Specialty guides for patient management during the coronavirus pandemic

Clinical guide for the management of trauma and orthopaedic patients during the coronavirus pandemic

14 April 2020 Version 2

“…and there are no more surgeons, urologists, orthopaedists, we are only doctors who suddenly become part of a single team to face this tsunami that has overwhelmed us…” Dr Daniele Macchine, Bergamo, Italy. 9 March 2020

As doctors we all have general responsibilities in relation to coronavirus and for these we should seek and act on national and local guidelines. We also have a specific responsibility to ensure that essential trauma and orthopaedic care continues with the minimum burden on the NHS. We must engage with management and clinical teams planning the local response in our hospitals. We may also need to work outside our specific areas of training and expertise, and the General Medical Council (GMC) has already indicated its support for this in the exceptional circumstances we may face.

Trauma and orthopaedics may not seem to be in the frontline with coronavirus, but we do have a key role, and this must be planned. In response to pressures on the NHS, the elective component of our work may be curtailed. However, the non-elective patients, who are predominantly trauma-related, will continue to need care. We should seek the best local solutions to continue the proper management of these trauma patients while protecting resources for the response to coronavirus.

In addition, we need to consider the small possibility that surgical facility for emergency surgery may be compromised due to a combination of factors including staff sickness, supply chain and the use of theatres and anaesthetic staff to produce intensive care unit (ITU) pods.
Categories of trauma and acute musculoskeletal (MSK) patients

- **Obligatory inpatients**: Continue to require admission and surgical management, for example, hip fracture. We must expedite treatment to avoid pre-operation delay and expedite rehabilitation to minimise length of stay.

- **Non-operative**: Patients with injuries that can reasonably be managed either operatively or non-operatively, for example, displaced wrist fracture. We must explore non-operative care first, especially if this avoids admission.

- **Day cases**: Surgery can be safely undertaken for a large number of conditions. Provision of day-case surgery should be optimised to minimise length of stay.

- **First contact and clinics**: Outpatient attendances should be kept to the safe minimum.

When planning your local response, please consider the following:

**Obligatory inpatients**

- **Ideally a consultant should be designated as lead consultant.** This duty can be for one day or a few days. When possible, it should not be performed by the consultant on-call or the consultant in the fracture clinic or the consultant in theatre. They must be free of clinical duties and the role involves coordination of the whole service from the emergency department (ED) through to theatre scheduling and liaison with other specialties and managers.

- It can be very stressful during a crisis. Support each other and share the workload. Do not expect the clinical director to do all of the coordination!

- The daily trauma conference should include an update on logistics; identifying problems and those tasked to deal with them.

- Use elective theatre capacity and surgeons to ensure minimum pre-operative delay.

- Use elective rehabilitation services to minimise post-operative stay.

- The majority of trauma admissions are the frail elderly. Work closely with orthogeriatrics and infection control to protect these patients during their admission.

- The majority of injuries in children can be managed conservatively or with day case admission.

- An anaesthetic guideline for patients requiring surgery and who are coronavirus positive will be required.

- Make contingency plans for supply chain issues.

**Theatre ventilation**

- Please refer to current [PHE guidance](https://www.gov.uk).
Non-operative management

- A number of injuries can be managed either operatively or non-operatively. Clinical decisions during a serious incident must take into account the available facility for the current patient and also the impact this may have on the whole community.
- As the system comes under more pressure, there will be a shift towards non-operative care.
- Non-operative care may well reduce the inpatient and operative burden on the NHS.
- It will also protect the individual from more prolonged exposure in a hospital setting.
- It will free up beds for more urgent cases.

Day cases

- Many trauma-related procedures are clinically suitable to be performed as a day case.
- During the coronavirus crisis, an increase in day-case trauma surgery will:
  - avoid unnecessary admission
  - reduce exposure of the individual to a hospital environment
  - free-up beds for more urgent cases
  - allow staff from elective theatres to continue working in a familiar environment.
- During the coronavirus emergency, it is likely that the only elective day-case surgery occurring will be urgent cases. Careful prioritisation of day-case patients will be needed across both the elective and non-elective patients based on theatre/staff capacity.

First contact and fracture clinics

- EDs are likely to come under intense and sustained pressure. Orthopaedic surgeons can make an important contribution by reducing the ED workload so that clinicians in ED can focus on medical patients.
- **EDs are likely to change their system and will use triage at the front door and stream patients directly to the fracture clinic before examination or diagnostics.** Fracture clinics are likely to be asked to take all patients presenting with trauma (including wounds and minor injuries) straight from triage. It is possible that this temporary service will need to be expanded to provide a 12-hour service, seven days per week.
- ED will continue to take patients requiring resuscitation, the trauma team, etc.
- We must avoid unproductive attendances at hospital. Senior decision-making at the first point of contact is essential: it will reduce or even prevent the need for further attendances.
- No patient should be scheduled for surgery by a junior doctor without discussion with a consultant.
• A decrease in elective work will allow for a greater senior presence at the front door.
• Clinicians may need to work in unfamiliar environments or outside of their sub-specialist areas. They will need to be supported.
• Consider, where appropriate, the use of splints rather than plaster casts to allow for removal without hospital re-attendance.
• Protocols to identify those injuries that require no follow up should be reviewed.
• The fracture clinic will need to be open access at least 9am to 5pm and potentially to 9pm. The longer hours will allow ED access and help reduce crowding in waiting rooms.
• The possibility of a seven-day service must be considered.
• Urgent elective, for example, infected prosthesis and red-flag patients, for example cauda equina, will need access to the fracture clinic if all urgent elective clinics are suspended.

Use of virtual fracture clinic
• Using virtual fracture clinic (VFC) will not reduce ED workload. Hospitals using this system may need to switch during the crisis to the system outlined above.
• The patient information used in VFC will be very effective in reducing follow-up visits.
• Consider postponing long-term follow-up patients until the crisis has passed.
• Can a follow-up VFC be developed with your facility?
• Plaster rooms should be accessible for the longest possible time. This will reduce the need for repeat visits to amend casts or splints.
• A temporary minor operating theatre and dressings clinic may need to be set up in fracture clinic to allow for suturing of wounds etc.
• CT scanning may be limited as it is the investigation of choice for coronavirus pneumonitis.

Provision of urgent services during the coronavirus epidemic
The pressure on NHS services will be intense during the coronavirus epidemic and the ability to provide routine elective care during this period will be severely degraded. Patients awaiting elective NHS surgery are unlikely to be treated promptly and it is possible that some will deteriorate. Some conditions, however, are time critical and should be prioritised for urgent management. This section discusses the organisation of urgent services needed for adult and paediatric patients.

NHS England and NHS Improvement, the royal colleges and the British Orthopaedic Association have prepared a document that categorises urgent procedures according to their priority level, and this should be referenced for detailed consideration of which procedures should be given what level of priority.
Patients newly presenting

• Patients with urgent conditions may present to any one of several services – GPs, first contact practitioners or triage services, or directly to the ED. It is vital that there is a clear pathway to the appropriate specialist, which should be communicated to all potential referrers. NHS England and NHS Improvement have prepared, with support from specialty bodies, guidance for primary and community care on urgent and emergency musculoskeletal conditions for onward referral.

• Those presenting to the ED should not be assessed in the department and will need to be moved into the enhanced fracture clinic or other designated MSK clinical area for onward management.

• Timely review of inward referrals needs to be done on a daily basis by a senior decision-maker who can initiate the appropriate action which may include:
  – remote consultation with the patient
  – urgent outpatient review
  – onward referral to the appropriate specialist service.

• Orthopaedic departments should facilitate communication with GPs and community care providers such as physiotherapists (for example, a dedicated orthopaedic/paediatric orthopaedic hotline) to provide specialist advice, which may reduce unnecessary attendances.

• Patients with critical and urgent conditions need to be investigated and managed to established protocols by a team with the appropriate facilities and skills.

Existing patients

Adults who are already undergoing a pathway of care such as staged revision for periprosthetic infection or undergoing limb reconstruction must have management continued so that the outcome is not compromised.

Children

• The majority of children with COVID-19 develop a sub-clinical or mild illness and are vectors, likely to be important in disease transmission. Reducing the number of attendances and shortening the duration of clinical contact with children is therefore essential during the COVID-19 emergency.

• Time-dependent conditions that require review as soon as local resources become available include:
  – DDH: suspected cases and those currently undergoing harness or plaster immobilisation
  – CTEV: currently undergoing cast treatment

• Postpone non-essential long-term follow-up until the situation improves for:
– all other patients previously referred to paediatric orthopaedic clinics
– all patients under routine paediatric orthopaedic clinic review.

Inpatient management

• The majority of paediatric patients and a large proportion of adult patients can be managed with day-case or short-stay surgery and provision should be optimised to minimise length of stay.
• Inpatient management must take account of potential limited access to high dependency unit/ITU.
• Enhanced recovery protocols must be in place to reduce the inpatient stay to the safe minimum and ensure that planning for early discharge is in place wherever possible.
• Elective inpatients must be reviewed daily, seven days a week, by a lead consultant who may or may not carry responsibility for the trauma inpatients.
• Discharge planning must take account of the required community and rehabilitation services required.
• Follow-up should be arranged so that outpatient attendance is kept to the safe minimum.
## Coronavirus: Trauma and orthopaedic escalation policy

<table>
<thead>
<tr>
<th>Prevalence</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
<th>Very high</th>
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<tbody>
<tr>
<td><strong>Impact</strong></td>
<td>Normal Winter Pressure</td>
<td>Limited ITU</td>
<td>No ITU</td>
<td>Emergency surgery limited</td>
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<td></td>
<td>Business as usual</td>
<td>Limited beds</td>
<td>No Beds</td>
<td>Isolation limited</td>
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<td><strong>Phase</strong></td>
<td>Prepare to respond</td>
<td>Stop routines</td>
<td>Prioritise Urgent</td>
<td>Major Incident</td>
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<td><strong>Trauma Operating</strong></td>
<td>Normal</td>
<td>Increase day-case</td>
<td>Maximise day-case</td>
<td>Increase non-op</td>
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<td>Further increase non-op</td>
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<tr>
<td><strong>Elective Operating</strong></td>
<td>Normal except no</td>
<td>Urgent and cancer only</td>
<td>All elective surgery stops</td>
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<td>vulnerable patients</td>
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<td><strong>Fracture Clinic</strong></td>
<td>Normal new patient</td>
<td>Increase use of splints</td>
<td>All ED injuries triaged</td>
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<td>Start reducing follow-up</td>
<td>All-day open access pt</td>
<td>to fracture clinic except resus cases</td>
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<td>Start designing virtual fracture clinic (VFC) follow-up</td>
<td>VFC follow-up where possible</td>
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<td>Urgent diverted to fracture clinic</td>
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<td>Start reducing follow-up</td>
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<td>Normal referral informed by ECI guidance and local Pathways</td>
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<td>Specific FU clinics for fracture + elective rehab</td>
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<td>Free up resource to assists with other tasks</td>
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