Llywodraeth Cymru
Welsh Government

Designed for Life:

Welsh guidelines for the transfer of the critically ill adult

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NHS WALES GIG CYMRU

Contents

1. Introduction

Critical Care Networks were established in Wales 2007. Since then we have striven to plan and deliver guidance and promote excellence for critical care in the Principality along with other health care bodies. One such task is the production of an all Wales Transfer Guideline. This guideline attempts to rationalise advice from a number of sources and also incorporates the unique challenges critical care faces in Wales.

It is important, when discussing critical care, to understand the complexities of the various levels of care. A précised version of the Welsh levels of care is set out in appendix 1. For a full description of the Welsh levels of care please visit:

http://www.wales.nhs.uk/sites3/Documents/753/FINAL-Revised%20NWCCN%20levels%20of%20care.pdf

These Transfer Guidelines apply to Level 2 and Level 3 critically ill adults in the main, but Level 1 patients may need to be considered in some circumstances e.g. cardiac patients being transferred for Primary Percutaneous Coronary Intervention (PPCI).

The guidelines pertain to transfers outside of the Critical Care Department, be it an internal transfer (intra-hospital) for example, to the CT scanner or an inter-hospital transfer (to another hospital); these are called secondary transfers. Such transfers may originate from the Critical Care Unit, the Emergency Department and sometimes the wards. This document only applies to secondary transfers. Primary transfers in the Wales are generally carried out by the Welsh Ambulance Service Trust (WAST) by paramedic and/or technician ambulance crews or the Emergency Medical Transfer and Retrieval Transfer Service (EMRTS) - See section 3.

Transferring a critically ill patient requires co-ordination with many parts of the health service and other bodies including WAST, EMRTS and Search and Rescue (SAR), all with the common goal of providing patients with the best possible standard of care. This document attempts to harmonise this procedure by clarifying roles, capabilities and responsibilities.

2. Transfer arrangements within the Critical Care Network and Health Boards

The Critical Care and Trauma Network, Health Boards, EMRTS, WAST and SAR must work in close collaboration to achieve the common goal of safe transfer of critically ill patients.

It is the responsibility of the Network to maintain regional transfer groups. These groups should involve critical care nursing, AHPs and medical staff from the Health Boards within the Network and those outside the Network to which they regularly send patients for specialist care (see appendix 7). WAST, EMRTS, Wales air ambulance and SAR should also be represented on this group. These groups should provide overarching governance for all critical care adult transfers.

All acute hospitals must have in place a system to resuscitate, stabilise and transport critically ill patients regardless of what Level/Tier of care the hospital provides.

A named consultant and senior nurse should be responsible for the organisation and development of transfer services within the Health Board and work closely with the Network regional transfer group.

Within each hospital, a named consultant should be available 24 hours a day to arrange and supervise all critical care inter-hospital transfers. This would normally be the intensive care consultant.

Sending hospital personnel on transfers must not jeopardise the care of existing patients in the unit by leaving inadequate staff numbers and skill mix. Each Health Board must develop protocols to prevent this.

A regional bed bureaux or the Directory of (Critical Care) Services should be used to identify the nearest available and appropriate critical care bed when needed.

3. Emergency Medical Retrieval and Transfer Service (EMRTS) Cymru

EMRTS Cymru is a Consultant led and delivered service providing transfer of critically ill or injured patients in Wales. It is commissioned by the Emergency Ambulance Services Committee (EASC) and is hosted by ABMU Health Board.

The service is operational 12 hours a day from its Swansea and Welshpool airbases and has access to the Wales Air Ambulance aircrafts (Helimed 57 and 59) and five specialised rapid response vehicles. In addition to the provision of pre-hospital critical care to all age groups, the service is available to Welsh healthcare facilities to provide the transfer of patients who meet all of the following criteria:

1. Critically ill or injured and requiring Level 2 or Level 3 care.
2. Time critical and require intervention that can only be carried out at the receiving hospital OR not time critical but have a high risk of deterioration requiring care that is best carried out at the receiving hospital.
3. Referred and accepted by the receiving hospital.

The service is accessed by making contact with the EMRTS Air Support Desk (ASD). A teleconference is established between the referring hospital and a ‘top cover’ consultant, who is responsible for accepting the transfer and determining the most appropriate EMRTS resource to undertake it.

The service is delivered by Consultants from Anaesthetics, Intensive Care Medicine and Emergency Medicine working in conjunction with Critical Care Practitioners. The standards of clinical care of the EMRTS are aligned with this guidance; Designed for Life Guidelines: Welsh Guideline for Transfer of the Critically Ill Adult.

The EMRTS has the ability to provide the following:

1. Patient packaging system allowing safe transfer by air and road.
2. Advanced monitoring system including a detailed patient report.

3. Ultrasound (FAST, vascular access and echocardiography).
4. Point of care blood gas and clotting analysis.
5. Blood and blood products (4 units of packed red blood cells, 4 units of plasma, 4g of fibrinogen and prothrombin complex concentrates).
6. Electronic patient care record and database to ensure consistent and complete data collection.

The service can be contacted via the Air Support Desk (ASD) 7 days a week from 08.00 – 20.00hrs on **0300 123 2301**.

4. Decision to transfer and ethics

The decision to transfer a patient needs to be taken at a Consultant level. This decision must not be taken lightly and the risks and benefits must be evaluated. If the potential risks outweigh the potential benefits, then the transfer should not take place.

Once a decision to transfer is made, contact with the receiving unit/ED must be made at a senior medical level.

The patient (if they have capacity) and their relatives must be informed as early as possible of the decision to transfer and the reasons for that decision.

The final decision for transfer lies with the Consultant at the *receiving* unit.

There are three reasons for transferring the critically ill patient;

a) **Transfer for specialist care and investigation**

This is often an emergency where efficient transfer is essential for treatment which cannot be provided in the base hospital.

NB when contacting the ambulance service or EMRTS these patients may be classified as an 'immediate' transfer, for example emergency neurosurgical care.

Immediate/urgent cases should be discussed with the Air Support Desk (when active) to determine whether EMRTS can effect the transfer.

Some patients however may be classed as 'urgent', for example transferring where not immediately life or limb threatening but where definitive care is required (appendix 6).

b) **Transfer for non-clinical reasons.** (Due to lack of resources, lack of critical care bed or inadequate staffing levels)

There are circumstances where demand for critical care beds outstrips supply and a decision to transfer a patient to a unit with spare capacity must be made.

An ethical decision needs to be made whether to transfer a stable patient already on the critical care unit, or the patient requiring the critical care bed, however unstable. It can be argued that the patient requiring critical care should be the one transferred to a unit in

another hospital because they are moving from a high risk environment outside critical care to a safer environment. This could not be said of the stable patient already on the unit. There may however be unusual circumstances where moving the stable patient already on the unit is the best option.

NB when contacting the ambulance service these patients would usually be classified as an 'urgent' transfer, please see below.

c) **Repatriation**

These transfers are invariably to move a patient for care closer to home, for example once the specialist episode of care is completed in the tertiary centre and once the patient has been deemed fit enough for transfer by the consultant looking after them. A full risk/benefit assessment must be undertaken and documented before the decision is made. Once a request is made for repatriation, this should be acted on as a priority in the receiving hospital and should normally take precedence over elective admissions to the unit. This helps preserve good-will between units. For trauma patients moving from the Major Trauma Centres, national guidance states the repatriation must take place within 48 hours of request.

NB when contacting the ambulance service these patients would usually be classified as an 'elective' transfer-please see below.

Some units have outlying hospitals in their area with medical/surgical intake but with no critical care facilities. Each of these hospitals must have a robust agreement with their local acute hospital/Health Board to facilitate retrievals. These outlying hospitals must have the personnel and resources to resuscitate and stabilise critically ill patients until the retrieval team arrives.

Once a decision to transfer is made, a clear categorisation of urgency for the arrival of the most appropriate ambulance (and crew) must be established. This may be EMRTS, WAST, air ambulance or SAR. This must be communicated with ambulance control. (See appendix 6). These categories are;

i) **Immediate**

Ambulance crew will be at the patient's bedside **within 30 minutes** from the time of the call to the ambulance service.

ii) **Urgent**

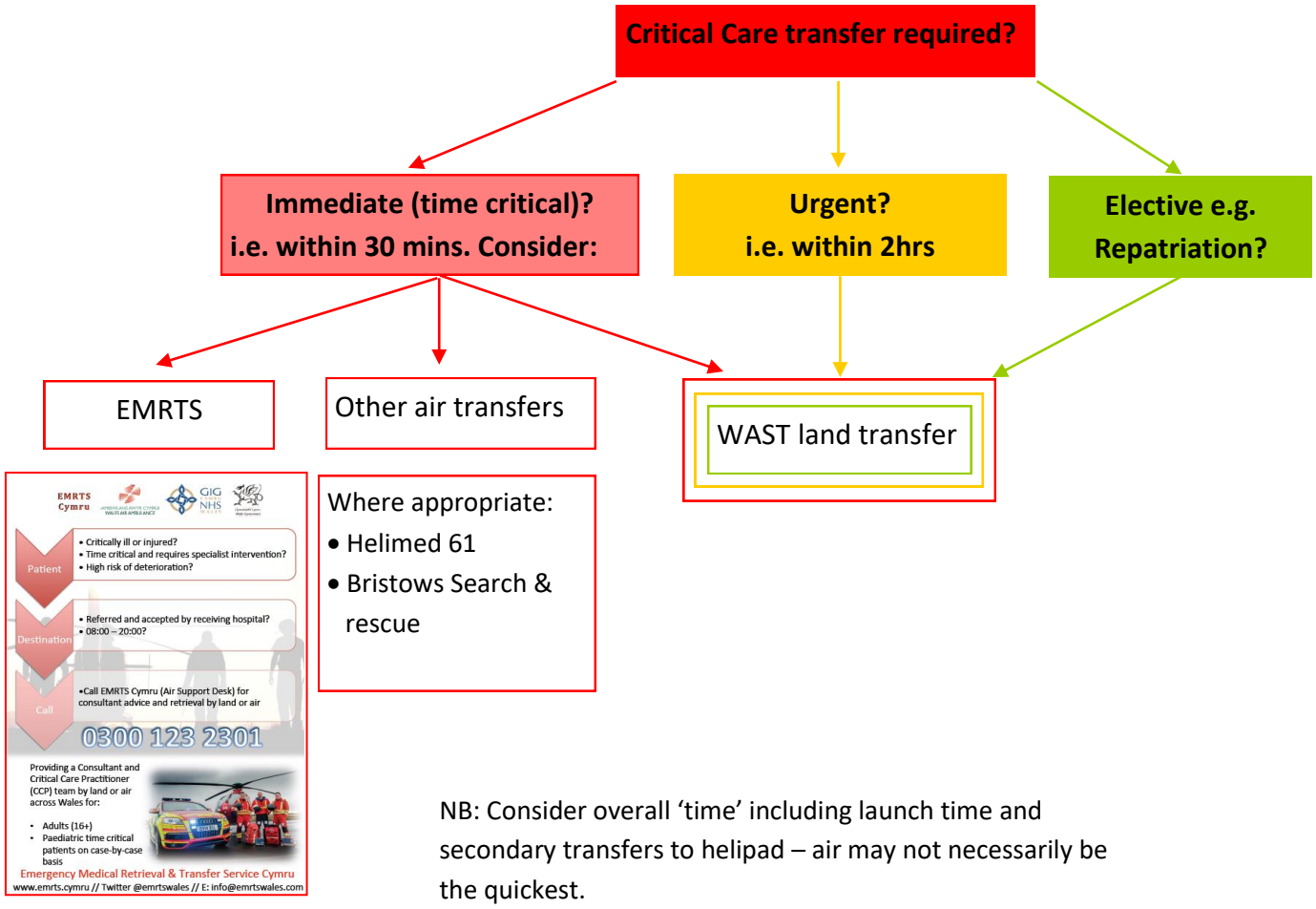
Ambulance crew will be at the patient's bedside **within 2 hours**; at a time specified by you in the hospital.

iii) **Elective**

Ambulance crew will endeavour to arrive at a time specified by you in the hospital. This will be at the convenience of the transferring hospital, the ambulance service and the receiving hospital. These will usually be repatriations.

NB: If you require a long distance (out of region) transfer please try to give 48hrs warning to the ambulance service).

WAST Clinical Contact Centre must be informed as early as possible when a decision to transfer is made even if an exact time has not yet been decided. This enables them to plan deployment more efficiently with regards to breaks and shift changes.



NB: Consider overall 'time' including launch time and secondary transfers to helipad – air may not necessarily be the quickest.

5. Equipment: All transfers

All Health Boards and independent hospitals must ensure that staff have access to dedicated transfer equipment for road and air transfers that meets the minimum monitoring standards and allows for both road and air transfer.

Supplementary equipment may be taken but rationalised in dedicated medical bags supplied within each Health Board for transfer. All equipment attached to or associated with the patient should be mounted securely at or below the level of the patient and all must be compliant with Health and Safety law and compliant with current (full) CEN regulations (European Committee for Standardization - CEN: Comité Européen de Normalisation).

Suction devices and defibrillators must be available on inter-hospital transfers and when moving the patient to and from the ambulance or helicopter. These devices are standard on SAR helicopters, Air Ambulances and the EMS/UCV ambulances.

6. Equipment: Road transfers

A standard ambulance trolley is not recommended for secondary critical care transfer. Dedicated critical care transfer trolleys, approved by WAST are the recommended system for road transfers. NB this excludes EMRTS who will use their own packaging system.

All WAST emergency and urgent care vehicles have equipment for monitoring and resuscitation as standard. The equipment available on an ambulance is standard regardless of the skill level of the crew.

Equipment must be adequately secured. Volumetric drip counter infusions should be avoided for safety reasons as they are unreliable in a moving vehicle but peristaltic pumps can be used. All infusions should be delivered in syringe pumps.

Oxygen supply, flow rate and length of journey must be considered and discussed with ambulance control when requesting a vehicle. Additional unsecured oxygen cylinders are not permitted. All Type B ambulances carry two HX (2300L each) cylinders and three ZD cylinders. These must be checked on entering the vehicle.

If additional oxygen cylinders are permitted on the vehicle, appropriate connections and suitability of the cylinders must be assessed prior to transfer. Cylinders must be secured for the journey.

If oxygen demands require additional cylinders including that carried on the vehicle, air transfer should be considered.

Equipment must be familiar to all staff undertaking transfers.

Battery life must be considered with all equipment purchased and hospitals must ensure that this equipment is always suitably charged for use and checked by medical engineering as appropriate to each device.

Alarms must be audible as well as visual.

All new WAST Emergency Ambulances have 230v power, older vehicles have 240v. If you require power please check and confirm with WAST Clinical Contact Centre.

Vehicles have heating facilities but additional blankets may be required according to patient condition and season. Temperature of the patient must be monitored continuously to avoid hypo- or hyperthermia.

Appropriate clothing and footwear must also be worn bearing in mind that it may be cold, despite heating in the ambulance, or you may have to make your own way home.

7. Equipment: Air transfer

EMRTS have their own equipment and will package the patient themselves. For all other air transfers:

Standard ambulance trolleys or dedicated road transfer trolleys are not suitable for any air transfer. A vacuum mattress is recommended for packaging the patient; this can be fixed to the floor of the Air Ambulance aircraft or the raised patient platform in the S-92. A splint type system is appropriate but, whichever system is used, it must be approved by your local air carrier.

Each hospital must provide their own equipment and oxygen. Equipment should be approved for use on an aircraft and should be properly secured. Be self sufficient.

No equipment containing mercury should be taken on board.

Lightweight oxygen cylinders may be used but must be declared to the carrier on initial communication.

Cylinders taken on board must have appropriate adapters on each cylinder to ensure rapid change of cylinders mid flight.

All necessary equipment for airway and fluid maintenance must be taken, rationalised and easily accessible within the transfer bag.

For the Maritime and Coastguard Agency (MCA) S-92 helicopter: The Zoll X Series Monitor Defibrillator and Schiller FRED Easyport defibrillator are carried on board. Only suitably trained personnel, under the direct supervision of the helicopter rearcrew, are authorised to use this on board the aircraft.

All other equipment e.g. syringe drivers and infusion pumps must be rationalised as there will be limited areas to secure equipment in the aircraft.

The patient and all the equipment should be secured and must be strapped with safety harnesses within the aircraft.

Due to the positioning of the patient within the aircraft appliances should be positioned and attached on the patients' left hand side for Air Ambulance transfers the right hand side for SAR transfers.

The carrying device will be anchored to the aircraft floor or raised patient platform (S-92) by the aircrew prior to departure. Battery life of all equipment must be considered. In the Air Ambulance there is no electrical supply readily available on the aircraft however, on the S-92 there are 3 pin plug sockets.

The flight in any season will be cold and appropriate steps should be taken to ensure patient warmth and that staff are dressed accordingly. Staff must have access to warm and waterproof clothing as well as all-weather robust foot-wear.

Mobile phones must be turned off on board the aircraft.

8. Modes of transport:

Selection of transport mode should consider a number of key factors;

a) Urgency of the transfer

b) Condition of the patient

c) Geographical factors

d) Weather conditions

e) Traffic

f) Availability

g) Suitable landing sites at destination, including secondary landing site to hospital and availability of vehicle (where required).

h) Distance

The options for patient transport are;

a) Welsh Ambulance Service:
Availability 24/7.
Suitability: All journeys.
Durability: Consideration should be given to type of equipment required and crew. Consideration should be given to feasibility of taking Emergency vehicle out of service for length of time. *NB. Urgent Care ambulance crews should be the preferred choice for all grades of transfer. The use of a Paramedic Ambulance deprives the community of a 999 response and is <u>not</u> required where a nursing or medical escort is provided.*
Contact Process: Ambulance Control.

b) Air Ambulance HM61 Caernarfon - Eurocopter EC135 helicopter- See SOP (Appendix 9)
Availability: Available 7am-7pm. Can fly from lit helipad to lit helipad.
Suitability: Weight restrictions apply.
Contact process: Air Support Desk on 03001232301. Tasked by Top Cover Consultant, EMRTS.

c) EMRTS Eurocopter EC135 helicopter
Availability: Available 8am – 8pm. Can fly from lit helipad to lit helipad.
Suitability: Weight restrictions apply.
Contact process: Air Support Desk on 03001232301. Tasked by Top Cover Consultant, EMRTS

d) MCA S-92 Search and Rescue Helicopter
Availability: 24/7 if aircraft available.
Suitability: All journeys.
Durability: Any distance within the UK.
Contact Process: Ambulance Control initially and thereafter through the Aeronautical Rescue Co-ordination Centre (ARCC).

It must be noted that the primary role of the MCA Sikorsky S-92 helicopter is search and rescue. It must only be used for secondary transfers when other options have been ruled out and the time saved by flying may save life or limb.

If the decision has been made to go by air, any condition likely to be affected by a change in barometric pressure must be declared to the aircrew. In some cases the flight altitude can be

limited by the pilot, if this can be done without compromising aviation safety.

Relative contra-indications for travel at altitude are pneumoperitoneum and intracranial air. Undrained pneumothorax is generally considered an absolute contraindication.

Vehicle Types:

All critical care transfers including bariatric, can be undertaken in Urgent Care Service Vehicles (ambulances). Paramedic crews can be requested in exceptional circumstances but this request may cause delay. (See appendix 2)

9. Personnel

All escort personnel involved in the transfer of the critically ill patient must;

a) Be suitably experienced for the clinical aspect of treating critically ill patients (see appendix 5)
b) Have completed and passed Part A of the 'All Wales Transfer of the Critically Ill Course'. Part A teaches about the process of transferring patients and the pitfalls that can occur during transfer as well as helicopter and ambulance orientation.
c) Have completed and passed Part B of the 'All Wales Transfer of the Critically Ill Course'. Part B teaches about the hands on use of transfer equipment, patient packaging and rationalisation of equipment and transfer bag.
d) Consider doing the optional Part C. Any member of the escort personnel likely to be involved with helicopter transfers, ideally should do Part C of the 'All Wales Transfer of the Critically Ill Course'. This will involve half a day spent at Bristows in Caernarfon learning about aircraft safety and orientation. The candidates will then experience a short flight (depending on availability due to emergency call-outs). Spaces will be very limited on Part C and only available to those hospitals which regularly transfer patients by air using hospital personnel.
e) Have completed and have signed off by a supervising consultant as safe, at least three intra-hospital transfers (i.e. to CT scan) for a critically ill patient.

Competency based training and assessment is well established. (See appendix 3, 4 and 5).

There are risks associated to both patient and staff with any mode of transport.

A critically ill patient should be accompanied by a minimum of two attendants usually one medical and one from nursing or other health worker. In certain circumstances it may be appropriate for Advanced Critical Care Practitioners (ACCPs) to undertake a transfer (see Appendices 4 and 5). The precise requirement for accompanying personnel will depend upon the clinical circumstances in each case.

For the Air Ambulance there may be circumstances where only one attendant is allowed, this will usually be medical (see Appendix 9)

Medical and nursing/OPD attendants must be willing to undertake transfer.

They will have to work independently.

They are expected to assist in any unpredicted procedure during transfer that may pose a threat to life if not acted upon.

They may not be able to communicate with other team members during the journey. It is however recommended that mobile phones are carried by the attendants during the transfer with pre-programmed numbers of the base and the destination hospitals. Mobile phones must be switched off during flight.

The attendants must be experienced personnel with relevant competencies as they will be working independently in an unusual environment. Details of the necessary experience and competencies of attendants are given in Appendices 2, 3 and 4.

The medical escort ideally should be a Consultant, staff grade or associate specialist grade. This however is not always practical and it may be necessary to send a trainee (ST3 or above). These trainees must have a level of competence suitable to the degree of illness of the patient. It is up to the discretion of the critical care consultant to decide this. If there is any doubt, then the trainee should not be sent and a more suitable person found.

EMRTS transfers will be undertaken by an EMRTS Consultant and EMRTS Critical Care Practitioner. Wales is developing as a centre for training in Prehospital Emergency Medicine (PHEM), and it is anticipated that appropriate transfers may in future be undertaken by a senior PHEM trainee and EMRTS Critical Care Practitioner. This approach would, however, be in keeping with the recommendation above.

Anaesthetists or others with appropriate airway skills are required to attend all Level 3 transfers. Level 2 transfers may require anaesthetic involvement if there is a risk of airway/breathing compromise during transfer. This should be decided by the critical care consultant.

Anaesthetists are not required if:

a) There is unlikely to be any airway/breathing compromise during transfer.

b) The patient has a ‘do not resuscitate’ order.

c) Anaesthetic intervention will not affect outcome.

Due to operational reasons, there is no guarantee that personnel and equipment will be returned to the base hospital by either WAST, Air Ambulance or SAR after a transfer. It is therefore imperative that personnel carry money, credit cards and mobile phones to facilitate repatriation of themselves and the equipment as soon as possible. Any reasonable expense incurred during this process must be reimbursed by the Health Board.

10. Minimum monitoring

The standard of care and monitoring during transport should be at least as good as that at the referring hospital or base unit. The minimum standards required for Level 2 and Level 3 patients are:

a) Continuous presence of appropriately trained staff
b) ECG-continuous
c) Non-invasive blood pressure
d) Pulse oximetry (SpO_2)
e) End tidal carbon dioxide ($EtCO_2$) in ventilated patients
f) Temperature
g) Airway pressure monitor in ventilated patients

Intermittent non-invasive blood pressure measurement is sensitive to motion artefact and is unreliable in a moving vehicle. It is also a significant drain on the battery supply of monitors. Continuous invasive blood pressure measurement, through an indwelling arterial cannula, should normally be used. Ideally all Level 3 patients should have invasive blood pressure monitoring during transfer (this is mandatory in all acutely brain injured patients or any patient where the blood pressure is unstable, has the potential to be unstable, or if the patient is on inotropes).

Central venous catheterisation is not essential but may be of value in certain circumstances prior to transfer. Central venous access is required for the administration of inotropes and vasopressor infusions.

Intracranial pressure monitoring may be required in selected patients. Frequent pupil monitoring is mandatory for all acute brain injured patients.

11. Preparation and stabilisation for transfer

All hospitals must be able to stabilise and resuscitate critically ill patients. Thorough resuscitation and stabilisation of the patient should be aimed for before transfer. Hypovolaemia is poorly tolerated by the patient due to acceleration and deceleration forces during a transfer. Due to this, where possible, hypovolaemia must be fully corrected before transfer.

Advice can be sought from the receiving unit to guide transfer resuscitation but responsibility rests with the transfer team.

Transport attendants must familiarise themselves with treatment already undertaken and independently assess the patient's condition.

All equipment and drugs must be re-checked by the transporting staff.

The airway must be assessed. Tracheal intubation and ventilation prior to transfer is essential if there are any concerns as to the integrity of the airway. The patient should then be sedated, paralysed and ventilated.

Arterial blood gas analysis should be performed prior to departure after the patient has been on the transport ventilator for at least 15 minutes.

Venous access must be secured before departure. These must be at least two wide bore peripheral or central venous cannulae.

If pneumothoraces are present, chest drains must be inserted with a flutter valve (Heimlich) prior to transfer. Chest drains should *never* be clamped.

Nasoenteric (oro- if the nasal route is contra-indicated) and urinary catheters should be passed and free drainage allowed into collection bags.

Departure check lists should be used to ensure that all the necessary preparations have been completed (see appendix 5).

12. Management during transfer

Unless there is a specific contraindication, patients must be kept warm. Their eyes, ears and pressure areas must be protected during the transfer.

Patients must be secured to the transfer trolley by means of a 5 point harness or if travelling by helicopter, secured to a mattress/splint which is itself secured to the floor with strapping.

The patient must be monitored continuously throughout the transfer and observations recorded on the transfer chart. The frequency of observations should be governed by the patient's clinical condition.

Monitors, ventilator and pumps must be visible at all times to the attending personnel and should be secured to the trolley, on the right hand side, below patient level.

For the majority of cases high speed travel is not necessary. The decision to use blue lights and/or police escort rests with the ambulance crew who will take advice from the senior clinician on board. A police escort is seldom worthwhile. A single police car preceding you is no more helpful than your own ambulance lights and sirens. WAST only request assistance from the Police in exceptional circumstances.

During road transfer, staff should remain seated at all times and wear seat belts. If the patient requires intervention, then the vehicle should be stopped in a safe place. Where staff may be required to move outside the vehicle, high visibility clothing must be worn. On safety issues the attendant staff must obey instructions from the crew.

During air transfer, a fall in barometric pressure will result in reduced alveolar partial pressure which may lead to hypoxaemia. An increased inspired oxygen concentration should be considered when transferring by air.

13. The handover

On arrival at the receiving hospital, there must be a formal handover between the transfer team and the receiving nurses and medical staff who will assume responsibility for the patient.

For retrievals, there needs to be a handover from the referring team to the retrieval team before the transfer.

For transfers originating from an emergency department, a copy of the referring hospital's notes

must accompany the patient.

For transfers originating from within the hospital, the referring team should generate a transfer letter. This should be succinct, but include all important details of the patient's stay. It should include: presentation and course; past medical history; results of investigations; list of current medications and doses; contact details of referring team. There should be three copies: one for the notes, one for the doctors to facilitate clerking, and one for the nurses to facilitate admission.

This handover should take place in a calm environment once the patient is settled.

Handover should include a written and verbal history, vital signs and any relevant investigations such as blood results, x-rays and scans. Any adverse events during transfer must also be reported and written clearly on the chart.

The white (top) copy of the completed Transfer Form will be retained at the receiving hospital, the middle (pink) copy will be kept by the referring hospital and inserted into the patient's hospital notes and the bottom (yellow) copy will be sent to the Critical Care & Trauma Network (North Wales) in the pre-addressed envelope.

For EMRTS transfers, a copy of the EMRTS transfer documentation will be left at the receiving hospital, along with any documentation from the referring hospital.

Handover must take place as quickly and efficiently as possible because the ambulance and crew become 'operational' as soon as the patient has been transferred to the critical care/ED bed. Every effort will be made by WAST to repatriate the transfer team. However, on occasion, during exceptionally busy times whilst returning from a transfer, the ambulance will become a first responder (attend an emergency) with or without the transfer team on board.

14. Communication

Communication is vital for a trouble free transfer. Many problems which occur in the transfer process are avoidable with good communication.

The patient (if the patient has capacity) and relatives of the patient must be told the reasons for transfer as early as possible and the place to which the patient is being sent. They must be given contact numbers for that unit and told how to get there.

The decision to transfer a patient is the responsibility of the sending consultant however the final decision for transfer lies with the Consultant at the receiving unit.

The patient must be accepted by the consultant of the receiving unit before the transfer can take place. If the patient is being retrieved, then these decisions rest with the Consultant in the retrieving unit. First contact should be made between consultants in the sending and receiving units where the medical needs of the patient can be discussed.

All subsequent contact can be delegated to one other person, usually the senior nurse of the unit/ED. That person should be the sole communicator with the receiving unit until the transfer is

complete. Obviously a shift change may occur but a full handover between the nurse going off shift and the one coming on must take place. This avoids the problems of multiple people getting involved and information being lost.

The dedicated communicator with clinical knowledge of the patient should contact ambulance control requesting an ambulance/helicopter and should be the sole contact for subsequent discussions between the unit and the ambulance service. (See appendix 7)

The dedicated communicator must give a full update of the nursing needs of the patient to their counterpart in the receiving hospital.

It is vital that the transferring team have contact with both the base hospital and the receiving unit to receive medical advice if needed. It is recommended that the transfer team carries a mobile phone with pre-programmed numbers.

15. Documentation, audit and quality assurance

Clear records must be maintained at all stages of the transfer. Documentation must be of the same standard as in your base hospital.

Critical incidents which occur during a transfer must be reported through local Health Board risk reporting processes. The local transfer group must also be informed.

All Critical Care transfers should have an All Wales Transfer Form completed as this provides a medico-legal document pertaining to the transfer.

This documentation is used as an audit tool by the Network and feeds into a National database. Analysis of the data is disseminated on a regular basis to stakeholders. EMRTS also have an independent audit framework.

Feedback is also given on each transfer undertaken and notice is given of those transfers that did not have a transfer form completed. It is the responsibility of the lead transfer clinician for each hospital to follow up each of these transfers to ascertain what can be learned to improve those that were less than satisfactory and to give due praise for the good and excellent transfers carried out.

It is the responsibility of the Health Boards to maintain critical incident reporting regarding transfers using the Health Board standard (clinical governance) protocols.

Audit data is reviewed on a regular basis by the Network and key issues flagged up at regular regional and National audit meetings. EMRTS have an independent audit framework.

16. Insurance and Indemnity

It is essential that all members of staff who might be involved in transporting patients ensure that adequate financial arrangements are in place for themselves and their dependents in the event of an accident. Each Health Board must provide personal indemnity insurance in addition to

corporate insurance for all staff employed within each Health Board, including trainee staff.

Membership of the Intensive Care Society or the Association of Anaesthetists of Great Britain and Ireland will confer a degree of personal insurance to that member in the event of an accident during a transfer. Details should be sought from these bodies.

17. Education and Training

Each Welsh hospital has a responsibility to ensure that personnel involved with the transport of critically ill patients are adequately trained and experienced to at least the minimum standard (see appendices 2, 3 and 4).

The Critical Care Networks should facilitate theoretical training (Part A) for transfers but it is the responsibility of the Health Boards to support this. The All Wales Transfer of the Critically Ill Course is available. This provides a background level of knowledge and used as an adjunct to appropriate clinical training and experience including supervised transfers.

Competency based training and assessment (Part B) has been developed to ensure the highest possible standards of care for the critically ill patient requiring transport. This course encompasses all members of the multidisciplinary team who may be potentially involved. (See appendix 2, 3 and 4)

The same level of training is required whether transporting critically ill patients between departments within a hospital (intra-hospital transfer) or between hospitals (inter-hospital transfer).

18. Internal transfers

The minimum monitoring standards, training standards and experience of personnel apply to intra-hospital as well as inter-hospital transfers.

A risk benefit analysis must be considered before all internal transfers.

Aim to be self-sufficient in oxygen and battery power with enough reserve capacity to allow for emergencies, for example, getting stuck in a lift. Electrical equipment should be plugged into the mains and walled oxygen used for the duration of stay at the destination.

Patients being taken to the MRI scanner must have MRI compatible equipment. Personnel must be aware of the potential hazards. If in doubt, check with the radiology staff.

The standard road transfer trolley is not necessary for intra-hospital transfers due to the low speed of such an activity.

All equipment associated with the patient must be at or below patient level (not on the patient).

Thorough resuscitation and stabilisation should be aimed for, before internal transfers.

Intra-hospital transfers should be used as supervised training for trainees.

19. Independent hospitals

All independent hospitals must have a written policy for the procedure of transferring a patient who becomes critically ill, to another hospital. This is the responsibility of the independent hospital to ensure that the protocol is in place.

All independent sector hospitals must be able to stabilise and resuscitate critically ill patients with access to transfer equipment which meets the minimum monitoring standards and allows for both road and air transfer.

The independent hospital and the designated local NHS Health Board must decide how the patient is transferred. The patient can be retrieved by personnel from the NHS Health Board or the independent hospital can opt to carry out the transfer themselves using appropriately trained staff.

Transfer minimum standards must be the same in the independent sector as they are in the NHS.

The independent hospital must have equipment for resuscitation and stabilisation of the patient which meets the minimum monitoring criteria.

Patients who become critically ill in the independent sector must be treated promptly by appropriately trained staff.

It is the responsibility of the patient's consultant to ascertain the patient's and family's wishes regarding critical care intervention and resuscitation prior to transfer. Advice can be sought from the critical care consultant in the designated NHS Health Board.

All patients must be risk assessed prior to admission to a private sector hospital. Patients likely to require critical care should not be admitted. Instead, arrangements should be made for their treatment to be carried out in a hospital with more appropriate facilities.

Transfer events from the independent sector to a critical care facility in the NHS should be recorded as a critical incident by Health Board (NHS). The regional transfer group should also be informed.

Medical staff (usually consultant) looking after the patient in the independent sector must contact the consultant covering the critical care unit in the designated NHS Health Board. The critical care consultant will have the final say on whether the patient is admitted. Some NHS doctors may feel uncomfortable with the concept of NHS and private sector interactions. The general principles apply, however that, 'Patients who are entitled to NHS funded treatment may opt into or out of NHS care at any time'. This principle also applies to emergency care.

20. Acknowledgements

Many thanks to the numerous contributors to both the original 2008 version and this revised version.

Main Authors

Ed Farley-Hills	Critical Care Network Lead for Wales Critical Care & Trauma Network and Clinical Director, Critical Care, BCUHB.
Sue O'Keeffe	Wales Critical Care & Trauma Network Manager

Appendix 1 - Standards for Adult Critical Care in Wales

All Wales Critical Care Development Group (September 2003)

Level 0	Suitable for patients whose needs can be met through normal ward care in an acute hospital.
Level 1	Suitable for patients at risk of their condition deteriorating, those recently relocated from higher levels of care, and those whose needs can be met on an acute ward with additional advice and support from the critical care team.
Level 2	Suitable for hospitalised patients requiring more detailed observation or intervention, including support for a single failing organ system, postoperative care and those stepping down from higher levels of care.
Level 3	Suitable for hospitalised patients requiring advanced respiratory support in addition to the above, but the duration of multi-organ support or ability to manage multiple patients might be limited by staffing or equipment constraints.
Level 3T	Organ support and monitoring for most body systems should be available at Level 3T and these facilities would normally be available to multiple patients simultaneously. This level is suitable for critically ill patients requiring prolonged support for multi-organ failure. Such units would have a significant teaching and training role.

Appendix 2 - What Type of Ambulance is Required?

Ymddiriedolaeth GIG Gwasanaethau Ambiwlans Cymru
Welsh Ambulance Services NHS Trust

GIG CYMRU NHS WALES

What type of ambulance is required?

The Welsh Ambulance Service has 90 ambulance stations around Wales, each responding to emergencies and transporting patients to and from hospital.

This leaflet provides useful information on the types of vehicle in use and their different roles in responding to the varied needs of patients.

Type of Ambulance		Main Role
Emergency Ambulance		Respond to all types of emergency calls and can undertake urgent and emergency transfers for medically unwell patients. Can provide advanced life-support treatment, including intubation, defibrillation and a range of drugs.
Urgent Care Service Ambulance		UCS support the Emergency Medical Service to provide safe transport for stable patients requiring urgent transport or transfer. UCS crews can undertake emergency transfers where a medical or nursing escort is travelling with the patient. UCS crews respond to emergencies as first responders prior to the arrival of an emergency vehicle. They are equipped with Oxygen and a defibrillator and can monitor patients with in-situ cannula and/or syringe drivers. UCS staff don't administer GTN but may encourage a patient to self-administer if they experience chest-pain during transfer.
Patient Care Service Ambulance		PCS provide transport and care for patients with outpatient or day-hospital appointments or inter-hospital transfers. They do not respond to emergency calls but are able to provide safe transport for stable patients. Crews are trained to provide basic life support if necessary, and are able to monitor patients with in-situ cannula and/ or syringe drivers. All PCS vehicles now carry an AED defibrillator.
Self Transport and Taxi		Some patients will have symptoms that do not need an ambulance to take them to hospital. These patients may be suitable to travel to hospital by other means because it is safe and more appropriate for them to do so. This could mean travelling with family, friends, using their own transport or by taxi, keeping emergency resources free to respond to life-threatening 999 calls in the community.

Appendix 3 - Recommended competencies for intra-hospital transfers of patients

Patient	Accompanying personnel (minimum)	Skills required	Essential equipment
Level 0	Porter or HCA	BLS	
Level 0.5 (Elderly/confused)	Porter and HCA	BLS	
Level 1	Suitably experienced nurse/HCA and porter, appropriate to the needs of the patient	BLS and gas cylinder training. Appropriate competency in; • specific drug delivery • recognition of deterioration (ILS) • suction and tracheostomy care	Oxygen, suction (if trachy), portable IV stand, battery operated infusors, pulse oximetry
Level 2	Nurse and porter	All of the above, plus; • two years critical care experience • use of airway adjuncts • use of bag and mask • use of defibrillator • care of invasive monitoring	All of the above, plus; ECG and BP monitors, immediate access to defibrillator
Level 3	Doctor/ACCP, nurse or ODP and porter	Competency of the supervising doctor/ ACCP or the transferring doctor/ ACCP must be at or above the minimum standard (see appendix 4)	Full ICU portable monitoring, ventilator and transfer equipment up to minimal monitoring standards

Appendix 4 - Recommended competencies for inter-hospital transfer of patients

Patient	Accompanying personnel (minimum)	Skills required	Essential equipment and vehicle type
Level 0	Ambulance urgent care crew	BLS	**Urgent Care vehicle**
Level 1	Nurse and ambulance urgent care crew	BLS plus competency training in; • gas cylinders • specific drug delivery • recognition of deterioration (ILS) • suction and tracheostomy care	**Urgent Care vehicle**, Oxygen, suction, portable IV stand, battery operated infusors, pulse oximetry
Level 2	Doctor/ACCP, nurse or ODP and ambulance urgent care crew	All of the above plus competency in; • use of airway adjuncts • ALS provider • use of bag and mask • use of defibrillator • care of invasive monitoring	**Urgent Care Vehicles;** All of the above plus; continuous ECG and BP monitoring, defibrillator.
Level 3	Doctor/ACCP, nurse or ODP and ambulance urgent care crew	See appendix 5	**Urgent Care Vehicles:** Full ICU monitor, ventilator and transfer equipment according to minimum monitoring guidelines.

These guidelines are not completely inclusive.
Para-medic crews can be requested from ambulance control in exceptional circumstances.
NB Level 1, 2 and 3 patients must have personnel with appropriate skills with them at all times whilst away from the ward/Unit.

Patients requiring Primary Percutaneuos Coronary Intervention (PPCI) are at high risk of cardiac arrest and require access to a defibrillator / AED and staff trained in its use but this can still be achieved with an Urgent Care Vehicle and crew, as per above; please see local guidelines.

Appendix 5 - Competencies for transferring critically ill Level 3 adults on inter-hospital and intra-hospital transfers

All critically ill adults (Level 3) are transferred by two attendants (except in some Air Ambulance cases). One is a doctor, either an anaesthetist or equivalent with airway training and a nurse or operating department practitioner (ODP). In certain circumstances it may be appropriate for ACCPs. Transfers require a minimum standard of skill from these attendants as they will be working entirely independently. These competencies are:

The doctor

Must have;

- At least 6 months experience in critical care.
- Advanced airway skills of at least ST3 anaesthetics level or ST3 ICM with ACCS training, or equivalent.
- Must attend and pass a course for the transfer of critically ill adults.
- ALS, ATLS or equivalent, provider.

Advanced Critical Care Practitioners (ACCPs)

Must have;

- ALS provider status.
- Must attend and pass a course for the transfer of critically ill adults.
- Airway skills; must work within competencies of covering letter (see below)
- FICM associate status
- Documented level of competence to undertake Critical Care transfers from Lead Consultant of department in the form of a letter (a copy of which must be sent to the Critical Care Network responsible for transfer assessment).

The assistant

- Must be an ALS or ILS provider.
- Must attend a course for the transfer of critically ill adults.
- In the case of an ODP, must be at least 2 years post qualification.
- In the case of a nurse, must have at least 2 years' experience working in a critical care environment, either ICU or ED.
- In the case of a dedicated transfer practitioner, must have 2 years' experience following primary registration, and be assessed as competent to function effectively within their transfer service.

All transfer personnel must be assessed as competent in the following:

Equipment

Ventilator-
Doctor/ACCP must show;

1) good knowledge of the ventilator modes and functions
2) ability to change batteries if required
3) ability to change oxygen cylinders and calculate oxygen requirements

The second attendant must show;

1) ability to change oxygen cylinder
2) ability to change batteries if required

Pumps
Both attendants must show;

1) ability to change batteries
2) ability to change syringes
3) ability to change infusion rates and give boluses

Monitor
Both attendants must demonstrate

1) zeroing invasive waveforms
2) care of invasive monitoring
3) setting up ECG
4) setting up capnography
5) setting up pulse oximetry

Transfer bag
Both attendants must have full knowledge of the contents of the transfer bag.

Transfer trolley
Both attendants must show how to set up the transfer trolley and secure the equipment and the patient on to it.

Vacuum mattress/Splint system for air transfer
Both attendants must have knowledge of setting up this system for air transfer.

Patient packaging

Both attendants must demonstrate how to package a patient safely, ready for transfer.

Communication and guidelines

Both attendants must demonstrate knowledge of how to communicate with the receiving hospital and ambulance control. They must both have read and understood the local and national transfer policies. They must also have knowledge of the command and control structure for transfers.

The transfer

Both attendants must show knowledge of the pitfalls of transferring a critically ill adult in a moving vehicle, both land and air and be aware of the associated dangers to themselves and the patient. For staff likely to undertake air transfer Part C should be completed to gain knowledge of safety training, evacuation procedures for the aircraft, and basic on board communication skills.

Handover

Both attendants must know the handover procedures at the receiving hospital.

Orientation

Both attendants must have guided orientation round the inside of a land ambulance and the air carrier aircraft prior to their first transfer. Both should have undertaken Level 3 intra-hospital transfers prior to inter-hospital transfers.

Minimum monitoring guidelines

Both attendants must have knowledge of the minimal monitoring guidelines.

Appendix 6 - Transfer checklist

Tick each task when completed

- ☐ Has the intensive care consultant/TTL in the receiving hospital accepted the patient?
- ☐ Has the consultant physician/surgeon at the receiving hospital accepted the patient?
- ☐ Has the receiving hospital ITU/ED been informed of time and date of arrival and accepted the patient?
- ☐ Has the appropriate mode of transport been arranged i.e. helicopter or ambulance? Has EMRTS been considered?
- ☐ Is the patient adequately resuscitated and intubated if necessary?
- ☐ Is the patient adequately sedated and paralysed if necessary?
- ☐ Do you have a spare tracheostomy tube, including inner tube (if relevant)?
- ☐ Is there full monitoring up to the minimum monitoring standards including capnography?
- ☐ Are the patient's eyes and ears protected, and measures taken to prevent heat loss?
- ☐ Does the level of experience of the transfer team comply with these Guidelines?
- ☐ Is the transfer team wearing appropriate clothing and footwear?
- ☐ Has the transfer team got money/credit cards and mobile phone in case of being stranded?
- ☐ Ventilator checked?
- ☐ Batteries checked?
- ☐ Adequate oxygen for the journey?
- ☐ Transfer bag checked?

Continued Overleaf

- [ ] Letter to receiving consultant?
- [ ] Appropriate drugs? (Don't forget fridge drugs)
- [ ] Notes?
- [ ] X-rays (or hard copy on CD)?
- [ ] Blood results?
- [ ] Transfer form (documentation and observation chart)?
- [ ] Cross matched blood and blood transfer form if applicable?
- [ ] Ring receiving hospital just before leaving?

Re-check A,B,Cs again and check an arterial blood gas after 15 minutes on the transport ventilator before leaving.

Appendix 7 – Standard Operating Procedure for Welsh Ambulance Services NHS Trust

Ymddiriedolaeth GIG Gwasanaethau Ambiwlans Cymru

Welsh Ambulance Services NHS Trust

Standard Operating Procedure for
The Transfer of the Critically Ill Adult

Control Services - Standard Operating Procedures

Receipt of call requesting transfer of the critically Ill adult

The hospital responsible for the transfer of the patient will make an assessment and ensure that the patient assessment is in line with one of the following categories -

These categories are;

d) **Immediate**

Ambulance crew will be at the patient's bedside **within 30 minutes** from the time of the call to the WAST.

e) **Urgent**

Ambulance crew will be at the patient's bedside **within 2 hours**; at a time specified by the hospital.

f) **Elective**

Ambulance crew will endeavour to arrive at a time specified by the hospital. This will be at the convenience of the transferring hospital, the ambulance service and the receiving hospital. These will usually be repatriations.

NB If the transfer is of a long distance in nature the hospitals have been advised to try to give 48hrs warning to the WAST.

Inputting of calls to Computer Aided Dispatch System

Immediate

Ambulance crew will be at the patient's bedside **within 30 minutes** from the time of the call to the WAST.

Urgent

Ambulance crew will be at the patient's bedside **within 2 hours**; at a time specified by the hospital.

Elective

Ambulance crew will endeavour to arrive at a time specified by the hospital. This will be at the convenience of the transferring hospital, the ambulance service and the receiving hospital. These will usually be repatriations.

These patients should follow the current standard operating procedure for repatriation and the resource department will follow their guidelines on attempting to ensure Operational Unit Hour Production is not adversely affected by this type of request.

Transfer of the critically Ill adult by Air

Utilisation of WAST Air Ambulance or EMRTs

It will be the responsibility of the requesting hospital to ascertain whether or not a transfer by Air Ambulance/EMRTS is required and indeed suitable. The Air Support Desk (Tel 0300 123 2301) will determine availability etc. and if an Air Ambulance Transfer is possible.

Utilisation of SAR Helicopters

It will be the responsibility of the requesting hospital to ascertain whether or not a transfer by SAR Helicopter is required and suitable for the patient. This request will be passed to the Control Duty Manager and they will instigate a request through the standard operating procedures for utilisation and activation of SAR helicopters.

(Ambulance Control) Cue Cards

In order to improve the communication between hospital staff and ambulance control room staff 'cue cards' have been developed. They have been written in collaboration with WAST control room staff are designed to provide the clinician with the order of questions that they will be asked. They should also:-

- Avoid clinicians needing to ring 999 for immediate transfers.
- Ensure the appropriate ambulance attends at the appropriate time.
- Avoid ambulance staff waiting unnecessarily whilst the patient is packaged for transfer.

Critical Care Transfer Cue Card

Calling the Ambulance service:

Where possible please ring the Ambulance Control room to give prior warning that you will be requiring a Critical Care Transfer soon.

- Please dial your region's number
- Please state the hospital and unit/ward you are calling from
- Please state that you need an
- **Immediate** transfer within 30mins or
- **Urgent** transfer within 2 hours or
- **Elective** transfer within 24 hours (try to give 48hrs notice)

CALL 0300 123 9234

State that you require an Urgent Care Vehicle for a Critical Care Transfer

(According to the Welsh Transfer Guidelines - see below for definitions).

You will then be asked

Patients name	
Patients gender	
Patients DOB	
Where you are going to (which hospital)?	
Which dept/ward you are going to (in the hospital)?	
Mobility of the patient	State 'stretcher'
Diagnosis of the patient	State 'sick person'
Time to be at the patient's bedside	Please be realistic about when you will be ready to leave - the aim is not to keep ambulance staff waiting
Are there any staff or, how many staff are escorting the patient?	E.g. 'one anaesthetist, one nurse'
Are there any infections the ambulance crew need to be aware of?	If the patient has MRSA for example just state 'MRSA but covered'
Are there any special requirements (relevant to the crew)?	E.g. slow transfer/blue light transfer etc

Immediate

Ambulance crew will be at the patient's bedside within 30 minutes from the time of the call to the WAST.

THESE PATIENTS WILLPATIENTS REQUIRING IMMEDIATE CARE IN A SPECIALIST CENTRE

If 0800 – 2000, Consider calling EMRTS on 0300 123 2301

Urgent

Ambulance crew will be at the patient's bedside within 2 hours; at a time specified by you in the hospital.

THESE PATIENTS WILL USUALLY BE NON-CLINICAL TRANSFERS I.E. TRANSFERRED DUE TO LACK OF CRITICAL CARE BEDS IN YOUR HOSPITAL

Elective

Ambulance crew will endeavour to arrive at a time specified by you in the hospital. This will be at the convenience of the transferring hospital, the ambulance service and the receiving hospital.

THESE PATIENTS WILL USUALLY BE REPATRIATIONS. NB If you require a long distance (out of region) transfer please try to give 48hrs warning to the WAST.

Appendix 9 - Emergency Medical Retrieval and Transfer Service (EMRTS) Cymru

OPERATIONAL STANDARD OPERATING PROCEDURE (OSOP)

Welsh Air Ambulance (WAA) Aircraft Operating on Paramedic-only Taskings

Reference Number	EMRTS OSOP 056
Application	Air Support Desk; Consultants; Critical Care Practitioners; EMRTS administrator; Research & Audit Leads
Version	2.0
Replaces	NA
Issue date	September 2015
Review date	September 2016
Related SOPS	Top Cover Consultant; Caernarfon Clinical Lead and Deputy.

Author(s)	John Glen
Internal reviewer(s)	EMRTS Clinical and Operational Board
External reviewer(s)	Sue O'Keeffe, North Wales Critical Care and Trauma Network Manager North West Midlands and North Wales Trauma Network Jonathan Whelan, Wales Ambulance Service Trust
Sign off	EMRTS Clinical and Operational Board, September 2015

This SOP should be read in conjunction with the all-Wales transfer guidance *Designed for Life.*

1. Introduction & Objectives

EMRTS operates in partnership with the Wales Air Ambulance charity (WAA). There are three WAA bases in Wales: Swansea (Helimed 57, H57), Welshpool (Helimed 59, H59), and Caernarfon (Helimed 61, H61). In the initial phases of the EMRTS project, a 12 hour service has been instituted, based at the Swansea and Welshpool bases. The purpose of this SOP is to outline some aspects of the interface between EMRTS and the remaining base in Caernarfon (H61), and to address the issue of patient triage when H61, H57, or H59 is operating with a paramedic-only crew.

In some cases, H61 is used by North Wales hospitals as a transport platform for urgent inter-hospital transfers. This activity does not fall under the remit of EMRTS except in relation to tasking. Further information on this aspect of Helimed 61 activity can be found in the all-Wales transfer guidelines.

2. Daily Routine

As part of the morning comms check, the EMRTS Air Support Desk (ASD) should ascertain the crew configuration of H61 and pass this information to the EMRTS Top Cover Consultant (TCC). Possible configurations are:

- Paramedic only (usually two)
- Paramedic(s) plus Pre-Hospital Emergency Medicine (PHEM) Fellow
- Paramedic(s) plus PHEM Trainee

It is important to be clear on the distinction between 'PHEM Fellow' and 'PHEM Trainee'. The former are present as observers, and have no additional capability beyond JRCALC. The latter are undertaking a programme of training leading to a Certificates of Completion of Training (CCT), and are authorised to carry out advanced medical interventions with remote support. Where a PHEM Trainee is flying, the EMRTS TCC will be the remote supervisor, and may be phoned for advice at any point.

3. Tasking

3.1 Tasking initiated by ASD

Helimed 61 is tasked by the ASD. Tasking of H61 is based on proximity to the incident, combined with a case-by-case assessment of the need for the additional medical resource available from H59 and H57.

In some cases, H61 will be tasked to an incident along with an EMRTS asset.

During a mission, crew of H61 are encouraged to request the support of EMRTS if they perceive that a case would benefit from additional medical capability.

3.2 Tasking request originating from hospital

In addition to the above, a helicopter may be requested by a North Wales hospital, to help with the urgent inter-hospital transfer of a patient. This request may be couched in terms of a request for EMRTS, or may be a direct request for H61. Treat all such requests as a request for EMRTS, with a

conference call between the originating clinician, ASD, and EMRTS top cover consultant. Key questions are:

- Is an EMRTS response appropriate?
- Is the EMRTS team available?
- What is the configuration of H61? If there is a PHEM trainee on board, then they may be able to take on the transfer, avoiding depletion of local hospital staff.

If EMRTS are unavailable/not the most appropriate resource, a request from a North Wales hospital to task H61 should be respected.

The approach to managing transfers involving hospital staff and H61 is dealt with in the all-Wales transfer guidance *Designed for Life*. In short, once H61 has been tasked, the transfer should be managed by the hospital staff in conjuncton with the crew of H61.

4. Request from Helimed Paramedics to attend MTC ('Bypass')

4.1: Introduction

In some cases, it may be appropriate for a patient being carried by HM61 (or H57/59 where there is a paramedic-only crew) to be conveyed directly to the major trauma centre (MTC) in the Royal Stoke University Hospital. These cases should be relatively uncommon because:

- A serious case should have had an EMRTS 'medical' asset dispatched.
- Many serious cases under paramedic care will require stabilisation at the nearest Trauma Unit (e.g. for airway compromise) prior to being moved to the MTC.

Cases where bypass is being considered should be discussed with the EMRTS Top Cover Consultant in the first instance.

4.2 Use of Trauma Triage Tool

Use of an appropriate triage tool will help Helimed paramedic crews identify patients who may require direct transfer to the MTC. It should be noted, however, that:

- The trauma triage tool will trigger contact with the EMRTS Top Cover Consultant, not automatic triage to MTC.
- All trauma triage tools contain a safety net of 'clinical concern', enabling crews to contact Top Cover Consultant even if strict criteria are not met.

It is thus not of particular importance which triage tool is used, because each case will be discussed on its own merits. At present, the West Midlands Trauma Triage Tool is available to H61 crews.

4.3 Bypass Procedure

Where a case being carried by Helimed paramedics is felt to merit direct transfer to RSUH, the following procedure should be observed:

1. Paramedic crew assess patient.
2. Crew contact Air Support Desk to request bypass.
3. ASD set up conference call between EMRTS TCC, Paramedic, and ASD.
4. Discussion between TCC and Paramedic.
5. If approved, ASD set up conference call between Midlands Trauma desk, ASD, TCC and MTC.
6. Discussion (ATMIST) between Paramedic and MTC Trauma Team Leader, with TCC and ASD in conference.
7. Bypass confirmed.
8. ASD inform West Midlands Air Support (Whiskey Alpha) that aircraft will be transiting to Stoke.

4.4 Contacting MTC at Royal Stoke University Hospital

This should be undertaken as per Operational Comms Brief 0011, issued 1/6/15.

4.5 Review of Bypass Cases

All cases which go to RSUH via the route described in this SOP should be reviewed at the EMRTS monthly clinical governance meeting. Clinical staff at H61 are encouraged to attend these meetings, either in person or by VC.

5. Secondary Transfers

Where H61 takes a case to a Trauma Unit, the possibility exists of a secondary transfer to the MTC. The ASD should aggressively pursue these transfers, and aim to identify the need for an EMRTS team prior to the request for WAST asset from the Trauma Unit.

Appendix 10 - Role of a regional transfer group

Each regional transfer group should be a senior transfer lead. This group should consist of:

1) Senior doctor and nurse from each critical care unit in the Network.
2) Ambulance representation.
3) Ambulance Clinical Contact Centre representation.
4) Search and rescue.
5) Air ambulance.
6) EMRTS
7) Out of region tertiary referral centre representation.

The role of this group is to:

1) Look at clinical governance issues regarding transfers using audit data from the transfer forms and the Health Boards. This data will be analysed by the group and lessons learnt disseminated to interested parties. Clinical governance surveillance however is still the primary responsibility of the Health Boards.
2) Review transfer activity, particularly in relation to service redesign of hospitals and the impact on critical care transfers.
3) Facilitate transfer training for interested parties.
4) Act as a forum to discuss practical issues regarding transfers.
5) The group should meet at regular intervals. Approximately every 4-6 months

Further hard copies are available from:

Sue O'Keeffe
Wales Critical Care & Trauma Network
Room 34/35 Residence Building
Abergele Hospital
Llanfair Road
Abergele
Conwy
LL22 8DP

Phone: 01745 448586 ext: 2282
E-mail: sue.o'keeffe@wales.nhs.uk

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