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 HSE.

We must engage with management and clinical teams planning the local response in our hospitals. This may necessitate working outside our specific areas of training and expertise. The Medical Council has already indicated its support for this in the exceptional circumstances we may face. www.medicalcouncil.ie

Similar guidance has issued from the General Medical Council in the UK https://www.gmc-uk.org

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 HSE, the elective component of our work is severely restricted. 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. All hospitals and other facilities should work together across hospital and group boundaries to optimise the efficiency of the service. This should maximise the utilisation of human and other resources.

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 anaesthesiology staff to produce ITU pods.

CATEGORIES OF TRAUMA AND ACUTE MUSCULOSKELETAL PATIENTS

Obligatory in-patients: Continue to require admission and surgical management, e.g. 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 e.g. 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 for day-case surgery must be made.

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

WHEN PLANNING YOUR LOCAL RESPONSE, PLEASE CONSIDER THE FOLLOWING:

Obligatory in-patients

A consultant must be designated as 'lead consultant'. This duty can be for one day, a few days or even five days in small units. This is an essential role during crisis management.

Ideally, they should have minimally conflicting duties, they must be free of clinical duties and the role involves co-ordination 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 co-ordination.
- A daily trauma conference, ideally facilitated through remote communications should include an update on logistics; identifying problems and those tasked to deal with them.
- Use elective theatre capacity where appropriate 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 colleagues from Geriatric Medicine and Infection Prevention and Control to protect these patients during their admission.
- An anaesthesiology guideline for patients requiring surgery and who are coronavirus positive will be required.
- Make contingency plans for supply chain issues.

Non-operative management

- A number of injuries can be managed either operatively or non-operatively. Clinical decision-making during a time of crisis must take into account the available facility for the current patient and 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. This may become the recommended norm as the crisis continues.
- Non-operative care may well reduce the in-patient and operative burden on the HSE.
- 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 may 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, 7 days a week.
- ED will continue to take patients requiring resuscitation, the trauma team, etc. In instances of major trauma, it is best to assume the patient is Covid-19 positive and use Personal Protective Equipment (PPE).
- We must avoid unproductive attendances at hospital. Senior decision-making at the first point of contact is essential. This will reduce or even prevent the need for further attendances.

No patient should be scheduled for surgery by a Non Consultant Hospital Doctor (NCHD) without discussion with a consultant.

- 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, or soft casts, rather than plaster casts to allow for removal without hospital re-attendance. Similarly, absorbable sutures should be used to avoid the necessity for return visits for suture removal.
- Protocols to identify those injuries that require no follow up should be reviewed.
- The fracture clinic may need to be open access from at least 9.00am to 5.00pm and potentially to 9:00pm. The longer hours will allow ED access and help reduce crowding in waiting rooms.
- The possibility of a seven-day service may be considered.
- Urgent elective, e.g. infected prosthesis and red flag patients, e.g. cauda equina, will need access to the fracture clinic if all urgent elective clinics are suspended.

Trauma Assessment Clinics (TAC)

- Trauma Assessment Clinics (TAC) 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 TAC will be very effective in reducing follow-up visits.
- Consider postponing long-term follow-up patients until the crisis has passed.
- Consider can a follow-up TAC be developed with your facility.
- Plaster rooms should be accessible for the longest possible time. This will reduce the need for repeat visits to adjust casts or splints.
- A temporary minor operating theatre and dressing's clinic may need to be set up in the fracture clinic to allow for suturing of wounds etc.
- CT scanning may be limited as it is the investigation of choice for coronavirus pneumonitis.

Appendix

Fracture Clinics: Consider working with units close to you, discuss if the outpatient workload can be consolidated in one location within a region and/or hospital group.

Remote access: NIMIS or PACs will be helpful

COVID-19 positive patients - Management in theatre from surgeons' point of view

Safe Site Surgery: The TIME OUT phase will need to be amended to fit with current circumstances (the number of personnel minimised). Quality and patient safety tasks - patient identification, surgical site and type of procedure must still be verified.

Instruments and sharps: Take extra care handling surgical instruments, needles, blades and other sharps during surgical procedures.

Power Tools: Take additional precautions whilst using power tools, all staff must wear eye protection.