Restart of Elective Surgery after a Pandemic (COVID-19)
Introduction (Setting the Scene)

During the COVID-19 Pandemic (2020) all elective surgery was suspended in response to the impending pandemic and uncertainty it may have on the National Health Service in the UK. Some theatre staff were redeployed where needed to provide COVID-19 provision in case of staffing shortages, and essential equipment, resources such as ventilators were reallocated to HDU and ITU areas to manage COVID-19 surge capacity.

The cancellation of all elective, 'non-essential' surgery in the UK has created a backlog of elective surgery within the NHS and private sector. This can have the potential to inflict significant harm on patients if their surgery is cancelled or postponed causing patients' physiological conditions to deteriorate making them more vulnerable to COVID-19.

The UK government has advised the NHS and the private sector that due to the reduced deaths from COVID-19 and the decline in hospital admissions and need for critical care bed occupancy, individual providers can resume elective planned surgical activity. Matt Hancock, health and social care secretary, announced at the ministerial coronavirus briefing on 27 April that resumption of healthcare services suspended due to coronavirus can resume from Tuesday 28 April. This will be introduced locally depending on COVID-19 provision.

In response to the UK government’s recommendations to resume what is called ‘normal service’, the NHS has made it clear that planned elective surgery cannot be resumed until sufficient resources and core services such as essential staff, drug stocks, PPE, intensive care and recovery units have capacity for non-COVID-19 patients. This means Anaesthetists and Surgeons will need to be freed from or taken off their COVID-19 duties.

Restarting elective surgery will be a staggered and gradual process with no particular time frame and it will need to be managed locally. They will need to be both flexible and sustainable as demand and activity levels change. Individual trusts and independent providers will be left to risk assess provision of surgical services dependent on geographical location, region, hospital, number of ICU and non-ICU beds, and appropriate PPE and COVID-19 provision.

Where to find recommendations and guidance to support SOP

In response to government recommendations to begin resuming elective surgery, the AfPP are issuing guidance on how to restart elective procedures within the operating department, safely for both patients and staff. It is important to remember that this should not happen until appropriate, adequate supplies of PPE, and medical surgical supplies are at a sustainable level to support the service as COVID-19 will be around for the foreseeable future and infection rates may fluctuate as the government relaxes lockdown restrictions and social distancing becomes the new norm.

The incubation period for the coronavirus is 14 days (two weeks), therefore, there should be a reduced incidence of COVID-19 cases for at least two weeks prior to resuming elective surgery.

This guidance is a starting point for organisations which can be used to establish polices and standard operating procedures (SOPs), giving reference to policies that are already in place, for example, standard infection control and environmental cleaning.

The Standards and Recommendations for Safe Perioperative Practice 2016 will give you guidance on constructing these policies.

Organisations need to be given an opportunity to risk assess the restart of elective procedures within the operating department.

A strategy document has been developed jointly between The Royal College of Anaesthetists, Association of Anaesthetists Intensive Care, The Society and Faculty of Intensive Care Medicine and The Royal College of Surgeons of England.

Please see links below:

The Royal College of Surgeons of England have provided this guidance and tool to support recovery for surgical services.


The format of the document will address considerations relevant to the return to planned surgery.


The World Health Organisation (WHO) in February 2020, produced a checklist to assist hospital managers and emergency planners for the onset of the coronavirus. This check list may again assist in the restarting of elective surgery.

To facilitate the restart of elective procedures, key fundamental issues need to be considered with the establishment of an organisational governance committee. Developing cohesive leadership and the processing of frequent communication is crucial at this stage.

**The membership of the organisational governance committee could include a key representative from each department to form the multidisciplinary membership:**
- Hospital Director – Manager
- Matron
- Clinical Governance Lead
- Clinical Nurse Manager
- Oncology Lead
- Paediatric Lead
- Pharmacy Manager
- Radiology Manager
- Infection Control Lead
- Theatre Manager
- Pathology Manager
- Outpatients Manager
- House Keeping Manager
- Sterile Service Manager
- Laundry Services – Manager
- Anaesthetic Lead
- Surgical Lead
- Post Anaesthetic recovery Lead, PACU

This List is not exhaustive and can be added to and reduced depending on local need. In the absence of the Manager a Deputy should be nominated who will be required to attend and represent the department in their absence.

An agenda/action plan will need to be drawn up with responsibilities and deadlines.

**Agenda**

The agenda is dependent on local need, but may include items such as:
- Staffing – all areas to include housekeeping (domestics)
- Availability and current stock levels of PPE
- Ward bed availability
- ITU bed availability
- Review of waiting lists to prioritise two weeks wait and urgent cases to elective operating lists
- Protecting patients and staff
- Emergency list
- Portering services
- Patient/staffing COVID 19 testing results

The agenda items should reflect local need and will be agreed with key stake holders. However, the content should reflect the clinical need of the organisation.

Assessing local or organisational deferred elective cases and providing a classification list is required in order to prioritise procedures discussed with the multidisciplinary teams. This needs to be managed daily considering any evolving local or national issues, such as COVID-19 provision.

*Examples of surgical case classification by indication and urgency are shown at Figure 1 at the end of this document.*
The Perioperative Journey

It is imperative that perioperative patients and staff are kept safe at all times during the COVID-19 pandemic or when dealing with other highly infectious diseases.

You will already have policies in place for the safe perioperative journey of your patients; this guidance is to demonstrate that most policies in this journey can be adapted to allow patients to travel safely during the COVID-19 pandemic.

Communicating with patients in an effective way regarding their safety is crucial to provide them with reassurance when coming into hospital for their procedures.

Preoperative Assessment (Phase 1)
- The function of this assessment is about how we acquire the information we need to keep patients safe during the preoperative, intraoperative, and postoperative stages of care.
- You will already have a local policy regarding preoperative assessment, along with a preoperative form or pathway to complete, therefore it is recommended that this is adapted to include COVID-19 patients.
- What to include will be agreed locally depending on your organisational needs.
- If you normally assess patients face to face, then this may need to be adapted to telephone or video conferencing.
- The Royal College of Surgeons have produced a document providing principles, recommendations and key considerations to facilitate elective surgery. Point 1 of this document states.

Testing: Hospitals should know their diagnostic testing availability and develop clear policies for addressing testing requirements and frequency for staff and patients:

Audit of the preoperative assessment service should be carried out to support local clinical governance requirements as determined by organisational and commissioning requirements. These must be reviewed on a regular basis as requirements change (AfPP Standards 2016).

Environmental Cleaning (Phase 2)
- Operating theatres should be cleaned as per local policy.
- The Operating Department is categorised as ‘very high risk’. The service level required is for consistently high cleaning standards to be maintained throughout the day.

Intraoperative Period (Phase 3)
- Areas adjoining very high-risk areas (i.e. staff lounges, offices and bathrooms) must also receive intensive levels of cleaning. (AfPP Standards 2016).
- Public Health England have produced a document providing guidance surrounding control of Infection and Prevention.

4.8 Operating Theatres – of the PHE document states that:
Theatres should be cleaned as per local policy for infected cases, paying attention to hand contact points on the anaesthetic machines. All operating theatres should be terminally cleaned, and air exchanges/ventilation systems reviewed. Cleaning/testing of all anaesthetic machines used in COVID-19 positive patients and non-COVID-19 intensive care units (ICU’s) should be carried out.

The document also identifies the chemical to be used when cleaning the operating theatre.

Restart of Elective Surgery after a Pandemic (COVID-19)
WHO Checklist

Local adaptation of the WHO checklist can take place if patient safety is not affected. Inclusion of COVID-19 at sign in, time out and sign out should be agreed and discussed in the planning stages at the organisational governance committee meeting.

Anaesthesia
During this phase of the intraoperative period a discussion within the clinical governance committee, along with Consultant Anaesthetists should take place confirming that all anaesthetic procedures should be carried out with government recommended PPE for Aerosolised Generating Procedures (AGPs) which includes intubation and extubation of patients. This should be agreed locally using guidance from the Royal College of Anaesthetists. Infection control practices should be maintained in line with local infection control policies.

Surgical Procedure
All organisations should agree a plan identifying those specialities and procedures they will begin their restart with. This can be determined by urgency of procedures, delayed procedures, and children. This list is not exhaustive and will be agreed locally with anaesthetic, surgical and theatre management team’s agreement. All this is dependent upon the availability of specialist staff. Possible or confirmed cases of COVID-19 should be placed at the end of a list where feasible.

Staffing
It is crucial that experienced staff are available to carry out the elective procedures. Consideration must be given to staff who have been providing care on COVID-19 wards including ITU. These staff members may have feelings of stress and fatigue and may require additional support, they may also require childcare support if hours are extended.

AfPP provide access to their Professional Advice Service and the Big White Wall (BWW) which is an online mental health support community. If an AfPP member is struggling with stress, anxiety and lifestyle challenges, they can access the link below:

www.afpp.org.uk/membership/wellbeing

Organisations/Theatre Managers should comply with the recommendations set out in the AfPP publication Staffing for Patients in the Perioperative Setting (AFPP 2014) to ensure allocated theatre time is used effectively and that perioperative personnel are deployed appropriately to meet the identified demand. These numbers should be agreed locally before confirming the number of theatres to be used.

Personal Protective Equipment (PPE)
Organisations need to be aware of the amount of PPE stock that they are carrying and who will be required to wear the PPE before restarting planned elective surgery. There is evidence to say that smoke plume from Electrosurgical units can carry viruses. There is no evidence that these viruses are from COVID-19. If organisations decided to use the government guidelines on PPE for patients with suspected COVID-19 and all aerosol generating procedures, then stocks will need to be reviewed daily and reported into the governance meeting. It would be the responsibility of the theatre stores manager to review the daily supply of PPE. A link to the up to date (24/04/2020) guidance on PPE from the UK government is shown below. This may be subject to change.


Equipment
Theatre Managers will be required to assess what instrumentation they will need and to take into consideration the availability of sterile services facilities and available staffing. Local decontamination policy should be reviewed and updated in relation to COVID-19; instruments and devices should be decontaminated in the normal manner in accordance with manufacturer’s advice.

Availability of instrumentation should be risk assessed on a daily/weekly basis and placed on the agenda of the organisational governance committee meeting. The decontamination of instrumentation and equipment should be assessed alongside the Health and Technical Memorandum (HTM) 01-01 Management and Decontamination of Surgical Instruments (Medical Devices) used in acute care.

https://bit.ly/3h3ZxJZ
Postoperatively (Phase 4)

- All Operating Departments will have a Recovery/PACU area.
- Patients are transferred from theatre to recovery with a handover from the perioperative team.
- All relevant information is shared with all practitioners involved with the patient’s care during the postoperative phase.
- There is evidence to state that the patient should be recovered in theatre thus containing the possibility of any cross infection, therefore there is a need to establish the safest place for the patient to be recovered postoperatively and this should be agreed prior to surgery restarting by anaesthetics, surgeons and theatre management.
- Consideration should be given to information regarding the patient’s COVID-19 status and the local infected case policy should be followed.

The strategy document that was referenced earlier in this document by the Royal College of Anaesthetists, Association of Anaesthetists, Intensive Care Society and Faculty of Intensive Care Medicine demonstrates guidance for all the perioperative journey including the staffing of each area.


Considerations

Operating Theatres will already have in place policies and procedures to assist them in managing the restart of elective operating lists.

Consideration will need to be given to updating and reiterating the following policies:

- Infection control
- Infected cases
- PPE
- Environmental cleaning
- Safe Staffing
- Equipment
- Decontamination.

These Policies should be your starting point to restarting your services safely.

This will assure you that your patients and staff are safe during the Perioperative journey.

Conclusion:

The safety of the patient and the perioperative team is paramount at all times and organisations should continually re-evaluate their facilities, policies and procedures based on COVID-19 related data, resources, testing and other clinical information provided by local authorities, Public Health England (PHE) and government agencies.

This guidance can be used for the restarting of elective surgery for any highly infectious disease.
<table>
<thead>
<tr>
<th>Indication</th>
<th>Urgency</th>
<th>Conditions to consider</th>
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| Emergent (arising)      | « 1 hour      | **Life-threatening emergencies:**  
  - Acute exsanguination / haemorrhagic shock  
  - Trauma level 1 activations  
  - Acute vascular injury or occlusion  
  - Aortic dissection  
  - Emergency C-section  
  - Acute compartment syndrome  
  - Necrotizing fasciitis  
  - Peritonitis  
  - Bowel obstruction / perforation |
| Urgent                  | « 24 hours    |  
  - Appendicitis / cholecystitis  
  - Septic arthritis  
  - Open fractures  
  - Bleeding pelvic fractures  
  - Femur shaft fractures & hip fractures  
  - Acute nerve injuries / spinal cord injuries  
  - Surgical infections |
| Urgent elective         | « 2 weeks     | **Cardiothoracic / cardiovascular procedures:**  
  - Cerebral aneurysm repair  
  - Vascular access devices  
  - Skin grafts / flaps / wound closures  
  - Scheduled C-section  
  - Closed fractures  
  - Spinal fractures & acetabular fractures |
| Elective (essential)    | 1 » 3 months  |  
  - Cancer surgery & biopsies  
  - Subacute cardiac valve procedures  
  - Hernia repair  
  - Hysterectomy  
  - Reconstructive surgery |
| Elective (discretionary)| » 3 months    |  
  - Cosmetic surgery  
  - Bariatric surgery  
  - Joint replacement  
  - Sports surgery  
  - Vasectomy / tubal ligation  
  - Infertility procedures |
Algorithm for COVID Negative Patients in the Operating Theatre

Preoperative

Testing
Patients need to be tested and self isolate for 14 days

Positive

Follow COVID 19 ALGORYTHM

Negative

Admit to ward following normal protocol

Operating list generated

Patient arrived in theatre. Check in process performed.

Confirmation of COVID 19 Status

11-18 minute pause following airway insertion

Anaesthesia carried out in theatre ffp3 PPE for insertion of Airway

Patient taken to theatre

*Surgery completed

Patient extubated transferred to recovery after 11-18 minute pause

11-18 minute pause following airway insertion

Safe for operating team to enter theatre after pause wearing *FRSM PPE

*Paperwork completed after 11-18 minute pause
Theatre Algorithm for Suspected/Known COVID Positive Patient

1. Identification of COVID theatre
2. Identified theatre at nearest point to entry of patient
3. Patient sent for from COVID ward
4. Minimal notes to accompany patient notes to be in plastic sleeves
5. All theatre staff to wear FFP2 masks and PPE

6. Patient fully recovered in theatre
7. Surgery completed
8. Paperwork to be completed after induction 11-18 minute pause
9. After airway insertion. 11-18 minute pause
10. Patient taken straight into theatre. General anaesthesia performed in theatre

11. After extubation of patient 11-18 minute pause
12. Paperwork to be completed after extubation 11-18 minute pause
13. Patients transferred directly from the theatre to the ward
14. Theatres to be cleaned as per infection control policy for infected cases??