

West Midlands Ambulance Service

Midlands Air Ambulance /MERIT

(In partnership with West Midlands Ambulance Service NHS Foundation Trust)

Standard Operating Procedure

'DAILY EQUIPMENT CHECK'

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APPROVED BY:	Air Operations/MERIT/RTD Manager
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LEAD DIRECTOR:	Director of Specialist Operations
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Change Control:

Document Number	OPS-SOP-005
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Version	5
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Author	I Roberts, RTD/MERIT Support Officer –
	Supported by Equipment Working Group

Change History:

Date	Change	Authorised by
2015	 Reviewed and developed by equipment working group (MAAC/MERIT) Draft format completed and sent for review by MAAC Clinical Lead/Air Operations/RTD/MERIT Manager Changes and full change into SOP by MERIT/RTD Support Officer Reviewed in draft format by MAA CLI- OPS Committee 	R Steele
2016	Reviewed by Consultants Dias/Keene Reviewed by MAA CLI/Ops leads and trial bags set up for use to support weight reduction and functionality Reviewed by HEMS equipment Working Group – removed WMAS RRV Response Bags Final Review by specialist group – CLI-OPS Committee and lead Director	R Steele
12 ^{thth} May 2016	Final review/approval and distribution	
19 th May 2016	Added omitted kit EMAA and Thermometer. Redistributed as V2	R Steele
Sept 16	Reviewed and amended by Equipment WG leads	D Keene/D Balthazor
November 2016	Reviewed by AOM: Change History: 3.4.4 –added : Each side pouch, top pouch and the <u>BLS</u> main compartment should then be sealed/tagged to allow efficient kit checks at the start of shift. 3.6 added: In the event of a late shift finish	

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	the bags should be exchanged and the kit restocked at the start of the next shift. Combined adult/paed airway changed from McCoy to Mac 4 blade Added : nasal spec to airway role Added Duo dote kits Sent to CLI-OPS Committee for final review Reviewed Lifepak v Zoll Added info re RePHIL – lactate tester/strips and Orca boxes	
December 2016	Final review by CLI-OPS Committee – Response Bag working Group lead /approval/distribution	R Steele
December 2016	Amended check sheet – to reflect the revised list. Approved and redistributed v 4	R Steele
Feb 2017	Updated weekly checklist to incorporate further equipment and stores checks	M Nash

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Appendix I: WMAS Guidance for Handling Responder Bags

1.0 AIMS

1.1 The aims of this document are:

To ensure that all members of staff understand the content, location and packing of the medical equipment carried on board the aircraft /land vehicles.

To provide a structure for the introduction of new equipment.

2.0 BACKGROUND

- 2.1 Midlands Air Ambulance Charity (MAAC) operates three aircraft across the West Midlands. Supported by 3 Rapid Response Vehicles (RRV). Overnight cover is provided by the Medical Emergency Response Incident Team (MERIT) based at Oldbury.
- 2.2 All aircraft should have an identical set of Medical Equipment to enable staff to work effectively at all bases (Appendix A + B). Aircraft who have a doctor on duty provide the MERIT role and there is an additional transfer bag that is available in the event of a critical care transfer being undertaken (Appendix C). Base rapid response vehicles and the MERIT night vehicle contents are included in this policy.
- 2.3 The equipment bags are packed to provide rapid access to the equipment required for the immediate management of ill and injured patients.
- 2.4 The equipment reflects a compromise in terms of utility, practicality and weight restrictions.

3.0 MEDICAL RESPONSE BAG LAYOUT

- 3.1 West Midlands Ambulance Service (WMAS) and Midlands Air Ambulance Charity (MAAC) are committed to doing all that is reasonably practicable to reduce the risk of injury to its staff, particularly through manual handling of response bags (see Appendix I).
- 3.2 This procedure has been developed following a review of provision of response bags across the four bases and supports the management of risk associated with such bags. It replaces those previously issued in relation to provision of response bags on the air operations units and MERIT.
- 3.3 The aim of this policy is to provide the best possible solution that balances manual handling, clinical, medicines and patient safety risks in order to protect its staff and the public, with the objectives of;

- Providing a consistent and safe response to patients.
- Reducing the risk associated with manual handling of response bags.
- Preventing the bags from being overstocked and increasing weight
- Providing a standard layout and content list across the operation.
- 3.4 There are two medical equipment bags carried on the three MAAC aircraft and rapid response vehicles (RRV's). A third bag is carried from Cosford and the MERIT car based out of HART Oldbury; this should also be utilised when a doctor is on duty at Tatenhill and/or Strensham.
- 3.4.1 The Enhanced Care Bag contains all drugs and equipment required for advanced procedures, this is additional equipment to that carried on a land ambulance or RRV. This bag <u>must be taken to all incidents</u> along with the issued defibrillator/monitor.
- 3.4.2 The Basic Life Support (BLS) bag carries all equipment required if first on scene where there is no land ambulance, or at incidents where resources are limited/multi casualty scenes. This bag holds equipment essential for the initial treatment of a casualty and <u>in the event of being first on scene this bag must</u> <u>be taken</u> along with the issued defibrillator/monitor by the first crewmember. The Enhanced Care Bag should then be conveyed to scene by the second crewmember once released from aircraft (or RRV) when vehicle/aircraft safety duties are assured and complete.
- 3.4.3 The Transfer Bag should be available for the MERIT and doctor led aircraft. Although Tatenhill and Strensham are not the commissioned MERIT service, if a doctor is on duty, the equipment should all be available. The transfer bag is not routinely carried on the aircraft but should be taken for pre-planned transfer activity.
- 3.4.4 All bags are to be stocked in accordance with the equipment lists in appendix A, B and C. All pouches and compartments, <u>except drugs pouches</u>, should be sealed with a tag and signed, noting the expiry date of the first item to go out of date on a laminated label (Appendix H). Each side pouch, top pouch and the <u>BLS</u> main compartment should then be sealed/tagged to allow efficient kit checks at the start of shift. Drugs pouches must be inspected daily for contents and breakages.
- 3.5 A reserve Enhanced Care and BLS bag should be held at each base. On return from a case where equipment has been used <u>both bags should be exchanged</u>. This will ensure the platform is rapidly re-deployable. A complete kit check and re-stock of the used bags should then occur. This will allow 'slow time' checks of equipment with the aim of reducing errors in re-stocking. To ensure compliance to the equipment SOP, on the 1st of each month, all pouches should be unsealed, checked and resealed.
- 3.6 The responsibility for re-stocking a used bag lies with all clinical team members who have used the bag. The bag checks should be a two-person process of challenge and response against the equipment list contained in the attached

appendices. In the event of a late shift finish the bags should be exchanged and the kit restocked at the start of the next shift.

- 3.7 It is recognised that it is impossible to cater for all situations however a limited set of replacement consumables should be kept in the aircraft/ RRV for restocking on scene where necessary to enable re-tasking when appropriate. The items held should be decided at a base level.
- 3.8 A set of the Enhanced Care, BLS and transfer bags should be fully stocked & mission ready before the end of each shift.
- 3.9 At the commencement of a shift a full inspection of all the bags should take place. All sections of the bag must be checked for an unbroken tag and the presence of none tagged items using the daily equipment checklist (appendix E). This should be documented and signed for by both clinicians. The completed documents must be kept for submission to the Air Operations/MERIT/RTD Manager (AOM) and readily available for review on request. All records should be retained.
- 3.10 ALL staff are responsible for taking reasonable care of the response bags and any defects should be reported to an aircrew supervisor who will arrange for repair or replacement as required.
- 3.11 Bags that are soiled should be cleaned. Under no circumstances should soiled bags be used operationally or leave the base. For further information about cleaning of equipment staff should refer to WMAS infection prevention and control guidelines.

4.0 ALTERATIONS TO THE BAGS

- 4.1 Proposals for changes of the bag contents should be put forward either at the monthly clinical governance meeting or via the base leads for review at the Clinical Ops group meetings. If an immediate risk is identified requiring immediate attention/action this should be communicated to the duty manager and be supported with an ER54.
- 4.2 Requests will be passed onto the appropriate Advisory / Steering Group and ultimately sanctioned by the Air Operations manager in conjunction with the MAA Clinical Lead for aircraft specific queries and the MERIT Lead for the MERIT vehicles.

5.0 AIRCRAFT MEDICAL EQUIPMENT

5.1 Whilst it is recognised that there are variations in the aircraft equipment fit such as the central storage tower unit. It is best practice that the equipment should be standard across the three bases.

Any equipment contained within the cabin must always be secured in an appropriate manner so as not to become a potential hazard during flight. The responsibility for carriage of equipment and personnel rests ultimately with the aircraft captain, therefore if there is any doubt as to how, or where to best store any item, then their advice should be sought.

6.0 CENTRAL STORAGE UNIT / CD CARRIAGE

- 6.1 The central storage unit on the aircraft contains the approved Controlled Drugs (CD) storage locker. The Controlled Drugs pack must be locked away when not in use, and the key kept securely by the clinician who has signed for the pack.
- 6.2 The tower unit or pouch storage unit should contain basic equipment that may be required during flight.
- 6.3 Weight limitations on any storage units must be strictly adhered to.
- 6.4 Due to variations in the design and space available, it is impractical to issue a definitive equipment list, therefore staff should familiarise themselves with local arrangements.
- 6.5 A Safe is provided in all RRV's that is approved for CD Storage. The CD packs must be locked away when not in use and the key kept securely by the clinician who has signed for the CD packs.

7.0 Cardiac MONITOR/ DEFIBRILLATOR.

- 7.1 All clinical staff must ensure that they are confident and competent in the operation and use of the Cardiac Monitor and defibrillator currently in service.
- 7.2 The unit should be checked at the start of every shift using the self test procedure, and batteries should be replaced and rotated as required. The test pass confirmation printout should be retained for a minimum of 24 hours or until the next self test is performed.
- 7.3 A therapy cable defibrillation test using a test load should be carried out as per the recommendations from the supplier. Refer to LifePak or Zoll user manuals for clarity on each device.
- 7.4 Any problems identified during either test must be reported to the Air Operations/MERIT/RTD Manager and/or base supervisor and an alternative unit/repairs will be sourced. Any unit which fails the built in test <u>must not</u> be used operationally. It should be clearly marked as being unfit for patient use and sent for maintenance or repair as soon as possible- an ER54 must also be completed to support.

- 7.5 The Aircraft Monitor mount should be checked daily for stability and the retaining straps checked frequently for damage and wear. Any defects should be reported to the Aircrew Supervisor, Pilot or BAS Engineer for inspection.
- 7.6 The Monitor unit should be accompanied by an equipment bag containing all required leads and monitoring consumables listed in Appendix D. For day operations the paediatric consumables are stored separately to the monitor due to the aircraft bracket.

BATTERY MANAGEMENT

- 7.7 Battery maintenance including charging, conditioning and shelf life testing should be carried out in accordance with the manufacturers maintenance and user guide. (for Zoll battery management Procedure refer to WMAS OPS-Procedure-006 and appendix G).
- 7.8 Life-Pak Batteries should be rotated regularly to ensure even usage.
- 7.9 To reduce the risk of voltage depression (memory effect) Life-Pak batteries should be conditioned every three months. Each battery should be numbered and the date of charge/conditioning should be documented (Appendix G).
- 7.10 The Life-Pak charging unit must be maintained between 5^o and 35^o degrees Celsius. Charging below or above these temperatures may lead to incomplete charging and risk of irreversible battery damage. Care must be taken particularly during winter if the charger is not stored in the base accommodation.

8.0 **STOWAGE BAG – Aircraft only.**

- 8.1 The additional storage bag is carried in the rear cargo area of the aircraft and it must be securely fastened using only the Babcock approved straps and loading points.
- 8.2 The bag is at risk of contamination from bodily fluids due to its close proximity to the patient and the aircraft floor. Cleaning should be carried out in line with WMAS infection, prevention and control guidelines.
- 8.3 Responsibility for replacing the equipment rests with the crew completing the tasking, however in cases where equipment is left with a patient, then it may be restocked from base, and if unable to do so it is the responsibility of the crew to inform the next duty crew of any shortfall in equipment.
- 8.4 Caution should be used whist lifting the bag in and out of the aircraft to ensure that no injuries occur. Movement of the bag is a two-person task. Both parties should ensure that a good lifting and handling technique is utilised along with good communications.

8.4 The bag contents should be checked against the list contained in Appendix E for all aircraft.

9.0 WINDOW STORAGE UNIT RIGHT SIDE (Pilot side) - Aircraft

- 9.1 The window storage unit on the right is mainly used to house the Laerdal suction unit but can be utilised for carriage of lightweight frequently used equipment and storage. It is unsuitable for heavy items as there are no security straps and objects may break free during significant aircraft motion and may cause injury to the cabin occupants.
- 9.2 A list of equipment to be stored in the unit is contained in Appendix E.

10.0 WINDOW STORAGE UNIT LEFT SIDE (P1 side) - Aircraft

10.1 The left hand side window storage incorporates the suction unit mounting & the B-Braun infusion pumps however behind the unit is space for additional spare suction consumables.

11.0 NAVIGATION BAG - Aircraft

- 11.1 Good practice dictates that the Aircraft Navigation Bags are fit for purpose and ready to cover the area of operations for Midlands Air Ambulance.
- 11.2 The 1:250000 Aviation maps are the legal responsibility of the Aircraft operator and pilot and are covered under the aircrafts 'Check A'.
- 11.3 The bag should be checked daily to ensure that all Ordnance Survey maps are clean and refolded appropriately after use. An Aviation ruler and protractor should also be available for immediate use.
- 11.4 There should be an appropriate set of A-Z Map books for the intended area of operations.

12.0 RRV Equipment

- 12.1 The equipment on the RRV is based around its use as a rapid response vehicle for the local area. The airbase cars are intended for use when the aircraft is unavailable or deemed inappropriate such as a response to the RAF main camp or M5 service station junction 8. There is also a night car operating from HART Oldbury (1900-0700hrs).
- 12.2 The vehicle should undergo a daily vehicle defect inspection (VDI) in line with Trust procedures to ensure serviceability. Any defects should be reported to an

appropriate supervisor or in their absence the AOM who will arrange for repair via the Trust/Charity fleet manager.

- 12.3 Due to the high demand of electrical items on the battery, where available a shore line **<u>must</u>** be attached at all times when the vehicle is not in use.
- 12.4 Oil and Water levels must be checked daily and documented in the station log.
- 12.5 The fuel tank should be maintained with no less than 3/4 tank of fuel in line with WMAS Operational procedures.
- 12.6 The vehicle must be kitted and ready for use at all times to enable prompt mobilisation.
- 12.7 All medical kit must be secured in the rear of the vehicle behind the safety guard to prevent injury to the occupants.

13. Equipment Checks and Cleaning Schedule

13.1 Appendix F is a minimum cleaning schedule for RRV's/Aircraft and must be completed daily. This is to be completed in line with WMAS infection and prevention control procedures (CLN-Procedure -003) where possible (products for aircraft cleaning are to be approved before use) Audit R should also be completed on a monthly basis to reflect the RRV audit requirements by the base leads or AOM.

RELATED DOCUMENTS

WMAS Infection, prevention and Control Guidelines (CLN- Procedure-003)

WMAS Vehicle Based Response Bags. OPS-PROCEDURE – 008 (V4)

Lifepak 12 Defibrillator Monitor Operating Instructions, Physio control Inc. 10/2008

Lifepak 15 Defibrillator Monitor Operating Instructions

WMAS Zoll Battery management procedure – OPS – Procedure – 006)

Blue Highlighting denotes Dr led Teams only Appendix A

BAG 1 (ENHANCED CARE BAG)

Enhanced Care Bag: Front Pouch (Upper) MERIT/Doctor led team.

Doctors Drug Pack	
Ketamine 200mg in 20ml	2
Thiopentone 500mg powder	1
Suxamethonium 100mg in 2ml - (All Changed at 1 st of the Month)	2
Rocuronium 50mg in 5mls - (All Changed at 1 st of the Month)	4
Midazolam 5mg in 5ml	4
Ondansetron 4mg in 2ml	2
Ephedrine 30mg /ml in 1ml	2
Flumazenil 500mcg in 5ml	2
Naloxone 400mcg in 1ml	2
Cefotaxime 1g vial	1
Metaraminol 10mg in 1ml	2
Lignocaine 1% - 10ml	2
Bupivicaine 0.5% - 10ml	2
Tranexamic Acid 500mg in 5ml	4
Atropine Sulphate 600mcg in 1ml	2
Water For Injection - 10ml	4
Saline Prefilled Flush - 10ml	4
20ml Syringe	4
10ml Syringe	6
5ml Syringe	4
2.5ml Syringe	4
1ml Syringe	4
Filter Straws	4
Needles 21G (Green)	4
Needles 23G (Blue)	4
Needles 25G (Orange)	4
Drawing Up Needles	6
Drug Labels	4 Each
Syringe bungs	10
RSI Checklist	1
MAD (mucosal atomiser device)	2
Intranasal Dosing Chart	1

Enhanced Care Bag: Front Pouch (Upper) HMED 06/09

*for Doctor led teams, this pouch will be carried in Bag 2. For Paramedic/CCP teams this will be carried in BAG 1

Adrenaline 1:10,000 (pre-filled)	6
Atropine 600mcg/1ml	5
Amiodarone 300mg (pre-Filled)	2
Frusemide 20mg	2
Hydrocortisone 100mg	2
Aspirin 300mg (strip)	1
Buccal Gtn (strip)	1
GTN spray	1
Salbutamol 2.5mg	4
Salbutamol 5mg	4
Atrovent 250mcg	2
Atrovent 500mcg	2
Hypostop	2
Glucagon	1
Benzylpenicillin 1.2g	2
Chlorpheniramine 10mg	2
Adrenaline 1:1000	2
Ondansetron 4mg in 2ml	2
Metoclopramide 10mg	1
Calpol (paracetamol) sachets	4
Paracetamol tablets (500mg) strip	1
Ibuprofen tablets (200mg) strip	1
Naloxone 400mcg	4
Tranexamic Acid 500mg/5mls	2
Water for Injection 10ml	4
1 ml syringe	2
2 ml syringe	2
5ml syringe	5
10ml syringe	5
Filter straws	5
Needles 21G (Green)	4
Needles 23G (Blue) Needles 25G (Orange)	4
Drawing Up Needles	5
Saline pre-drawn syringe 5ml	5
Luer lock caps	5

Enhanced Care Bag: Front Pouch (Lower)

EMS Blizzard Blanket	1
Medi wrap	1

Enhanced Care Bag: Top Pouch

Clinical Waste bags	2
Sharps bin (small)	1
Tuffcuts (sterile)	1
Transpore Tape 2.5cm	1
EMMA	1

Enhanced Care Bag: Side Pouch 1

KTD Traction Splints

tion Splints	2	

Enhanced Care Bag: Side Pouch 2

SAM Pelvic sling	1
Paediatric monitoring consumables (HMED03 only) – see cardiac monitor carry case section	1 pack

Belmont Buddy Fluid Warmer + Accessories, including blood giving set	1
Lactate monitor, strips and BM needles (HMED03 and MD98 only)	1
Disposable insert	
Blood giving set	1

Enhanced Care Bag: Main Compartment – Rear Section

WMAS Bougie Holder

15Ch Bougie – Adult	2
10Ch Bougie – Paed	1
5Ch Bougie – Infant	1

Combined adult/paed airway

ETT size 8.0	1
ETT size 7.0	1
ETT size 6.0 (cuffed)	1
ETT size 5.5 (cuffed)	1
ETT size 5.0 (cuffed)	1
ETT size 4.5 (cuffed)	1
ETT size 4.0 (cuffed)	1
ETT size 3.5 (cuffed)	1
ETT size 3.5 (uncuffed)	1
ETT size 3.0 (uncuffed)	1
ETT size 2.5 (uncuffed)	1
Adult laryngoscope handle with batteries	1
Paed Laryngoscope handle with batteries	1
Mac 3 blade	1
Mac 4 blade	1
Miller 1 blade	1
Magills Adult	1
Magills Paed	1
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Adult catheter mount	1
Paed catheter mount	1
20ml syringe	1
Tube tie	1
Adult Thomas tube holder	1
Paed Thomas tube holder	1
Lubricating Jelly (sachet)	2
Adult HME filter	1
Paed HME filter	1
Nasal spec	1

Thoracostomy Kit

Scalpel size 22	2
Spencer Wells Forceps 200mm	2
Russell chest seals	2
Eye protection	2
Surgical gloves size 6	1
Surgical gloves size 7	1
Surgical gloves size 8	1
Videne	1

Surgical Kit

Sterile Tuffcuts	1
Scalpel Size 22	2
Ambulatory Chest Drainage Set	2
Mosquito Artery Forceps (Curved 125mm Sterile)	2
Surgical sterile pack (Curved Mayo, Forceps), Satinsky small, Satinsky medium)	1
Gigli Saw (2 handles, 1 blade)	2
Chlorhexidine spray	1
MerSilk 0 suture on colt hand-held needle – W792	2
Foley Catheter 14Ch Female (with sterile water)	1
Sterile Drape	1
Transpore Tape 2inch	1
Clinical waste bag (large)	2
Large Sterile Swab	1

Enhanced Care Bag: Main Compartment - Front Section

Main compartment, front pouch Mapleson F circuit

Failed Intubation/Ventilation Pack – (Adult and Paed)

I-Gel 5						1
I-Gel 4						1
I-Gel 3						1
I-Gel 2.5						1
I-Gel 2						1
I-Gel 1.5						1
I-Gel 1						1
Needle C	ric Kit					1
22mm Sc	alpel					1
Trachy 6.	0mm cuffed t	ube				1
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Tracheal dilators	1
McCoy 4 Blade	1

EZ-IO Pouch

EZ IO Power Driver	1
Manual Driver	1
Adult IO needles (Blue) – including EZ-IO extension and label	1
Paediatric IO needles (Pink) – including EZ-IO extension and label	1
LD IO needles (Yellow) – including EZ-IO extension and label	1
3-way tap extension (Long)	1
50ml syringe (luer lock)	1
EZ-IO stabiliser set	1
24g Neoflon	2

Haemorrhage control Pouch

CAT Tourniquet	2
Olaes bandage 4"	2
Blast Bandage 4"	2
Nightingale dressing 6"x8"	2
Gauze Dressings (pack of x5)	2
Celox Gauze Dressing	2

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Appendix B

BLS BAG

BLS Bag: Front Pouch (Upper)

Drugs bag JRCALC (Dr led).

BLS Bag: Front Pouch (lower)

Mediwrap

BLS Bag: Top Pouch

First Aid	
Gauze Swabs 10x10	4
Small Dressing	1
Medium Dressing	1
Large Dressing	1
Transpore Tape	1
Conforming bandage small	1
Conforming bandage large	1
Triangular Bandage	1

BLS Bag: Side Pouch 1

Paed O2/vent

Paed BVM and Masks 1,2,3	1
Paed O2 masks (100%, 28%, Neb)	1 each
O2 tubing	1
Hand held suction & catheters	1

BLS Bag: Side Pouch 2

Adult Airway/Vent/O2

Adult BVM and Masks 4,5	1
Adult O2 masks (100%, 28%, Trachy, Neb acorn)	1 each
O2 Tubing	1
T-Piece	1

BLS Bag: Main Compartment Rear Pocket

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Ambu Perfit ACE collar – Adult	1
Ambu Mini Perfit ACE collar – Paediatric	1

BLS Bag: Main Compartment Rear section

Fluid Pouch

0.9% Saline (250mls)	2
0.9% Saline (500mls)	2
Giving Set	2
Glucose 10% (500ml) LABELLED WITH WMAS GLUCOSE STICKER	1
IV Paracetamol 1g	1

Foreign Body/Airway Obstruction Pouch

Laryngoscope Handle	1
MAC 4 Blade	1
Magills Adult	1
Magills Paed	1

BLS Bag: Main Compartment

Cannulation Roll

Cannula 14G (Orange/Brown)	2
Cannula 16G (Grey)	2
Cannula 18G (Green)	2
Cannula 20G (Pink)	2
Cannula 22G (Blue)	2
IV Dressing pack	2
0.9% saline flush (5ml)	4
Torniquet	2
1`` tape (micropore)	1
Chlorprep	4

Oxygen

Oxygen MGS 1 Litre	1

BLS Airway

NPA 6,7,8	1
Adult OPA 2,3,4	1
Paed OPA 000, 00, 0,1	1

Diagnostic pouch

Peak flow	1
Pen torch	1
Glucometer	1
Thermometer	1

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Appendix C

TRANSFER BAG (Dr Led Teams only)

Transfer Bag: Front Pouch (Upper)

Miscellaneous

Transfer Bag: Front Pouch (Lower)

Spares	
Arterial lines (BD Floswitch)	2
Arterial lines (Vygon Laedercath)	1
Bungs	4
Syringes – 20ml	2
Syringes – 10ml	2
Syringes – 5ml	2
Syringes – 2ml	2
Drawing up needles	5
Tape (1" Transpore)	1
WMAS IV dressing pack	2

Drug Delivery Consumables

Syringes – 50ml luer-lock	2
Infusion lines	2
3-way taps	2
Drug Additive Labels	8

Transfer Bag: Side Pouch 1

Monitoring

Invasive pressure monitoring cable (for Lifepak)	2
Transducer set for invasive pressure monitoring	2
Pressure bag	2

Transfer Bag: Side Pouch 2

Diagnostics

BM kit (includes lancets, strips, monitor, Hypostop®)	1
Spare LifePak battery - charged	1

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Transfer Bag: Main Compartment Rear Pocket

PaperworkBBCCCN Transfer Paperwork1packBlood transfusion paperwork, infusion guide,1pack

Transfer Bag: Main Compartment Rear Section

Syringe Driver Pouch

Syringe driver (charged)	3
Clamp	1
Link cable	1
12v DC charging cable	1

Fluids

0.9% Saline (500ml)	2
Blood giving-sets	2

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Appendix D:

Additional Items

WMAS Controlled Drugs Pack (Vehicle Safe)

		MD98	HMED 03	HMED 06/09	ST001/ ST903
Oramorph & Oral Syringe	2	\checkmark	\checkmark	\checkmark	\checkmark
Diazemuls	2	\checkmark	\checkmark	\checkmark	\checkmark
Stesolid Rectal Diazepam 5Mg	2	\checkmark	\checkmark	\checkmark	\checkmark
Stesolid Rectal Diazepam 2.5 Mg	3	\checkmark	\checkmark	\checkmark	\checkmark

Transfer Drug pouch DR Led Teams only (Vehicle Safe on MD98)

		MD98	HMED	HMED	ST001/
			03	06/09	ST903
Propofol 1% 20ml	4	\checkmark	\checkmark	\checkmark	V
Tranexamic Acid (500mg in 5ml)	4	\checkmark	\checkmark	\checkmark	V
Drug Labels (each)	5	\checkmark	\checkmark	\checkmark	\checkmark

Cardiac Monitor + Carry Case (Paed consumables carried in Bag 1 on HMED03*)

					-
		MD98	HMED	HMED	ST001/
			03	06/09	ST903
Lifepak Monitor (securely mounted)		\checkmark			
Standard Monitoring set (coiled NIBP hose, 4-lead ECG, Pulse	1	\checkmark	\checkmark	\checkmark	\checkmark
oximeter)					
Disposable BP Cuff Adult	1	\checkmark	\checkmark	\checkmark	\checkmark
Disposable BP Cuff Adult – Extra large	1	\checkmark	\checkmark	\checkmark	\checkmark
ECG Dots (pack)	1	\checkmark	\checkmark	\checkmark	\checkmark
Defibrillator therapy cable attached	1	\checkmark	\checkmark	\checkmark	\checkmark
Adult Defibrillator therapy pads	2	\checkmark	\checkmark	\checkmark	\checkmark
Paediatric defibrillator therapy pads	2	\checkmark	\checkmark	\checkmark	\checkmark
Disposable BP Cuff Child*	1	\checkmark	\checkmark	\checkmark	\checkmark
Disposable BP Cuff Infant*	1	\checkmark	\checkmark	\checkmark	\checkmark
SPO2 Finger Probe Paediatric (single use)*	2	\checkmark	\checkmark	\checkmark	\checkmark
Capnography ETT airway adapter (adult/paed)	2	\checkmark	\checkmark	\checkmark	\checkmark
Capnography ETT airway adapter (infant)*	2	\checkmark	\checkmark	\checkmark	\checkmark
Nasal capnography (adult)	1	\checkmark	\checkmark	\checkmark	\checkmark
Nasal capnography (paed)*	1	\checkmark	\checkmark	\checkmark	\checkmark
Spare printer paper	1	\checkmark	\checkmark	\checkmark	\checkmark
Spare batteries (In centre console of the aircraft)	1		\checkmark	\checkmark	

Ventilator

		MD98	HMED	HMED	ST001/
			03	06/09	ST903
ParaPAC plus 310 ventilator (secured)	1	\checkmark	\checkmark	\checkmark	\checkmark
Ventilator circuit	2	\checkmark	\checkmark	\checkmark	\checkmark

PRF Folder

	MD98	HMED	HMED	ST001/
		03	06/09	ST903
1	\mathbf{N}	\checkmark	\checkmark	\checkmark
1	\checkmark	\checkmark	\checkmark	\checkmark
1	\checkmark	\checkmark	\checkmark	\checkmark
1	\checkmark	\checkmark	\checkmark	\checkmark
1	$\mathbf{\overline{\mathbf{A}}}$	\checkmark	\checkmark	\checkmark
-	1 1 1 1 1 1	1	03 1 I 1 I 1 I 1 I 1 I 1 I	03 06/09 1 I I 1 I I 1 I I 1 I I 1 I I 1 I I 1 I I 1 I I

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Medical Gases

		MD98	HMED	HMED	ST001/
			03	06/09	ST903
Entonox Cylinder & regulator (secured in aircraft, bag for RRV)	1	\checkmark	\checkmark	\mathbf{N}	$\mathbf{\nabla}$
Mouthpieces (in centre console of aircraft, bag for RRV)	2	\checkmark	\checkmark	\checkmark	\checkmark
Oxygen Cylinders E Size (secured)	2		\checkmark	\checkmark	
Oxygen spare MGS 1 Litre	1	\checkmark			\checkmark

Suction

		MD98	HMED	HMED	ST01/
			03	06/09	ST903
Suction Unit (secured)	1	\checkmark	\checkmark	\checkmark	\checkmark
Suction tubing	2	\checkmark	\checkmark	\checkmark	\checkmark
Yankaur	2	\checkmark	\checkmark	\checkmark	\checkmark
Suction liner (where required)	1	\checkmark	\checkmark	\checkmark	\checkmark
Endotracheal suction catheter – 10	2	\checkmark	\checkmark	\checkmark	\checkmark
Endotracheal suction catheter – 12	2	\checkmark	\checkmark	\checkmark	\checkmark
Endotracheal suction catheter – 14	2	\checkmark	\checkmark	\checkmark	\checkmark
Endotracheal suction catheter – 16	2	\checkmark	\checkmark	\checkmark	\checkmark

Syringe Drivers

			MD98	HMED	HMED	ST001/
				03	06/09	ST903/
						Cos 01
E	Braun Perfuser Compact (stored securely on a/c when	MD98 x3	\checkmark	\checkmark	\checkmark	\checkmark
r	equired- transfer bag for Dr Led services) - for use by Dr	HMED x2				
	ed or trained personnel with competencies to support only					

Navigation Bag

		MD98	HMED	HMED	ST001/
			03	06/09	ST903
Map Bag	1		\checkmark	\checkmark	\checkmark
A-Z	As req'd	\checkmark	\checkmark	\checkmark	\checkmark
OS Maps	As req'd	\checkmark	\checkmark	\checkmark	\checkmark
1:250000 Air Navigation Charts			\checkmark	\checkmark	
1:500000 Air Navigation Charts			\checkmark	\checkmark	
Aviation Ruler			\checkmark	\checkmark	
360 Protractor			\checkmark	\checkmark	

Vehicle Cabs

		MD98	HMED	HMED	ST001/
			03	06/09	ST903
Gloves (sizes as required for duty crew)	As req'd	\checkmark	\checkmark	\checkmark	\checkmark
Clinical Wipes	1	\checkmark	\checkmark	\checkmark	
Child ear defenders	1		\checkmark	\checkmark	
Sharps bin	1	\checkmark	\checkmark	\checkmark	\checkmark
Emergency Briefing Card	1		\checkmark	\checkmark	
Headsets	2		\checkmark	\checkmark	
350 Watt Inverters (Drivers Door)	1				\checkmark
Fuel Card	1	\checkmark			\checkmark
Mobile Phone	1	\checkmark	\checkmark	\checkmark	\checkmark
ARP spare Batteries	2	\checkmark			\checkmark
Safety Helmets	As req'd	\checkmark	\checkmark	\checkmark	\checkmark

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Aircraft Rear Storage Bag/RRV Boot Contents

		MD98	HMED03	HMED	ST001/
				06/09	ST903
Vacuum Splints - Pack to contain: Large (120cm)	1	\checkmark	$\mathbf{\overline{\mathbf{A}}}$	\checkmark	\checkmark
Medium (90cm)	1	\checkmark	\mathbf{N}	\checkmark	\checkmark
Small	1	\checkmark	\mathbf{N}	\checkmark	\checkmark
Suction Pump	1	$\mathbf{\nabla}$	\checkmark	\checkmark	\checkmark
Burns Dressing Pack	1	\checkmark	\checkmark	\checkmark	\checkmark
Burns Cling Film	1	\checkmark	\checkmark	\checkmark	\checkmark
Maternity Pack	1	\checkmark	\checkmark	\checkmark	\checkmark
Clinical Wipes	1	\checkmark	\checkmark	\checkmark	\checkmark
Scoop Stretcher	1		\checkmark	\checkmark	\checkmark
Ventilator Tubing (spare)	1	\checkmark	\checkmark	\checkmark	\checkmark
Infection Control Pack	1	\checkmark	\checkmark	\checkmark	\checkmark
Vacuum Mattress with Pump (Hangar for a/c – MD98 vehicle	1	\checkmark	\checkmark	\checkmark	\checkmark
SMART Triage Kit	1	\checkmark	\checkmark	\checkmark	\checkmark
Major Incident Pack	1	\checkmark	\checkmark	\checkmark	\checkmark
Spare adult/paed BVM	1	\checkmark	\checkmark	\checkmark	\checkmark
Monitoring spare consumables	1	\checkmark	\checkmark	\checkmark	\checkmark
Spare suction consumables		\checkmark			\checkmark
Long board + Head blocks	1		\checkmark	\checkmark	
Fluid pack 500ml	2	\checkmark	\checkmark	\checkmark	\checkmark
Snow shovel (when required)	1	\checkmark			\checkmark
Duodote Packs (x 1 pack per crew member)	X 1 each	\checkmark	\checkmark	\checkmark	\checkmark
RePHIL Orca Boxes x 2 – secured in agreed area		\checkmark	\checkmark		

Personal Issue

		Dr	Para	CCP	Pilot
JRCALC	1	\checkmark	\checkmark	\checkmark	
PPE		\checkmark	\checkmark	\checkmark	\checkmark
Handgel	1	\checkmark	\checkmark	\checkmark	\checkmark
Aide Memoirs	1	\checkmark	\checkmark	\checkmark	
Paramedic CD Pouch	1		\checkmark		
Docs CD Pouch	1	\checkmark			
CCP CD Pouch	1			\checkmark	
Trauma Triage Tool	1	\checkmark	\checkmark	\checkmark	

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Appendix E: Daily Equipment Checklist (Tick for presence and where appropriate dated in line with the first expiry of the contained equipment)

Week Commencing:		MON	TUE	WED	THU	FRI	SAT	SUN
Clinicians Initials		/	/	/	/	/	/	/
Enhanced Care Bag								
Front Pouches	Drug Pouch							
	Blizzard Blanket							
	Mediwrap							
	Bougie Holder							
	Airway Pouch							
	Failed intubation pouch							
Main Compartment	EZ-IO Pouch							
	Haemorrhage control							
	Thoracostomy kit							
	Surgical kit							
	Mapleson F Circuit							
Top Pouch								
Side Pouch 1								
Side Pouch 2	* new location for the Belmont*							

BLS Bag										
Front Pouch	JRCALC Drugs									
Top Pouch										
Side Pouch 1										
Side Pouch 2 (new location for Belmont REPHIL only)										
Main Compartment										

Transfer Bag (MERIT /Dr Led Teams only)							
Front Pouch	Spares						
	Drug Delivery consumables						
Main Compartment	Syringe Driver Pouch						
-	Fluids						
	Transfer Paperwork						
	Blood transfusion paperwork						
Side Pouch 1							
Side Pouch 2							

Additional Items				
WMAS Controlled Drug Pack				
Transfer Drug Pouch				
Lifepak + Carry Case				
Ventilator				
PRF Folder				
Medical Gases				
Suction				
Syringe Drivers				
Navigation				
Vehicle Cabs				
Aircraft Rear Storage/RRV Boot				
Personal Issue				
Daily VDI Checks complete				
Confirm fit for Duty and compliant with the EWTD				

All Pouches (except drug pouches) should be sealed and tagged	SIGNATURE 1	Para						
All Contents should be								
checked against the Check Lists as per Appendix A, B +C	SIGNATURE 2	Para/Doc						

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Appendix F

Weekly Equipment Checks and Minimal Cleaning Schedule

Initial white sections when complete:

Equipment	Mon	Tues	Weds	Thurs	Fri	Sat	Sun
Date:							
Signed:							
Daily clean during							
equipment check							
and after use of							
any equipment							
Drugs and stores							
stock check and							
order – weekly for							
03 and HART,							
fortnightly for 09							
and 06 Suction incl.							
Laerdel function							
test							
Parapac incl.							
function test							
Zoll defib test/							
Rotate batteries							
Syringo drivors on							
Syringe drivers on charge and							
functional							
Vehicle/Aircraft A							
Clean							
Splints (where							
applicable)							
Vacuum Mattress							
Maps – clean and							
check							
RRV							
L							

N.B all equipment should be checked for cleanliness as part of your vehicle equipment checks and also cleaned following use. Deep cleans are required on specific items as listed

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Appendix G

Life Pak BATTERY MANAGEMENT RECORD BASE :

Date	Batteries of	on Charge	Batteries on Monitor	Comments

Batteries to be rotated at the end of shift on **Saturday** and **Wednesday** evenings and if required during a shift. Please log problems with batteries in the comments section so trends can be identified.

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WEST MIDLANDS AMBULANCE SERVICE NHS FOUNDATION TRUST ZOLL BATTERY MANAGEMENT PROCEDURE

Appendix Three – Zoll Battery Charging/Test Log

ZOLL BATTERY CHARGING/TEST LOG

DATE/TIME ON			DATE/TIME OFF		TEAT
CHARGE	SERIAL NUMBER	SIG	CHARGE	SIG	TEST Y/N
				• •	
			C		
	Ch				
0					
<u> </u>					
X					
$\overline{\mathbf{v}}$					
		-	l		_
Audited by		Date			

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Appendix H: Pouch Insert Card

Pouch:

First Expiry date:

Appendix I:



West Midlands Ambulance Service

VEHICLE BASED RESPONSE BAGS

Standard Operating Procedure

DATE APPROVED:	January 2014
APPROVED BY:	Service Delivery Directorate
IMPLEMENTATION DATE:	January 2014
REVIEW DATE:	December 2015
LEAD DIRECTOR:	Director of Service Delivery
IMPACT ASSESSMENT STATEMENT:	No adverse impact on Equality or Diversity

Procedure Reference Number:

OPS - Procedure - 008 (version 4)



Introduction

Handling a response bag is an everyday activity of operational emergency staff. The trust is making every effort to reduce the risks associated with responder bag provision.

Staff should be constantly aware of the principles of safe handling of bags.

Application of the principles of safe handling is an integral part of ambulance operations, for which training is provided to all staff.

Individual support and guidance on safe handling of inanimate loads, including response bags, can be provided by the Training and Education Team, through requests to your line manager. This supplements Manual Handling training that will have already been provided. Employees have responsibility for managing their own health and safety and should seek additional training assistance if required.

This guidance is provided in association with the Trusts Safer Handling Policy

Preventing injury from responder bags

Development of musculo-skeletal complaints are often not always solely attributed to work-related incidents in isolation.

The principles of maintaining good posture and safe handling techniques should be applied throughout everyday activities in order to reduce risks of injury. Normal 'wear and tear', posture and injuries, such as those received during falls can later contribute to the development of injury.

Nevertheless, the nature of ambulance work inevitably involves elements of manual handling requiring further ongoing needs to apply techniques safely.

Principles of safer handling include:

- Complete dynamic risk assessments based on TILE principles (Task, Individual, Load and Environment)
- Maintain a stable base with feet apart and leading foot in direction of travel
- Maintain the natural curves of your spine
- Avoid twisting
- Keep close to the load
- Bend knees and hips
- Ensure you have a good hold of the bag
- Keep elbows tucked in
- Keep abdominal muscles tight

When moving:

- Raise your head as you move, keeping shoulders relaxed
- Undertake smooth movements

Maintain posture:

- Attempt to maintain an upright position
- Avoid hunching shoulders
- Use strong thigh and buttock muscles to avoid bending your back

Reducing the risks from handling responder bags include:

Task	
•	Avoid carrying on one shoulder, particularly when handling over distance - this
	will affect posture, balance and stability
	Avoid twisting whilst handling – move your feet if turning
•	When using the bag avoid stretching to reach contents
-	When in confined spaces / on floor attempt to slide the bag rather than lift it
•	Do not swing the bag in order to position the bag on your shoulder, particularly whilst removing the bag from a car – apply correct handling techniques
•	Do not snatch / jerk the bag in order to move it
•	Consider transporting the responder bag on the stretcher trolley, if this is likely to be taken directly to the scene (E.g. attending an incident a distance from the vehicle e.g. shopping centre)
•	Share equipment carried to an incident with a colleague, if possible
•	Share the handling and carrying of responder bags with a colleague throughout
	the day if working as a 2 person crew
Individ	dual
•	Ensure application of correct safe handling techniques at all times
•	Select the most suitable option for carrying the bag, based on individual

- Select the most suitable option for carrying the bag, based on individual preference / comfort and the presenting circumstances (e.g. proximity of the incident / route to travel)
- Ensure the straps are correctly positioned and not twisted to avoid bruising
- Notify your manager if you are pregnant (in accordance with trust policy)
- Consider adjusting straps, if required, when wearing additional clothing / protection e.g. Hi-visibility jackets

Load

- Maintain contents of the bag in accordance with trust procedures
- Ensure contents are securely located and in the correct area to maintain correct distribution of weight
- Visually inspect for defects to reduce the likelihood of injury occurring as a result of damage
- Ensure straps are adjusted prior to use to suit the wearer / handler
- Keep the bag and straps clean a natural reaction is keep things that are dirty away from us which is against safe handling principles
- Ensure the bag and its contents are secure before handling to prevent contents falling and changing weight distribution

Environment

- Clear obstacles in your path Ask members of the public/bystanders to open doors for you
- Pay attention to your posture, particularly when working in confined spaces
- Consider the most appropriate carrying option when walking up steps / slopes / ramps
- Where circumstances permit use an available lift, rather than stairs
- Be aware of environments with slip, trip and fall hazards, as risks are increased when handling loads
- Where practicable ensure routes are well illuminated

Helping yourself

- Ensure you maintain the expected level of fitness
- Avoid excess weight as it exerts a constant forward pull on your lower back and increases 'wear and tear' on joints
- If you feel that you have not received an adequate level of training in manual handling techniques:
 - Request additional training from your line manager
 - Take every opportunity to discuss manual handling techniques with Mentors, Clinical Development Officers or during formal training / CPD sessions

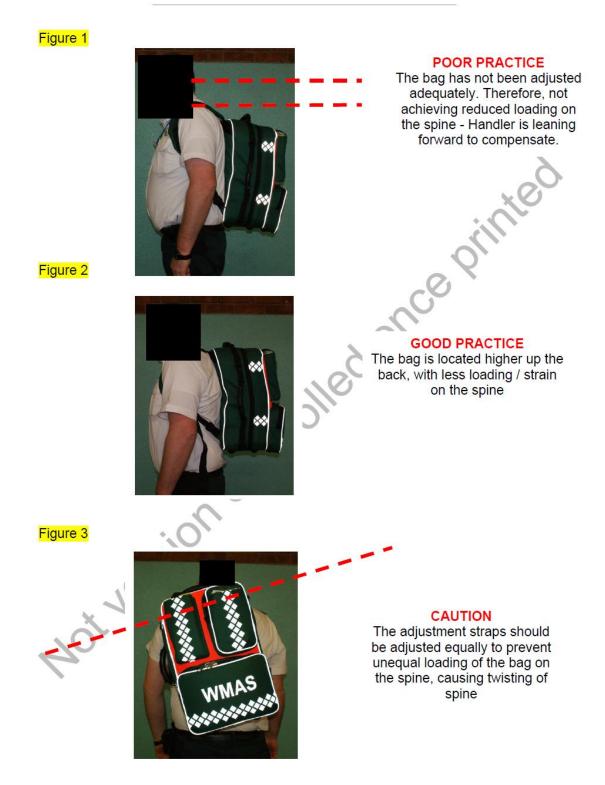
Handling responder bags

Using as a backpack

There are advantages to using the bag as a backpack, as it allows the weight to be located to the body's centre and frees the hands for other tasks such as carrying the defibrillator / opening and closing doors.

The use of both shoulder straps keeps the weight of the bag centred and avoids stress from the pendumum motion of swinging a bag.

Straps should be adjusted so that the backpack remains close to the body. The higher the bag is located up the back, the less loading / strain will be placed on the back (See figure 2)



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Putting the bag on as a backpack

Where possible place the bag on a surface at a suitable height to wear it as a backpack.

Although not ideal, the rear of a car / side step of a vehicle is a preferable height to floor level, as lifting and turning is more likely to cause injury from lifting and twisting.

Figure 4



Alignment of the spine is central

Allows arms to slide through and place on both shoulders

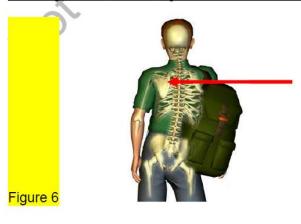
Figure 5



This position allows a good use of thigh muscles to power the lift

led C

Avoiding the use of the bag with one shoulder strap



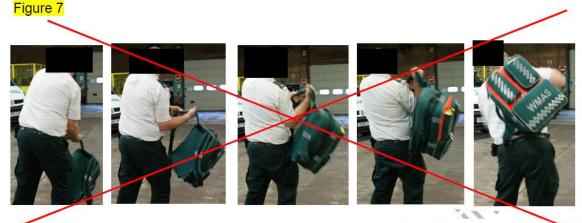
CAUTION

A backpack being carried by one strap can cause disproportionate shift of loading in the spine, leading to neck and muscle spasm, as well as low back pain

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Avoid swinging the bag as this involves twisting and can strain the shoulder

Avoid lateral twisting as movement causes compression strains Slinging the bag over one shoulder leads to physical compensation due to lack of balance, as well as putting more weight on one shoulder

Potential risk of strain to lower arm muscles and further twisting of back and strain on shoulder

Figure 8



Lifting outside of the handlers 'base' can result in potential instability when lifting with an increasing the risk of loss of balance

References

Getting to grips with Manual Handling (HSE) Manual Handling Operations Regulations 1992 (MHRO) (as amended 2002) WMAS Safer Handling Policy The Guide to Handling of People – Version 5

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Appendix J

BS to insert Zoll Battery Mnagement PSOP WMAS