NCPS Model for a return to elective surgery

Delivering safe surgical services in aftermath of COVID-19

RCSI. DEVELOPING HEALTHCARE LEADERS WHO MAKE A DIFFERENCE WORLDWIDE
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1. Purpose
To provide guidance to assist surgeons and members of the surgical multidisciplinary team in relation to the resumption of elective surgical activity

NOTE. This guidance does not replace clinical autonomy and judgement.

2. Governance, planning and risk assessment of surgical services

The decision to resume scheduled surgery in the aftermath of the COVID-19 pandemic is challenging and requires judgement and balancing of risk. Measures have been taken to reduce the risk to the public, and more particularly to patients, led to the cessation of all but the most urgent surgery. At a population level, the risk from coronavirus has reduced but not disappeared. This risk may vary with the local and hospital prevalence of coronavirus infection. Surgeons are equally concerned that individual patients awaiting surgery may experience adverse effects if their surgery is cancelled or delayed for a prolonged period of time.

Restoration of surgical services requires careful decision-making including interpretation of the risks and benefits to each individual patient. The care of each surgical patient remains the responsibility of their consultant surgeon, working within a defined clinical governance system, including a multidisciplinary team.

The current greater risks of adverse outcomes from possible COVID-19 infection after surgery should be factored into planning and consent. In some circumstances, measures to reduce the risk of surgery might be considered, for example, stoma formation may be considered rather than an anastomosis in a high-risk patient to reduce the need for unplanned postoperative critical care for complications.

See: Consenting in the COVID situation

These important decisions must be made in consultation with the patients as part of a process of informed consent that includes new risks arising from COVID-19 and its aftermath.

3. Pre-Assessment/Virtual OPD

All patients undergoing surgery should be advised on ways they can reduce their risk preoperatively and ideally should cocoon for 14 days prior to a scheduled operation to reduce the risk they will undergo an operation while affected by coronavirus. Unnecessary hospital visits must be avoided.

3.1. 14 days prior to admission:
In order to mitigate the risk of having surgery or in-patient medical therapy whilst incubating COVID-19, it is recommended that each individual, in so far as possible, minimises their risk of exposure to others who may be asymptomatic or presymptomatic or indeed already symptomatic with COVID-19.

The most effective strategy is to cocoon for 2 weeks in advance of admission. Where this is not possible, it is recommended that contact is minimised with people outside of the patient’s immediate social group to the greatest possible extent and that social distancing, mask-wearing and hand washing/sanitising is used to minimise infection risk.

If an individual is in a residential care setting, it is important to establish if there is COVID-19 transmission in the RCF and if so defer surgery or remove to another setting two weeks prior to admission.

3.2. 7 days prior to admission:

Call or text patient to confirm they are cocooning/physical distancing. Check that they and their social circle have no clinical features suggestive of COVID-19 see: Guidance of planned hospital admissions

3.3. 48 hours pre-admission:

All patients should have a pre-procedural engagement that is virtual, by telephone or other suitable means, to ascertain that they are not

- Suffering from any symptoms or signs of COVID-19
- Restricting their movements due to being a close contact
- Suffering from acute illness of any nature other than that related to the procedure
- In contact with any member of their social group who is suffering from the symptoms or signs of COVID-19.

The patient should attend for a COVID-19 test within 48 hours of scheduled admission. Patients (and individuals accompanying them) should wear face masks to and from testing, if medically tolerated.

At this time the patient’s medical file can be made up and sent to their admission ward which should only care for patients with planned admission who have spent 2 weeks preparing and have had pre-screening and test results with ‘VIRUS NOT DETECTED’. This gives clinicians the opportunity to review the chart on the day before, if required.

In addition, the patient needs to arrange transport to the hospital. It is preferable if the accompanying adult remains in the car but recognised that this may not always be possible. No children are to accompany individuals for admission.

Prior to admission, patients should be sent an appointment time and asked to wait in their car, where possible, until shortly before their appointment time. Included in this communication should be a patient information leaflet indicating the requirements pertaining to the procedure. Face masks may be used during hospital visits, if tolerated and hands sanitised. Individuals are asked not to touch their face whilst wearing masks. If masks are inadvertently touched, hands should be sanitised immediately after.
Patients should be advised about how to minimise their risk of COVID-19 exposure prior to surgery including cocooning and hand hygiene. The extent of cocooning should take into account the potential benefits and harms of COVID-19 infection and delaying surgery. 

**see:** NCCP guidance

**Preoperative assessment is a necessity and must encompass both anaesthetic and surgical risk as well as risk mitigation for COVID.**

Pre-admission: All patients should have a pre-procedural engagement that is virtual, by telephone or other suitable means, to ascertain that they are not
- Suffering from any symptoms or signs of COVID-19
- Restricting their movements due to being a close contact
- Suffering from acute illness of any nature other than that related to the procedure
- In contact with any member of their social group who is suffering from the symptoms or signs of COVID-19.

In addition, they need means to get to the hospital and a designated individual to stay with them for 12/24 hours after any procedure involving sedation or anaesthesia. It is preferable if the accompanying adult remains in the car but recognised that this may not always be possible. No children are to accompany individuals for procedures.

**see:** Interim management of day case procedures

**Preoperative visits to hospital should be reduced as much as possible.**

If a OPD visit is required, patient actions:
- Commence social distancing two weeks in advance of OPD visit with attention to hand hygiene.
- Comply with requirements for assessment for signs and symptoms of COVID-19 to minimise the spread
- Hand sanitise and wear a face mask during visit, if tolerated

**see:** Interim guidance for non COVID-NCAGL

**Surgeons should follow national guidance on preoperative COVID testing**

Pre-procedural testing: Within 48 hours of the procedure, the patient should attend for a COVID-19 test. They should not proceed to the hospital/ clinic until it has been confirmed that their test is negative.

**see:** Interim management of day case procedures

Patients should have RT-PCR COVID-19 testing within 48 to 72 hours prior to scheduled cancer surgery. If RT-PCR test shows the virus is detected, elective surgery should be deferred in line with national recommendations.

**see:** NCCP guidance

4. Consent:
Obtaining informed consent from patients should be performed in line with the Irish Medical Council Guide to Ethics, the RCSI Code of Practice for Surgeons and the HSE National Consent Policy given must take into account the risks and benefits of the procedure as well as the patient’s own risk related to COVID acquisition. The risk relating to COVID is linked to the prevalence of COVID in the region and the risk of hospital transmission

During the COVID19 pandemic and its immediate aftermath, you should consider and provide patients with information on how the pandemic might alter the risks and benefits of their treatment. The situation regarding COVID19 is evolving rapidly and to guide you in decision-making and speaking with patients, you should consider the following:

In addition to general and procedure-specific information to patients, the context of having Surgery in the current COVID19 pandemic should be addressed.

Currently, the risk of a perioperative patient developing COVID19 during the perioperative period is estimated at currently <10% over a seven day period. Those who do develop COVID19 have a 50% incidence of pulmonary complications (<5% of all patients), a 40% likelihood of requiring ICU admission (4% of all patients), and an additional COVID-specific mortality risk of less than 2%. For more detailed guidance see the RCSI NCPS guidelines on Consenting in the COVID situation: consenting support briefing document

See: Consenting in the COVID situation

5. Patient and Staff Safety

The COVID-19 pandemic will have a significant impact on healthcare professionals across Ireland. Many challenging situations across every aspect of work will have to be faced, with patient and staff safety at the centre of policies, procedures, guidelines and guidance recommendations.

There has been a virtual closedown of scheduled surgical services since the pandemic began and with ever-increasing waiting lists, there is an urgency to resume safe surgical services. We must improve the confidence of patients and the general population that people will be safe when attending hospital for scheduled surgery.

Breaking the chain of transmission is key to tackling this virus for which there is no vaccine or treatment at this point in time. Patient and staff safety are intertwined, with a responsibility on each person whether staff or patients to observe the advice of the Chief Medical Officer and the National Public Health Emergency Team (NPHET). Staff safety advice protects them and helps to prevent transmission to other staff and patients. Patient safety measures assist in preventing transmission to staff and other patients. Staff should follow the HPSC guidelines on infection prevention and control precautions during COVID-19.

See: Infection Prevention and Control Precautions for COVID-19

Staff and patients should follow the general advice provided by the DoH as follows:

- Wash your hands frequently with soap and water or use an alcohol-based hand rub if your hands are not visibly dirty
• Practice good respiratory hygiene, that is, when coughing and sneezing, cover your mouth and nose with flexed elbow or tissue – discard tissue immediately into a closed bin and clean your hands with alcohol-based hand rub or soap and water

• Maintain physical distancing, that is, leave at least 2 metres (6 feet) distance between yourself and other people, particularly those who are coughing, sneezing and have a fever

• Avoid touching your eyes, nose and mouth – if you touch your eyes, nose or mouth with your contaminated hands, you can transfer the virus from the surface to yourself.

The government also have a specific set of guidelines for vulnerable groups including those over 70 years of age.

See: HPSC Guidance for Vulnerable Groups

The following flow chart, produced by the HSE and the Health Protection and Surveillance Centre (HPSC), outlines important information with regard to segregation of patients at entry to hospital, i.e. the use of COVID and non-COVID areas outlining the personal protective practices which should be adopted.

Standard precautions, contact and droplet precautions, airborne precautions for aerosol-generating procedures, associated with some surgeries, are clearly outlined in this chart.

Any patient currently prioritised to undergo urgent planned surgery should have self-isolated and be assessed for COVID-19 as above. The current greater risks of adverse outcomes from possible COVID-19 infection after surgery should be factored into planning and consent. Consider stoma formation rather than anastomosis to reduce the need for unplanned postoperative critical care for complications.

5.1. Operating theatres where Aerosol Generating Procedures (AGPs)
Operating theatres where Aerosol Generating Procedures (AGPs) are regularly performed are considered a higher risk clinical area and full PPE is advised where COVID-19 is possible or confirmed. General anaesthesia is an AGP. In line with PHE guidance, full PPE consists of disposable gloves and fluid repellent gown, eye/face protection and FFP2/3 mask. It is imperative to practise sterile donning and doffing of PPE in advance. Procedural tasks are slower and more difficult when wearing full PPE.

5.2. Laparoscopy
Laparoscopy is considered to carry some risks of aerosol-type formation and infection and considerable caution is advised. The level of risk has not been clearly defined and the level of PPE deployed may be important. Advocated safety mechanisms (filters, traps, careful deflating) can be difficult to implement. The smoke plume at laparotomy from coagulating instruments may also not be without some risk. Given the current requirement to protect staff and other patients, a safety-first approach is needed. This guidance may change as COVID-related risks and the efficacy of risk mitigation measures are more clearly understood.

- Consider laparoscopy only in selected individual cases where the clinical benefit to the patient substantially exceeds the risk of potential viral transmission to surgical and theatre teams in that particular situation.

- Where non-operative management is possible and reasonable (such as for early appendicitis and acute cholecystitis) this should be implemented. Appropriate nonoperative treatment of appendicitis and open appendicectomy offer alternatives. Some gall bladder operations can be reasonably deferred for several weeks. Commissioning advice from AUGIS on gallstone disease can be helpful in assessing urgent cases that cannot be deferred.

5.3. In theatre:

- The decision that surgery is essential during the period of infectivity for a patient with confirmed COVID-19 should be made by senior surgeons and anaesthetists.
- Ventilation in both laminar flow and conventionally ventilated theatres should remain fully on during surgical procedures where patients have suspected or confirmed COVID19 infection.
- Aerosols which may be generated as a result of AGPs will be localised and rapidly diluted by operating theatre ventilation. Air passing from operating theatres to adjacent areas will be highly diluted and is not considered to be a significant risk.
- Local risk assessment may dictate that a neutral pressure theatre or negative pressure theatre is preferred for COVID-19 procedures.
• The patient should be transported directly into the operating theatre and should wear a surgical mask if it can be tolerated. Infection Prevention and Control Precautions for Possible or Confirmed COVID-19 in a Pandemic
• The operating theatre staff must be informed in advance of a patient transfer of a confirmed or possible COVID-19 case.
• The patient should be reviewed, anaesthetised, intubated, extubated and recovered in the operating theatre.
• Appropriate PPE should be worn by staff present in the theatre when AGP is performed (for example intubation, extubation). If the operative procedure is anticipated to involve an AGP, as described in the section on AGP, all staff present in the theatre for the duration of the surgery must wear appropriate PPE for an AGP scenario.
• Entry and exit from the room should be minimised during the procedure.
• Disposable anaesthetic equipment should be used where possible.
• The anaesthetic machine must be protected by a filter with viral efficiency to 99.99%.
• The operating theatre should be cleaned, as per local policy, paying particular attention to hand contact points (for example on the anaesthetic machine).
• Instruments and devices should be decontaminated in the normal manner, in accordance with the manufacturer’s advice.
• Smoke evacuation for diathermy / other energy sources
• Team changes will be needed for prolonged procedures in full PPE
• Higher risk patients are intubated and extubated in theatre – staff immediately present should be at a minimum.

6. Exemplar Care Pathways
   a. example 1 direct access haematuria pathway (Link to Follow)
   b. example 2 day case tonsillectomy (Link to Follow)
   c. example 3 nasendoscopy / microlaryngoscopy (Link to Follow)
   d. example 4 lap chole (Link to Follow)

7. Post Care Pathway

Face to face hospital-based follow-up should be reduced as much as possible. On discharge, patients should receive a copy of their discharge summary at the time of discharge to ensure they have all necessary information on their procedure. Include in the discharge summary should be an information leaflet detailing the means to contact the hospital or to attend for unplanned care due to an unforeseen complication of the procedure, e.g. G.P., a virtual clinic, the ASAU or AMAU for clinical examination rather than attending an undifferentiated care pathway (ED).

Patients should be provided with a phone number to contact a member of the surgical MDT in the event of post-operative problems to minimise the need to attend through EDs where they may risk exposure to COVID

See: Interim management of day case procedures
If being discharged to another healthcare institution or long stay residential centre (LSRC) after a stay case the patient should be tested for COVID-19 within 24 hours of discharge and consideration given to ‘cocooning’ on return to the LSRC for 14 days.

See: Guidance of planned hospital admissions

If patients are required to attend for OPD follow up consultation the following should be considered:

- Review all planned OPD attendees for the option to triage to virtual clinic review.
- Consider mechanisms to support single patient visits where the patient is attending multiple providers of having laboratory and radiology tests undertaken ('one-stop-shop').
- Deliver OPD services by appointment only, patient to remain in their car until just before the appointment, there will be a minimal seating area.
- Pre-review and cohort all required OPD attendees (per specialty criteria) to a designated provider (consultant, SpR, SHO, intern, student, ANP, CNS, SN).
- Clearly record in the OPD appointments system designated clinician per patient and other staff per clinic. Update if changes occur on the day of the clinic.
- Pre-assess all OPD attendees (with appropriate supports for vulnerable groups) for symptoms: fever, cough, shortness of breath OR lethargy, confusion, loss of appetite, unexplained change in the baseline condition (also enquire symptomatic members or close contact with confirmed cases amongst social circle)
- Consider split clinics, extended days, extended working hours with workforce planning.
- There is a requirement for service re-design (systems engineering) to ensure lean principles/ flow processes are applied. Need for risk management and quality assurance/improvement process to underpin service re-configuration.

See: Interim guidance for non COVID- NCAGL

8. Follow-up

It is recommended that patients are reviewed for infection, including COVID-19 and surgical site infection occurs between 2 to 3 weeks post-discharge. In so far as possible this should be done virtually.

See: Guidance of planned hospital admissions

Postoperative surveillance/ protocols should be in place to ensure that patients do not become infected with COVID-19 postoperatively.

See: NCCP guidance
9. Surgical Training

The COVID-19 pandemic has presented unforeseen and unprecedented challenges for surgical training worldwide, including here in Ireland. The almost complete cessation of elective surgery has profoundly impacted the operative surgical experience for trainees. This is clearly reflected in the electronic logbook records of trainees at all levels of training. But there has also been a significant reduction in urgent surgery (eg cancer surgery) and even emergency surgery (due partly to a reduction in major road trauma and sports injuries). However, the impact on surgical training goes significantly beyond the operating theatre. There has also been a marked reduction in outpatient clinic activity, endoscopy, and even routine ward work. In many cases, trainees have had less interaction with their trainers with consequent effects on role-modelling and mentorship. In some cases, trainees have been redeployed to other non-surgical areas of the hospital. Many trainees have been off work due to illness or self-isolation.

The net effect of all these challenges has been that trainees have had a significant reduction in training opportunities including reduced clinical decision-making and other areas of professional development.

The impact of COVID-19 has also affected other elements of the surgical curriculum including national selection, workplace-based assessments, teaching activities in the hospitals and in RCSI, CAPA/ARCP reviews and conduct of MRCS/FRCS examinations.

In an era of competency-based education and training, the current pandemic will have a significant impact on career development and progression for many surgical trainees. It is therefore essential that we develop a coherent plan to mitigate the effects of the current pandemic.

9.1. Background

From the outset of the pandemic, RCSI Surgical Affairs has pro-actively managed the rapidly evolving crisis and has taken robust steps to try to limit the impact on surgical training. Some of these steps have been taken in collaboration with our colleagues in JCST.

The RCSI response has included:

• Bringing forward dates of interviews for selection for Specialty Training to before lockdown
• Delivery of weekly webinars for surgeons and trainees
• Online delivery of educational discussions and teaching sessions for many specialties
• Development of a suite of online wellbeing courses/resources
• Arrangements for CAPA/ARCP sessions to be conducted virtually
• Agreement with HSE/NDTP that rotations would change as planned in July 2020
• Prioritisation of CSTs and ST8s for MRCS and FRCS when exams recommence
• Pro-actively managing CCST requirements for ST8 trainees

Notwithstanding these initiatives, there will undoubtedly be major challenges ahead for surgical trainees and for the surgical training process when the situation in Irish healthcare begins to return to “normal”.

The current wave of COVID-19 appears to be waning rapidly and the expected “surge” of cases did not occur. It is now time to focus on a return to normal clinical activity in our hospitals, albeit a “new normal”. An important part of this focus must be mitigation of the negative effects of the pandemic on surgical training over the past 4 months and maximising the training opportunities going forward.

9.2. RCSI Response

In planning for the future 12-18 months, there are certain realities which need to be considered:

• There will be a significant backlog of both urgent and elective clinical activity which will compound the already unmanageable waiting lists. The backlog will relate not only to surgical procedures but also to outpatient appointments and access to diagnostic services.
• There will be an ongoing need for social distancing/use of PPE in all clinical environments. This will significantly impact numbers of cases in operating theatres, OPD clinics and endoscopy lists
• There will be major capacity issues in our public hospitals as overcrowding in the wards, Emergency Departments and OPD clinics cannot be allowed to happen as before. Most major hospitals will probably need to function at much less than full occupancy.
• There will be a need to develop new approaches to patient consultations/interactions both in the wards and in OPD clinics.
• There will be pressures on consultants to do operative cases themselves, rather than assist trainees, to maximise patient turnover in a reduced capacity environment
• The major infrastructural deficits in our health systems were brought into sharp focus during the pandemic (eg national shortage of ICU beds/IT infrastructure issues/manual medication prescribing etc). These problems have still not been addressed and will continue to be a challenge when we return to “normal”.
• The issues highlighted above will require “rethinking” of the working day/week in our hospitals. For example, there will undoubtedly be pressures to extend the working day in operating theatres, OPD clinics and diagnostic services and also to carry out these activities at weekends. Also, there will be a need to contract out certain surgical services to the
private hospital sector because of capacity issues in our public hospitals. All of this will have implications for surgical trainees. Whilst access to increased training opportunities would be welcomed, we need to be mindful of the implications of these new arrangements for trainees in relation to domestic issues such as childcare, schooling and crèches.

- Trainees must be facilitated to follow the patients and clinical training opportunities. This will inevitably involve opportunities to work in the private sector under close supervision as it is clear that much of the elective surgery backlog will be contracted out to private hospitals.
- Expand the role of simulation in both teaching and assessment of both technical and nontechnical skills. The National Surgical Skills Training Centre in RCSI and regional centres around the country should be involved in this initiative.
- Exploit online teaching modalities to their full potential. This will require investment in the infrastructure and also training of trainers in ways to optimise the delivery of education in this way.
- Leverage the educational pedagogies developed over the past year in the RCSI Masters in Surgical Science and Practice to deliver formal training for surgical trainees in areas such as conducting of ward rounds and consultation skills.
- Formalise teaching in clinical decision-making and clinical judgement through the use of simulated MDTs and case-based discussions.
- Integrate the RCSI online Professionalism course into the curriculum for surgical training in all specialties.
- Enhance the support for surgical trainers through the new Faculty of Surgical Trainers. This should include training in the delivery of online courses, how to give constructive feedback and how to teach technical skills in a constrained environment.
- Ensure the physical safety and emotional wellbeing of our trainees by putting formal support structures in place which are easily accessed by trainees at all times. This should include consideration of the impact of extraneous or domestic factors such as altered school schedules, reduced crèche facilities and other childcare implications.
- Develop a flexible approach to prolongation of training/delay in CCST as a last resort in cases where trainees simply cannot meet the required competencies of ISCP

9.3. Recommendations

Although the next 12-18 months will present major challenges for surgical training there will nevertheless be opportunities to develop novel education strategies and utilise existing platforms in a way that transcends current geospatial and temporal limitations. By doing this, it should be possible to maintain a rigorous educational experience despite the limitations imposed by COVID-19 and the post-COVID era.

10. Guideline review

The National Clinical programme in Surgery has collated this set of recommendations and resources for surgeons in practice, trainees and other professional involved in surgical patient care during the current COVID-19 epidemic. This document will be updated regularly over the
coming months and many of these resources are themselves dynamic and will change, update or disappear.

Please contact us with other resources you think we should share and to let us know if there are any out of date or broken links (surgeryprogramme@rcsi.ie). Knowledge is evolving rapidly and some of the advice may change or go out of date so cross-check your sources if you are not sure.

11. References

I. Updated-intercollegiate-general-surgery-guidance-on-covid-19

II. ncagl-acute-operations-interim-guidance-on-the-management-of-planned-hospital-admission-for-non COVID care


IV. ncagl-acute-operations-interim-guidance-on-the-management-of--day-case-agps

V. ncagl-acute-operations-interim-guidance-non-covid-opd-v4

VI. ncps-guide-for-consenting-in-the-covid-situation

VII. Medical Council Guide to professional conduct ethics 8th edition

VIII. RCSI Code of Practice for Surgeons

IX. HSE National Consent Policy
https://www.hse.ie/eng/about/who/qid/other-quality-improvement-programmes/consent/

X. HPSC Infection prevention and control guidance document

XI. HPSC Assessment and testing pathway for use in a hospital setting

12. Acknowledgements

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