



**Standard Operating Procedure:
Inter-Hospital Transfer of The
Critically Unwell Adult COVID-19
Patients**



**West of
Scotland
Critical Care
Network**

**18th April 2020
V. 1.05**

1. Background

- i. The COVID-19 global pandemic has caused a significant increase in demand for mechanical ventilation and critical care resources.
- ii. Across the West of Scotland Critical Care Network we have seen a worsening capacity and demand mismatch for intensive care beds as the pandemic has progressed. In order to ensure equity of access to the appropriate level of care for patients we have set up a critical care COVID transfer team which will provide a safe, non-time critical transfer of ICU patients from one site to another where there is a level 3 bed available.
- iii. Transfers will be in line with the recommendations made in “Guidance on: The Transfer of the Critically Ill Adult” provided by The Faculty of Intensive Care Medicine (FICM) and The Intensive Care Society (ICS).

2. Objective

- i. The purpose of this document is to outline the set up for a safe, new inter-hospital transfer service for critically unwell adult patients who are potentially confirmed or suspected positive for COVID-19. It will outline how the team will be staffed, the procedure for activating the team, the protocol for patient transfer with equipment needs, and the personnel and equipment decontamination procedures.
- ii. This document adheres to the key recommendations made in the SAS SG009 Transmissible Droplet / Airborne Infections document and also in CV001.v2 Critical care retrieval of patients with possible or confirmed COVID19.
- iii. Due to the short time period available for planning and due to the rapidly changing demand upon critical care during this time, this document will be reviewed and possibly amended on a regular basis dependent on new information.

3. Service

- i. The service will operate five days per week, operating between the hours of 08:00 and 20:00 Monday to Friday and will be based at QEUH. A weekend service will be under review depending on demand.
- ii. The team will consist of two critical care doctors and a two person SAS (Scottish Ambulance Service) crew, using an ambulance compatible with using a CCT6 transfer trolley.
- iii. Transfers will be non-time critical transfers for capacity redistribution reasons and patients should be appropriately clinically stable for transfer.
- iv. The planned capacity would likely be for up to two, potentially three if timings allow, transfers per day within local area. Transfers from the wider area (e.g. Dumfries) may limit this capacity to one transfer per day.
- v. Any additional requests would need to be assessed by the senior clinician on for the transfer team in conjunction with QEUH receiving consultant holding the 83081(direct dial number 0141 452 3081) phone and they would review the priorities of calls, consider the availability of the team for the day and whether a call may need postponed to the following day. If demand exceeds current capacity then need for extra medical staff and crews will be discussed on a case by case basis in conjunction with SAS.
- vi. Patients need to be identified as early as possible in the morning and flagged up to the transfer team by 09:30 where possible. This can be done by contacting the transfer team on

07976 931 925 following acceptance of the patient by the critical care consultant at the receiving site.

- vii. No transfers will be started after 16:00 in order to avoid late finishes for team members.
- viii. In order to limit staff contact and reduce risk of COVID-19 exposure and due to the additional challenges of carrying out the transfer whilst wearing PPE, the service will not be able to transfer bariatric patients. It would be expected that patients should weigh less than 110Kg. Patients that weigh more than this are likely to need extra staffing resources and are therefore unlikely to be suitable.

4. Team

- i. The team will consist of two critical care doctors and a two person SAS crew. The team will rendezvous at 09:00 outside the paediatric ED bay.
- ii. The doctors may consist of consultants or trainees of appropriate seniority with experience in adult critical care and transfers. It should be ensured that the two doctors are suitably matched in terms of seniority and skill mix. At least one of the doctors should have prior experience of caring for critical care patients whilst dealing with the difficulties of wearing PPE (personal protective equipment).
- iii. For the trainees on the transfer team their supervising consultant would be the receiving consultant at the QEUH carrying the 0141 452 3081 (83081) phone, if there is no adult critical care consultant present on the transfer.
- iv. Staffing will be provided through a mixture of a pre-planned rota of anaesthetic trainees currently based in RHC, and a selection of PICU consultants and fellows with suitable adult critical care experience, and a daily allocation of a member of medical staff from QEUH critical care (allocated by the QEUH receiving consultant carrying the 83081 phone at 08:00).
- v. For the trainees currently based within paediatric anaesthesia it is expected that they would continue to work within paediatric theatres if there are no transport requirements that day. Monday to Friday the trainee allocated to paediatric emergency theatres 08:00 to 20:00 would usually take on the transfer team role.
- vi. The service will be consultant led where available however it is recognised that under current circumstances this may not always be possible, in this situation the senior transfer doctor will be a senior trainee with appropriate transfer and critical care experience.
- vii. Other medical staff undertaking transfers must be transfer trained (completed a transfer course or have Faculty of Intensive Care Medicine / Royal College of Anaesthetists competencies for transfer signed off at intermediate level or equivalent) as a minimum standard.
- viii. Any additional hours (and remuneration for) required for operating the transfer team in excess of normal working hours will need to be discussed on an individual basis.
- ix. The roles of the SAS crew should be clarified and the crew should be briefed prior to retrieval. This will include the following:
 - Ensure that medical staff are appropriately briefed on securing the CCT6 trolley into the ambulance to reduce SAS crew contact with the patient, however the rear vehicle doors are only to be touched by appropriate SAS crew member.
 - Oversee the transfer bags and any other “clean” equipment whilst the team is packaging the patient at the referring site.
 - Hold the “clean” walkie talkie for communication with the team during packaging and during journey to communicate with medical team in rear of the vehicle.
 - Carry the transfer bag and other “clean” equipment to the ambulance whilst wearing droplet protection and keeping 1 metre distance from the patient at all times.

- Communications during transfer journey i.e. pre-alert both referring and receiving units when the vehicle is 15 minutes away so they are prepared for the team's arrival
 - Hold the transfer team's mobile phone during the journey in case there is communication regarding further transfers.
- x. The Intensive Care Society (ICS), The Scottish Intensive Care Society (SICS), and The Association of Anaesthetists of Great Britain and Northern Ireland (AAGBI) have negotiated insurance for all their members involved in the transport of critically ill patients. Therefore medical staff should ensure they have membership to one of the above societies.

5. Equipment

- i. Equipment will be made available from QEUH as the operational base. It will be maintained and stocked on a daily basis by the medical staff on the transfer team.
- ii. Equipment will include:
- Red kit bag (contents as per equipment list in appendix)
 - Airway grab bag with the addition of a video laryngoscope (as per contents in appendix)
 - Drugs bag (contents as per drugs list in appendix)
 - Vac Mat
 - CCT6 trolley provided by QEUH (EMRS SOP included in appendix)
 - 2 size E Oxygen cylinders
 - Oxylog 3000 ventilator (EMRS SOP included in appendix) mounted on CCT6
 - Four Braun infusion pumps (EMRS SOP included in appendix) mounted on CCT6
 - PPE as listed below
 - Philips Monitor with the capability to monitor end tidal CO₂ and invasive pressures
 - Transfer documentation (see appendix)
 - Dedicated mobile phone - 07976 931 925
 - Walkie talkies to aid team communication with appropriate wipeable bags
- iii. The Laerdel Suction Unit is available in the ambulance and it should be fitted with a high performance viral filter (not fitted as standard). If not available in an emergency a 50ml catheter tipped syringe can be used attached to standard closed suction tubing.
- iv. Staff should ensure they are trained to use all items of equipment prior to going on transfer calls. Where necessary training will be organised to ensure competent use.

6. Minimum Standard of Monitoring

- i. The standard of monitoring during transport should be at least as good as that at the referring hospital or receiving hospital and will be in line with laid out by FICM and ICS in their document "Guidance on: The Transfer of the Critically Ill Adult". This will be continuous monitoring with:
- Cardiac Monitor
 - Invasive blood pressure monitoring (or 5 minute non-invasive blood pressure if IBP has not been established and is deemed not necessary by the senior transfer medic)
 - Capnography
 - Oxygen saturations
 - Temperature
- ii. In addition to this all patients will be on invasive ventilation and therefore ventilator settings, airway pressures, and inspired oxygen concentration will also be monitored.
- iii. Observations will be recorded on the transfer documentation (see appendix). This will be laminated and recorded in wipeable marker (for infection control purposes related to COVID-19) and transferred to the patient notes on arrival at the receiving unit.

7. Infection Control & Personal Protective Equipment (PPE)

- i. Each of the medical team should take a grab bag of PPE, the following would be the minimum PPE required for each COVID-19 patient transfer:

2 FFP3 facemasks per person
2 sets of goggles/visor per person
2 surgical gowns per person
2 x Sterile gloves
3 x Non-sterile gloves
1 apron person

- ii. The SAS crew should aim to maintain a minimum of a 1 metre distance from the patient and not be involved in direct patient contact or aerosol generating procedures and therefore they will require only droplet protection i.e. surgical mask, apron and gloves.

8. Case Allocation and Pre Departure Checks

- i. The SAS crew will rendezvous with the transfer team at QEUH at 09:00 opposite the paediatric ED ambulance bay.
- ii. The cases will be allocated a priority following discussion between the senior transfer doctor and the receiving site consultant.
- iii. If cases have not already been flagged up to the transfer team and the receiving site prior to 09:45 then they should be flagged up at the 09:45 local health board call which the senior transfer doctor may be part of.
- iv. Patients selected should be appropriately stable for transfer. Patients should fit the following criteria:

Intubated and ventilated
FiO₂ < 0.6
On minimal or no cardiovascular support
No co-existing significant pathology such as major trauma
Weight < 110kg

- v. After this point any change to the priorities of calls or additional calls will be decided by contacting the lead of the transfer team.
- vi. The transfer team medical staff should ensure they have the following details from the referring site: patient details (name and CHI), location and clinical details, and identify an appropriate door for rendezvous with the referring site member of staff. They should also communicate a suitable NHS email address to which the handover document (see appendix) can be emailed to.

- vii. Prior to departure the team should ensure equipment (inc. CCT6 trolley), Personal Protective Equipment (PPE) and drugs are checked and ready as per checklists (see appendix).
- viii. Prior to departure team should inform the referring hospital of their estimated time of arrival and give a 15 minute pre-alert to ensure there is a member of staff available to meet the ambulance on arrival.

9. Referring Hospital Site Transfer Process

- i. On arrival at the referring hospital a member of staff will meet the arriving transfer team. This is due to potential lack of knowledge by the transfer team of the geography of other sites, especially given that patients may be being treated in unusual areas of the hospital. The member of staff could be non-clinical, the main requirement is that they are aware of how to navigate a route (suitable for the CCT6 trolley) to a clean area near to where the patient is being treated.
- ii. The requirements of the referring site are laid out in The Referring Hospital Checklist (see appendix)
- iii. In a suitable “clean” area, outside of the patient area, equipment should be divided into equipment which will be kept “clean” and equipment which will have patient contact and will therefore be “dirty”. Put “dirty” equipment on CCT6 trolley.
- iv. A member of the SAS crew will be allocated as “gatekeeper” outside the COVID-19 area and will hold the transfer team phone, “clean” walkie talkie and “clean” equipment.
- v. Medical Team should don PPE with a buddy check system. It is advisable to write the names and roles of team on front of gowns for easy identification whilst wearing PPE.
- vi. The patient will be packaged and secured on the Vac Mat on the CCT6 trolley and the ventilator transfer should be done as per the prompt card (see appendix) with, endotracheal tube (ETT) clamped, ventilators on standby and ensure closed suction fitted to ETT.
- vii. During the ventilator change it is advisable for staff to wear an additional apron and pair of gloves over their PPE which can be discarded if they are not needing to doff prior to departure.
- viii. The Oxylog ventilator should be set up ensuring the HME filter is fitted appropriately just distal to the closed suction unit. When in dirty areas FiO₂ should be set to 100% to prevent air entrainment with contaminated air.
- ix. Allowing a period of 20 minutes post ventilator change will ensure stability of patient on the CCT6 and the Oxylog ventilator. Oxygen should be connected to a mains supply rather than cylinders during this time.
- x. During this time the medical team may want to doff and have a refreshment break in a non-COVID-19 area if a long return journey is anticipated.
- xi. After a final check of observations and action card requirements, the transfer team will leave the referring unit and move to the ambulance with medical staff pushing the trolley.
- xii. SAS Crew remain “clean” in droplet protection and can lead the way and clear any obstacles, maintaining a >1 metre distance from the patient.

10. Mid Transfer Process and Communication

- i. Medical staff will secure CCT6 trolley into vehicle (following morning briefing on this), SAS crew only will control the rear doors.
- ii. Medical staff will travel in full PPE with the patient.
- iii. SAS crew will remain in the front as the “clean” team, the window between the cab and the back of vehicle is to remain closed, the windows in the front should be open if possible. Communication will be via hands free walkie talkie or intercom system (no patient details to be given as it will be an unsecure connection).
- iv. High speed transfer will be avoided as these are non-time critical transfers. Blue lights will be at the discretion of the transferring team senior doctor to aid passage and deliver a smooth journey.
- v. The “clean” crew should hold the team mobile phone in case of any communication regarding other transfers.
- vi. The SAS crew will give the receiving site a 15 minute pre-alert of arrival to allow a member of staff to meet arriving transfer team.

11. Receiving Unit Transfer Process

- i. There should be a pause prior to entering the “dirty” area to ensure all staff are still wearing adequate PPE and to ensure Oxylog is on FiO₂ 100% to prevent air entrainment. SAS crew to remain outside and can leave the clean equipment in an appropriately agreed area. This will allow the SAS crew to leave to take the vehicle to be cleaned at the nearest station.
- ii. Handover will occur at the patient’s bedside in full PPE.
- iii. The patient will be transferred onto the ICU bed and ventilator as per prompt card (see appendix), ensuring both ventilators are in stand by mode and that the tube clamp is used.
- iv. Once the patient is established upon ICU bed and ventilator the medical staff from the transfer team will ensure they remove all transfer team pumps, monitoring and other equipment.
- v. The transfer team will ensure all appropriate documentation is transferred to the receiving site.
- vi. Equipment will be taken to the doffing area for decontamination as per decontamination guide (see appendix) and then the medical staff will doff PPE.
- vii. Whilst the medical team are decontaminating the medical equipment and restocking, the SAS crew will take the vehicle to the nearest station for cleaning.
- viii. Medics will check and replenish equipment and drugs as necessary for the next transfer or in preparation for the following day. Checks will be carried out and signed for appropriately.

12. Post- transfer debriefs & well-being

- i. Post transfer, the team should conduct a hot-debrief. Any challenges or adverse events may require further debrief or discussion with the larger ICU and retrieval team. Highlighting areas of good practice is also important and shared with the wider team so that it might be replicated again in future transfers.
- ii. Transfers of critically ill patients in full PPE are very challenging and can induce fatigue. The team should have sufficient time to rest and refuel following a transfer. In the event of a

difficult transfer (for example, a death during transfer), the team should always have the option to not undertake further transfers that day.

- iii. Participation in this process presents a degree of personal risk over and above that of normal operations and team members should conduct a personal risk assessment for themselves. Anyone wishing to be exempt, for any reason, should make their line manager aware; they will be supported.

13. Adverse Events

- i. Significant Patient Deterioration - If a patient has deteriorated between transfer request and pick up it will be at the discretion of the senior transfer doctor as to whether the transfer should go ahead. If the deterioration occurs mid transfer then the doctor can undertake a risk assessment and decide whether to return to the referring site, continue to the receiving site or (in extreme situations) divert to the nearest emergency department with a COVID-19 positive pre alert resus call.
- ii. Patient has a Cardiac Arrest - The patients being transferred are expected to be assessed as being stable for transfer and therefore unanticipated cardiac arrest would be unlikely. In the event of this occurring management is at the discretion of the senior transfer doctor. Two cycles of resuscitation will be completed (unless DNACPR in place) whilst reversible causes are considered and treated as appropriate. If the patient does not respond to these measures, and particularly if the cardiac arrest is due to the progression of COVID-19 disease process then it is likely that further resuscitation attempts will be futile and can be discontinued at the discretion of the senior transfer doctor.
- iii. Patient Death in Transit - In the event of a patient dying during the transfer the patient will continue to be transported to the receiving site where the doctor will formally examine the patient and confirm death. The appropriate critical incident reporting documentation will be completed.

14. Risk Management

- i. It is important than any adverse events or near misses are captured and appropriately escalated. Datix reports in GG&C are an appropriate way to do this (rather than through the Ambulance Service Incident Reporting). Whilst excessive datix forms or using this tool for small matters is inappropriate (and may not be processed in a timely fashion during this pandemic), it is important that due processes are followed. Equally any areas of good practice or elements of the transfer that went particularly well may be passed on via Greatix forms.
- ii. There should be an appropriate system to escalate concerns and also enable learning for other transfer teams so that future transfers can benefit from this. This should be communicated in a timely fashion to those clinicians undertaking these transfers.
- iii. Travel Sickness
 - Consider prophylactic anti-emetics
 - Nausea and vomiting can be debilitating in retrieval and will not be helped by PPE.
 - Vomiting with full PPE during a transfer will compromise infection control of the retrieval team.

15. Acknowledgments

We would like to thank both EMRS and ScotSTAR for their support in compiling the relevant documentation in a short space of time, the use of their information has been invaluable. In addition to this we are extremely grateful to the anaesthetic department and PICU at RHC for the provision of staffing and their support in setting up this service for adult patients. We also thank SAS for their support and for the provision of crew and vehicle.

16. Appendices

1. WoS CCN Prompt Cards for the Transfer of Critically Unwell COVID-19 Patients
2. Transfer Documentation
3. Referral Site Checklist
4. Handover Form
5. Equipment & Drugs lists
6. Emergency Action Cards adapted from EMRS

Also to be included in team documentation will be the following documents for reference:

7. SAS CG011.v1 Adult Drug Infusions Guidance
8. EMRS SOP Oxylog 3000
9. EMRS SOP Ferno CCT6 Trolley

WOS CCN Covid-19 Transfer Prompt Cards

v1.03

(Adapted from ScotSTAR Paediatric Team COVID-19 card, EMRS post mission checklist and RAH CCT6 pre and post transfer checklists)

v	PRE-DEPARTURE
	08:00 Identify medical team members for the day. Contact 83081 for 2nd team member if necessary
	CCT6 Trolley: <ul style="list-style-type: none"> • Daily check complete and signed for in logbook • Attach circuit and run full ventilator/circuit check • Full battery: ventilator, pumps, monitor, suction unit
	Yellow Drugs Bag: check sealed and signed for previous day in log book
	SCRAM Airway Bag: check sealed and signed for previous day in log book
	Red Response Bag: check sealed and signed for previous day in log book
	PPE: 2 x full sets
	Documentation Folder: Prompt cards, Laminated Transfer Document, dry wipe markers
	Comms: Team phone (plus appropriate charger if necessary) and radios
	Personal: Money and food if required
	09:00 Rendezvous (Paeds A&E ambulance bay area) with SAS crew and make team introductions. SAS crew phone number 07920 271 622
	10:00 Senior transfer doctor to dial into health board call to identify potential transfers for the day and prioritise calls. Liaise with QEUH consultant on 83081.
	Contact with Referring Site Team to make contact with receiving hospital to identify patient details, location and clinical details and organise to send referring site checklist and handover form via secure NHS email account.
	Team Brief: Ensure whole team aware of plan and SAS crew to run through securing CCT6 trolley in vehicle
	Pre-Alert: Inform referring site of departure plus 15 minute pre-alert for longer journey, request escort for arrival

√	REFERRING SITE
	Meet referral site staff member at designated door
	Identify clean area outside ICU: separate kit into 'clean' and 'dirty'
	Assign 'gatekeeper': usually SAS crew member to remain with kit
	Don PPE prior to entering room – use referring site PPE where possible, staff should only use masks they have passed fit testing on
	PAUSE: PPE CHECK AND ENSURE FiO₂ ON OXYLOG IS 100%
	Receive Handover for Patient and ensure referring site checklist has been completed
	Pre-oxygenate the patient prior to moving onto CCT6
	Ventilator change: ensure both vents on standby then ETT clamped. Consider wearing extra pair of gloves and apron for this which can be removed prior to departing referring site
	ETT—airway adapter—closed suction catheter—HME filter—ETCO₂ line—ventilator tubing
	Package patient in vacmattress and eliminate snags, Ensure period of stability on CCT6 (recommended at least 20 minutes with patient on wall oxygen)
	Decision re time of transport:
	Team agree and short transfer then remain in PPE or Team doff PPE in designated doffing area, minus FFP3 mask
	Team leave designated doffing area, Remove FFP3 mask
	Refreshments etc and communicate with receiving unit and then re-don PPE
	Complete Ready to Go checklist before departing with patient (see next page)
	Referring site to escort team back down to ambulance, SAS crew member carries clean bags and maintains 2 metre distance from patient
	15 minute pre-alert given to receiving site - request staff member to meet at appropriate door
	Medical staff travel in full PPE in rear of vehicle with patient, SAS crew in front with window between front and rear closed

√

READY TO GO CHECKLIST

PATIENT:

- ETT tube secured and tied in
- Eyes taped or padded
- IV access x2 patent and accessible
- Oxygenation and perfusion acceptable
- Pupils, GCS documented
- NG secured and aspirated
- Catheter bag emptied, K⁺safe

MONITORING:

- ECG
- Arterial line: zeroed, transducer secured, trace displayed
- ETCO₂ and SpO₂ displayed

DRUGS:

- Emergency drugs
- Sedation: transfer time x2
- Vasoactive drugs: transfer time x2, MAP decision point confirmed
- Muscle relaxant: transfer time x2
- Analgesia (boluses): transfer time x2

VENTILATION:

- Established on transfer ventilation: Vt 6-8ml/kg, Ppeak <30cmH₂O
- Spare Mapelson C circuit or Ambu bag
- OXYGEN = 2 x transport time (mins) x [(MV x FiO₂) + 0.5]
- Size E cylinder = 680L

VACMAT: air suctioned

DOCUMENTATION:

- Patient case notes including imaging. Drug Kardex, ITU Carevue notes
- Referral proforma
- Laminated transfer sheet

COMMUNICATION:

- Receiving hospital contacted: ETA, destination and bedspace confirmed
- Patient relatives informed
- Transfer phone and radio

√	RECEIVING SITE
	Meet receiving site staff member at designated door
	Identify 'clean' area: ensure 'clean' kit kept here, SAS crew can leave at this point to take vehicle for cleaning
	PAUSE: PPE CHECK AND ENSURE FiO₂ 100% ON OXYLOG IS 100%
	Handover to receiving site in designated bedspace with full PPE on
	Ventilator change: ensure both vents on standby then ETT clamped
	ETT—airway adapter—closed suction catheter—HME filter—ETCO₂ line—ventilator tubing—HME filter on expiratory limb--ventilator
	Transfer patient onto bed, ensure all transfer team monitoring and pumps returned
	Documentation: take photo of transfer proforma and email to duty transfer doctor. Wipe clean transfer proforma and laminated cards
	Decontamination of equipment by team in full PPE using disposable cloths and Actichlor:: <ul style="list-style-type: none"> • Blood contaminated: 1% Actichlor (10 tablet sin 1L H₂O) • Non blood contaminated: 0.1% Actichlor (1 tablet in 1L H₂O)
	Alcohol gel hands. Clean equipment from top or furthest away point
	CCT6 <ul style="list-style-type: none"> • Wheels • Outside of cupboard and frame • Harness and buckles • Monitor • Braun infusion pumps • Suction unit (dispose of contaminated suction equipment) • Vacmattress – wipe, machine wash cover • Oxylog – dispose of tubing
	Communications: wipe clean protective pouch
	Clean any other used kit: drugs bag, scam bag and red bag if necessary, McGrath video laryngoscope cleaned and blade disposed of if used
	Trolley removed from contaminated area
	Doff PPE in designated area. Remove FFP3 mask outside doffing area
	Yellow drug bag: remove from plastic bags and wipe clean.
	SCRAM airway bag: remove from plastic bags and wipe clean. If used, need to wipe inside contents. If used, wipe clean McGrath handle and dispose of blade
	Red response bag: remove from plastic bags and wipe clean

√	POST MISSION
	Rest and Refuel
	HOT DEBRIEF with team
	What went well? Consider submitting Greatix
	What could be improved?
	Adverse event? Submit Datix
	YELLOW DRUG BAG: <ul style="list-style-type: none"> • All sharps disposed of • Re-stocked, sealed and logbook signed Return to fridge
	RED RESPONSE BAG: <ul style="list-style-type: none"> • Re-stocked, sealed and logbook signed
	SCRAM AIRWAY BAG: <ul style="list-style-type: none"> • Re-stocked, sealed and logbook signed
	CCT6: <ul style="list-style-type: none"> • Return to storage location, charge through 1 cable from AC/DC converter • Oxylog: confirm green charge light • Braun pump displays on and back on charge • Replace ET/CO₂ sampling lines/ 2 x HME filters • Monitor on charge • Confirm suction unit charging and closed suction system/Yankauer replaced • Replace oxygen cylinder if < 3/4 full • Ensure head rest present • Logbook signed
	COMMUNICATION: <ul style="list-style-type: none"> • Radios and phone placed back on charge
	DOCUMENTATION: <ul style="list-style-type: none"> • Prompt cards, laminated transfer proforma, drywipe markers present
	PPE: <ul style="list-style-type: none"> • Re-stocked and sealed.

**REFERRING HOSPITAL CHECKLIST
FOR WoS COVID-19 TRANSFERS**

ATTACH PATIENT ID
LABEL

Date:

Task	Signature
COMMUNICATION	
Inform patient's NOK. Provide contact tel. for receiving site ICU	
Ensure available routes in/out of hospital for transfer team	
Designate member of staff to meet transfer team at rendezvous point and ensure they are familiar with route	
Transfer referral letter completed, printed and e-mailed to duty transfer doctor	
Nursing discharge documentation completed and copy in notes	
PATIENT PREPARATION	
Patient belongings placed into sealed clear plastic bag for transfer	
Ensure ETT secured, cuff pressure checked and incisor position documented	
Confirm ETT/NGT position on CXR and document	
ABG prior to arrival of transfer team	
Ensure IV access x2 accessible and available	
x1 500mls crystalloid bag attached	
Ensure all infusions lines clearly labelled with backup syringes made up	
Arterial line clearly labelled	
ARRIVAL OF TRANSFER TEAM	
Escort transfer team to PPE area to don	
SBAR handover incl. Resuscitation status	
Patient sedated & paralysed for transfer	
Assist team with transfer of patient onto CCT6 trolley	
Oxylog to remain on FiO2 1.0 to prevent entrainment of "dirty" air	
Empty catheter bag	
Aspirate NG, stop feed	
Assist transfer team with pre-departure checklist	
Ensure clear pathway & escort to ambulance	

ICU TRANSFER TEAM HANDOVER FORM

07976 931 925

Please email completed form to duty transfer doctor

A printed copy should also be included with the patient notes

TEAM WILL CALL ON DAY OF TRANSFER TO CONFIRM MEETING POINT / ROUTE

PATIENT DETAILS

CHI _____
Forename _____
Surname _____
NOK _____
Relationship to patient _____
NOK Contact number _____

AFFIX ADDRESSOGRAPH LABEL HERE

REFERRING TEAM

Date transfer requested _____
Hospital _____
Unit / bed space _____
Consultant _____
Contact number _____
Email _____

DESTINATION DETAILS

Date to be transferred _____
Hospital _____
Unit / bed space _____
Accepting Consultant _____
Contact Number _____
Email _____

COVID-19 DIAGNOSIS

Date developed symptoms _____
Date diagnosis confirmed _____
Source of diagnosis NP swab / sputum / ETA
Date of hospital presentation _____
Date of intubation _____

SIGNIFICANT PMH

If additional space is required, please attach in a letter

MEDICATIONS

ALLERGIES _____

DRUG HISTORY

PLEASE INDICATE IF / WHEN STOPPED

CURRENT STATUS

AIRWAY

Grade of intubation I / II / III / IV
ETT size _____
Length @ lips _____
Difficult intubation Y / N
Comments / equipment

BREATHING

FiO2 _____ PEEP _____
Vt _____ RR _____
Pmax _____ SpO2 _____
ABG FiO2 pO2 pCO2 H+
Bic Lactate BE
Proned Y / N
Imaging results (CXR / US / CT)

CIRCULATION

CVC location / type / date of insertion

A – LINE location/ type / date of insertion

PVC LOCATION / size / DATE OF INSERTION

HR _____ BP _____

ECG _____

CV SUPPORT drug / concentration / rate

1. _____
2. _____
3. _____

DISABILITY

PRE-INTUBATION GCS _____

SEDATIVE INFUSIONS

1. _____ RATE _____ ml/hr
2. _____ RATE _____ ml/hr

KEY BLOOD RESULTS

24h U/O _____ 24h fluid balance _____

Creatinine _____ K+ _____ Na+ _____

WCC _____ CRP _____

PCT _____ Temp _____

OTHER INFORMATION

If more space is required, please attach in a letter

Thank you

WoS COVID-19 TRANSFER GROUP EMERGENCY ACTION CARDS
ADAPTED FROM EMRS ACTION CARDS

SUDDEN HIGH PAWP

EMERGENCY ACTION

IMMEDIATE ACTIONS

“INFORM TEAM”

DECLARE TO DRIVER VIA WALKIE TALKIE	“MEDICAL PROBLEM WITH PATIENT” Request to remove seatbelts
OXYGEN	100%
ASSESS PULSE	+/- DECLARE CARDIAC ARREST

CHECK

PATIENT	FIGHTING VENTILATOR
CHEST	BILATERAL EXPANSION
ETT	POSITION/PATENCY
VENTILATOR	SETTINGS APPROPRIATE
CIRCUIT	KINKS; BLOCKAGE
MONITOR	etCO2 WAVEFORM; VITALS

EXCLUDE PATHOLOGY

NB: PAUSE VENTILATION AND CLAMP ETT PRIOR TO ANY DISCONNECTION

TENSION PNEUMOTHORAX	DECOMPRESS SEE <i>SUDDEN FALL IN SpO2</i> CARD
BRONCHOSPASM	SALBUTAMOL 50mcg IV BOLUS
DYNAMIC HYPERINFLATION	TARGET LOW VT 6-8ML/KG IBW DECREASE RR – START WITH 10bpm DECREASE I:E RATIO= 1:3 →1:5
MUCUS PLUG	IN-LINE SUCTION
VENTILATOR/PATIENT DYS-SYNCHRONY	ADMINISTER PARALYTIC +/- SEDATION
ANAPHYLAXIS	ADRENALINE 500mcg IM (0.5mls of 1:1,000)

ADAPTED FROM EMRS EMERGENCY ACTION CARDS V3_15.06.2017

WoS COVID-19 TRANSFER GROUP EMERGENCY ACTION CARDS
ADAPTED FROM EMRS ACTION CARDS

<u>SUDDEN FALL IN BP</u>	
<u>EMERGENCY ACTION</u>	
IMMEDIATE ACTIONS	
<u>“INFORM TEAM”</u>	
DECLARE TO DRIVER VIA WALKIE TALKIE	“MEDICAL PROBLEM WITH PATIENT” Request to remove seatbelts
OXYGEN	100%
ASSESS PULSE	+/- CARDIAC ARREST
VENTILATOR PAWP	+/- RAISED PAWP (SEE CARD)
CHECK	
MONITOR	DYSRHYTHMIA; etCO ₂ ; PACED?
CHEST	BILATERAL EXPANSION?
A-LINE	TRACE / POSITION / PRESSURE BAG
INFUSION	DISCONNECTION / OCCLUSION
EXCLUDE PATHOLOGY	
<u>NB: PAUSE VENTILATION AND CLAMP ETT PRIOR TO ANY DISCONNECTION</u>	
TENSION PNEUMOTHORAX	DECOMPRESS SEE <i>SUDDEN FALL IN SpO₂</i> CARD
TACHYDYSRHYTHMIA	DC CARDIOVERSION / AMIODARONE 300mg IV
BRADYDYSRHYTHMIA	ATROPINE 1mg IV / EXTERNAL PACING
ANAPHYLAXIS	ADRENALINE 500mcg IM (0.5mls of 1:1,000)
DYNAMIC HYPERINFLATION	TARGET LOW VT 6-8ML/KG IBW DECREASE RR – START WITH 10bpm DECREASE I:E RATIO= 1:3 →1:5
<i>ADAPTED FROM EMRS EMERGENCY ACTION CARDS V3_15.06.2017</i>	

WoS COVID-19 TRANSFER GROUP EMERGENCY ACTION CARDS
ADAPTED FROM EMRS ACTION CARDS

SUDDEN FALL IN SpO2

EMERGENCY ACTION

IMMEDIATE ACTIONS

“INFORM TEAM”

DECLARE TO DRIVER VIA WALKIE TALKIE	“MEDICAL PROBLEM WITH PATIENT” Request to remove seatbelts
OXYGEN	100%
ASSESS PULSE	+/- CARDIAC ARREST
MONITOR etCO2	+/- FALLING etCO2
VENTILATOR PAWP	+/- SUDDEN RISE PAWP

CHECK

CHEST	BILATERAL EXPANSION?
ETT	POSITION / PATENCY / CUFF LEAK ASSESSED WITH MANOMETER
MONITOR	VITALS / SpO2 PROBE OFF?
VENTILATOR	CIRCUIT CONNECTION / O2 SUPPLY FAILURE

EXCLUDE PATHOLOGY

NB: PAUSE VENTILATION AND CLAMP ETT PRIOR TO ANY DISCONNECTION

TENSION PNEUMOTHORAX	DECOMPRESS
MUCUS PLUG	IN-LINE SUCTION
ALVEOLAR OEDEMA ATELECTASIS LOBAR COLLAPSE	RECRUITMENT + PEEP
BRONCHOSPASM	SALBUTAMOL 50mcg IV
VENTILATOR / PATIENT DYS- SYNCHRONY	ADMINISTER PARALYTIC +/- SEDATION
GASTRIC DISTENSION	NG TUBE

ADAPTED FROM EMRS EMERGENCY ACTION CARDS V3_15.06.2017

WoS COVID-19 TRANSFER GROUP EMERGENCY ACTION CARDS
ADAPTED FROM EMRS ACTION CARDS

FALLING etCO2

EMERGENCY ACTION

IMMEDIATE ACTIONS

“INFORM TEAM”

DECLARE TO DRIVER VIA WALKIE TALKIE	“MEDICAL PROBLEM WITH PATIENT” Request to remove seatbelts
OXYGEN	100%
ASSESS PULSE	+/- CARDIAC ARREST
ASSESS BP	+/- SUDDEN FALL IN BP

SUDDEN & COMPLETE LOSS OF TRACE

CONSIDER HAND VENTILATION

NB: PAUSE VENTILATION & CLAMP ETT PRIOR TO ANY DISCONNECTION

CHEST	BILATERAL EXPANSION
ETT	POSITION
VENTILATOR	CHECK AIRWAY PRESSURES
CIRCUIT	CHECK ETT TO VENTILATOR
CAPNOGRAPH	EXCLUDE CALIBRATION / CHECK CABLE CONNECTED / CONDENSATION IN CIRCUIT NB: FOLLOW DISCONNECTION INSTRUCTIONS

SUDDEN SEVERE REDUCTION IN etCO2

DROP REPRESENTS PULMONARY HYPOPERFUSION

EXCLUDE TENSION PNEUMOTHORAX	DECOMPRESS CHEST SEE <i>SUDDEN FALL IN SpO2</i> CARD
EXCLUDE ANAPHYLAXIS	ADRENALINE 500mcg IM (0.5mls of 1,1000)
FAT OR THROMBOEMBOLISM	

HYPERVERTILATION PRESENTS AS GRADUAL REDUCTION IN etCO2

REVIEW VENTILATOR SETTINGS

ADAPTED FROM EMRS EMERGENCY ACTION CARDS

V3_15.06.2017



COVID-19 APPROVED GUIDANCE

OFFICIAL SENSITIVE

Note: This guidance has been fast-tracked for approval for use within NHSGGC

Covid-19 WOS Inter Hospital Transfer Critically Unwell Adult

This guidance is intended to assist healthcare professionals in the choice of disease-specific treatments.

Clinical judgement should be exercised on the applicability of any guidance, influenced by individual patient characteristics. Clinicians should be mindful of the potential for harmful polypharmacy and increased susceptibility to adverse drug reactions in patients with multiple morbidities or frailty.

If, after discussion with the patient or carer, there are good reasons for not following guidance, it is good practice to record these and communicate them to others involved in the care of the patient.

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Important Note:

The version of this document on the Clinical Guideline Directory is the only version that is maintained. Any printed copies should therefore be viewed as 'Uncontrolled' and as such, may not necessarily contain the latest updates and amendments.