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## **DRAFT EAST AFRICAN STANDARD**

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**Emergency Medical Services — Ground ambulance — Requirements**

**EAST AFRICAN COMMUNITY**

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*East African Community*

*P.O. Box 1096,*

*Arusha*

*Tanzania*

*Tel: + 255 27 2162100*

*Fax: + 255 27 2162190*

*E-mail: [eac@eachq.org](mailto:eac@eachq.org)*

*Web: [www.eac-quality.net](http://www.eac-quality.net)*

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## Foreword

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The Community has established an East African Standards Committee (EASC) mandated to develop and issue East African Standards (EAS). The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the public and private sector organizations in the community.

East African Standards are developed through Technical Committees that are representative of key stakeholders including government, academia, consumer groups, private sector and other interested parties. Draft East African Standards are circulated to stakeholders through the National Standards Bodies in the Partner States. The comments received are discussed and incorporated before finalization of standards, in accordance with the Principles and procedures for development of East African Standards.

East African Standards are subject to review, to keep pace with technological advances. Users of the East African Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

The committee responsible for this document is Technical Committee EASC/TC 076, *Services*.

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## Emergency Medical Services — Ground ambulance — Requirements

### 1 Scope

1.1 This Draft East African Standard establishes the requirements which a provider shall comply with when operating/providing ground ambulance services.

1.2 This standard specifies categories of ambulances based on increasing order of the level of treatment that can be carried out.

1.3 The standard is applicable to ambulances capable of referring at least one person on a stretcher.

1.4 It does not cover the requirements for approval and registration, this is the responsibility of the relevant authority/authorities in the country where the ambulance is to be registered.

### 2 Normative references

There are no normative references in this document.

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply. ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

#### 3.1

##### **ambulance**

vehicle designed, constructed, equipped, and operated for emergency medical treatment and/or transportation of persons by land who are sick or injured

#### 3.2

##### **emergency**

situation in which a prudent layperson has identified a potential medical threat to life or limb such that the absence of immediate medical attention could reasonably be expected to result in placing the individual's health in serious jeopardy, serious impairment of bodily functions, or serious dysfunction of bodily organ

#### 3.3

##### **advanced life support**

treatment of life-threatening medical emergencies through the use of techniques such as endotracheal intubation, the administration of drugs or intravenous fluids, telemetry, cardiac monitoring, and cardiac defibrillation by a qualified person or such other techniques as may be authorized by federal, state or local laws or regulations, as same may be amended from time to time where applicable

#### 3.4

##### **basic life support service**

basic level of prehospital care, which includes Patient stabilization, airway clearance, cardiopulmonary resuscitation, hemorrhage control, initial wound care and fracture stabilization, and other techniques and procedures authorized by the Department pursuant to regulation

**3.5**

**ambulance service provider**

**ASP**

organization, entities or body that is licensed, dedicated, staffed and equipped to operate ambulance in order to provide emergency medical care, transportation, and preventive care to mitigate loss of life or exacerbation of illness or injury

**3.6**

**response time**

means the time measured from when an ASP receives an emergency call to the time the first medical responder arrives at the scene

**3.7**

**emergency medical technician**

trained professional who provide out of hospital emergency medical care and transportation for critical and emergency patients who access the emergency medical services system

**3.8**

**patient transport vehicles**

any form of vehicle designed to transport patients whose condition is of a non-life-threatening nature

**3.9**

**relevant authority**

ministry, State entity administering any legal requirement pertaining to any approval which may be required

**3.10**

**paramedic**

healthcare professional trained in the medical field, whose main role is to respond to emergency calls for medical help outside of a hospital

**4. Abbreviations" terms**

**ASP**-Ambulance Service Provider

**ALS**-Advanced Life support

**BLS**-Basic Life Support service

**EMT**-Emergency Medical Technician

**PTV**-Patient Transport Vehicle

**EMS**- Emergency Medical Services

**5. Classification of ground ambulances**

**5.1 According to ownership**

- a) Government - owned, managed and operated wholly by government agencies/institutions
- b) Private - owned, managed and operated through registered business company, single proprietorship, partnership, corporation, cooperative, foundation, religious, non-government organization and others
- c) Public Private Partnership (PPP)-partnership between government and private sector.

## 5.2 According to institutional character

- a) Institution-based - ambulance that is owned, operated, maintained and used by a health facility (i.e. hospital, infirmary, etc.) regulated by relevant authority.
- b) Non-institution-based/ Free-Standing - ambulance that is operated independently from a health facility but may be used to service a health facility through a notarized Memorandum of Agreement (MOA)/service contract or its equivalent.

## 5.3 Categorization of ground ambulances

- a) Type I- Ambulance capable of providing Basic Life Support (BLS)
- b) Type II- Ambulance capable of providing Advance Life Support (ALS)

## 5.4 Category of ambulances required among health facilities

- a) Ambulances are part of the licensing requirements of several types of health facilities. The category of ambulance required from a health facility shall be commensurate to the services provided by the health facility as shown in the table below:

Table 1: category of ambulances according to the services provided by the health facility

Type of Facility	Category of Ambulance Service Required	If Outsourced with Ambulance Service Provider
Specialty and Level 3 <sup>a</sup> Hospitals	Type II (ALS) Ambulance	<ul style="list-style-type: none"><li>• The ambulance servicing the should be Type II</li><li>• There should be a MOA between the hospital and the ASP (whether government or privately owned)</li><li>• The ambulance should be stationed at the hospital at all times.</li></ul>
Level 2 <sup>b</sup> Hospitals		
Hospitals Level 1 <sup>c</sup>	Type I (BLS) Ambulance+ MOA with a hospital of higher level	<ul style="list-style-type: none"><li>• The ambulance servicing the Hospitals may either be Type I or Type II</li><li>• There should be a MOA between the hospital and the ASP (whether government or privately owned)</li></ul>
Infirmarys	May opt to have a Type II Ambulance	
Note: <sup>a</sup> Tertiary facility. <sup>b</sup> Secondary facility. <sup>c</sup> Primary facility.		

- b) Hospitals and infirmarys may opt to have their own PTV in addition to their ambulance
- c) Birthing facilities at a minimum are required to enter a MOA with ambulance service providers (whether government or privately owned) but may also opt to own an ambulance. This shall be complemented with a MOA with a health facility of higher level. In cases wherein, the

birthing home's referral facility is also the ambulance service provider, one MOA will suffice as long as the terms for ambulance services are clearly stipulated in the said MOA.

- d) All facilities opting to enter a MOA with any ambulance service provider shall take into consideration that the ASP servicing the facility should be able to respond and provide ambulance services within a reasonable time. Moreover, ASPs entering into MOA/s with health facilities should do so in accordance with their service capacity and capability.

## **6. Requirements**

### **6.1 General requirements**

- 6.1.1** All ambulances shall be duly registered with the relevant authority under the name of the ambulance service provider prior to application for License to Operate.
- 6.1.2** Ambulance service providers shall be registered with the relevant authority as per applicable policies, laws and regulations of the partner states.
- 6.1.3** Ambulance shall only be used for the purpose by which it was granted a license to operate.
- 6.1.4** No ground ambulance of any kind shall bear on its body the label or marking of the word "AMBULANCE" unless it has been duly licensed and categorized as ambulance by the relevant authority.
- 6.1.5** Ambulance service provider shall be organized to provide safe, quality, effective and efficient ambulance services for patients which shall be made available at all times.
- 6.1.6** Ambulance service provider shall have documented policies and procedures on its administrative and technical Standard Operating Procedures (SOP) for the provision of its ambulance services.
- 6.1.7** Ambulance service provider shall have documented policies and procedures on the establishment of its referral system.
- 6.1.8** Ambulance service provider shall maintain a system of communication, recording and reporting of the patient's condition as well as the results of examinations which may include electronic communications or otherwise.
- 6.1.9** Ambulance service providers shall have an Operations Control and Dispatch Center of their ambulance/s whether it be a business office or space and shall ensure adequate parking spaces for their ambulance/s.
- 6.1.10** Ambulance service providers shall ensure that they are part of a functional referral network within the area/vicinity where they shall operate.
- 6.1.11** Ambulances used to transport patients but are not equipped with Basic Life Support (BLS) or Advance Life Support (ALS) shall be categorized as Patient Transport Vehicle (PTV).
- 6.1.12** PTV shall be used to transport patients whose condition is of a non-life-threatening nature such as but not limited to scheduled visits to a physician's office for treatment, routine physical examinations, x-rays or laboratory tests, or upon discharge from a hospital.
- 6.1.13** PTV shall not bear the marking of the word "AMBULANCE" but shall instead be labeled as "PATIENT TRANSPORT VEHICLE."

## 6.2 Specific requirements

To be permitted as Ambulance Services Providers, services shall meet the following requirements:

### 6.2.1 Personnel requirements

**6.2.1.1** Ambulance Services Providers shall ensure that all staff are appropriately trained and are available to provide adequate coverage to meet the level of service to be provided.

**6.2.1.2** The ASP Agency shall ensure personnel's uniforms and clothing are clean or changed if they become soiled, contaminated, or exposed to vomitus, blood, or Other Potentially Infectious Material (OPIM).

**6.2.1.3** Ambulance shall be staffed by minimally a two (2) person and three (3) person crew in accordance with the following requirements:

a) The two (2) person crew shall comprise:

- A crew leader who is qualified to perform the tasks stipulated in sub clause 6.2.1.3.3.3. This person shall be either a Paramedic, Ambulance Nurse who fulfils the requirements stipulated in sub clause 6.2.1.3.3.3.1, or Ambulance Doctor; and
- A crew member who shall drive the Emergency Ambulance, and be minimally qualified as an Emergency Ambulance Driver.

b) The three (3) person crew shall comprise:

- A crew leader who is qualified to perform the tasks stipulated in 6.2.1.3.3.3. This person shall be either a Paramedic, Ambulance Nurse who fulfils the requirements stipulated in 6.2.1.3.3.3.1, or Ambulance Doctor;
- A crew member who shall drive the Emergency Ambulance, and be minimally qualified as an Emergency Ambulance Driver; and
- Another crew member who is minimally qualified to perform the tasks stipulated in clause 6.2.1.3.2.3. This person shall be either an Emergency Medical Technician, Paramedic, Ambulance Nurse who fulfils the requirements stipulated in clause 6.2.1.3.2.1 or Ambulance Doctor.

#### 6.2.1.3.1 Ambulance operators/Driver

The Emergency Ambulance Driver shall have the minimum qualifications and experience as follows:

- a) possess a valid licence to drive the Emergency Ambulance;
- b) possess a valid certificate issued by relevant Driving Centre, to prove that the driver has completed a course in defensive driving, and be familiar with the use of sirens and beacon lights during conveyance of patients;
- c) possess valid certification for Cardio-Pulmonary Resuscitation (CPR) and Automated External Defibrillation (AED) usage issued by a centre accredited by the relevant authority for the purpose; and
- d) understand the usage of stretchers and be able to assist in the care of and evacuation of a patient or casualty.



- e) Trained on Advanced first aid.

**6.2.1.3.2 Emergency Medical Technician (EMT)**

**6.2.1.3.2.1** The EMT shall have the minimum qualifications and experience as follows:

- a) be certified through an EMT course, as approved by relevant authority.
- b) hold valid certification in Basic Cardiac Life Support (BCLS) issued by a centre accredited by the relevant authority for the purpose; and
- c) be certified in AED usage and first aid by a centre accredited by the relevant authority for the purpose.

**6.2.1.3.2.2** The EMT shall undergo recertification of the above at least once every two years.

**6.2.1.3.2.3** The EMT shall be able to perform the tasks as stipulated below:

- a) be familiar with and be able to properly handle and operate all equipment on board the Emergency Ambulance and be familiar with the Emergency Ambulance-SP's medical protocols;
- b) use various types of stretchers and body immobilization devices;
- c) perform basic life support on infants, children and adults and be proficient in the use of bag valve mask;
- d) independently initiate the use of an AED;
- e) perform standard first aid and give oxygen supplement;
- f) measure and monitor the patient's vital signs, i.e. pulse rate, blood pressure, temperature and respiratory rate and give oxygen saturation;
- g) monitor intravenous peripheral lines and flow of drip of stable patients;
- h) transfer and maintain patients with nasogastric tubes, tracheostomy tubes, and/or urinary catheters;
- i) perform basic emergency procedures such as control of external bleeding and application of dressings, bandages, slings and splints;
- j) establish contact with the receiving hospital if the need arises;
- k) appropriately use PPE and apply standard precautions to prevent the transmission of infectious agents during patient care;
- l) assist the crew leader in the conduct of the various procedures for the care of the patient who is being managed.
- m) provide immediate care to casualties during the process of extrication and disentanglement from entrapments;

- n) assess and maintain the patient's airway, including the use of adjuncts such as the oropharyngeal airway.
- o) obtain intravenous access and perform intravenous infusions as per ambulance care protocols;
- p) obtain capillary blood glucose sample and institute treatment for hypoglycaemia;
- q) assess and manage an emergency childbirth;
- r) administer basic emergency medications including nebulisation;

**6.2.1.3.3 Paramedic**

**6.2.1.3.3.1** The Paramedic shall have the minimum qualifications and experience as follows:

- a) be qualified under a Paramedic course approved by relevant authority;
- b) hold valid certification in Basic Cardiac Life Support (BCLS) issued by a centre accredited by relevant authority for the purpose; and
- c) be certified in CPR and AED usage by a centre accredited relevant authority for the purpose.
- d) Paediatric Advanced Life Support (PALS)

**6.2.1.3.3.2** The Paramedic shall undergo recertification of the above at least once every two years.

**6.2.1.3.3.3** The Paramedic shall be able to perform the tasks as stipulate below:

- a) assess and independently manage trauma and non-trauma emergencies in patients of all age groups in accordance with the Emergency Ambulance-SP's medical protocols;
- b) organise and prioritise treatment and evacuation in multiple casualty incidents;
- c) use various types of stretchers and body immobilisation devices provided by the Emergency Ambulance Service;
- d) carry out emergency basic procedures to control external haemorrhage, apply dressings, bandages, slings and splints;
- e) provide immediate care to casualties during the process of extrication and disentanglement from entrapments;
- f) assess and maintain the patient's airway, including the use of adjuncts such as the oropharyngeal airway or Laryngeal Mask Airway (LMA) and endotracheal intubation (ETT);
- g) perform basic life support on infants, children and adults;
- h) perform a 12-lead electrocardiogram, monitor the patient's electrical rhythm and transmit the 12-lead electrocardiogram to the receiving hospital, if appropriate and required;
- i) independently initiate the use of an AED;
- j) obtain intravenous access, administer designated intravenous medications and perform intravenous infusions as per ambulance care protocols;
- k) obtain capillary blood glucose sample and institute treatment for hypoglycaemia;

- l) assess and manage an emergency childbirth;
- m) administer basic emergency medications including nebulisation;
- n) identify abnormal chest sounds through auscultation;
- o) appropriately use PPE and apply standard precautions to prevent the transmission of infectious agents during patient care; and
- p) manage patients with nasogastric tubes, intravenous plugs or urinary catheters or other tubes and cannula.

**6.2.1.3.4 Ambulance Nurse**

**6.2.1.3.4.1** The Ambulance Nurse shall hold a valid practising certificate, and be assessed by the relevant authority to be able to perform the tasks stipulated in 6.2.1.3.3.3.

**6.2.1.3.4.2** The Ambulance Nurse who is serving in the crew leader role shall be registered with the relevant authority as a registered nurse and hold valid certifications issued by a centre accredited by relevant authority for the purpose in Life Support Course for Nurses (LSCN) or Advanced Cardiac Life Support (ACLS).

**6.2.1.3.4.3** The Ambulance Nurse who is serving in the crew member role shall be registered or enrolled with the relevant authority and hold valid certifications in BCLS issued by centres accredited by relevant authority for the purpose.

**6.2.1.3.5 Ambulance Doctor**

**6.2.1.3.5.1** The Ambulance Doctor shall be registered with relevant authority as a fully registered medical practitioner, hold a valid practising certificate, and assessed by the relevant authority to be able to perform the tasks stipulated in 6.2.1.3.3.3.

**6.2.1.3.5.2** The Ambulance Doctor shall hold valid certification in BCLS and ACLS issued by centres accredited by relevant authority for the purpose.

**6.3 Ambulance requirements**

**6.3.1** The ambulances used to transport patients and personnel shall be safe and well maintained.

**6.3.2** The Ambulance Services Providers shall:

- a) ensure all ambulances are licensed and maintained,
- b) ensure all drivers have a valid driver's license and public transport driving permit,
- c) ensure all ambulance shall comply with the National Road Traffic Act, or the relevant ambulance registration and safety legislation, as applicable.
- d) ensure the floors of each Ambulance are free from sand, dirt, and other residue that may have been tracked into the compartment;
- e) ensure the wall, cabinet, and bench surfaces of each Ambulance are kept free of dust, sand, grease, or any other accumulated surface matter;

- f) ensure the interiors of cabinets and compartments of each Ambulance are kept free from dust, moisture, or other accumulated foreign matter;
- g) ensure bloodstains, vomitus, feces, urine, and other similar matter are cleaned from each Ambulance and all equipment after each call, using an agent or sodium hypochlorite solution
- h) ensure Window glass and cabinet doors of each Ambulance are clean and free from foreign matter;
- i) ensure each Ambulance is equipped with a receptacle provided for the deposit of trash, litter, and all used items;
- j) ensure a container specifically designed for the safe deposit and secure retainment of contaminated needles or syringes and a second container for contaminated or infectious waste is provided on each Ambulance that is easily accessible from the Patient compartment.
- k) implement an effective fleet management system.

**6.3.3** Ambulances shall have the name of the ASP identification mark permanently displayed on each side of the vehicle.

**6.3.4** Ambulance shall bear emblems and markings of the type, size and location as follows:

- a) Side: Each side of the Patient compartment has the “Star of Life” emblem not less than thirty (30) cm in height
- b) Side: Each side of the Patient compartment has the word “AMBULANCE”, not less than fifteen (15) cm in height, under or beside each star, and the name of the ASP as stated on the ASP's License, of lettering not less than seven and half (7.5) cm in height;
- c) Rear: The word “AMBULANCE”, not less than fifteen (15) cm in height, two (2) “Star of Life” emblems of not less than thirty (30) cm in height, and the name of the ASP Agency as stated on the ASP's License, of lettering not less than seven and half (7.5) cm in height.

**6.3.5** The ambulance shall be fitted with radio or telephonic communications so as to provide continuous communication with the ambulance's control room on a 24hour basis.

**6.3.6** The ambulance shall be able to accommodate the patient, and the required number of personnel and equipment.

**6.3.7** The ambulance shall have a non-porous partition between the driver and the body of the ambulance.

**6.3.8** The Ambulance shall use the siren and beacon lights only when transporting an emergency patient and when responding to an emergency.

**6.3.9** The ambulance shall be maintained in good repair and in safe operating condition at all times.

**6.3.10** The interior of the ambulance, including equipment and supplies, shall be maintained in accordance with environmental infection control practices to prevent transmission of disease from patient to EMS practitioner, as well as from patient to patient between runs.

**6.3.11** The interior surfaces of ambulance shall be of a nonporous material to allow ease of cleaning and that carpet-type materials shall not be used on any surface of the patient compartment.

**6.3.12** The exterior of the ambulance shall have a reasonably clean appearance and the exterior lighting shall be kept clear of foreign matter (insects, road grime, or other) to ensure adequate visibility.

**6.3.13** An efficient ambulance dispatch system shall be in place to ensure patients have rapid and safe access to services. The ASP shall:

- a) have a Computer Aided Dispatch (CAD) system that facilitates ambulance allocation, routing and tracking and where an ECC does not have a Computer Aided Dispatch (CAD) system, a paper -based system shall facilitate ambulance allocation, direction and tracking
- b) have a standardized process for dispatching ambulances.
- c) monitor response times for each stage of the call management and dispatch process

#### **6.4 Equipment requirements**

**6.4.1** Each Emergency Ambulance shall be fitted and equipped with the following, and ensure they are in good working condition and properly maintained:

- a) siren and wail sound horn or two tone-horn;
- b) beacon light;
- c) VHF radio network communication or mobile phone or other ambulance to hospital communication equipment;
- d) fire extinguisher;
- e) current street directory or electronic equivalent;
- f) global positioning system (GPS) /automatic ambulance location/ other navigation system
- g) passenger seat and safety belts;
- h) attendant seat and safety belts;
- i) frosted or tinted windows in patient compartment to ensure patient privacy;
- j) clear side windows in driver's cabin;
- k) medical equipment as specified in Annex A which shall be regularly checked, re-stocked and be in good working condition when the Emergency Ambulance is despatched;
- l) any other equipment specified by relevant authority.

**6.4.2** The ASP shall ensure all equipment not used in direct Patient care is in storage spaces or compartments to prevent contamination or damage to direct Patient care equipment or materials.

**6.4.3** All ASPs shall obtain and maintain all licenses, permits, certifications and regulatory authorizations pertaining to the above equipment (including medical equipment) without any restriction or qualification whatsoever so as to enable them to fulfil these Standards.

## **6.5 Medical equipment management**

A medical equipment management programme shall be implemented. The ASP shall:

- (a) ensure medical equipment is available and functional to provide care to patients.
- (b) ensure medical equipment is maintained and repaired according to a planned maintenance schedule, developed in accordance with the manufacturer's specifications.

## **6.6 Inter -facility transfers**

**6.6.1** Interfacility transfers shall be managed in a manner which maximizes patient safety.

**6.6.2** The ASP shall implement:

- (a) a standardised process for the arrangement of inter -facility transfers, and
- (b) a standardised process for the pickup, transfer and drop off of patients requiring an inter -facility transfer.

## **6.7 Planned patient transport services**

**6.7.1** Planned patient transport services shall be managed in a manner which maximises efficiency.

**6.7.2** The ASP shall implement a standardized process for the arrangement of planned patient transport services.

## **6.8 Patient safety incidents**

**6.8.1** A system to report and monitor all patient safety incidents shall be implemented.

**6.8.2** The ASP shall:

- (a) implement a system for recording, investigating and managing patient safety incidents to minimise the risk of harm and the risk of recurrence.
- (b) have systems in place to report patient safety incidents to the responsible authority.

## **6.9 Patient health records**

**6.9.1** The ASP shall ensure that accurate records of the health care services provided to patients are created and maintained.

**6.9.2** The ASP shall record accurate biographical information for patients.

**6.9.3** The accurate and comprehensive records of clinical care provided to patients shall be documented by the ASP to facilitate continuity of care.

**6.9.4** The ASP shall ensure that patient health records are accessible and can be retrieved when needed.

**6.9.5** The ASP shall ensure the patient records and information are protected and confidential.

**6.10 Prevention and control of infections**

**6.10.1** An infection prevention and control programme to minimise the risk of health care associated infections shall be implemented.

**6.10.2** The ASP shall be:

- (a) ensure infection prevention and control processes are implemented to reduce the risk of transmission of infection.
- (b) ensure personnel receive training on the prescribed infection prevention and control practices.

**6.10.3** The decontamination of medical devices and equipment shall be provided in a safe and effective manner . The ASP shall:

- (a) have systems in place for the decontamination of medical devices and equipment.
- (b) ensure equipment used for decontamination is managed and maintained to ensure sustainability of decontamination services

**6.10.4** Effective environmental cleaning which minimises the risk of disease outbreaks and the transmission of infection to patients or ASP personnel shall be implemented. The ASP provider shall:

- (a) ensure cleaning agents and equipment are approved by the relevant authority and available for cleaning personnel.
- (b) ensure that the performance of the cleaning service is monitored, and corrective actions are taken where necessary.
- (c) maintain and implement personnel practices that promote conditions that prevent the spread of infectious, contagious, or communicable diseases, including but not limited to standard precautions, transmission-based precautions, contact precautions, airborne precautions, and isolation techniques.
- (d) ensure proper disposal of toxic and hazardous substances.
- (e) ensure the preventive measures and practices are in compliance with applicable guidelines of the Bloodborne Pathogens Standard of the Occupational Safety and Health.
- (f) ensure the practice of hand hygiene to prevent the hand transfer of pathogens, and the use of barrier precautions such as gloves in accordance with established guidelines.

**6.11 Medicines and medical supplies**

**6.11.1** Safety protocols in relation to the administration of medicines shall be made available to protect patients from medication errors.

**6.11.2** The ASP shall ensure that medicines are administered safely in accordance with standard operating procedures to minimise the risk of patient safety incidents.

**6.11.3** Efficient stock management processes ensure sustainable service delivery and minimise waste shall be in place. The ASP shall:

- (a) ensure stock control and inventory procedures for medicines and medical supplies are implemented and maintained,
- (b) ensure medical supplies required for the care of patients transported by the ASP are available,
- (c) ensure medicines are stored in accordance with Good Pharmaceutical Storage Practice and manufacturer's guidelines, and
- (d) implement controls for the management, recording and distribution of medicines.

## **6.12 Waste management**

**6.12.1** Health care risk waste and general waste shall be handled, stored, and disposed of safely in accordance with relevant legislation.

**6.12.2** The ASP shall:

- (a) ensure health care risk waste and general waste is handled, stored and disposed of safely.
- (b) ensure procedures for recording of waste removed for destruction are implemented.

## **6.13 Environmental Management**

Every ambulance service provider shall ensure that the environment is safe for its patients and staff including members of the public as necessary and that the following measures and/or safeguards shall be observed:

- a) The ambulance shall be properly ventilated, lighted, clean and safe.
- b) There shall be a written plan and program of proper disinfection and preventive maintenance of the ambulance.

## **6.14 Response management**

For a co-ordinated and efficient manner response on emergencies the ASP shall:

- a) ensure emergency ambulances are appropriately equipped and staffed, and
- b) have systems to ensure that patients are treated in accordance with current evidence -based guidelines to reduce variations in care and improve patient outcomes and health care professionals shall have and adhere to evidence -based clinical practice guidelines on stabilising patients before and during transportation of patients and there is a standardised method of patient handover, which is implemented.

## **6.15 Complaints and feedback management**

**6.15.1** The ASP shall record and analyse complaints and feedback to improve quality of care provided to the patients and provide patients with information about the process of making a complaint.

**6.15.2** The ASP shall have a system for monitoring, assessing and responding to complaints and feedback contemplated in sub -clause 6.16.

## **7. Other services**



### **7.1.1 Security services**

**7.1.1.1** Appropriate Security measures shall be put in place to protect patients, personnel and property from security threats and risks.

**7.1.1.2** The ASP shall implement a security plan to protect patients and personnel.

### **7.1.2 Linen services**

**7.1.2.1** Clean linen shall be provided as required for the type of services provided

**7.1.2.2** The ASP shall;

- a) monitor the EMS station linen stock, or manage the service provider effectively where laundry services are outsourced.
- b) ensure that each Ambulance stores and maintains dry, clean linen.
- c) ensure each Ambulance is equipped with at least six (6) sets of freshly laundered or disposable linens to be used on cots and pillows and changed after each Patient is transported.
- d) ensure soiled linen is transported on the Ambulance in a closed plastic bag or container and removed from the Ambulance as soon as possible.
- e) ensure each Ambulance maintains blankets and towels that are intact, in good repair, and cleaned or laundered after each patient use.
- f) ensure that the blankets are a hypoallergenic material designed for easy maintenance
- g) ensure all linen used during any transport is removed from the cot and properly disposed of, or immediately placed in a designated, leak-proof bag or container and sealed until cleaned.
- h) ensure all used linen is treated as contaminated and handled as per standard precautions.

### **7.1.3 Building engineering and infrastructure services**

**7.1.3.1** The building engineering and infrastructure services shall be functional and enable safe and uninterrupted delivery of emergency medical services.

**7.1.3.2** The ASP shall ensure routine and emergency electrical and water supplies are available on a continuous basis.

## **8. Access to services**

**8.1** Ambulance service shall be available to all eligible people.

**8.2** Access to Ambulance service shall be by way of a call received and allocated by a contracted control centre.

**8.3** Any person or agency believing that a person has suffered a medical emergency or has suffered personal injury may make requests on behalf of the patient.

**Annex A**  
**(Normative)**

**Minimum Equipment Requirements for Ambulance**

The ASP Agency shall ensure the following equipment are maintained on all in-service ambulances in accordance with the response:

Table 2: Minimum Equipment Requirements for Ambulance

Required (R); Medical Control Option (MCO); Not Applicable (N/A)							
Item, and Quantity		EMERGENCY RESPONSE		AMBULANCE			
		EMT-Basic	Paramedic	EMT-Basic	AEMT	Paramedic	Air/Critical Care
<b>Personal Protective Equipment</b>							
1.	Eye protection or face shield for each medical crew member <b>One (1)</b>	R	R	R	R	R	R
2.	Labeled Non-sterile, latex-free exam gloves – two (2) sizes <b>Five (5) pairs each</b>	R	R	R	R	R	R
3.	Mask/Face shield for each Crew Member <b>One (1) each</b>	R	R	R	R	R	R
4.	Protective clothes covering	R	R	R	R	R	R
<b>Automatic External Defibrillator (AED)</b>							
5.	AED: secured and positioned for easy access to Attendants <b>One (1)</b>	R	R	R	R	R	R
6.	Paddles or pads and cables, Adult and Pediatric, compatible with AED	R	R	R	R	R	R
<b>Monitor/Defibrillator</b>							

7.	Four (4) lead wave form, twelve(12)lead/EKG,Sp O2 waveform with numeric reading, waveform capnography, and invasive pressure ports for adult and pediatric, and neonate, if applicable. Printable and transmittable and secured and positioned so displays are visible to Attendants.  All Components are required, but not all on one device. <b>One (1)</b>	N/A	R	N/A	N/A	R	R
8.	ECG Electrodes <b>Twenty (20)</b>	MCO	MCO	MCO	MCO	R	R
9.	Extra roll of compatible printer paper <b>One (1)</b>	N/A	R	N/A	MCO	R	R
10.	Internal rechargeable battery pack <b>One (1)</b>	N/A	R	N/A	MCO	R	R
11.	Extra battery or AC adapter and cord <b>One (1)</b>	N/A	R	N/A	MCO	R	R
12.	Defibrillator: May be integrated into cardiac monitor module. <b>One (1)</b>	N/A	R	N/A	MCO	R	R
13.	Pads – Pediatric and Adult (Neonatal sizes if transports are conducted)	N/A	R	N/A	N/A	R	R
14.	Transcutaneous Pace – Adult and Pediatric capabilities (stand-alone unit or integrated into cardiac monitor modular)	N/A	R	N/A	N/A	R	R
<b>Oxygen Delivery</b>							
15.	Nasal Cannulas – Adult <b>Two (2)</b>	R	R	R	R	R	R
16.	Nasal Cannula- Pediatric <b>Two (2)</b>	MCO	R	R	R	R	R

17.	Non-Rebreather Mask – Adult <b>Two (2)</b>	R	R	R	R	R	R
18.	Non-Rebreather Mask – Infant <b>Two (2)</b>	N/A	N/A	N/A	N/A	N/A	R
19.	Non-Rebreather Mask – Pediatric <b>Two (2)</b>	R	R	R	R	R	R
20.	Disposable Nebulizer <b>Two (2)</b>	MCO	R	MCO	R	R	R
21.	NPA 16 French through 34 French (12, 16, 20, 24, 28, 32,36) <b>One (1) each</b>	MCO	R	R	R	R	R
22.	Nonmetallic oropharyngeal airways (OPAs): sizes 0-5. <b>One (1) each</b>	R	R	R	R	R	R
23.	Positive Pressure Airway device <b>One (1)</b>	MCO	R	MCO	R	R	R
24.	Individual use circuit for Positive pressure device compatible with the device <b>Two (2)</b>	MCO	R	MCO	R	R	R
25.	Portable Oxygen Cylinder (min 1000 PSI) with working regulator <b>One (1)</b>	R	R	R	R	R	R
26.	Spare Portable Oxygen Cylinder <b>One (1)</b>	R	R	R	R	R	R
27.	On-Board Oxygen Cylinder (min 2000L) With working regulator <b>One (1)</b>	N/A	N/A	R	R	R	R
Bag Valve Mask Ventilation Units (BVM)							
28.	Adult BVM <b>One (1)</b>	R	R	R	R	R	R
29.	Pediatric BVM <b>One (1)</b>	R	R	R	R	R	R
30.	Neonate BVM <b>One (1)</b>	MCO	MCO	R	R	R	R
<b>Bandage Material</b>							

31.	ABD pad at least five by nine inches (5" x 9") <b>Two (2)</b>	R	R	R	R	R	R
32.	Adhesive bandages <b>Five (5)</b>	R	R	R	R	R	R
33.	Individually wrapped four by four inch (4" x 4") Sterile Gauze Pads <b>Fifteen (15)</b>	R	R	R	R	R	R
34.	Individually wrapped Sterile Gauze bandage rolls two (2) different Sizes Required <b>One (1) each size</b>	R	R	R	R	R	R
35.	Four by four inch (4" x 4") Commercial Sterile Occlusive Dressing or Chest Seal <b>Two (2)</b>	R	R	R	R	R	R
36.	Hypoallergenic Adhesive Tape – One inch (1") <b>One (1)</b>	R	R	R	R	R	R
37.	Hypoallergenic Adhesive Tape – Two Inch (2") <b>One (1)</b>	MCO	MCO	MCO	MCO	MCO	MCO
38.	Hypoallergenic Adhesive Tape – Three Inch (3") <b>One (1)</b>	MCO	MCO	R	R	R	R
39.	Large Trauma Bandage/Shears <b>One (1)</b>	R	R	R	R	R	R
40.	Sterile Water or Normal Saline for irrigation <b>Minimum of 250 ml.</b>	R	R	R	R	R	R
41.	Arterial Tourniquet <b>Two (2)</b>	R	R	R	R	R	R
42.	Hemostatic Agent or Bandage (non-granular) <b>Two (2)</b>	MCO	MCO	MCO	MCO	MCO	MCO
<b>Assessment Tools</b>							
43.	Thermometer <b>One (1)</b>	R	R	R	R	R	R

44.	Sphygmomanometer, cuff, bladder, and tubing in sizes for each age and size (Minimum of 3 sizes) <b>One (1) each size</b>	R	R	R	R	R	R
45.	Adult Stethoscope <b>One (1)</b>	R	R	R	R	R	R
46.	Pediatric Capable Stethoscope <b>One (1)</b>	R	R	R	R	R	R
47.	Pulse Oximeter with numeric reading with Adult and Pediatric capabilities <b>One (1)</b>	R	R	R	R	R	R
48.	Penlight <b>Two (2)</b>	R	R	R	R	R	R
<b>Miscellaneous</b>							
49.	Commercial antimicrobial and waterless hand cleanser	R	R	R	R	R	R
50.	EPA recommended Germicidal/viricidal agent or sodium hypochlorite solution - ninety-nine (99) parts water and one (1) part bleach for cleaning equipment.	R	R	R	R	R	R
51.	Portable Suction	R	R	R	R	R	R
52.	Wall Mounted Suction	N/A	N/A	R	R	R	R
53.	Suction Tubing	MCO	MCO	R	R	R	R
54.	Rigid suction Tip	MCO	MCO	R	R	R	R
55.	Flexible Suction Tip <b>Four (4) sizes</b>	MCO	R	R	R	R	R
56.	Naloxone Administration Kit	MCO	MCO	MCO	MCO	MCO	MCO
57.	Epinephrine Administration Kit	MCO	MCO	MCO	MCO	MCO	MCO
58.	Sharps container (fixed with locking mechanism) <b>One (1)</b>	R	R	R	R	R	R
59.	Portable Sharps Container <b>One (1)</b>	R	R	R	R	R	R

60.	Current color-coded Pediatric weight and length-based drug dose chart <b>One (1)</b>	MCO	R	MCO	R	R	R
61.	Antiseptic pads for injection sites <b>Twenty-four (24)</b>	R	R	R	R	R	R
62.	18-20g needles at least one and one-half inch (1½") length <b>Two (2) sets</b>	N/A	R	N/A	R	R	R
63.	23g-25g needles at least one and one-half inch (1½") length <b>Two (2) sets</b>	N/A	R	N/A	R	R	R
64.	1 ml Syringes <b>Two (2)</b>	R	R	R	R	R	R
65.	3-5 ml Syringes <b>Two (2)</b>	R	R	R	R	R	R
66.	10-20 ml Syringes <b>Four (4)</b>	R	R	R	R	R	R
67.	Sterile burn sheet <b>One (1)</b>	R	R	R	R	R	R
68.	Triangular Bandages <b>Two (2)</b>	R	R	R	R	R	R
69.	Traction-type, lower extremity splint (Bi-polar or Uni-polar type is acceptable) <b>One (1)</b>	MCO	MCO	R	R	R	MCO
70.	Padded splints: 15" x 3" (or other approved commercially available splints for arm or leg fractures) <b>Two (2)</b>	R	R	R	R	R	MCO
71.	Padded Splints: 36" x 3" (or other approved commercially available splints for arm or leg fractures) <b>Two (2)</b>	MCO	MCO	R	R	R	MCO
72.	Pelvic Splint <b>One (1)</b>	MCO	MCO	MCO	MCO	MCO	MCO

73.	Long Spine Board: at least 16" x 72". (Folding backboard may be used as a substitute.) <b>One (1)</b>	MCO	MCO	R	R	R	MCO
74.	Cervical collars: Adjustable or available in sizes of short, regular, or tall. Adult and Pediatric <b>Minimum of one (1) each</b>	R	R	R	R	R	MCO
75.	Commercially or Premade Head Immobilization Device – Adult and Pediatric <b>One (1) each</b>	MCO	MCO	R	R	R	MCO
76.	Nine (9) foot straps (one (1) set 10-point spider straps may be used) <b>Minimum of three (3) each</b>	MCO	MCO	R	R	R	R
77.	Triage Tag (Compatible with the state system)	R	R	R	R	R	MCO
78.	Patient Restraints <b>one (1) set</b>	N/A	N/A	R	R	R	R
79.	Obstetrical Kit: Sterile, latex free. (Contains the following: gloves, scissors or surgical blades, umbilical cord clamps or tapes, dressing, towels, perinatal pad, bulb syringe and a receiving blanket) <b>One (1)</b>	R	R	R	R	R	R
80.	Glucometer or Blood Glucose Measuring Device <b>One (1)</b>	R	R	R	R	R	R
81.	Emesis basin or bag <b>One (1)</b>	R	R	R	R	R	R
82.	Bedpan and urinal <b>One (1) each</b>	MCO	MCO	R	R	R	R
83.	ABC Fire Extinguisher (minimum of 5 LBS, properly mounted) <b>One (1)</b>	R	R	R	R	R	R



84.	Battery Operated Flashlight (non-penlight) <b>Two (2)</b>	MCO	MCO	R	R	R	MCO
85.	High Visibility vest or reflective clothing <b>Two (2)</b>	R	R	R	R	R	R
86.	Protective Work Gloves <b>2 Pair</b>	MCO	MCO	MCO	MCO	MCO	MCO
87.	Protective Helmet <b>Two (2)</b>	MCO	MCO	MCO	MCO	MCO	R
88.	Flameless Flare, Glow Sticks, Cones, or Reflective Triangles <b>Three (3)</b>	R	R	R	R	R	MCO
89.	Blankets/ Linen <b>Three (3) each</b>	MCO	MCO	R	R	R	R
<b>Advanced Airway and Ventilatory Support</b>							
90.	Laryngoscope handle with extra set of batteries and bulbs (Compatible with Blades) <b>One (1)</b>	N/A	R	N/A	N/A	R	R
91.	Laryngoscope blades –0-4 Miller, 1-4 Macintosh - Adult/ Pediatric/Neonate sizes (Compatible with handle) <b>One (1) each</b>	N/A	R	N/A	N/A	R	R
92.	Video Laryngoscope <b>One (1)</b>	N/A	MCO	N/A	N/A	MCO	MCO
93.	Disposable ET tube sizes 2.5 through 8mm with stylets sized for each tube <b>One (1) each</b>	N/A	R	N/A	N/A	R	R
94.	Bougie type device <b>One (1)</b>	N/A	MCO	N/A	N/A	MCO	MCO
95.	ET Placement Detector <b>One (1)</b>	N/A	R	N/A	N/A	R	R
96.	Water soluble lubricating jelly <b>Four (4) each</b>	R	R	R	R	R	R

97.	Blind Insertion Airway Device (BIAD) – Age and weight sizes as defined by FDA. Syringe(s) needed to inflate bulbs shall be included in packaging, if not, appropriate size(s) carried by provider.	R	R	R	R	R	R
98.	Mucosal Atomizer Device <b>One (1)</b>	N/A	MCO	N/A	N/A	MCO	MCO
99.	Positive End-Expiratory Pressure (PEEP) valve (may be incorporated into BVMs) age appropriate	R	R	R	R	R	R
100.	Mechanical ventilator and circuit - age/weight appropriate, including neonate, if applicable, includes measurement of: Fraction of inspired oxygen (FiO <sub>2</sub> ); Tidal volume (V <sub>t</sub> ); Respiratory rate (RR) or frequency; and PEEP.	N/A	N/A	N/A	N/A	MCO	R
101.	Continuous Positive Airway Pressure (CPAP), able to be incorporated within the mechanical ventilator mechanical and with appropriate setting and attachments for adult, pediatric, and neonate Patients, if applicable	N/A	N/A	N/A	MCO	MCO	R
102.	Bi-level Positive Airway Pressure (BiPap), able to be incorporated within the mechanical ventilator mechanical and with appropriate setting and attachments for adult, pediatric, and neonate Patients, if applicable	N/A	N/A	N/A	N/A	MCO	MCO

103.	Chest Decompression Kit <b>One (1)</b>	N/A	R	N/A	N/A	R	R
104.	Printable waveform End-tidal CO <sub>2</sub> continuous monitoring capabilities. May be incorporated within Cardiac monitor/modular	N/A	R	N/A	N/A	R	R
<b>Venous Access</b>							
105.	Intravenous catheters 14g-20g <b>Two (2) each</b>	N/A	R	N/A	R	R	R
106.	Intravenous catheters 22g-24g for pediatric/neonate transport <b>Two (2) each</b>	N/A	R	N/A	R	R	R
107.	Intraosseous needles – 15mm, 25mm, 45mm <b>One (1) each</b>	N/A	MCO	N/A	R	R	R
108.	Macro drip sets, 10-20 gtt/ml <b>Two (2)</b>	N/A	R	N/A	R	R	R
109.	Micro drip set <b>One (1)</b>	N/A	R	N/A	N/A	N/A	N/A
110.	IV start kits containing latex free tourniquet, antiseptic solution, and latex free catheter dressing. <b>Three (3)</b>	N/A	R	N/A	R	R	R
111.	Intravenous fluids: may be combination of sizes 100mL-1000mL variety such as Lactated Ringers, Normal Saline, D5W. Capability to be administered warm. <b>4000 ml total</b>	N/A	R (2000 ml total)	N/A	R	R	R
112.	IV Pressure Infuser <b>One (1)</b>	N/A	MCO	N/A	MCO	R	R

**Bibliography**

- KS 2429, *Minimum ground ambulance requirements*
- KS 2603, *Water ambulance requirements*