



# Indian Orthopaedic Association

25th March 2020

## COVID-19 IOA guidelines

### Introduction:

COVID-19 represents an uncertain challenge that could generate large numbers of patients in a short period of time. How best to manage this is evolving. There will not be an ideal solution so all are requested to work together to solve the challenge. The surgical workforce will need to adapt during the COVID-19 pandemic. They will need to balance optimum treatment of a patient's injury or condition against clinical safety and resources. The IOA supports reasoned pragmatic decision-making in these extraordinary circumstances and acknowledges that non-operative management of many injuries and reduced face to face follow up will be increasingly the norm.

- i) Maintain emergency surgery capabilities
- ii) Protect and preserve the surgical workforce
- iii) Fulfil alternate surgical roles
- iv) Fulfil alternate non-surgical roles

Surgical workforces are likely to be depleted as clinicians self-isolate. Maintaining normal Orthopaedic sub-specialty emergency services will be increasingly difficult. Surgical theatre capacity is likely to decrease and the surgeons are likely to be redeployed to support non-surgical specialties.

The main aims should be to triage and deliver healthcare to patients for maximal benefit as in a mass casualty scenario and to protect and preserve the surgical workforce. Any plans must be dynamic, reactive and will change as the situation/scale unfolds. Orthopaedic Surgeons will need to be flexible, collaborative and show leadership in what are expected to be testing times.

**Main priorities** in the list of importance should be:

#### 1: Maintain emergency surgery capabilities

Maintain emergency surgery provision, including major trauma. Initially, it should be delivered by individual specialty rotas. These will include rotas where some members of the team do not come into work and act as a healthy reserve. Surgeons may be required to take over running the major trauma service.

#### 2: Protect and preserve the surgical workforce

It is vital that risk to staff is minimised. This can be achieved by:

- i) Non-surgical solutions to be used to avoid surgery where possible
- ii) Personal protective equipment (PPE) used correctly
- iii) Rest and recuperation must be provided
- iv) Psychological support given to all the team members

#### 3: Fulfil alternate surgical roles

Due to the pressure on Emergency Departments, non-respiratory emergencies may be triaged to an alternate pathway which may need support from surgeons.

#### 4: Fulfil alternate non-surgical roles

If all other priorities have been met and the surgical workforce has been maintained, it may be possible for some surgeons to take on non-surgical roles.

### **Optimisation of resources:**

- a. Theatre resources. There should be a regular appraisal of available resources, including, at minimum, daily strategy meetings with a theatre coordinator and a consultant from anaesthetics and each relevant surgical specialty. All should have a clear understanding of the issues facing their own specialty prior to the meeting, including workload, relevant clinical details, ICU bed status, sickness absence and redeployment of staff. Resource allocation and patient prioritisation should be agreed.
- b. Equipment & resources may need to be relocated to alternative locations.
- c. Trauma meetings should have remote access options to minimise social contact.

### **Outpatient management:**

During the coronavirus pandemic, there will be increased emphasis on managing patients with non-operative strategies and minimising outpatient visits. The following tips may be helpful in this regard:

1. The patients should have consultant-delivered, definitive decision-making at first attendance and, in particular, should not be scheduled for surgery without senior input.
2. Minor injuries can be left for the Emergency department to deal.
3. Those patients who need immediate management that requires sedation facilities, such as those with dislocations, may need to remain in the Emergency department and the Orthopaedic team members should manage these patients here.
4. Referring doctors and the patients should have a direct telephone access to the Orthopaedic surgeons to advice to minimise the need for the patients to attend the hospital. The risk of hospital attendance may outweigh the potential benefit of intervention, particularly for patients in vulnerable groups.
5. Impact on radiology services should be minimised. Imaging should be requested after the patient has been assessed by the Orthopaedic team member, so as to minimise the x-ray requests and avoid repeat imaging. Avoid use of multiple imaging modalities and consider immediate use of the modality most likely to give a definitive diagnosis. Arrange for use of a mini C-arm in the Trauma Clinic if possible. CT scanning should be minimised as this is the investigation of choice for coronavirus pneumonitis.
6. Use of removable casts or splints should be maximised to reduce follow-up requirements.
7. Routine follow ups must be avoided as far as possible and the existing appointments should be cancelled, postponed or conducted remotely, telephonically or by an email.
8. Follow-up imaging should only be performed when there is likely to be a significant change in management. There is no role for imaging to check for fracture union in most injuries.
9. Rehabilitation services are likely to be very limited. Alternative resources such as written and web-based information should be used maximally.

## Management of specific injuries

1. Dislocations of the joints should be done in the emergency department wherever possible. If the joint is stable after reduction, the patient should be discharged with appropriate follow-up.
2. Most upper limb fractures, including clavicle, humeral and wrist fractures, have high rates of union and may be managed non-operatively, recognising that some patients may require late reconstruction.
3. Ligamentous injuries of the knee may be managed with bracing in preference to early ligament reconstruction.
4. Penetrating injuries (stab wounds) to the limbs that are not contaminated and have no neurological or vascular deficit may be sutured in the emergency department.
5. Abscesses in patients without systemic sepsis may be incised and drained under local anaesthetic in the emergency department.

## Inpatient management:

During the coronavirus pandemic, there will be increased emphasis on reducing hospital admission and minimising length of stay. Patients should only be admitted to hospital if there is no alternative.

1. Major Trauma and other networks should develop solutions for communication and distribution of workload, amongst the nearby hospitals.
2. Patients with multiple injuries, pelvic & acetabular fractures with major haemorrhage, open fractures, compartment syndrome and exsanguinating injury all require emergent resuscitation and management.
3. Consider alternative techniques for patients who require soft tissue reconstruction to avoid multiple operations or the need for critical care input (local flaps, intentional deformity, skin grafting for fasciotomy wounds).
4. Consider early amputation in patients for whom limb salvage has an uncertain outcome and is likely to require multiple operations and a prolonged inpatient stay.
5. Surgeons may need to base decisions about vascular injuries on clinical assessment alone if imaging is not readily available.
6. The care of patients with hip and femoral fractures remains urgent and a surgical priority. It is reasonable to offer hemiarthroplasty rather than total hip replacement, in order to facilitate early surgery.
7. Patients with complex fractures should have surgery planned to minimise length of stay. If a staged approach is used, aim to discharge and readmit the patient if possible.
8. Consider day-case treatment of simple peri-articular fractures and foot & ankle injuries. Where possible, use non-operative treatment and removable splints, recognising that some may require later reconstruction.
9. Patients with upper limb fractures that require surgery (e.g. forearm fractures) should be managed as day cases.
10. Wrist fractures may be treated with removable casts or splints to reduce unnecessary follow-up.
11. Use absorbable sutures and warn patients of the small risk of a mild inflammatory reaction to the sutures.

12. Consider non-operative management and bracing of patients with spinal fractures
13. Non-union of upper limb fractures may be managed in a delayed fashion. Non-union of lower limb fractures with failed implants or increasing deformity and a significant impact on daily function may require relatively urgent treatment.
14. Patients with cauda equina syndrome require emergency treatment.
15. Patients with septic arthritis, prosthetic joint infection or infected fractures and features of systemic sepsis require emergency treatment. Those who are not septic may be managed as out-patients in appropriate clinics. Suppression therapy should be considered.
16. Most paediatric fractures can be managed conservatively or by minimum interventions.
17. All the major elective Orthopaedic and Spinal surgery should be deferred.

### **Reference sources:**

- Guidance for surgeons working during the COVID-19 pandemic. The Surgical Royal Colleges of the United Kingdom and Ireland. 20<sup>th</sup> March 2020.  
<https://www.rcseng.ac.uk/coronavirus/joint-guidance-for-surgeons/>
- Management of patients with urgent orthopaedic conditions and trauma during the coronavirus pandemic. British Orthopaedic Association. 24 March 2020.  
<https://www.boa.ac.uk/resources/covid-19-boasts-combined.html>

