

Document Control

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Coronavirus Safety Measures for Emergency Care			
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1.0	08/08/20	Final	Initial version for consultation approved by CRG
2.0	28/07/20		<p>Approved by CRG.</p> <p>Incorporating NICE Guidance: COVID-19 rapid guideline: arranging planned care in hospitals and diagnostic services (NG179) https://www.nice.org.uk/guidance/NG179</p> <p>Refining preoperative advice and information to patients on the risks of contracting coronavirus during their procedure and signposting them to relevant information through the trusts website.</p> <p>To reinforce the importance of swabbing 72-48 hours prior to all procedures under general anaesthetic and for all patient groups.</p> <p>Changes to isolation for adults. If the procedure involves a general anaesthetic, that all adults should isolate from the time of swabbing unless they sit in a high risk group. For people who sit in this group, a 14 day period of self-isolation should be suggested.</p> <p>Changes to isolation for children. That children should not have any period of self-isolation.</p> <p>Changes to isolation for expectant women undergoing planned procedures. That pregnancy alone does not infer higher risk and poorer outcome with coronavirus. That low risk women presenting to labour ward they should follow the generic self-isolation for adults guidance (ie isolation from the time of swabbing). It identifies women over 35, those of BAME background, those with BMI of over 25 and those with comorbidities (chronic asthma and hypertension) as being of higher risk of admission with COVID-19, but does not specifically suggest any variation in pre operative care of these women.</p> <p>If the procedure does not require a general anaesthetic, then no swabbing or isolation is required. Self-isolation should still be suggested in high risk groups.</p> <p>If a local flare or surge is seen, then measures may be stepped up to ensure the safety and well being of patients and staff.</p>

3.0	May 2021	Final	<p>Approved by CRG.</p> <ul style="list-style-type: none"> - Updated to Trust Template - Changes to allow the parents of children to be present along the red pathway in line with the RCPCH - Updates to swabbing to signpost to the trust guidance - Removed reference to PCR Covid tests as new tests used may not be PCR. - Updates to PPE to signpost to relevant trust guidance - Changes to bring pathways in line with trust guidance (Green, Amber and Red) - Updated theatre ventilation times for Th5 and 6
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1. Background

2. Purpose

2.1. The Standard Operating Procedure (SOP) has been written to:

- Underpin the management of patients presenting for emergency procedures across the Trust during Coronavirus

3. Scope

3.1. This applies to all patients and staff during an admission where an emergency procedure is undertaken.

4. Location

4.1. These safety measures apply to emergency procedures performed in all settings, including theatres, endoscopy, ward and outpatient settings both at North Devon District Hospital and at community sites across North Devon.

5. Equipment

- N/A

6. Procedure

6.1. Patient Selection

- Each patient will be considered on an individual basis with the risk to the patient from coronavirus balanced against the detrimental effect of further delay to their procedure.
- Alongside the risk of the procedure, patients will be given information on the risk of contracting coronavirus during their stay in hospital, and include the safeguards that have been put in place to protect patients at the Trust. Those in vulnerable or extremely vulnerable groups, such as the over-70's and those of black, Asian and minority ethnic groups, may be at increased risk of severe outcomes if they contract coronavirus. They should be made aware of these risks prior to the procedure and alternatives suggested if feasible.
- They should be sign posted to information on coronavirus provided by the trust.

6.2. Procedure Selection

- Careful consideration should be given to selection of surgical procedure and anaesthetic technique to minimise risk to the patient and attending staff. In general, aerosol-generating procedures (AGPs) should be avoided if an equally effective non-aerosol generating alternative is feasible.

6.3. Patient Pathways

- The Trust has developed pathways that aim to manage patients with coronavirus separately from those who do not have coronavirus, with the intention that the core of the acute hospital and most community sites will remain coronavirus-free (green).
- The systems outlined below are designed to ensure that we can identify patients who may have an increased risk of coronavirus and these can be streamed away from the green pathways. These patients will be cared for in red pathways. This also ensures that staff will be able to work in ways more similar to usual practice but still have confidence that they are not putting themselves at risk.
- **Low Risk Green Pathway (Green Elective and Green Emergency Pathways)**
 - This includes patients/individuals who have been triaged/tested (negative within 72 hours of treatment) and clinically assessed with no symptoms or known recent coronavirus contact / exposure.
- **Medium Amber Risk Pathways**
 - This includes patients/individuals who are waiting for their coronavirus test result and who have no symptoms of coronavirus and individuals who are asymptomatic with coronavirus contact/exposure identified. Patients should if possible, either wait for a swab result and if negative be streamed into the green pathway or if this is not possible due to clinical course, treated in the red pathway.
- **High Risk Red Pathways**
 - This includes patients/individuals who are confirmed coronavirus positive by a coronavirus test or are symptomatic and suspected to have coronavirus (result pending). This includes patients who refuse a coronavirus test.

6.4. Pre-Operative Assessment

- Patients should undergo the usual pre-procedure assessments.

6.5. Isolation & Swabbing

- All patients should be swabbed prior to their procedure.
- Swabs should be taken within 30 minutes of admission and labelled “URGENT SWAB – FOR EMERGENCY SURGERY” if it is expected that they will need theatre within 24 hours of presentation.
- An expected time of operating should be labelled on the swab if known so that the laboratory team can select the most appropriate test.

- All children presenting with testicular pain should be swabbed in this way, regardless of certainty of theatres.
- Lateral flow tests should not be used for the purpose of swabbing for coronavirus status prior to a procedure.
- Children up to the age of 18 are not expected to self-isolate from the time of swabbing as per the Royal College of Paediatric and Child Health guidance.
- For low risk pregnant women having booked caesarean sections, they should follow the same advice as all other adults. The RCOG has stated that pregnancy itself does not confer any increased risk to coronavirus outcome. Swabbing in urgent and unplanned admissions is challenging and requires careful coordination by the obstetric team. Swabbing should be in line with other emergency admissions.
- Those patients who do not have a negative swab result will be streamed to the Red pathway.

6.6. Admission

- All patients will complete a symptom/ contact questionnaire and temperature check on arrival. Patients having a surgical procedure in theatres and/ or a general or spinal anaesthetic will also undergo examination of their chest. Symptomatic or pyrexial patients and those with acute chest signs will be streamed to the red pathway.
- The main theatre suite will run elective and green emergency lists. Lists will not have mixed elective and emergency patients. If it is necessary to perform an emergency procedure on a green urgent list, this will be scheduled after the screened elective patients. Post-operative patients will be separated as far as possible in the Recovery area.
- Theatre 7 is the dedicated red theatre. It has been set up to accommodate Obstetrics, alongside general and trauma patients. There may be a delay whilst appropriate equipment is located to theatres, this risk should be explained to patients.

6.7. Personal Protective Equipment

- Please refer to the Trusts Infection prevention and control precautions and PPE for COVID-19 Use during sustained Transmission of COVID-19 in North Devon.

6.8. Theatre Environment

- **Low Risk Green Emergency**
 - All patient received as per the green emergency pathway will be treated as per the planned surgery policy for green patients and can be managed in green emergency theatres.
 - Within the green emergency pathway, standard theatre cleaning and time for air changes provides appropriate levels of IPC and there is no requirement for additional cleaning or theatre down time

unless the patient has another infectious agent that requires additional IPC measures.

- The Trusts Low Risk Green PPE will be used for Green Emergency Patients. Airborne precautions are NOT required for AGPs on patients/individuals in the low risk COVID-19 pathway, providing the patient has no other known or suspected infectious agent transmitted via the droplet or airborne route. There is no additional requirement for ventilation or downtime in this pathway.
- Patients/individuals in the low risk COVID-19 pathway do not need to be anaesthetised or recovered in the operating theatre if intubation/extubation (AGP) is required.
- There is no restriction on discharge unless the patient/individual is entering a long-term care facility where testing may be required.

6.9. High Risk Red Emergency Pathway

- Red patients, and Amber patients without a coronavirus test result prior to the procedure, will be operated in a dedicated COVID-19 theatre, theatre 7.
- They will be received directly into the theatre 7 operating room and bypass the anaesthetic room.
- A parent or carer of a child will be offered to accompany a child for an emergency procedure in Theatre 7. They can be present for induction of anaesthesia and then will be asked to immediately leave via the staff exit, wash their hands and then be met by a team member in recovery and escorted to the ward or out of theatres. They will not be required to wear Airborne PPE.
- The number of staff in theatre will be kept to a minimum. Trust policy on PPE for red pathways will be enacted when managing red patients including airborne PPE for all high risk airborne generating procedures as per the PHE guidance as outlined in Appendix 3.
- Positive pressure air flow in theatres greatly reduces the risk to staff from aerosol generation as air is blown down towards the floor. After five air changes, 99% of airborne contaminants have been removed and all theatres at NDDH have a minimum of 17 air changes per hour. Anaesthetic rooms also have relatively high air changes, with a minimum of six air changes per hour. In theory, dilution is improved further by laminar flow but there is no evidence to support this in practice at present. Current air change data for NDDH theatres are in Appendix 2.
- All patients on the red pathway will be recovered initially in theatre 7 until sufficient air changes have occurred after the last aerosol generating procedure to move to recovery.
- A flowchart of the process in theatres is in Appendix 4.

7. Appendix 1: Theatre Air Changes

7.1. Data from NDDH Facilities

Theatre	Area	Air changes per hour	Time for removal of 99% airborne contaminants (mins)
1	Theatre	20	15
	Anaesthetic Room	10	30
2	Theatre	31	9
	Anaesthetic Room	6	50
3	Theatre	20	15
	Anaesthetic Room	14	21
4	Theatre	20	15
	Anaesthetic Room	20	15
5	Theatre	27	12
	Anaesthetic Room	16	18
6	Theatre	26	12
	Anaesthetic Room	15	20
7	Theatre	19	16
	Anaesthetic Room	12	25
8	Theatre	36	8
	Anaesthetic Room	23	13

8. Appendix 2: High-risk Aerosol-generating Procedures

The highest risk of transmission of respiratory viruses is during AGPs of the respiratory tract, and use of enhanced respiratory protective equipment may be considered for health and social care workers performing or assisting in these procedures, which include:

This is the list of medical procedures for COVID-19 that have been reported to be aerosol generating and are associated with an increased risk of respiratory transmission Error! Bookmark not defined.;

- tracheal intubation and extubation
- manual ventilation
- tracheotomy or tracheostomy procedures (insertion or removal)
- bronchoscopy
- dental procedures (using high speed devices, for example ultrasonic scalers/high speed drills)
- non-invasive ventilation (NIV); Bi-level Positive Airway Pressure Ventilation (BiPAP)

and Continuous Positive Airway Pressure Ventilation (CPAP)

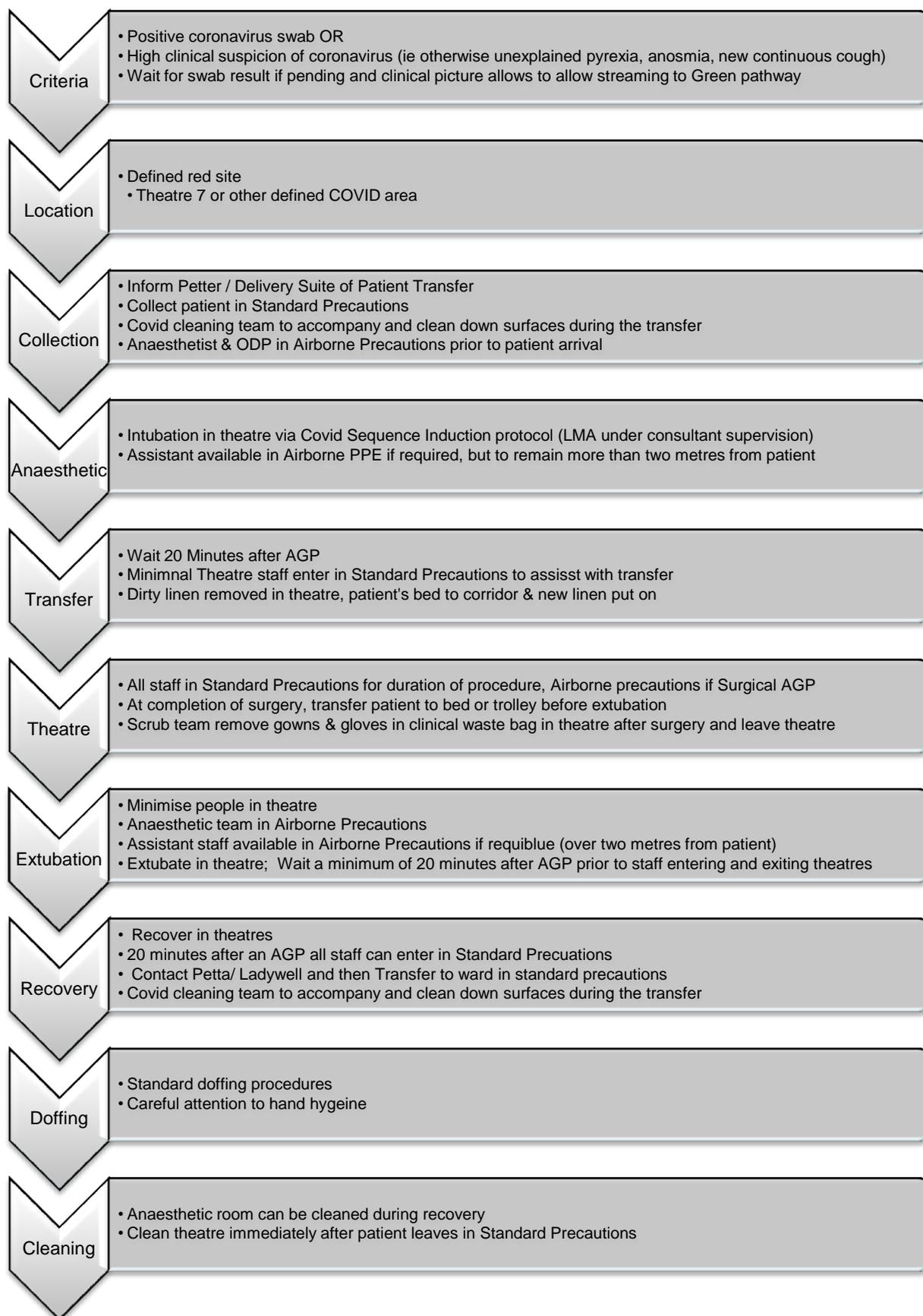
- high flow nasal oxygen (HFNO)
- high frequency oscillatory ventilation (HFOV)
- induction of sputum using nebulised saline
- respiratory tract suctioning
- upper ENT airway procedures that involve respiratory suctioning
- upper gastro-intestinal endoscopy where open suction of the upper respiratory tract

occurs

- high speed cutting in surgery/post-mortem procedures if respiratory tract/paranasal

sinuses involved

9. Appendix 3: Flowchart for Red Emergency Theatre



Process

10. References

- COVID-19: Guidance for maintaining services within health and care settings. Infection prevention and control recommendations.
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/954690/Infection_Prevention_and_Control_Guidance_January_2021.pdf
- The Royal College of Paediatrics and Child Health guidance for the recovery of elective surgery in children
<https://www.rcpch.ac.uk/resources/national-guidance-recovery-elective-surgery-children>
- Royal College of Obstetricians and Gynaecologist guidance on COVID-19 infection and pregnancy.
<https://www.rcog.org.uk/globalassets/documents/guidelines/2020-07-24-coronavirus-covid-19-infection-in-pregnancy.pdf>

11. Associated Documentation

11.1. Northern Devon Healthcare NHS Trust Policies for :

- Infection prevention and control precautions and PPE for COVID-19 Use during sustained Transmission of COVID-19 in North Devon
<https://www.northdevonhealth.nhs.uk/wp-content/uploads/2021/01/PPE-poster-set-4Jan21.pdf>
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