NECESSARY MEDICAL EQUIPMENT AND SUPPLIES

Medical equipment/supplies on racecourses must be appropriate for the acute treatment of sick or injured Riders and for their transport to hospital.

The designated Senior RMO, after discussion with local ambulance services, is responsible for ensuring that a detailed inventory of the equipment required and carried by each is located in:

a) the Paramedic Ambulance
b) any other ambulances
c) RMOs portable kit bags
d) the JMR

and that all available items, including those carried by each RMO, are written into the Standing Orders (see BHAGI 11.1).

The following list is the MINIMUM requirement for racing to proceed on a raceday. Failure to provide the required equipment in serviceable condition will constitute a serious breach of the BHAGIs. Serviceable equipment is defined as equipment that is:

- designed as fit for purpose
- safe to use
- tested and serviced in accordance with manufacturer's instructions
- in date (drugs and disposables)

EQUIPMENT AND SUPPLIES TO BE PROVIDED

The following table details all those items that must be provided in the given locations at all times. It is expected that the paramedic and other clinical staff that will be using this equipment will be trained in the appropriate use of the equipment and drugs in their charge.

The equipment specified for RMOs kit bags *must* be carried with the RMO *at all times.*

The equipment and drugs held in the JMR *must be immediately available.* The drugs held in the JMR must be detailed in full in the Standing Orders.

All airway and IV equipment must, where practicable, be disposable. All equipment must, where practicable, be latex free.

Y= COMPULSORY, D= DESIRABLE

EQUIPMENT	AMB	RMOs BAG	JMR
STRETCHERS , SPINAL BOARDS & SPLINTS			
Box splints	Y		
Cervical collars –disposable adjustable semi-rigid collar(s), or full set if not adjustable(e.g., Nec-Loc®, Stifneck®).	Y		Y
Femoral traction splint (e.g., Sager® or Hare Compact®[1])	Y		Y
Vacuum splints – full set for limbs	D		
Pelvic splint[2]	Y		
Scoop stretcher or Long spinal board with head immobilisers and immobilisation straps	Y		
AIRWAY EQUIPMENT			
Bag valve mask device (disposable)	Y		Y
Chest drain kit (e.g., Portex set)[3]		D	D
Cricothyrotomy device (e.g., Quiktrach®, Minitrach®)		D	D
Electronic Suction Unit (portable) plus disposable Yankauer and Flexible Suction Catheters.	Y		Y
End tidal CO_2 detector/monitor[4]	Y		Y
Entonox or Nitronox (Nitrous oxide 50%/oxygen 50%) kit + fully charged reserve cylinder.	Y		
Hand held manual suction device	Y	D	Y
Jet insufflation device[5]		D	D
Laryngeal Mask Airways - disposable (e.g., LMA Supreme® or equivalent[6]) - Sizes 3, 4 and 5	Y		Y
Laryngoscope with range of disposable adult and paediatric blades[7].	Y		Y
Nasopharyngeal Airways(N/P). Portex sizes 6,7,8	Y	Y	Y
Nebuliser Masks (adult)	Y		Y
Non-rebreathing (Hudson-type) Oxygen Masks (adult)	Y		Y
Oropharyngeal (O/P) Airways (sizes 0, 1, 2, 3 & 4)[8]	Y	Y	Y
Oxygen and Flow Meter system capable of supplying up to 15 litres/minutes for no less than 30 minutes, via one current and one fully charged reserve cylinder (either D or CD sizes).	Y		Y
Pocket mask	Y	Y	Y
Set of Endotracheal Tubes.[9]	Y		Y
INTRAVENOUS EQUIPMENT and SUPPLIES			
Crystalloid Intravenous Fluids – no less than 3 litres (Normal 0.9% Saline or Hartmann's Solution).[10]	Y		Y
Giving sets (blood) minimum of 4.[11]	Y		Y
Hypodermic needles – range of sizes	Y	Y	Y
Intravenous cannulae of sizes from 14g- 22g – minimum of 4 each size	Y	Y Min 2 each size	Y

EQUIPMENT	AMB	RMOs BAG	JMR
Sharps box	Y	Y	Y
Syringes – size range 2ml -20 ml.	Y	Y	Y
PARENTERAL DRUGS (Only Paramedic ambulances need carry the listed drugs)			
Adrenaline (Epinephrine) 1:10,000 injection for I/V use (minimum 10ml x 5).	Y	Y Min 1 amp	Y
Adrenaline (Epinephrine) 1:1000 injection for I/M or S/C use (minimum 1ml x 2).	Y	Y Min 1ml	Y
Amiodarone Hydrochloride 300mg *injection or* 5mg/kg (by I/V injection from a pre-filled syringe *or* diluted in 20ml Glucose 5%) to be considered after adrenaline to treat ventricular fibrillation or pulseless ventricular tachycardia in cardiac arrest refractory to defibrillation. If Amiodarone is not carried, 2% Lidocaine Hydrochloride injection (minimum 100mg) must be available.	Y		D
Anti-emetic injection of practitioners choice (e.g., Metoclopramide 10mg/2ml or Ondansetron 4mg/2ml).[12]		Y	Y
Atropine Sulphate 600mcg injection (minimum 600 mcg)[13]	Y	Y	Y
Atropine Sulphate 3mg injection (minimum 3mg).	Y		Y
Benzodiazepine for rectal administration	Y		Y
Benzodiazepine injection (e.g., midazolam, Diazemuls®)	Y	Y	Y
Broad spectrum antibiotic injection (practitioner's choice)			Y
Chlorphenamine Maleate 10mg/ml injection.		Y	Y
Furosemide 20mg/2ml injection (minimum 40mg).			Y
Glucagon injection 1mg/ml.[14]	Y	Y	Y
Glucose infusion 10% (1 x 500ml)	Y		Y
Glyceryl Trinitrate (GTN) Spray 400mcg/dose or Buccal GTN tablets 500mcg.	Y	Y	Y
Hydrocortisone Phosphate/Succinate 100mg/ml injection		Y	Y
Injectable analgesia of practitioners choice: this should ideally be Morphine, Diamorphine[15] or Ketamine[16]; an injectable NSAI may be substituted if the SRMO is able to demonstrate that the possession of the other drugs listed is wholly impracticable		Y	Y
Lidocaine Hydrochloride 1% injection (for suturing).			Y
Lidocaine Hydrochloride 2% injection (for cardiac use – minimum 100mg) if amiodarone is not available			Y
Morphine Sulphate 10mg (minimum of 2).	Y		
Naloxone Hydrochloride 400mcg/ml injection	Y	Y	Y
Salbutamol inhaler 100mcg/dose	Y	Y	Y
Inhaler spacer device	Y	D	Y
Salbutamol nebuliser solution	Y		Y
Water or Normal Saline for Injections (5x 10mls).	Y	Y	Y

EQUIPMENT	AMB	RMOs BAG	JMR
ORAL MEDICATIONS			
Antacid (practitioner's choice)			Y
Antihistamine (practitioner's choice)			Y
Aspirin 300mg	Y		Y
NSAID (practitioner's choice)			Y
Paracetamol 500mg			Y
GENERAL EQUIPMENT			
Ambulance dressings and bandages	Y		Y
Cold packs or access to an ice machine or continuous source of ice			Y
Dedicated "Direct Dial" Telephone Line (must have dedicated outgoing lines that cannot be blocked by incoming calls).			Y
Defibrillator (preferably an AED)[17]	Y		Y
Gastric tube – Size 16FG			Y
Gloves – must be NON-latex	Y	Y	Y
Head Injury Instruction Sheet for distribution to an injured Rider and any accompanying adult. This would normally be the appropriate pages of the BHA Assessment of Concussion (BHAAC) Protocol, but alternative versions may be used if they comply with the NICE template			Y
High visibility tabard[18]		Y	
Patella hammer			Y
Pulse oximeter	Y		D
Sphygmomanometer – Aneroid		Y	Y
Sphygmomanometer – Electronic	Y		D
Sterile suture kits – Disposable			Y
Steristrips			Y
Stethoscope	Y	Y	Y
Television (S.I.S. or equivalent)			Y
Triangular bandages	Y		Y
Venous tourniquet	Y	Y	Y

[1] These types are specifically mentioned because they are both capable of treating bilateral fractures. In practice, racecourses will have to accept the traction splint used by their local ambulance service. Some NHS ambulance services are reviewing the various types of traction splints that they routinely carry. RMOs should nevertheless always ensure that a traction splint is available.

[2] Must be made available either in the ambulance or the RMOs chase car as recommended in a recent major review of the prehospital treatment of pelvic fractures (Lee C, Porter K. The prehospital management of pelvic fractures. Emerg. Med. J. 2007;24:130-133). The SAM Sling is the most convenient device however, it is important that the small adult size is ordered to ensure that it will fit the smallest jockeys and all RMOs would need to understand the indications for its use and how to apply the splint.

[3] RMOs should be discouraged from using large-bore chest drains; a simple decompression with a cannula or a thoracostomy are just as likely to gain the time required to transfer the patient to definitive care in hospital where a blood transfusion is available.

[4] There are a number of devices available to measure and /or detect CO_2 in an intubated patient. These include EasyCap II® detectors,Capnocheck II® capnograph and EMMA® devices. It would be considered negligent not to use such devices in an intubated patient.
[5]Jet insufflation devices are not easily available for purchase. RMOs should therefore ensure that they have the requisite parts immediately available to provide insufflation if required: these include oxygen tubing, a 'Y connector' and a means of connecting the oxygen tubing to a cannula or other suitable device(MinitrachII® or Quiktrach®) inserted in the crico-thyroid membrane
[6] RMOs are encouraged to avoid tracheal intubation unless they are experts in this field. JRCALC and the Royal College of Anaesthetists currently advocate that supra-glottic airways have a more prominent role in pre-hospital care (http://www.ncepod.org.uk/2007b.htm; http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_074239; Letter from JRCALC to all UK ambulance trusts July2008.) The new single-use LMA Supreme® is easy to insert, and has a separate gastric port which effectively separates the patient's respiratory and gastrointestinal tracts. The device also allows for the easy passage of a 16FG gastric tube via the gastric port.
[7] Ambulance Trusts are beginning to move away from tracheal intubation in line with the latest JRCALC thinking. However, the laryngoscope will remain a useful item for inspection of the posterior pharynx and should remain available for use for intubation by suitably trained doctors.
[8] It is foreseeable that any RMO on duty will be required to assist the crowd doctor in the event of a serious incident involving an infant or child. It is therefore recommended that a full set of OP airways is carried. They are small, cheap and light and will add imperceptibly to the weight or volume of the RMOs bag
[9] E/T tubes may no longer be found on front line ambulances as Trusts begin to switch to the LMAs but should remain available for use by suitably trained doctors.
[10] A volume of at least 3 litres is recommended to ensure that, where there is more than one casualty, all casualties receive adequate fluid resuscitation when required. It is possible that 2 litres will be required at scene and en route for each casualty therefore the old standard of 2 litres is considered inadequate. Ambulances should routinely carry this volume already.
[11] Blood giving sets are recommended for those patients who have suffered significant blood loss. The rationale being that a blood transfusion can be commenced immediately upon arrival at hospital without the need to waste time taking down a fluid only giving set with the added risk of dislodging the cannula.
[12] Metoclopramide or ondansetron suggested since prochlorperazine is not licensed for I/V use and cyclizine is not suitable for cardiac cases.
[13] Aurum supply pre-filled ampoules of Atropine 300 and 600 mcg
[14] Glucagon(GlucaGen®) should ideally be stored in refrigerator at 4-8 ^{O}C. However the manufacturer states that : A pack carried for use may be kept at normal surrounding temperature (maximum 25°C) for up to 18 months. The expiry date printed on the outside of the pack is for storage in a refrigerator. Do not use the GlucaGen® HypoKit after this date. If you are keeping a pack at normal surrounding temperatures, write the date when you take it out of the refrigerator on the outside. If you have not used the GlucaGen®in the meantime, discard the pack after 18 months from this date or at the expiry date, whichever is the sooner. (http://xpil.medicines.org.uk/ViewPil.aspx?DocID=4257)
[15] It is legal for ***any*** registered medical practitioner to be in possession of morphine or diamorphine and other controlled drugs provided they ensure that the storage and documentation meets Home Office requirements. Doctors can obtain supplies from local pharmacies by presenting an official order form. These are available upon application and the provision of suitable evidence of need from your local PCT pharmacy manager. In addition State Registered Paramedics are entitled to obtain and hold stocks of morphine for use on patients (up to a maximum of 20mg per individual patient) provided they ensure that the storage and documentation meets Home Office requirements. . Private ambulance services must obtain supplies through their appointed medical director. Therefore RMOs should give due consideration to how they will supply opiate analgesia at race meetings. Normal CD record keeping and secure storage procedures for CDs must be followed; these are not onerous and have been followed by doctors in primary care for many years without undue duress.
[16] The use of ketamine in pre-hospital care is a widespread and acceptable practice. It should be noted however that the use of ketamine in this environment and for analgesia is an 'off label' use.
[17] Defibrillator with at least two sets of chest pads and a spare battery. This must be available and ready for immediate use at least 30 minutes before the start of racing

[18] It is recommended that RMO's wear a high visibility tabard when on duty. If an RMO chooses not to wear such a tabard he/she must wear a "Doctor" armband and carry the tabard in the doctors bag at all times.