

Midlands Air Ambulance /MERIT

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

Standard Operating Procedure 'DAILY EQUIPMENT CHECK'

DATE APPROVED: February 2019

APPROVED BY: Air Operations/MERIT/RTD Manager

IMPLEMENTATION DATE: Feb 2019

REVIEW DATE: April 2021

LEAD DIRECTOR: Director of Specialist Operations

IMPACT ASSESSMENT STATEMENT: No adverse impact on Equality or Diversity

Policy Reference Number: OPS-SOP-005

Change Control:

Document Number	OPS-SOP-005
Document	DAILY EQUIPMENT CHECKS
Version	7 (Pax)
Owner	Operations/MERIT/RTD Manager
Distribution list	Aircrew/MERIT (Paramedics / Doctors)
Issue Date	February 2019
Next Review Date	April 2021
File Reference	OPS-SOP-005
Impact assessment	Yes
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 CLIOPS 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 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
April 2018	Complete review of SOP	M Nash
August 2018	Re-issued with updates after feedback. For further re-issue once CCC bags, transfer and Pax system agreed	M Nash
February 2019	Pax Bag introduction List – Reword CCC section sent for review by AOM and Clinical Lead	J Spiers
9/02/2019	Minor amendments and sent to Governance leads and TL's for review	JS

CONTENTS

- 1 Aims
- 2 Background
- 3 Medical Response Bag Layout
- 4 Alterations to Medical bags
- 5 Aircraft Medical Equipment
- 6 Central Tower Storage Unit
- 7. Cardiac Monitor and Battery Management
- 8. Large Cargo Storage Bag
- 9. Window Storage Starboard Side
- 10. Window Storage Port Side (Spare Suction Equipment Pack)
- 11. Navigation Bag
- 12. RRV Equipment
- 13. Equipment Checks and Cleaning Schedule
- 14. Related Documents

Appendices:

Appendix A: Pax RED BAG 1 (Enhanced Care Bag) Equipment List

Appendix B: Pax GREEN BAG 2 (BLS Bag) Equipment List

Appendix C: Pax BLUE BAG 3 (Transfer Bag) Equipment List

Appendix D: Critical Care Car bags

Appendix E: Additional Items

Appendix F: Equipment Check List

Appendix G: Equipment Checks and Minimal Cleaning Schedule

Appendix H: 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 (MAA) and West Midlands Ambulance Service MERIT operate three aircraft across the West Midlands as well as both base Rapid Response Vehicles (RRV) and Critical Care Cars.
- 2.2 All aircraft should have an identical set of Medical Equipment to enable staff to work effectively at all bases (Appendix A, B and C). Base rapid response vehicles, Critical Care Cars 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.
- 2.5 All MAA/MERIT assets should be considered as additional resources to the standard WMAS response and therefore as such do not need to carry exactly the same equipment as standard WMAS DMA/RRVs

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 all specialist 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). In addition, a third transfer bag is available at every operating base and should be carried on whichever platform is being used for the primary response (i.e. may be moved between aircraft and RRV)
- 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 in the event of being first on scene this bag must be taken 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 contains basic equipment to facilitate inter-hospital transfers.
- 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, **except drugs pouches**, should be sealed with a green tag and signed, noting the expiry date of the first item to go out of date on the tag. Each side pouch, top pouch and the **BLS** 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 **both bags should be exchanged**. This will ensure the platform is rapidly re-deployable. A complete kit check and restock 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, specific parts of each response bag will be checked in turn on a daily basis. 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 A set of the Enhanced Care, BLS and transfer bags should be fully stocked & mission ready before the end of each shift.

- 3.8 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.
- 3.9 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.
- 3.10 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 Clin-Ops group and ultimately sanctioned by the Air Operations Manager in conjunction with the MAA/MERIT Clinical Lead.

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.

Operations/ACAO

6.0 CENTRAL STORAGE UNIT / CD CARRIAGE

- 6.1 The central storage unit on the aircraft contains the approved Controlled Drugs (CD) storage locker. Management of Controlled Drugs and their storage must be in line with the current WMAS Medicines Management Policy. Where the drugs are locked in the cabinet the key should be retained by the clinician who has signed the drugs out.
- 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 kept on a person securely or locked away when not in use in line with the current WMAS Medicines Management Policy.

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. 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 at a frequency specified in the weekly check schedule. Refer to the Zoll X series user manual for clarity.
- 7.4 Any problems identified during the device 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 must not 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. Any defects should be reported to the Aircrew Supervisor, Pilot or Babcock 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.

BATTERY MANAGEMENT

Issue Date

7.7 Battery maintenance including charging, conditioning and shelf life testing should be carried out in accordance with the Zoll maintenance and user guide. (Refer to WMAS OPS-Procedure-006 and appendix G).

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 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 in the EC135 and the infusion pumps in the EC145 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 in the EC135, however behind the unit is space for additional spare suction consumables. In the EC145 the left-hand window houses the Zoll X series.

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 airbase RRVs is based around its use as a rapid response vehicle for the local area or when the aircraft is off line. The MERIT and Critical Care Cars act as primary response vehicles.
- 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 Fleet /Charity fleet manager.
- 12.3 Due to the high demand of electrical items on the battery, where available a shore line **must** be attached at all times when the vehicle is not in use.
- 12.4 Oil and Water levels must be checked on a weekly basis as per weekly checks appendix F
- 12.5 The fuel tank should be maintained with no less than 3/4 tank of fuel in line with WMAS Operational procedures, RRV's should always be refuelled from WMAS trust premises in preference to use of the fuel card, which should be used in emergency situations only.
- 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

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

Appendix A

ENHANCED CARE BAG – Aircraft and MERIT platforms

Enhanced Care Bag: Front Zipped Pocket (Lower)

Critical Care Drugs Bag

Ketamine 200mg in 20ml	2
Thiopentone 500mg powder	1
Suxamethonium 100mg in 2ml	2
Rocuronium 50mg in 5mls	4
Midazolam 5mg in 5ml	4
Ephedrine 30mg /ml in 1ml	1
Flumazenil 500mcg in 5ml	2
Cefotaxime 1g vial	2
Co-Amoxiclav 1.2g powder	1
Metaraminol 10mg in 1ml	1
Magnesium sulfate 50% - 2ml	4
Ondansetron 2mg/ml in 2ml	1
Lignocaine 1% - 10ml	2
Levobupivicaine 0.5% - 10ml	2
Water for Injection - 10ml	4
Propofol 1% - 20ml	2
Saline Prefilled Flush - 10ml	4
20ml Syringe	2
10ml Syringe	2
5ml Syringe	2
2.5ml Syringe	2
Infusion lines	2
Filter Straws	4
Needles 21G (Green)	2
Needles 23G (Blue)	2
Drawing Up Needles	6
Drug Labels	4 Each
Syringe bungs	5
RSI Checklist	1
MAD (mucosal atomiser device)	1
Intranasal Dosing Chart	1

Pocket Lid loop Section

Transpore Tape 1"	1
Tuff Cuts	1
Golden Hour Blood Pack	1

Enhanced Care Bag: Front Zipped pocket (Upper)

Inner Section

EMS Blizzard Blanket	1
Kendrick Traction Splint	1
Roll up Keyboard	1
Prometheus Pelvic Splint	1

Outer Clear 'Drop Down' Section

Mediwrap Green Blanket	1
Clinical Waste Bags	2
Ultrasound (Where carried)	1
Carabiner and Safety Sling	1

Enhanced Care Bag: Main Compartment: Back

Surgical Kit (Curved section to top of bag)

Sterile Tuffcuts	1
Ambulatory Chest Drainage Set – double wrapped	1
Mosquito Artery Forceps (Curved 125mm Sterile)	2
Sterile curved Mayo scissors	1
Sterile forceps	1
Sterile Satinsky medium – double wrapped	1
Sterile Gigli Saw pack - (2 handles, 2 blade) – double wrapped	1
MerSilk 0 suture on colt hand-held needle – W792	1
Foley Catheter 14Ch Female (with sterile water) – double wrapped	1
Sterile Drape	1
Sterile surgical skin stapler	1
Transpore Tape 2inch	1
Clinical waste bag (large)	2
Large Sterile Swab	1

Combined Adult/ Paed airway (Curved section to base of bag)

, i i i i i i i i i i i i i i i i i i i	
ETT size 8.0	1
ETT size 7.0	1
ETT size 6.0 (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
McCoy 4 blade	1
Miller 1 blade	1
Magills Adult	1
Magills Paed	1
Lange Date Calaman 2000 Langed Dr. Air Orangtica (DTD/MEDIT Manager Daymont No. 2002 Co.	D 005

Issue DateFebruary 2019Issued By
ManagerAir Operations/RTD/MERIT Manager
ManagerDocument No
Document No
ManagerOPS -SOP-005
PageRevisionVersion 7 PaxAuthorityDirector of Specialist
Operations/ACAOPage13 of 33

Adult catheter mount	1
Paed catheter mount	1
20ml syringe	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 O2 1.8m	1
Ryles Tube - Large	1
Ryle's tube – Small	1
NIPPV harness	1
Surgical airway Section	
22mm Scalpel	1
Portex Trachy 6.0mm cuffed tube	1
Sterile tracheal dilators	1

Enhanced Care Bag: Main Compartment: Front

Thoracostomy Kit

Thoracostomy rat	
Scalpel size 22	2
Spencer Wells Forceps 200mm	2
Russell chest seals	2
Eye protection	2
Surgical gloves size 6	2
Surgical gloves size 7	2
Surgical gloves size 8	2
Betadine Sponges	2
Sharps receptacle & lid	1
Pneumofix with blade	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

Max Fax Emergency Pouch

the state of the s	
Dental Blocks (small, medium, large)	2 each
Epistat II Nasal Catheter	2
Pre-filled saline syringe 10ml	2
Lubricating gel	1
Printed instructions	1

Mapelson / Waters Circuit

Mapelson 'F' Circuit	1
Waters Circuit	1

Enhanced Care Bag: External Storage

Issue Date	February 2019	Issued By	Air Operations/RTD/MERIT Manager	Document No	OPS -SOP-005
			Manager		
Revision	Version 7 Pax	Authority	Director of Specialist	Page	14 of 33
			Operations/ACAO		

Bougie Holder

_ = 0g. 0 0 0	
15Ch Bougie –Adult	2
10Ch Bougie – Paed	1
5Ch Bougie – Infant	1
Side Stowage	
Small Sharps Bin	1

End of Enhanced Care bag List

Appendix B - Green Bag

BLS BAG (Aircraft and MERIT platforms)

BLS Bag: Front Lower Pouch.

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
GTN spray	1
Salbutamol 2.5mg	4
Salbutamol 5mg	4
Atrovent 250mcg	2
Atrovent 500mcg	2
Hypostop	2
Glucagon	1
Benzylpenicillin 600mg	2
Chlorpheniramine 10mg	1
Adrenaline 1:1000	2
Ondansetron 4mg in 2ml	2
Calpol (paracetamol) sachets	4
Paracetamol tablets (500mg) strip	1
Ibuprofen tablets (200mg) strip	1
Nurofen Sachets (100mg/5ml)	
Naloxone 400mcg	4
Tranexamic Acid 500mg/5mls	2
Water for Injection 10ml	4

BLS Bag: Top Front Pouch

Inner Section

EMS Blizzard Blanket	1
SAM Splint Roll	2

EZ-IO Pouch

EZ IO Power 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

Outer 'Drop Down' Section

Mediwrap Green Blanket	1
•	
First Aid	
Gauze Swabs 10x10	4
Small Dressing	1
Medium Dressing	1
Large Dressing	1
Transpore Tape	1
Conforming bandage small	2
Conforming bandage large	2
Triangular Bandage	1

BLS Bag: Main Compartment: Back

ADULT – BVM (Note Curved corner to fit bag corner)

ABOLI BYIN (Note ourved contents in bag content)	
Adult BVM	1
Adult Masks: Size 5	1
Adult Mask: Size 4	1
OPA Size 4	1
OPA Size 3	1
OPA Size 2	1
NPA 8mm	1
NPA 7mm	1
NPA 6mm	1
Lubricating Jelly	1

Diagnostic pouch

Peak flow meter with mouth piece	1
Pen torch	1
Glucometer Strips and BM needles.	1
Thermometer – tympanic	1
Thermometer – axillary	1

PAED – BVM (Note Curved corner to fit bag corner)

(· · · · · · · · · · · · · · ·	
Paed BVM	1
Paed Mask : Size 3	1
Paed Mask : Size 2	1
Paed Mask : Size 1	1
OPA Size 1	1
OPA Size 0	1
OPA Size 00	1
OPA Size 000	1
Lubricating Jelly	1

IGELS

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
Lubricating gel sachet	1

Oxygen (Base of Bag)

	0/	
Oxygen MGS Flogas	1 Litre	1

BLS Bag: Main Compartment: Back

Fluid Pouch (Curved section to top of bag)

Tala I Gallon (Gallon to top of bag)	
0.9% Saline (500mls)	2
Giving Set	2
Glucose 10% (500ml)	1
IV Paracetamol 1g	1

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
Tourniquet	2
1`` tape (micropore)	1
Chlorprep	4

O2 Masks

Adult 100% Mask	1
Paed 100% Mask	1
Oxygen Tubing	1
Nebuliser Acorn	1
Adult Neb mask	1
Paed Neb mask	1
28% Venturi Valve	1

Suction Consumables

Yankauer	1
Suction Tubing	1
Soft Suction CH 10 (Black)	1
Soft Suction CH12 (White)	1
Soft Suction CH14 (Green)	1
Soft Suction CH16 (Orange)	1

BLS Bag: External Storage Side Stowage

End of BLS Bag List

Issue Date	February 2019	Issued By	Air Operations/RTD/MERIT Manager	Document No	OPS -SOP-005
D. 111.	\/	A (I)	Manager	D	40 - 500
Revision	Version 7 Pax	Authority	Director of Specialist	Page	18 of 33

Appendix C

TRANSFER BAG

End of Transfer bag List.

Top Opening section (Right)	
Oxylog 3000 Ventilator	1
Page Section (Under Ten Opening Tray (Left))	
Base Section (Under Top Opening Tray (Left)) Braun Syringe Driver (In addition to Aircraft/RRV Equipment)	1
Syringe Driver Clamp Mount	1
Syringe Driver Clamp Mount	
Top Opening Tray Section (Left)	
Qinflow and Battery	1
Qinflow Clamp Mount	1
Front Drop Down Section	
Oxylog Tubing Adult	1
Oxylog Tubing Paediatric	1
Qinflow Disposable Unit	1
Lactate Monitor (if carried)	1
Bloods Giving Sets (if carried)	2
RePHILL Paperwork (if carried)	
Temperature Probe General purpose	2
Temperature Probe monitoring cable (6.3 mm Jack)	1
Invasive pressure monitoring cable Zoll x1 (arterial line)	1
Truwave Transducer Pressure monitoring Set (Red)	1
500ml Infu-Surg Pressure Infuser	1
Arterial LeaderCath Vygon 3 Fr 8cm	1
Arterial cannula BD 20G x 45mm	2
3 Way tap VyClicColor Red/ Blue	2
3 Way tap short 10cm	2
3 way tap Long	1
50ml Syringe	2
Infusion Lines V-Green extension	4
Drug Additive Labels	4 each

Appendix D - Critical Care Car

Critical Care Car Response packs are currently kitted as per Enhanced Care Bag and BLS bags however the bag may also contain additional items used specifically on the Cardiac Arrest car

CPR-Stat feedback pads	2
Autopulse bands x 1	1
IPad	1

Appendix E: Additional Items

Cardiac Monitor + Carry Case

Cardiac Monitor + Carry Case		MD98	HMED 03	HMED 06/09	Base RRVs	CCC
Zoll X series Monitor (securely mounted)		V	V	V	V	\checkmark
Standard Monitoring set (coiled NIBP hose, 4-lead ECG, Pulse oximeter)	1	V		$\overline{\mathbf{A}}$	$\overline{\mathbf{A}}$	$\overline{\lor}$
Disposable BP Cuff Adult	1	V	\checkmark	\checkmark	$\overline{\mathbf{V}}$	\checkmark
Disposable BP Cuff Adult – Extra large	1	V	$\overline{\mathbf{V}}$	$\overline{\checkmark}$	$\overline{\mathbf{V}}$	$\overline{\mathbf{V}}$
ECG Dots (pack)	1	V	$\overline{\mathbf{V}}$	$\overline{\checkmark}$	$\overline{\mathbf{V}}$	\
Defibrillator therapy cable attached	1	V	$\overline{\mathbf{V}}$	$\overline{\checkmark}$	$\overline{\mathbf{V}}$	\
Adult Defibrillator therapy pads	2	V	$\overline{\mathbf{V}}$	$\overline{\checkmark}$	$\overline{\mathbf{V}}$	\
Adult "Feedback" Defibrillator pad						\
Paediatric defibrillator therapy pads	2	V	$\overline{\mathbf{V}}$	$\overline{\checkmark}$	$\overline{\mathbf{V}}$	\
Disposable BP Cuff Child	1	\checkmark	\checkmark	$\overline{\checkmark}$		
Disposable BP Cuff Infant	1	\checkmark	\checkmark	$\overline{\checkmark}$		$\overline{\mathbf{V}}$
SPO2 Finger Probe Paediatric (single use)	2	V	$\overline{\mathbf{V}}$	$\overline{\checkmark}$	$\overline{\mathbf{V}}$	\
Capnography ETT airway adapter (adult/paed)	2	V	$\overline{\mathbf{V}}$	$\overline{\checkmark}$	$\overline{\mathbf{V}}$	\
Capnography ETT airway adapter (infant)	2	\checkmark	\checkmark	\checkmark	\checkmark	$\overline{\checkmark}$
Nasal capnography (adult)	1	\checkmark	\checkmark	$\overline{\checkmark}$		$\overline{\mathbf{V}}$
Nasal capnography (paed)	1	V	$\overline{\checkmark}$	$\overline{\checkmark}$	$\overline{\mathbf{V}}$	\
Oesophageal temperature probe	1	$\overline{\mathbf{V}}$	$\overline{\mathbf{V}}$	$\overline{\checkmark}$	$\overline{\mathbf{V}}$	\
Spare printer paper	1	V	$\overline{\checkmark}$	$\overline{\checkmark}$	$\overline{\mathbf{V}}$	V
Spare batteries	1	$\overline{\mathbf{V}}$	$\overline{\mathbf{V}}$	$\overline{\checkmark}$	$\overline{\mathbf{V}}$	\

PRF Folder

i iti i olaci						
		MD98	HMED	HMED	Base	CCC
			03	06/09	RRVs	
EPR tablet (charged between use) (PRF's spare if required)	1	\checkmark		$\overline{\checkmark}$	$\overline{\checkmark}$	\checkmark
WMAS Cardiac PRF	1	V	\checkmark	\checkmark	\checkmark	\checkmark
Hyperacute Transfer Policy	1	V	\checkmark	\checkmark	\checkmark	\checkmark
WMAS Cardiac Pathway (PCI)	1	V	\checkmark	\checkmark	\checkmark	\checkmark
WMAS Stroke Pathway	1	\checkmark	\checkmark	\checkmark	\checkmark	V

Medical Gases

		MD98	HMED	HMED	Base	CCC
			03	06/09	RRVs	
Entonox Cylinder & regulator (secured in aircraft, bag for RRV)	1	$\overline{\checkmark}$	$\overline{\mathbf{V}}$	$\overline{\mathbf{V}}$	$\overline{\mathbf{V}}$	$\overline{\mathbf{V}}$
Mouthpieces (in centre console of aircraft, bag for RRV)	2	$\overline{\checkmark}$	$\overline{\mathbf{V}}$	$\overline{\mathbf{V}}$	$\overline{\mathbf{V}}$	$\overline{\mathbf{V}}$
Oxygen Cylinders BOC ZD Size (secured)	2			$\overline{\mathbf{V}}$		
New cylinders for HM 03 Bucher			$\overline{\mathbf{V}}$			
Oxygen spare WMAS 2 litre cylinders	1	\checkmark			V	V

Suction

		MD98	HMED	HMED	Base	CCC
			03	06/09	RRVs	
Suction Unit (secured)	1	\checkmark	$\overline{\checkmark}$			$\overline{\checkmark}$
Suction tubing	2	\checkmark	\checkmark	$\overline{\checkmark}$	\checkmark	\checkmark
Yankauer	2	\checkmark	\checkmark	$\overline{\checkmark}$	\checkmark	\checkmark
Suction liner (where required)	1	\checkmark	\checkmark	$\overline{\checkmark}$	\checkmark	\checkmark
Endotracheal suction catheter – 10	2	V	\checkmark	\checkmark	\checkmark	V

Issue Date February 2019 Issued By

Air Operations/RTD/MERIT Manager Manager

Document No

OPS -SOP-005

Revision Version 7 Pax Authority

Director of Specialist
Operations/ACAO

Page

22 of 33

Endotracheal suction catheter – 12	2	\checkmark	V	\checkmark	\checkmark	\checkmark
Endotracheal suction catheter – 14	2	\checkmark	V	\checkmark	\checkmark	\checkmark
Endotracheal suction catheter – 16	2	\checkmark	V	\checkmark	\checkmark	\checkmark

Syringe Drivers

Securely mounted in the vehicle & in addition to transfer bag.		MD98	HMED 03	HMED 06/09	Base RRV	CCC
Braun Perfuser Compact	1	\checkmark	V	$\overline{\checkmark}$	\checkmark	

Navigation Bag

		MD98	HMED 03	HMED 06/09	Base RRVs	CCC
Map Bag	1		V	\checkmark		
Ipad Airbox Panda Navigation Software	3		\checkmark	\checkmark		
A-Z	As req'd		\checkmark	\checkmark		
OS Maps	As req'd		V	\checkmark		
1:250000 Air Navigation Charts			V	\checkmark		
1:500000 Air Navigation Charts			V	\checkmark		
Aviation Ruler			V	\checkmark		
360 Protractor			V	\checkmark		

Vehicle Cabs

		MD98	HMED	HMED	Base	CCC
			03	06/09	RRVs	
Gloves (sizes as required for duty crew)	As req'd	V	V	abla	abla	V
Clinical Wipes	1	\checkmark	\checkmark			\checkmark
Child ear defenders	1		\checkmark	\checkmark		
Sharps bin	1	V	V	✓	V	V
Headsets	2		V	\checkmark		
350 Watt Inverters (Drivers Door)	1					
Fuel Card	1	V				V
ARP spare Batteries	2	V				V
Safety Helmets	As req'd	V	V	\checkmark	\checkmark	V

Aircraft Rear Storage Bag/RRV Boot Contents

		MD98	HMED03	HMED 06/09	Base RRV	CCC
Burns Cling Film	1	\checkmark	V	\checkmark	\checkmark	\checkmark
Clinical Wipes	1	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Scoop Stretcher, blocks and straps	1		V	\checkmark	\checkmark	
Ventilator Tubing (spare)	1	V	V	V	\checkmark	V
SMART Triage Kit	1	V	V	\checkmark	\checkmark	V
Major Incident Pack	1	V	V	\checkmark	\checkmark	
Spare suction consumables		V			\checkmark	V
Snow shovel (when required)	1	V			\checkmark	V
Duodote Packs (x 1 pack per crew member)	X 1 each	V	V	\checkmark	\checkmark	V
RePHILL Boxes x 2 – secured in agreed area		V	V	06 ☑		

Personal Issue

		Dr	Para	CCP	Pilot
JRCALC	1	\checkmark		\checkmark	
PPE		\checkmark		\checkmark	\checkmark
Handgel	1	\checkmark		\checkmark	\checkmark
Aide Memoirs	1	\checkmark		\checkmark	

Issue Date February 2019 Issued By Ai

Air Operations/RTD/MERIT Manager Manager

Document No (

OPS -SOP-005

Revision Version 7 Pax Authority

Director of Specialist
Operations/ACAO

Page

23 of 33

Paramedic CD Pouch	1		\checkmark		
Docs CD Pouch	1	$\overline{\mathbf{V}}$			
CCP CD Pouch	1			\checkmark	
Trauma Triage Tool	1	\checkmark	\checkmark	\checkmark	

Appendix F: Daily Equipment Checklist

FOR REFERENCE ONLY – COMPLETE ONLINE CHECK SHEET

Week Commencing:			MON	TUE	WED	THU	FRI	SAT	SUN
Cli	inicians Initials		1	1	1	1	1	1	/
RED Enhanced Care	Bag								
External Storage	Bougie Holder / S	harps Bin							
FRONT POCKETS	Lower: Critical Ca	re Drug Pouch							
	Upper: Various								
Main Compartment;	Upper: Surgical k	(it							
BACK	Lower: Airway Pa								
Main Compartment	THORACOSTOM	Y Pack							
FRONT	HAEMORRHAGE	Pack							
	MAX FAX Pack								
	MAPELSON / WA	TERS / MISC							
GREEN BLS Bag									
External Storage	Sharps Bin								
FRONT POCKETS	LOWER: JRCALO	C Drug Pouch							
	UPPER: Various								
Main Compartment;	ADULT BVM								
BACK	DIAGNOSTICS								
	PAED – BVM IGELS Pack								
	OXYGEN 1 Litre	MGS Flogas							
Main Compartment									
FRONT	CANNULATION I								
	SUCTION Consu								
	Laerdal Portable	Suction Unit							
	O2 MASKs Pack								
Transfer Day									
Transfer Bag Front Pouch	Mariana Cas assi		1	l	1				
Main Compartment	Various: See equi	pment List							
Main Companinent	Ventilator Tubing:	2 Adult 1 Dood							
	Syringe Driver & i								
	Qinflow, Battery a								
	Qirillow, battery a	ina mount							
Additional Items									
Zoll X series									
PRF Folder and EPRF	charging								
Medical Gases	oa. gg								
Suction									
Syringe Drivers									
Navigation									
Vehicle Cabs									
Aircraft Rear Storage/R	RV Boot								
Personal Issue									
Daily VDI Checks comp	1								
Confirm fit for Duty and									
All Pouches (except drug pouches)									
	should be sealed and tagged SIGNATURE 1								
All Contents should be			CCP						
	checked against the Check								
Lists as per Appendix A, B +C									
Lists as her Appe	iidix A, D TO		Para/Doc						

Issue DateFebruary 2019Issued By
ManagerAir Operations/RTD/MERIT Manager
ManagerDocument No
Director of Specialist
Operations/ACAOOPS -SOP-005
PageRevisionVersion 7 PaxAuthorityDirector of Specialist
Operations/ACAOPage25 of 33

Appendix G

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 and overnight charging							
Ventilator incl function test and overnight charge							
Zoll defib test/ Rotate batteries							
Syringe drivers, USS and Qinflow on charge and functional							
Vehicle/Aircraft A Clean							
Maps – clean and check							
RRV – tyres, oil and water check							

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

Issue Date	February 2019	Issued By	Air Operations/RTD/MERIT Manager	Document No	OPS -SOP-005
	,	,	Manager		
Revision	Version 7 Pax	Authority	Director of Specialist	Page	26 of 33
			Operations/ACAO		

Appendix H:





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)

Trust us to care.

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

WEST MIDLANDS AMBULANCE SERVICE NHS FOUNDATION TRUST VEHICLE BASED RESPONSE BAGS - SOP

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

Individual

- Ensure application of correct safe handling techniques at all times
- 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

WEST MIDLANDS AMBULANCE SERVICE NHS FOUNDATION TRUST VEHICLE BASED RESPONSE BAGS - SOP

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)

WEST MIDLANDS AMBULANCE SERVICE NHS FOUNDATION TRUST VEHICLE BASED RESPONSE BAGS - SOP

Figure 1



POOR PRACTICE

The bag has not been adjusted adequately. Therefore, not achieving reduced loading on the spine - Handler is leaning forward to compensate.

Figure 2



GOOD PRACTICE

The bag is located higher up the back, with less loading / strain on the spine

Figure 3





CAUTION

The adjustment straps should be adjusted equally to prevent unequal loading of the bag on the spine, causing twisting of spine

Authority

31 of 33

WEST MIDLANDS AMBULANCE SERVICE NHS FOUNDATION TRUST VEHICLE BASED RESPONSE BAGS - SOP

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

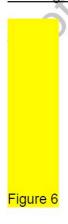
Allows arms to slide through and place on both shoulders

Figure 5



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

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

WEST MIDLANDS AMBULANCE SERVICE NHS FOUNDATION TRUST VEHICLE BASED RESPONSE BAGS - SOP

Figure 7











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

33 of 33