SOUTHAMPTON OXFORD
NEONATAL TRANSPORT

INFANTS WITH SUSPECTED OR CONFIRMED COVID-19 INFECTION

Background

- Protection of staff and other patients is a priority.
- There is currently no evidence of vertical transmission of COVID-19 .
- No viruses have been detected in breast milk and amniotic fluid; therefore, the baby is very unlikely to be infectious at birth.
- Transmission is mainly via droplet spread from close contacts and inadequate hand washing.
- Information on Covid-19 is changing rapidly – please refer to the following websites for latest information and advice
    - RCPCH https://www.rcpch.ac.uk/resources/covid-19-guidance-paediatric-services#working-in-neonatal-settings
    - BAPM https://www.bapm.org/pages/182-perinatal-covid-19-resources
    - RCOG https://www.rcog.org.uk/coronavirus-pregnancy
    - ODN https://southodns.nhs.uk/projects/?nid=49&sub=2

Network Pathways & Transport Service

- Infection with COVID-19 alone is not an indication for transfer.
- All units will be affected by staffing shortages – no transfers for capacity reasons alone.
- Babies >27 weeks gestation in LNUs requiring intensive care for more than 48 hours should prompt senior consultation to consider whether extending this period through the exception reporting mechanism may be safer than transfer. Daily consultations between NICU and LNU/SCU should continue until the patient no longer fulfils criteria for transfer
- In the case of reduced level 3 capacity the ODN will follow national guidance and provide local support in prioritising access to intensive care
- Back transfers will be prioritised to ensure NICU cots are available to maintain patient flow throughout the Network and to minimise separation of baby and parents.
- Patients with suspected/confirmed COVID-19 infection will **not** be transferred by air (NARU advice)

Parents

- Parents with suspected/confirmed COVID-19 infection **will not** be able to visit the neonatal unit until they have a negative test result.
- Parents/ family members **will not** be able to travel in the ambulance routinely for **any** transfer. Exceptional circumstances should be discussed with the transport consultant

SJA team

- All SJA drivers will be fit mask tested for appropriate FFP3 mask, and carry appropriate PPE although it is anticipated that drivers should not need PPE.
- SJA drivers should be responsible for supporting loading of trolley and equipment on the outward journey and carry non-contaminated equipment at all times. Also responsible for loading clean items into the ambulance on the inbound journey (locked away or in front cabin as advised by transport clinical staff) ahead of patient entry.
- Drivers should not enter the patient’s room, or push the transport incubator but can ensure a clear route for the team between the neonatal unit and ambulance

- The driver will be responsible for remotely operating lowering and lifting the tail lift, opening and closing the ambulance doors and remotely supervising the locking of the trolley. This can all be done whilst maintaining a 2m distance from patient
- Whilst in the ambulance, the window between the front cab and the back of the ambulance should be closed
- Drivers will not wear PPE when driving the ambulance
- Driver activates deep clean and advises team when ambulance will be available for service.

Personal Protective Equipment (PPE)

- **Level 1 -Partial PPE**
  - For providing general care to patients with suspected or confirmed covid 19 when there is a low risk of splashing secretions (including respiratory secretions), blood, body fluids or excretions and no aerosol generating procedures (AGPs) are occurring (intubation, extubation, suction, manual ventilation, non-invasive ventilation {high flow/CPAP/biPAP}, CPR)
  - Consists of fluid resistant surgical mask, apron and gloves (one pair) +/-eye protection
  - No staff training is required.
  - See UHS/OUH posters for level 1 PPE and training video
    - Removing Level 1 PPE https://www.youtube.com/watch?v=u02WJaZHf0s
- **Level 2- Full PPE**
  - For aerosol generating procedures (AGPs) (intubation, extubation, suction, manual ventilation, non-invasive ventilation {high flow/CPAP/biPAP}, CPR)
  - Consists of putting on (also called 'donning') fit-tested FFP3 mask or hood, visor/goggles, long sleeved fluid-repellent gown, double gloves. Please note, if wearing a valved FFP3 mask, a visor is required during AGPs. Training is required to be able to safely complete donning and doffing (removing) procedures
  - See UHS/ OUH posters for level 2 PPE and training videos
    - Removing Level 2 PPE https://www.youtube.com/watch?v=Tl93QUmxlyU
    - FFP3 Fit check https://www.youtube.com/watch?v=a88UMqB7_40

Which PPE when for Transport Teams?

Transport team members should wear appropriate PPE at all times during transfer:

- Patients where Covid-19 is not suspected **–** as per current base hospital guidance (currently either mask or level 1, Partial PPE)

Suspected or confirmed covid-19 – level of PPE may be higher than that used in base hospitals for the same procedure as you are unable to donn & doff in the ambulance.

- **Delivery Room Resuscitation** - **Level 2, Full PPE**
- **Ventilated - level 2, Full PPE** (neonatal tubes have a significant leak)
- **Non-invasive ventilation** (high flow therapy, duoPAP, biPAP, CPAP) –**Full PPE (** non-invasive ventilation is AGP).
- **Self ventilating or on low flow oxygen**
  - high risk of needing to do an AGP on the transfer **– level 2, Full PPE** but may use surgical mask during transfer if preferred and change to FFP3 mask if AGP required
  - stable infant where AGPs unlikely – **level 1, partial PPE (use eye protection for oral suction and when the incubator is open)**

Equipment

- All babies should be transferred in an incubator or baby pod. However, please note incubators are not a sealed unit and have air circulation to the outside
- Non-essential equipment should be removed prior to transfer and placed in a closed cupboard
- Minimise the opening of cupboard and incubator doors
- Essential equipment should be placed in a pouch in a wipe down plastic sealed bag and kept on the incubator
- If you have a camera sealed in plastic wipeable pouch then you can keep paperwork in the covid area. Keep in plastic sleeve on the incubator during transfer. You will need to photograph using the camera sealed in plastic wipeable pouch for later print out in clean area at end of transfer. If unable to do this, keep paperwork in clean area in clean plastic sleeve in the front of the ambulance. Ask driver to write down obs at beginning and end of journey.
- Take the following covid specific kit - cuffed neonatal ET tubes, HMEF devices, bacterial/viral filters. For use in infants who have deteriorated and covid-19 is strongly suspected
- Ensure there are a minimum of 3 spare sets of PPE1, PPE2 and spare scrubs in the front of the ambulance

Pre transfer

- Transport Consultant decision that transfer is required
- Ensure all team members are aware of any suspected/confirmed COVID-19 transfer and have appropriate PPE training.
- All staff to change into scrubs before transfer and empty pockets of all unnecessary items.
- Have a drink (level 2 PPE is hot and dehydrating) on outbound journey.
- Use plastic bags for other essential items and take camera in sealed plastic pouch
- Inform receiving unit of estimated time to allow the isolation area to be prepared. They should advise the transport team where the patient should be cared for and agree the route into the hospital avoiding areas where covid 19 patients may be present eg. A+E
- Check there is a mechanism for communicating between the patient room and the clean area – white boards and windows ideally.
- FFP3 masks last 3-4 hours – ensure you have sufficient supplies and a plan for where to stop and change these in the event of a longer distance transfer
- Keep staff to a minimum – 2 personnel plus driver ideally. Do not take observers but if a nurse only transfer, you can take a trainee (clean runner) who will sit in the front on inbound journey
- SJA driver to inform manager of confirmed COVID-19 transfers to allow planning for deep clean
- SJA driver to set air conditioning to extract (not recirculate) air within the vehicle.

Stabilisation and Transfer

- Equipment bags should not be taken into the isolation room.
- Handover, reviewing charts & X rays, and preparing infusions/monitoring equipment etc should be done **before** donning PPE and entering the isolation room
- In-line suction should be used to minimise aerosol particles. Always suction using referring unit in line suction before leaving to minimise procedures in transit.
- Use HMEF on neopuff/rPAP device
- CPAP and HFT are AGPs but can be used with the patient in the incubator. If using CPAP, keep the CPAP expiratory arm inside the incubator

- For babies who have deteriorated and covid-19 is strongly suspected (this does not apply to the newly born infant of a covid positive/suspected mother) the following additional precautions can be considered to minimise AGP further where possible/appropriate:
    - Consider adding filters to the inspiratory and expiratory limb of the ventilator circuit. Monitor CPAP pressures are the same as settings as inadvertent PEEP can occur, especially if the filters get wet. For babies with very small tidal volumes and those on oscillation, the filters may interfere with ventilation. Try with just the expiratory filter, but if this still causes problems the filters can be removed (the AGP risk will be low due to low tidal volumes and low likelihood of viral pneumonitis)
    - Consider use of cuffed ET tube if baby is appropriate size (do not change a tube that is already present unless there is a large leak)
- Any disconnection should be as short as possible - use HMEF on neopuff/rPAP
- If an AGP is required in the ambulance, donn an additional plastic apron and gloves before proceeding. These can then be removed and binned in the ambulance before exiting the vehicle
- Unless you have a camera in a sealed plastic sleeve, paperwork should be left outside the patient room as it cannot be cleaned (keep in a clear Perspex folder). The driver or clean runner will need to carry clean items including paperwork back to the ambulance
- If you do have a camera in a sealed plastic sleeve, paperwork can be kept in dirty area and with the incubator for transfer – you should then photograph all paperwork at the end of the transfer and dispose of the paperwork in the dirty area.
- PPE should be worn at all times whilst in the presence of a person with suspected or confirmed covid -19
- If most preparation is done outside the room and the time in PPE2 is not excessive, then remain in PPE without changing. If the stabilisation time is prolonged so that total time in PPE is likely to exceed 4 hours, or the team require a drink/toilet break, doff and redon in sequence (note this will add about 40 minutes to transport time)
- Confirm ETA and route into the hospital with the receiving team prior to leaving the referring unit. Avoid entering via A+E entrance or any other potential covid-19 contact area.
- Recheck air conditioning has been set to extract (not recirculate) air within the vehicle.
- On arrival at the receiving hospital, alert the receiving team prior to leaving the ambulance to allow them to prepare PPE and help maintain a clear pathway. If the receiving hospital is not base, teams should doff and re-don level 1 PPE to travel home.

After Transfer

- Team should change scrubs and put on PPE for equipment cleaning
- Incubator/pod should be deep cleaned with a chlorine-based cleaner (minimum 1000ppm, such as actichlor) and allowed to dry
- If a suspected COVID-19 infection, the ambulance should be cleaned thoroughly with clinell wipes. If the COVID-19 infection is confirmed, the ambulance needs to be deep cleaned by SJA Guidance regarding ambulance cleaning is available at https://www.gov.uk/government/publications/covid-19-guidance-for-ambulance-trusts/covid-19-guidance-for-ambulance-trusts
- The resilience vehicle may be used if there is a delay
- Discard any disposable equipment that may have been contaminated