitals during pandemic. With these routines and trained professionals, it was possible to make a difference in the face of need imposed by corona virus.

Elective orthopaedic hospital care needs to be redesigned to build a universal model for NHS. However, our guidelines are in response to emerging virus situation and subject to change.

By restructuring our service and utilising primary care facilities we have created capacity of 205 hours.

We propose one pathway for minor procedures to create capacity for planned surgery.

## Bibliography

- Adrian Diaz and Benjamin A Sarac. "Elective Surgery in the time of COVID-19". *The American Journal of Surgery* 219.6 (2020): 900-902.
- Ahmed Al-Jabir, *et al.* "Impact of the Coronavirus (COVID-19) pandemic on Surgical practice-Part 1". *International Journal of Surgery* 79 (2020): 168-179.
- Andreozzi V, *et al.* "The impact of COVID-19 on orthopaedic trauma: A retrospective comparative study from a single university hospital in Italy". *Orthopedic Reviews* 12.4 (2021): 8941.
- Khadabadi NA, *et al.* "Impact of COVID-19 Pandemic on Trauma Theatre Efficiency". *Cureus* 12.11 (2020): e11637.
- Nick D Clement, *et al.* "The number of patients "worse than death" while waiting for a hip or knee arthroplasty has nearly doubled during the COVID-19 pandemic". *Bone Joint Journal* 103-B4 (2021): 672-680.
- Current BOA position regarding elective activity, waiting lists and restart 23 (2021).
- Ahmed Al-Jabir, *et al.* "Impact of the Coronavirus (COVID-19) pandemic on Surgical practice-Part 2". *International Journal of Surgery* 79 (2020): 233-248.
- Afshin A, *et al.* "Reemergence of Multispecialty Inpatient Elective Orthopaedic Surgery During the COVID-19 Pandemic. (Guides for a New Normal)". *Journal of Bone and Joint Surgery American* 102 (2020): e 79.
- J Parvizi, *et al.* "Resuming Elective Orthopaedic Surgery During the COVID-19 Pandemic". *The Journal of Bone and Joint Surgery American* 102.14 (2020): 1205-1212.
- Benjamin Tze Keong Ding and Tamara Soh. "Operating in a Pandemic: Lessons and Strategies from an Orthopaedic Unit at the Epicenter of COVID-19 in Singapore". *The Journal of Bone and Joint Surgery American* 102.13 (2020): e67.
- Zhen Chang Liang and Wilson Wang. "Novel Coronavirus and Orthopaedic Surgery: Early Experience from Singapore". *The Journal of Bone and Joint Surgery American* 102.9 (2020): 745-749.
- <https://www.nice.org.uk/covid-19/Specialty-guides;www.fssa.org.uk>

### Assets from publication with us

- Prompt Acknowledgement after receiving the article
- Thorough Double blinded peer review
- Rapid Publication
- Issue of Publication Certificate
- High visibility of your Published work

**Website:** [www.actascientific.com/](http://www.actascientific.com/)

**Submit Article:** [www.actascientific.com/submission.php](http://www.actascientific.com/submission.php)

**Email us:** [editor@actascientific.com](mailto:editor@actascientific.com)

**Contact us:** +91 9182824667