Developing Safe Surgical Services (DSSS) for the Covid19 Era

Contents

Appendices

1. Introduction

After the suspension of elective surgical services, with re-deployment of surgical teams, it has become clear that we will not be able to simply 're-start' surgical services.[1, 2] Working practices, which were in place up to February 2020, will not be able to resume until there is a vaccine for Covid19. That may be many months at best, and, at worst, we have to remember that we still do not have a vaccine for HIV or for the common cold.

This document is intended to help develop peri-operative pathways and documentation for the Covid19 era, highlighting important areas to be considered.

2. What changes do surgical teams need to consider in the patient pathway?

There are already several documents on this subject and we recommend they are amalgamated, together with any additional recommendations set out below, into one document for the NHS. Collaboration, especially between anaesthesia and surgery, is essential in producing working solutions.[3,4,5,6,7,8,9]

2.1. Covid19 Testing[10]

- Current NHSE guidance is that all patients about to undergo non-acute/emergency surgery must be tested negative for Covid19 a maximum of 72hrs before the procedure and self-isolate for 14 days.
- Any patients who have been infected with Covid19 should be deferred for 6 weeks to allow the lung cilia to recover and also self-isolate before non-acute/emergency surgery.
- The frequency, timing and the Covid test used may vary with the local and clinical context.
- The surgical team and all those the patient comes into direct contact within the hospital should be regularly tested for Covid19 (e.g., assuming 'track and trace 'is introduced, testing staff daily may be too much of a burden on staff and testing weekly would be a burden for 'track and trace 'because all those the individual has been in contact with in the week before would have to be contacted. Testing on alternate days would seem to be a working compromise).

2.2. Covid19 'lite 'hospitals

- Covid 'lite' facilities will be fundamental to re-introducing elective surgery as safely as possible.
- Local protocols will be required for transfer of patients between facilities in case of clinical need (e.g., a patient becoming Covid +ve, for investigation or emergency

medical need, etc.).

- There are already national arrangements for some super-specialist care (e.g., tertiary cancer and transplant) and GIRFT (Getting It Right First Time) has been championing splitting elective and acute surgery.
- There is a difficult balance between focusing care and reducing access due to geography/transport, resulting in worsening the ''Post Code Lottery'.
- A national perspective on the impact of changes in service configuration is required to avoid increasing health inequalities.
- Changes introduced as Covid19 emergency responses should not be made permanent unless proven to be better for patients compared with previous arrangements.

2.3. Working with others to ensure best use of resources

- Cases should be prioritised according to the national agreed Surgical Prioritisation Sheets (see Appendix 1).[11]
- There should be no distortion of priorities.
- All surgeons have a moral responsibility to consider if a limited resource could be used for someone in greater need.
- Close working in multidisciplinary care groups, including the relevant Surgical Specialty Association, is essential to develop Covid19 era surgical care pathways.
- Surgical care needs to be delivered in the context of regional and national need and to match resources.

2.4. What level of facility is required?

- What access to facilities is available?
- Does the patient need an outpatient/day case/inpatient/HDU/ITU bed?
  This will depend on both the procedure and the patient (see RPM attached).

2.5. The Anaesthetic Team[12]

- Many anaesthetists were redeployed to support critical care services during the Covid19 surge. Restoration of normal anaesthesia job plans may take time as the need for critical care support is ongoing. Recovery nurses, pain team nurses and ODPs were redeployed also. Close liaison with departments of anaesthesia and theatre managers is essential at this time.
- Anaesthetic drugs and equipment (e.g., anaesthetic machines, volumetric pumps,

syringe drivers) were redistributed to critical care to meet surge requirements. Ensuring that 'tools of the trade' are in adequate supply is an essential step in achieving team readiness.

Will there have to be a change in the anaesthetic technique?

- During the Covid19 pandemic, regional anaesthesia has been encouraged to help reduce the need for aerosol generating procedures, such as intubation.
- Choice of airway management takes into consideration the risk of aerosol generation. A well seated, supraglottic airway device[13] is an acceptable airway management technique**).** Drug shortages are frequently a risk and anaesthetists have national guidance[14] on how to deal with this during the Covid19 pandemic.

Anaesthetic teams have been rapidly adapting to the changes enforced by the Covid19 pandemic

- Any potential impact of the Covid19 pandemic on the delivery of safe, high quality anaesthetic services should be communicated well in advance of any proposed elective surgery. In the case of urgent / emergency surgery, this communication should be undertaken during the team brief at the latest. Surgeons will need to have detailed discussions with their anaesthetic colleagues so that the surgeon understands any required changes in anaesthetic technique.

Consent for anaesthesia

- Consent for anaesthesia will include the discussion of regional versus general anaesthesia when appropriate, acknowledging the material risks important to the patient.
- If any changes in the anaesthetic technique could contribute to an adverse outcome, that is a 'material risk' and the both surgeon and the anaesthetist need to inform the patient during the pre-operative consent process.
- Trusts should ensure that preoperative assessment services provide patients with relevant information on how services may be altered due to Covid19 pandemic. The Centre for Perioperative Care provides a useful FAQs resource[15]. Providing information in a timely manner, will help ensure patients have the necessary information to support informed decision making.

2.6. 'Kit' - Issues to consider

- What 'kit 'is needed for the procedure, including appropriate PPE?
- Is it all available?
- Can it be guaranteed to be on site the day before the procedure to avoid glitches in the supply chain?
- The whole team must be trained and experienced in the use of all the 'kit 'required, including the anaesthetic equipment, PPE, surgical kit, etc.

2.7. Theatre usage

- Theatre managers should set the priorities for the lists under their immediate control according to the Surgical Prioritisation Guidelines, taking into account the clinical priorities of the patients listed and in discussion with clinicians locally. Unresolved disputes over individual priorities should be referred to the local ethical team for resolution.
- Cases under GA will probably take longer, especially if a patient cannot be confirmed to be Covid -ve.
- The numbers of cases per list is likely to be significantly reduced for the near future
- What is the protocol if a regional anaesthetic has to be converted to a GA?

2.8. Post-discharge care – issues to consider

- What post-discharge care is required?
    - Who removes sutures?
    - Who delivers the aftercare (e.g., nursing, physio, psychology, etc.)?
    - What social care is needed?
    - Is there a shielded individual, someone self-isolating or in quarantine in the household to which they are returning?
    - Locally agreed plans for the management of post-operative complications are required and must take the Covid status of the patient and access to testing into account. What happens if the patient has to be admitted to another facility under another team?

3. The Covid19 surgical consent process

3.1 What should surgeons be informing patients about the Implications of the new Covid 19 surgical care pathways?

- The Montgomery Ruling (2015) has not been changed by Covid19 and it is still mandatory that when a patient makes a decision to undergo any procedure, it must be based on understanding all *material risks i*nvolved in the procedures appropriate to treat their condition, including not having surgery[16].
- It is the surgeon who is legally responsible for ensuring the patient is informed of ALL material risks in the joint decision-making process.
- Covid19 has created new, potential '*material risks* 'for patients undergoing surgery (see attached – Covid19 related material risks).
- If a patient suffers harm that could have been foreseen and about which the patient was not warned, the surgeon may be negligent in consent.

3.2 Pre-Covid19 pre-printed consent forms and information leaflets

- Pre-printed consent forms and patient information leaflets from before Covid19 should be amended to include peri-/intra and post-operative risks, including changes in the care pathway, especially those that would come into play if they become Covid +ve after having surgery (see below).
- In general, consent forms and information leaflets, no matter how well written are not a defence in law. It is the recording of discussions within the notes that are the best defence.

3.3 COVID19 Related *Material Risks*

The following is not an exhaustive list for every surgical procedure but illustrates the elements that should be considered in the Covid19 surgical consent processes or when formulating new Covid19 surgical patient information.

- **Peri-operative Covid19 Infection**

  There is no guarantee that a patient will not become infected with Covid19 during their passage through the surgical care pathway.
- Covid19 infection at any stage during the surgical care pathway adds to the *material risk* of surgery (see below — complications).

- **Fundamental Changes in the Surgical Pathway**
  Surgical pathways will almost certainly be affected by Covid19 in some way and those changes must be taken into account by the surgeon because it is the surgeon's legal responsibility to ensure that a patient considers all the information when making their decision.
- For decades, peri-operative care and aftercare has happened 'automatically', but the Health Service may not now be able to deliver the same care as pre-Covid19 (e.g., access to physiotherapy, dressing care, GP services, etc.). As a result, the patient's outcome may not be as it might have been. It is the surgeon's responsibility to warn patients of that eventuality.

3.4 Complications – Issues to consider in shared decision making.

There are no longer any 'minor' complications. If complications occur, and no surgeon can guarantee they will not, the outcome and aftercare for the patient may not be the same as routinely expected in the Pre-Covid era.

Major complications - Returns to theatre/transfers

What happens if the patient needs to return to theatre urgently, needs transfer to HDU/ITU or to another facility for care for a life-threatening problem (n.b. especially important for procedures performed in 'annexed' private hospitals)? Patients should be made aware before embarking on a procedure that they may have to be transferred to a Covid +ve facility for care if the need arises. Developing a post discharge complication (e.g., DVT/PE) may require admission to a Covid +ve facility for treatment. These would be viewed as *material risks* by patients.

Intermediate complications — must be treated as Covid +ve

If a patient develops a less urgent complication (e.g., seroma, wound or other infection, loosening, fracture, partial necrosis, etc.) in the community and needs a return to hospital (let alone theatre) they may have to be treated as Covid +ve because point of care Covid19 testing may not be available and waiting 7-14 days in self isolation may be impractical. Where will your patient go to and who will look after them? Patients would view this as a *material risk*.

Patients becoming Covid +ve whilst in hospital

What happens when a patient in hospital becomes Covid +ve? How does this change the post-operative care for the patient? What is the protocol for the theatre team and the hospital? The additional physical, emotional and domestic stress this would cause

would be viewed as a *'material risk'* by any patient. What if they require Covid inpatient care? Who looks after their surgical care if that has to be in a different hospital/ITU? What if the patient dies of Covid? Do you have to inform the Coroner?

'Unknown Unknown'complications

There are 'unknown unknown' complications, such as significant increases in mortality, which have been reported but for which there is little evidence to quote. These complications are hard concept for patients to understand and they cannot be asked to 'sign a blank cheque' for Covid19 complications. Such a consent may well be invalid.

4. Outcome statistics

Pre-Covid outcome statistics may be unreliable because the whole care pathway may now be different and similar results may not be achievable and, therefore, quoting them may give patients a false sense of security.

5. Patient concerns about attending hospital

The public have been avoiding hospitals since the start of the epidemic in the United Kingdom not, 'like the plague' but 'because of the plague'. The marked reduction in patient numbers attending A&E and presenting with cancer, heart conditions, etc., has been well documented.

Health professionals are now accustomed to the current level of fear in hospitals and are adapting working practices to mitigate the risk. It is unlikely that patients will view that risk in the same way. The public are scared because hospitals are where they, rightly, perceive is the greatest concentration of Covid19 cases.

Until hospitals are reconfigured to create 'Covid19 'lite' facilities and information about this reconfiguration becomes public knowledge, it is likely that this reluctance to come to hospital will remain.

6. Conclusion

There is no doubt that planning for Developing Safe Surgical Services (DSSS) for the Covid19 era is much more complex than it first appeared. The Surgical Specialty Associations, in conjunction with the Association of Anaesthetists, are ideally placed to collaborate with other agencies in the production of Covid19 era core care pathways that can be adapted at individual unit level. It has, also, to be remembered that any protocol needs to be followed and failure to do so may lead to legal challenge.

The consent process will be longer and, perhaps, more complicated. Surgeons are likely to feel exposed in the law of negligence for any failings to warn patients of all '*material risks'* but with education and increasing awareness of the necessity for new care pathways and their associated *'material risks'*, that fear and concern should also abate as the practice is adopted as the new way of working.

The best advice for any surgeon and for any patient, who is not in imminent danger, remains, 'If you have any doubts, don't go ahead today'.

21st May 2020

7. References

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4. COVID 19 – Good Practice for Surgeons and Surgical Teams https://www.rcseng.ac.uk/standards-and-research/standards-and-guidance/good-practice-guides/coronavirus/covid-19-good-practice-for-surgeons-and-surgical-teams/ (accessed 11 May2020)

5. Royal College of Surgeons in Ireland – Collected Policy Documents https://www.rcsi.com/dublin/coronavirus/surgical-practice/clinical-guidance-for-surgeons

6. Recovery of Surgical Services, RCS England https://www.rcseng.ac.uk/coronavirus/recovery-of-surgical-services/ (accessed 11 May 2020)

7. COVID Webinar Series Royal College of Surgeons in Edinburgh – https://www.rcsed.ac.uk/professional-support-development-resources/learning-resources/webinars/covid-19 (accessed 11 May 2020)

8. Webinar Links Royal College of Surgeons in Ireland https://www.rcsi.com/dublin/coronavirus/surgical-practice/weekly-webinar-series (accessed 11 May 2020)

9. A Bowtie Risk Model for COVID: The Bowtie Methodology illustrates how threats can act on hazards leading to a loss of control, which may result in catastrophic consequences https://www.abs-group.com/Knowledge-Center/Insights/A-Bowtie-Risk-Model-for-COVID19/ (accessed 11 May 2020)

10. https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/05/Operating-framework-for-urgent-and-planned-services-within-hospitals.pdf (accessed 22 May 2020)

11. Intercollegiate Guidance on Prioritisation of Surgery https://www.rcsed.ac.uk/media/681113/clinical-guidance-to-surgical-prioritisation-during-covid-19.pdf (accessed 11 May 2020)

12. Restarting Planned Surgery: A strategy document from the Royal College of Anaesthetists, Association of Anaesthetists, Intensive Care Society and Faculty of Intensive Care Medicine
Excellent joint document from range of stakeholders in anaesthesia
https://icmanaesthesiacovid-19.org/restarting-planned-surgery-in-the-context-of-the-covid-19-pandemic (accessed 11 May 2020)

13. Use of supraglottic airways during the COVID-19 pandemic
https://icmanaesthesiacovid-19.org/use-of-supraglottic-airways-during-the-covid-19-pandemic
Joint document from range of stakeholders in anaesthesia

14. Drug demand-supply guidance
https://icmanaesthesiacovid-19.org/drug-demand-supply-guidance
Joint document from range of stakeholders in anaesthesia

15. Centre for Perioperative Care (CPOC)
Guidance for patients having an operation during COVID-
https://cpoc.org.uk/patients/guidance-patients-having-operation-during-covid-19

16. Surgery in COVID-19 patients: operational directives (experience from Italy)
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7137852/

Appendix 1- Surgical Prioritisation Sheets

Intercollegiate Guidance on Prioritisation of Surgery

https://www.rcsed.ac.uk/media/681113/clinical-guidance-to-surgical-prioritisation-during-covid-19.pdf

Appendix 2

Recovery Prioritisation Matrix (to use with cases on sheets 2-5)

	1 = low	2 = Intermediate	3 = Significant
Risk to life		Consider moving patient to priority 1a/1b	Move patient to priority 1a/1b
Risk to function			Move patient to priority 1a/1b
Worsening disability			Consider moving patient to priority 1a/1b
Existing Disability			Consider moving patient to priority 1a/1b
Worsening Pain/ Physical symptoms			Consider moving patient to priority 1a/1b
Existing Pain/ Physical symptoms			Consider moving patient to priority 1a/1b
ASA grade (1 to 3)			
Operative facility and staff/kit required			
Post-operative care level required			
Out of hospital care level required			
Column Totals			
TOTAL SCORE (10-28) (copyright NSGMltd)_		X	X
n.b. Only for use with Covid negative cases that do not fulfil the criteria for emergency/urgent care (sheets 1a/ 1b)	Low score suggests outpatient/day case appropriate	ASA category 4 and 5 patients should be included in sheets 1a/1b.	High score suggests in patient with complex intra and post op care needs that must all be in place before surgery.