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POLICY ON SAFETY OF LAND AMBULANCES

MINISTRY OF HEALTH MALAYSIA

2019



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2019

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Contents

| | |
|--|-----------|
| ACKNOWLEDGEMENTS | 3 |
| FOREWORD BY DIRECTOR-GENERAL OF HEALTH MALAYSIA | 6 |
| FOREWORD BY THE DEPUTY DIRECTOR-GENERAL OF HEALTH (MEDICAL), MOH | 7 |
| FOREWORD HEAD OF MALAYSIAN EMERGENCY AND TRAUMA SERVICES | 8 |
| GLOSSARY OF TERMINOLOGIES | 9 |
| GLOSSARY OF ABBREVIATIONS | 11 |
| 1. INTRODUCTION | 12 |
| 2. POLICY DOCUMENT STATEMENT | 13 |
| 3. OBJECTIVES | 13 |
| 4. ESTABLISHMENT OF AMBULANCE SAFETY COMMITTEE | 14 |
| 4.3. NATIONAL AMBULANCE SAFETY COMMITTEE | 14 |
| 4.4. STATE AMBULANCE SAFETY COMMITTEE | 14 |
| 4.5. DISTRICT HEALTH OFFICE AND HOSPITAL AMBULANCE SAFETY SURVEILLANCE ACTIVITIES | 15 |
| 5. MANDATORY AMBULANCE SAFETY INCIDENT OR COLLISION REPORTING | 17 |
| 6. AMBULANCE INCIDENT OR COLLISION INVESTIGATION | 18 |
| 7. LAND AMBULANCE SPECIFICATION | 19 |
| 7.4. TECHNICAL SPECIFICATIONS OF LAND AMBULANCE | 19 |
| 8. PROCUREMENT OF LAND AMBULANCES | 20 |
| 9. AMBULANCE OPERATIONS AND MANAGEMENT | 21 |
| 9.1. SUPERVISION OF LAND AMBULANCE OPERATIONS | 21 |
| 9.2. ROAD WORTHINESS OF LAND AMBULANCE | 21 |
| 9.3. SERVICE MAINTENANCE OF AMBULANCE | 22 |
| 9.4. REPAIR MAINTENANCE OF AMBULANCE | 22 |
| 9.5. PRE-DEPARTURE AND POST DEPLOYMENT SAFETY INSPECTION | 23 |
| 10. AMBULANCE DRIVING POLICY | 24 |
| 10.1. NUMBER OF OCCUPANTS IN AN AMBULANCE | 24 |
| 10.2. SAFETY PRECAUTIONS PRIOR TO SETTING THE VEHICLE IN MOTION | 24 |
| 10.3. USE OF RESTRAINTS IN AN AMBULANCE | 24 |
| 10.4. GENERAL STATEMENTS ON DRIVING OF AMBULANCE | 25 |
| 10.5. DRIVING OF AMBULANCE DURING LIGHTS AND SIREN RESPONSE | 25 |
| 10.6. USE OF DISTRACTING DEVICES | 26 |

| | |
|--|-----------|
| 10.7. JOURNEY MANAGEMENT AND PLANNING | 26 |
| 11. HUMAN RESOURCE MANAGEMENT AND SAFETY STANDARDS | 27 |
| 11.1. RECRUITMENT AND TRAINING OF AMBULANCE DRIVERS..... | 27 |
| 11.2. MEDICAL FITNESS FOR AMBULANCE DRIVERS..... | 27 |
| 11.3. AMBULANCE DRIVER DRIVING HOURS | 27 |
| 11.4. POLICY ON SUBSTANCE ABUSE..... | 28 |
| 11.5. REGULATION VIOLATION AND TRAFFIC OFFENCES MONITORING | 28 |
| APPENDIX 1 | 29 |
| APPENDIX 2 | 30 |
| APPENDIX 3 | 31 |
| APPENDIX 4 | 32 |
| APPENDIX 5 | 33 |
| APPENDIX 6 | 37 |
| APPENDIX 7 | 38 |
| APPENDIX 8 | 41 |
| REFERENCES | 42 |
| COMMITTEE MEMBERS | 43 |

FOREWORD BY DIRECTOR-GENERAL OF HEALTH MALAYSIA



Datuk Dr Noor Hisham bin Abdullah
Director-General of Health Malaysia

Ambulance Services is the most visible and crucial component in Pre-Hospital Care. It is the initial segment in the continuum of health care. The Ministry of Health has placed great importance on this frontline activity to benefit the community in Malaysia.

I would like to thank and congratulate the Medical Development Division and the Emergency Medicine and Trauma Services for their continuing effort in development and improvement in standards of care for pre hospital care service. Many challenges arise from implementation of the ambulance services, and as paramount for patient and staff safety, this policy was developed to safeguard and elevate the quality and safety of the service. It strengthens the Safety-First work culture within all MOH facilities and uses surveillance methodology to measure the success implementation.

FOREWORD BY THE DEPUTY DIRECTOR-GENERAL OF HEALTH (MEDICAL), MOH



Datuk Dr Hj. Rohaizat bin Hj Yon
Deputy Director-General of Health
(Medical), MOH

Ambulances services play a major role in ensuring that patients receive the appropriate care for their needs. With the increasing scope and coverage of the service, many challenges are encountered when providing patient care. There is a need for a policy to be developed and these measures shall standardize and improve the quality of ambulance services as well as raise the credibility of the existing system.

This led to the combined effort between the medical development division of ministry of health with the emergency services and trauma in which the first policy for land ambulances was first tabled in 2015. From there on, ongoing work has been put forth into setting a guide for managing, maintaining and supporting such service. This policy is a product of those efforts and will help guide especially the administrative aspect in maintaining and support the services.

I would like to thank those who were involved from the Medical Development Division, the Emergency Medicine and Trauma Services and the working group for putting through the effort to help develop this policy.

May it guide us going forward.

FOREWORD HEAD OF MALAYSIAN EMERGENCY AND TRAUMA SERVICES



Dr Mahathar Bin Abd Wahab
Head of Emergency and Trauma Services,
MOH

Pre hospital Care and Ambulance Service is a crucial component of patient care in the chain of survival at the first contact point. It is of utmost importance for MOH to ensure the services are delivered in a safe manner.

As an emergency response vehicle, land ambulance must be maintained in safe and reliable operational conditions at all times. This can be achieved via effective operation and management on Pre Hospital Care Services (PHCS).

This policy serves as guidance for the managerial and operational group to ensure ambulances safety in pre hospital care services in MOH. However, non MOH PHCS are encouraged / welcomed to adapt the policy to enhance their services.

Ambulance safety encompasses wide aspects which include the procurement of the vehicle, daily operational practice, vehicle maintenance, accident prevention and surveillance and we have included this in this policy.

I would like to take this opportunity to congratulate the Working Committee for the effort of producing this important policy which would serve as a standard in ensuring ambulance safety in this country.

GLOSSARY OF TERMINOLOGIES

| | |
|---------------------------------------|--|
| Aggressive Driving | Driving in a selfish, bold or pushy manner, without regard for the rights or safety of other users of the roadway. |
| Ambulance | Specialized vehicle used or intended for the care and transportation of ill or injured persons to, from or between places of treatment. |
| Ambulance Accident / Collision | Any incident involving land ambulances in which the first harmful event involves a motor vehicle in motion coming into contact with another vehicle, property, person(s) or animal(s). |
| Ambulance Drivers | All individuals trained and certified to operate and drive Ambulances. |
| Ambulance Main Component | Original vehicle specifications components from its manufacturer that includes chassis, suspension, engine, exhaust system, steering and passive vehicle safety devices such as airbags, brakes, anti-lock braking system (ABS) and others |
| Ambulance Medical Equipment | Any patient care equipment or interface being utilized or used in the management of patients in the ambulances |
| Ambulance Modified Component | Vehicle component that has been customized for patient care which includes patient's compartment, electrical outlet, oxygen outlet, oxygen dock, stretcher and locking mechanism, loading area, lights and siren. |
| Ambulance Safety Incidents | An event or circumstances or series of events that could have or may have: (a) result in death, injury to a patient; (b) loss of or damage to a system or service; (c) cause environmental damage; (d) adversely affect an activity or function. |
| Distracting Devices | Devices with potential to divert driver's attention from operations of a motor vehicle such as but not limited to mobile communication devices, Mobile Data Terminals, Global Positioning System (GPS), MP3 players, etc. |

| | |
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| High risk driving behaviour | Drivers known to display aggressive driving behaviours such as speeding, tailgating, failure to signal a lane change, and running red lights or stop signs. Such behaviour may be identified via direct supervision or using verbal or formal feedback mechanism by team members. |
| Loading Capacity | Difference between Gross Vehicle Weight and the Net Vehicle Weight |
| Net Vehicle Weight | Unloaded weight of vehicle after modified to specification of an ambulance with all fixed installations including the weight of a driver taken as 70kg |
| Operational experts | Person(s) experienced in processes involved in planning and execution Pre-Hospital Care Services |
| Patient | Individual with medical condition or illness that requires appropriately trained personnel to provide medical care or suitable transport or both. |
| Permissible Gross Vehicle Weight | Permissible total weight of vehicle which includes the gross vehicle weight, sanitary, medical and technical equipment weight, the weight of maximum numbers of passengers taken as 70kg per person, and any reserve weight. |
| PHCAS Providers | Institutions or organizations that render emergency medical care outside of healthcare facility and transportation of patients to a healthcare facility. |
| PHCAS Responders | Individuals employed, certified and credentialed by a PHCAS Provider to provide medical care outside of a medical facility under the direction of a Medical Advisor. Responders include First Responders, Emergency Medical Responders and Assistant Medical Officer. |

GLOSSARY OF ABBREVIATIONS

| | | |
|--------------|---|---|
| AMAC | - | Ambulance Main Component |
| AMOC | - | Ambulance Modified Component |
| ASC | - | Ambulance Safety Committee |
| BER | - | Beyond Economic Repair |
| EMTS | - | Emergency Medicine and Trauma Services |
| GPS | - | Global Positioning System |
| MECC | - | Medical Emergency Coordinating Centre |
| MOH | - | Ministry of Health Malaysia |
| NASC | - | National Ambulance Safety Committee |
| OEHU | - | Occupational and Environmental Health Unit |
| OHU | - | Occupational Health Unit |
| PHCAS | - | Pre Hospital Care and Ambulance Services |
| SHO | - | State Health Department |
| SIRIM | - | Standards and Industrial Research Institute of Malaysia |
| TSLA | - | Technical Specifications of Land Ambulance |

1. INTRODUCTION

- 1.1. Pre-Hospital Care and Ambulance Services (PHCAS) is the provision of medical care and intervention to patients or victims at scene, during transfer or between hospitals by trained and credentialed providers under the supervision of a Medical Advisor. It covers wide range of medical illness from minor illness and injury to life threatening conditions.
- 1.2. The scope of service provided include:
 - 1.2.1. Ambulance Services
 - 1.2.2. Major medical incident and disaster management
 - 1.2.3. Mass gathering and major event medical coverage
 - 1.2.4. Medical Emergency Coordinating Centre (MECC) for selected MOH hospitals; or Ambulance Dispatch Centre for the rest.
- 1.3. Safe operational management of land ambulance services require adherence to the following values.
 - 1.3.1. **An organizational approach** that prioritizes safety in all aspects of land ambulances operations.
 - 1.3.2. **Ambulances and equipment** that complies with operational specifications and safety standards.
 - 1.3.3. **Human resource management** that emphasizes on safety in every aspect of land ambulance operations.
 - 1.3.4. **Surveillance** of land ambulance safety incidents or accidents through mandatory reporting system.

2. POLICY DOCUMENT STATEMENT

- 2.1. This policy shall serve as Ministry of Health (MOH) safety standards in safe operations and management of land ambulance services, hence providing guidance to all relevant stakeholders within and outside of MOH.
- 2.2. This policy shall cover key areas of safety in land ambulance operations such as organization, vehicle, operational and occupational safety standards.
- 2.3. This policy shall be read with the Emergency Medicine and Trauma Services (EMTS) policy and other policy related to PHCAS published by Ministry of Health, Malaysia.
- 2.4. The policy document shall be reviewed periodically every 5 years or whenever the need arises.

3. OBJECTIVES

- 3.1. To provide safety standards for land ambulance services for all MOH PHCAS Provider.
- 3.2. To mandate a compulsory reporting programme or feedback system for ambulance safety incidents or collisions.
- 3.3. To advocate organizational approach to safe operations and managements of land ambulances.

4. ESTABLISHMENT OF AMBULANCE SAFETY COMMITTEE

- 4.1. MOH shall establish an Ambulance Safety Committee (ASC) at National, State, Health and Hospital levels.
- 4.2. These committees shall provide guidance on safety standards on land ambulance services in MOH.

4.3. NATIONAL AMBULANCE SAFETY COMMITTEE

- 4.3.1. MOH shall establish a subcommittee under the MOH Technical Committee on PHCAS on ambulance safety called National Ambulance Safety Committee (National ASC) (Appendix 1).
- 4.3.2. The members of the committee shall be as in Appendix 2. The Director General of Health Malaysia shall appoint a PHCAS specialist from the Emergency and Trauma Services as the chairman of the committee.
- 4.3.3. The Occupational Health Unit (OHU) of the Disease Control Division Ministry of Health Malaysia shall be the secretariat to this committee.
- 4.3.4. The functions of the National ASC shall include:
 - 4.3.4.1. Form a **National Ambulance Incident or Collision Inquiry Team** to investigate any fatal collisions involving land ambulances.
 - 4.3.4.2. Review reports pertaining on any ambulance safety incidents or collisions involving land ambulances resulting in serious injuries or loss of ambulance operations of more than 14 days from State Ambulance Safety Committee (State ASC).
 - 4.3.4.3. Propose policy and guidelines on safety of land ambulance services to the MOH Technical Committee on PHCAS.

4.4. STATE AMBULANCE SAFETY COMMITTEE

- 4.4.1. The State Health Director shall establish a State Ambulance Safety Committee under the State Technical Committee on Prehospital Care and Ambulance Services (Appendix 3).

- 4.4.2. The members of the committee shall be as in Appendix 4. The State Health Director shall appoint a PHCAS specialist from the Emergency and Trauma Services as the chairman of the committee.
- 4.4.3. State Occupational and Environmental Health Unit (OEHU) of Public Health Division shall be the secretariat to this committee.
- 4.4.4. Functions of the State ASC shall include
 - 4.4.4.1. Monitor compliance to the policies and safety standards of land ambulance services by hospitals and health facilities.
 - 4.4.4.2. Receive mandatory reports on all ambulance safety incidents or collisions involving land ambulances services from MOH facilities.
 - 4.4.4.3. Maintain an updated registry of incidents or collision involving land ambulance services.
 - 4.4.4.4. Appoint **State Ambulance Incident or Collision Inquiry Team** to investigate any incidents or collisions involving land ambulances that resulted in injuries or loss of ambulance operations. Reports of the investigation shall be submitted to the National Ambulance Safety Committee.

4.5. **DISTRICT HEALTH OFFICE AND HOSPITAL AMBULANCE SAFETY SURVEILLANCE ACTIVITIES**

- 4.5.1. Surveillance of all ambulance safety incidents or collisions in MOH hospitals shall be an activity under the Hospital Quality Unit.
 - 4.5.1.1. Hospital Director shall appoint representative of PHCAS Unit to be part of the Incident Reporting Committee.
 - 4.5.1.2. Reporting of ambulance safety incidents or collisions in MOH Hospitals shall comply with MOH directives on Incident Reporting and Learning System.
- 4.5.2. Surveillance of all ambulance safety incidents or collisions in MOH Primary Health Care facilities shall be an activity under the Quality Unit of District Health Offices.

4.5.3. Hospital Directors and District Health Officers shall

- 4.5.3.1. Establish local operational directives to ensure operations of land ambulance services comply with MOH policy, guidelines and safety standards.
- 4.5.3.2. Ensure mandatory reporting of land ambulance safety incidents or collisions.
- 4.5.3.3. Perform internal inquiry on all land ambulance safety incidents or collisions.
- 4.5.3.4. Submit internal inquiry reports on all land ambulance safety incidents or collisions to the State ASC.

5. MANDATORY AMBULANCE SAFETY INCIDENT OR COLLISION REPORTING

- 5.1. MOH PHCAS Providers shall implement a mandatory reporting of any land ambulance safety incidents or collisions.
- 5.2. The reporting procedure shall be an addition to any existing directives such as:
 - 5.2.1. Treasury Directives on handling ambulance collisions. **[Pekeliling Perbendaharaan (WP4.2/2013: Kemalangan Yang Melibatkan Kenderaan Kerajaan Malaysia)].**
 - 5.2.2. Notification of Occupational Accident and Dangerous Occurrence Form (WEHU A1/A2 form) for land ambulance safety incidents or collisions resulting in injuries to healthcare worker.
- 5.3. MOH PHCAS Responders shall report any land ambulance safety incidents or collisions to their respective Hospital or District Health Office Quality Unit.
 - 5.3.1. All ambulance safety incidents shall be reported to the Quality Unit using the current Incident Reporting form.
 - 5.3.2. All ambulance collisions shall be reported to the Quality Unit using the current Incident Reporting form and an additional **AMB/IR/1 (Appendix 5)** form within 24 hours of the incident.
- 5.4. Hospital or District Health Office Quality Unit shall then submit a copy of the form to the State ASC and National ASC within 48 hours of the incident OR on the next working day (whichever earlier).

6. AMBULANCE INCIDENT OR COLLISION INVESTIGATION

- 6.1. State ASC shall investigate any land ambulance safety incidents or collisions that resulted in injuries or loss of ambulance operations.
 - 6.1.1. State Occupational and Environmental Health Unit (OEHU) upon receiving notification from any facility shall initiate an investigation no later than 7 days after the date of incident or collision.
 - 6.1.2. The investigation report shall be submitted to the National ASC no later than 14 days after the date of incident or collision.
- 6.2. State ASC shall appoint an **Ambulance Incident or Collision Inquiry Team** to facilitate with the investigation.
 - 6.2.1. The investigation committee shall comprise of land ambulance service clinical, technical and operational experts.
 - 6.2.2. This investigation shall also be jointly done with relevant Occupational Health Officers.
 - 6.2.3. The experts shall not be restricted to only MOH personnel.
- 6.3. The National ASC shall appoint a **National Ambulance Incident or Collision Inquiry Team** to investigate any incident or collision involving land ambulance services.
- 6.4. Summary of this process shall be as in Appendix 6
- 6.5. The Occupational Health Unit (OHU), Ministry of Health Malaysia as the secretariat of National ASC shall maintain records of all investigation report from State ASC.

7. LAND AMBULANCE SPECIFICATION

- 7.1. Procurement of land ambulances shall adhere to current Technical Specifications of Land Ambulances (TSLA).
- 7.2. TSLA shall be developed, maintained and updated by the Subcommittee on PHCAS Equipment Standard and Specifications.
- 7.3. MOH Technical Committee on PHCAS shall appoint operational and technical experts to form a Subcommittee on PHCAS Equipment Standard and Specifications.

7.4. TECHNICAL SPECIFICATIONS OF LAND AMBULANCE

- 7.4.1. The specifications for land ambulances shall emphasize service needs, safety and protection of all individuals in the vehicle (Appendix 7).
- 7.4.2. The design, construction, modification and testing processes of ambulance shall comply with local or international standards.
- 7.4.3. TSLA shall be used as a reference document for all land ambulance procurement process.
- 7.4.4. TSLA shall be reviewed at least once in five (5) years or when the need arises.

8. PROCUREMENT OF LAND AMBULANCES

- 8.1. Procurement proceedings or procedures shall abide by the rules governing assets procurement in MOH.
- 8.2. All procurement proceedings or procedures shall have consultation and presence of PHCS operational and technical experts.
- 8.3. The ambulance specifications shall conform to the current and approved TSLA.

9. AMBULANCE OPERATIONS AND MANAGEMENT

9.1. SUPERVISION OF LAND AMBULANCE OPERATIONS

- 9.1.1. All MOH PHCAS Provider shall ensure daily ambulance operations management comply safety requirements stipulated in this policy.
- 9.1.2. MOH PHCAS Supervising Assistant Medical Officer has the following operational safety supervision function:
 - 9.1.2.1. Submission of mandatory incident or collision reporting to individual Hospital or Health ASC.
 - 9.1.2.2. Ensure Ambulance Drivers receives training and certification in defensive driving techniques. **[Surat Pekeliling Ketua Pengarah Kesihatan Bilangan 17/2012: Penambahbakan Garispanduan Latihan Pemanduan Ambulan Kementerian Kesihatan Malaysia].**
 - 9.1.2.3. Ensure Ambulance Drivers undergo Medical Fitness Examination. **[Medical Examination Standard for Vocational Driver Licensing]**
 - 9.1.2.4. Ensure daily vehicle pre-departure and post-deployment safety inspection is performed by the PHCAS Responders.
 - 9.1.2.5. Ensure management of ambulance breakdown and reporting performed in accordance to MOH guidelines. **[Garis Panduan Penyelenggaraan Ambulans Di Hospital Dan Klinik Kesihatan 2014].**
 - 9.1.2.6. Perform inspection of ambulance returning from service and repair maintenance before scheduled to daily operations.
 - 9.1.2.7. Report of ambulances with repetitive breakdown or maintenance for Ambulance Main Components (AMAC) to the Hospital Operations Engineer /Assistant Hospital Operations Engineer / State Engineer.

9.2. ROAD WORTHINESS OF LAND AMBULANCE

- 9.2.1. All ambulances shall undergo yearly safety inspections by an authorized government agency.

- 9.2.2. MOH shall prioritize the replacement of ambulances proposed or certified as Beyond Economic Repair (BER).
- 9.2.3. Ambulances with identified or suspected to have breakdown of AMAC shall not be used in operations until repair or maintenance is performed and verified.
- 9.2.4. Hospital Operations Engineer /Assistant Hospital Operations Engineer / State Engineer shall be informed of ambulances with repetitive breakdown or maintenance.
 - 9.2.4.1. Hospital Operations Engineer / Assistant Hospital Operations Engineer / State Engineer shall provide recommendation to Hospital Director or District Health Officer on its road-worthiness.

9.3. SERVICE MAINTENANCE OF AMBULANCE

- 9.3.1. The service maintenance schedule for AMAC shall be carried out based on vehicle manufacturer recommendation.
- 9.3.2. All service and repair maintenance for AMAC shall be done at authorized service facilities.
- 9.3.3. All AMAC spare parts shall be replaced with genuine parts as specified by the vehicle manufacturer.
- 9.3.4. Service maintenance works for AMAC shall be completed within 24 hours.
- 9.3.5. All ambulances upon returning from service maintenance shall be inspected by the MOH PHCAS Supervising Assistant Medical Officer.

9.4. REPAIR MAINTENANCE OF AMBULANCE

- 9.4.1. All breakdown maintenance work for the AMAC shall be carried out at authorized service facilities.
- 9.4.2. All breakdown maintenance work for the Ambulance Modified Components (AMOC) shall be carried out by the supplier during the warranty period or at authorized service facilities after the warranty period.

9.4.3. All breakdown maintenance repairs shall be completed in not more than 14 days.

9.4.3.1. If the repair takes more than 14 days, a replacement ambulance and/or a 3rd party repair facility shall be used as per concession agreement.

9.4.3.2. Replacement ambulance provided by 3rd party repair facility shall comply with the current TSLA.

9.5. PRE-DEPARTURE AND POST DEPLOYMENT SAFETY INSPECTION

9.5.1. All ambulances shall undergo a pre-departure ambulance and medical equipment safety inspection at beginning of every shift or prior to deployment.

9.5.2. All facilities shall use a standard pre-departure ambulance and medical equipment checklist.

9.5.3. All ambulances shall undergo a post-deployment safety check at the end of every shift or deployment to identify necessary breakdown or repair maintenance works.

10. AMBULANCE DRIVING POLICY

10.1. NUMBER OF OCCUPANTS IN AN AMBULANCE

10.1.1. The maximum number of occupants in an ambulance shall be based on the seating arrangement availability and maximum allowable Loading Capacity.

10.1.1.1. All ambulances shall display a signage stating the maximum allowable occupants.

10.1.2. Relatives of patients shall be advised against and discouraged from travelling in the ambulance with the patient by the PHCS Responder.

10.1.3. PHCAS Provider shall have an **Ambulance Passenger Indemnity Form** that are signed by relatives insisting on travelling in the ambulance with the patient (**Appendix 8**).

10.2. SAFETY PRECAUTIONS PRIOR TO SETTING THE VEHICLE IN MOTION

10.2.1. Ambulance Drivers shall ensure that no person is in the process of mounting, dismounting, standing on top of, or on the outside of, the vehicle prior to setting the vehicle in motion.

10.2.2. Ambulance Drivers shall ensure that all occupants and the patient inside an ambulance are seated and properly restrained prior to setting the vehicle in motion.

10.3. USE OF RESTRAINTS IN AN AMBULANCE

10.3.1. Every occupant in an ambulance must be seated on individual assigned seats with restraints.

10.3.2. All ambulances shall display a signage instructing on the use of seat-belts.

10.3.3. Patients shall be restrained using shoulder straps, chest, pelvic and legs restraints.

10.3.4. PHCAS Responders providing direct patient care inside an ambulance shall be permitted to temporarily release their seat belt. Responders should minimize time without protection.

10.3.5. Ambulance Drivers shall provide verbal warnings to unrestrained PHCAS Responders regarding changes in the vehicle's motion, such as acceleration or deceleration, turning and stopping.

10.4. GENERAL STATEMENTS ON DRIVING OF AMBULANCE

10.4.1. Ambulance Drivers shall abide by all traffic rules, unless the use of lights and siren response is indicated.

10.4.2. Ambulance Drivers shall abide by the posted speed limit and drive at a speed that is safe and prudent, based on road and weather conditions and the design and capability of the particular vehicle.

10.4.3. Ambulance Drivers shall exercise extreme caution while driving at emergency incident locations.

10.4.4. Ambulance Drivers shall abide by all directions on movement, positioning or repositioning orders given by law enforcement officials.

10.4.5. The use of ambulance beacon lights is only permitted when travelling with a patient.

10.5. DRIVING OF AMBULANCE DURING LIGHTS AND SIREN RESPONSE

10.5.1. The use of lights and siren shall be based upon the clinical requirement of the patient; and be limited to the following situations:

10.5.1.1. Responding to a suspected critically ill patient based on telephone triage protocols.

10.5.1.2. Responding to or transporting a critically ill patient.

10.5.1.3. Medical direction authorizing the use of lights and siren.

10.5.2. The use of lights and siren is not to be seen as a privilege to disregard traffic rules but as an alert to other road users to give the right-of-way to an ambulance.

10.5.3. Ambulance Drivers shall not assume the right-of-way but exercise extreme caution to ensure right-of-way has been given by other road users.

- 10.5.4. Ambulance Drivers shall not employ aggressive driving techniques to force the right-of-way. The use of voice amplification device such as ambulance hailer is allowed, and the driver shall politely but firmly request the right-of-way.
- 10.5.5. When provided with the right-of-way, the Ambulance Driver shall operate with due regard to the safety of civilian traffic and occupants at all times.
- 10.5.6. The ambulance shall come to a full stop when entering an intersection with a red light, or a stop sign. Only when the driver visually confirms the right-of-way, shall the vehicle enter the intersection.
- 10.5.7. The ambulance shall remain in a single traffic lane. Changing of lanes is acceptable only when it is essential to do so and the intention to change lane shall be made known to other road users.
- 10.5.8. Ambulances shall not travel in opposite direction to traffic under any conditions, unless directed by traffic authority.

10.6. USE OF DISTRACTING DEVICES

- 10.6.1. Operating of distracting devices by Ambulance Drivers while the vehicle is in motion is prohibited.

10.7. JOURNEY MANAGEMENT AND PLANNING

- 10.7.1. Inter-facility transfer of patients shall be planned based on patient's requirement and observe the safety precautions for accompanying staff. **[Surat Pekeliling Ketua Pengarah Kesihatan Bil. 5 Tahun 2017 Keselamatan anggota mengiringi pesakit dalam ambulans Kementerian Kesihatan Malaysia]**
- 10.7.2. For transfers of non-critical patients, the AOS shall decide on the time of travel, based on road conditions, time of day and environmental hazards.
- 10.7.3. AOS must ensure presence of two drivers for journey of more than 4 hours per trip (journey to destination and return). **[Occupational Safety and Health Industry Code of Practice for Road Transport Activities, 2010]**

11. HUMAN RESOURCE MANAGEMENT AND SAFETY STANDARDS

11.1. RECRUITMENT AND TRAINING OF AMBULANCE DRIVERS

- 11.1.1. All Ambulance Drivers shall have a valid driving license, based on the vehicle class of the Ambulance.
- 11.1.2. All Ambulance Drivers shall undergo defensive driving training approved by the MOH. There shall be a mechanism of recertification of trained Ambulance Drivers.
- 11.1.3. MOH PHCAS Providers shall be conduct continuous, scheduled and periodic safety and health training education for all Ambulance Drivers.

11.2. MEDICAL FITNESS FOR AMBULANCE DRIVERS

- 11.2.1. All Ambulance Drivers shall be certified to be medically fit to drive.
- 11.2.2. MOH PHCAS Providers shall be responsible for assigning a Primary Care Physician or Medical Officer for Ambulance Drivers with known pre-morbid diseases.
- 11.2.3. Drivers with poor disease-control based on the current clinical practice guideline for the respective disease shall be prohibited from Emergency Ambulance Services or ***driving with the use of lights and siren*** until deemed fit by the assigned Primary Care Physician or Medical Officer.

11.3. AMBULANCE DRIVER DRIVING HOURS

- 11.3.1. The AOS shall be responsible for managing Ambulance Drivers working hours.
- 11.3.2. Ambulance Drivers shall be allowed to be on duty for only 12 consecutive hours, except with written permission by the Hospital Director or District Health Officer.
- 11.3.3. Ambulance Drivers that have been on duty for more than 12 hours shall be allowed a minimum of 12 hours resting time before recommencing active driving duty.

11.3.4. Ambulance Drivers shall drive for a maximum of four (4) continuous driving hours. **[Occupational Safety and Health Industry Code of Practice for Road Transport Activities, 2010]**

11.3.5. All land ambulance operations with driving time of more than 4 hours shall have two Ambulance Drivers assigned to allow rotation of driving. **[Occupational Safety and Health Industry Code of Practice for Road Transport Activities, 2010]**

11.4. POLICY ON SUBSTANCE ABUSE

11.4.1. Ambulance Drivers shall not be under the influence of any substance that impairs their capability to operate a vehicle during working hours.

11.4.2. Ambulance Drivers shall undergo substance abuse screening procedures, based upon request by the Head of Institution.

11.4.3. Ambulance Drivers tested positive for substance abuse shall be subjected to disciplinary procedures.

11.5. REGULATION VIOLATION AND TRAFFIC OFFENCES MONITORING

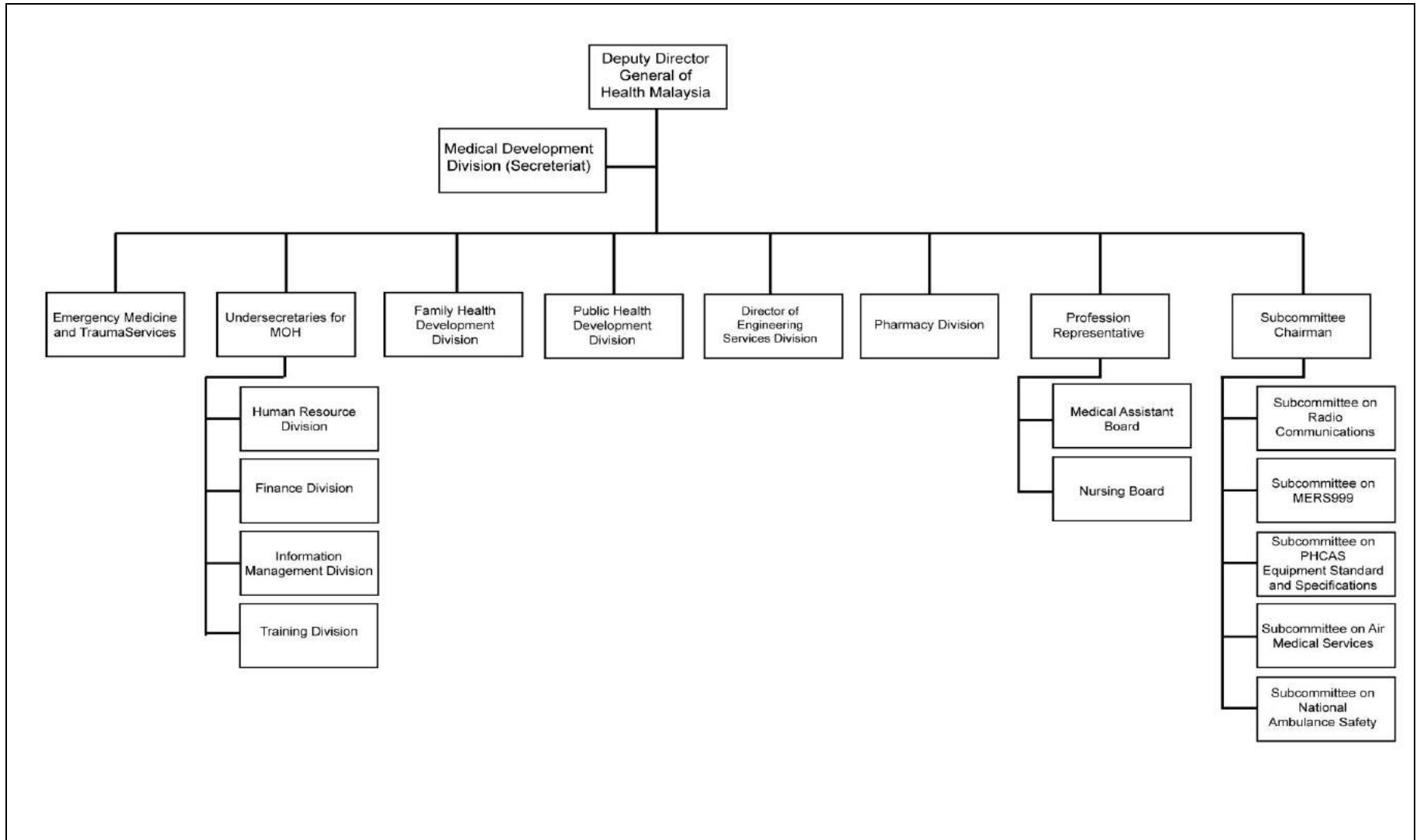
11.5.1. Ambulance Drivers shall be liable to any legal or punitive action for any violation of regulation and traffic offences.

11.5.2. Any Ambulance Drivers involved in a collision resulting in death or disability shall be prohibited from Emergency Ambulance Services or ***driving with the use of lights and siren*** pending investigation by State ASC.

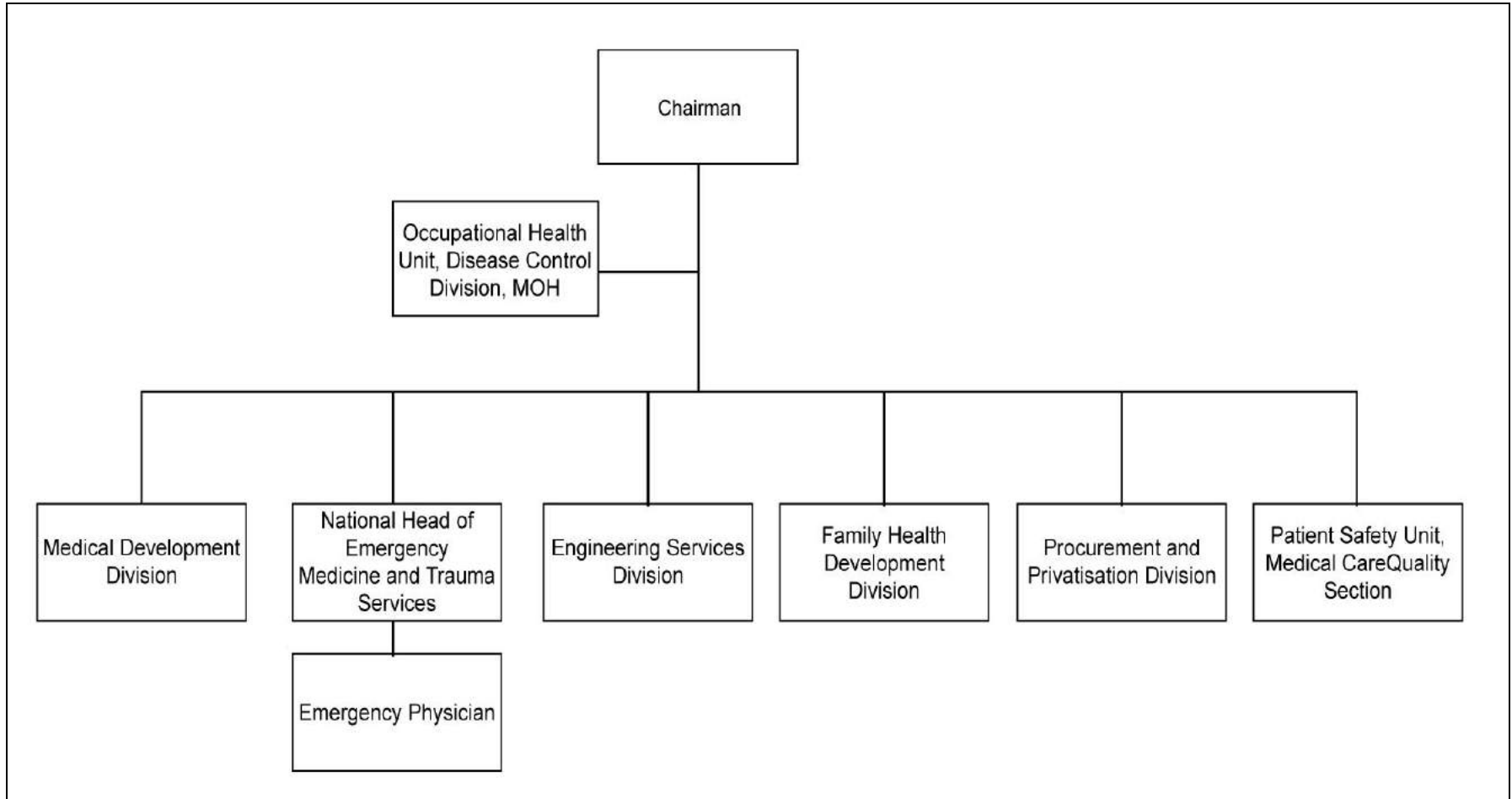
11.6. Any Ambulance Drivers, who are considered as having a high risk driving behavior, shall be prohibited from driving an ambulance.

11.6.1. MOH facilities shall have local operational policies on handling drivers with high risk driving behavior such as training, monitoring and disciplinary process.

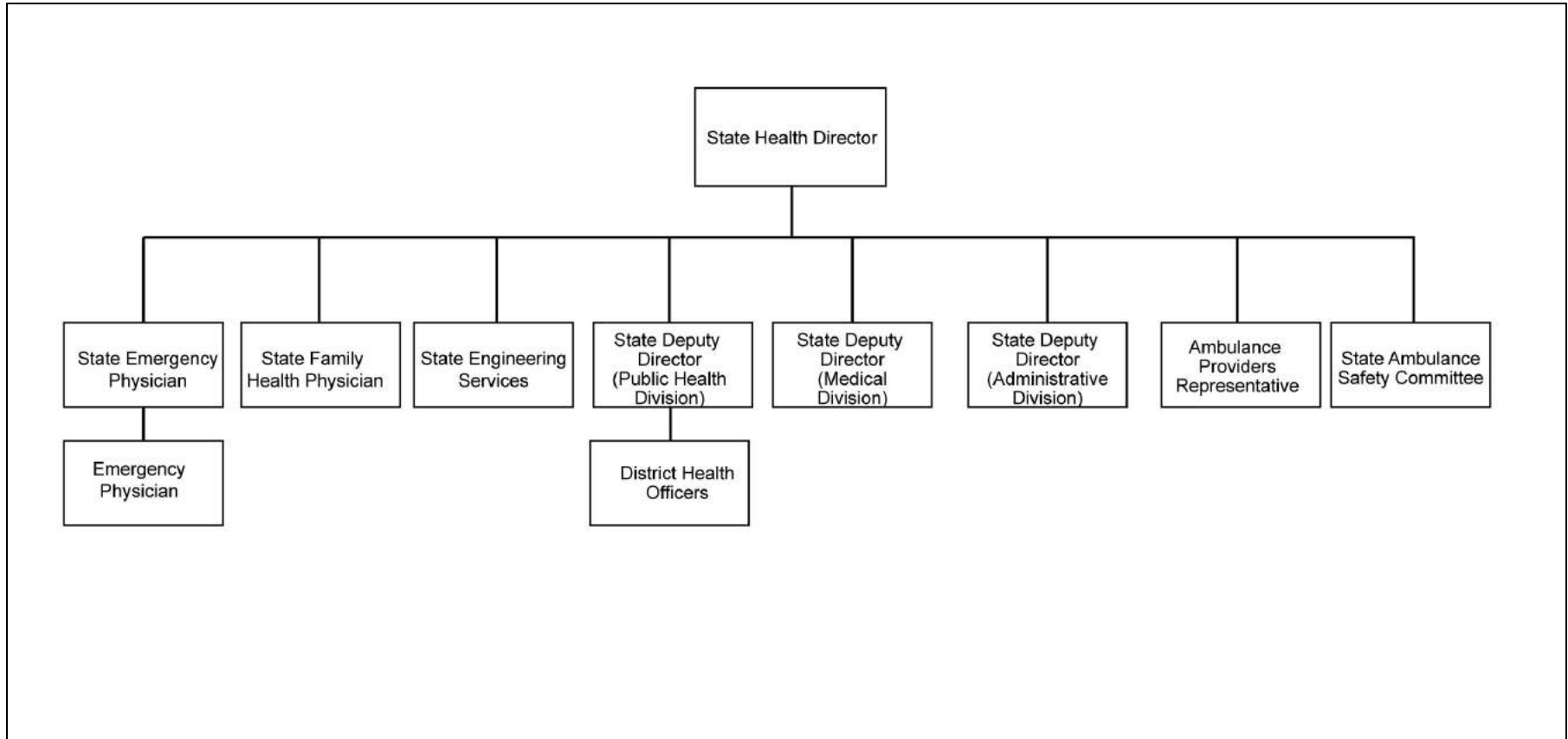
MOH TECHNICAL COMMITTEE ON PHCAS



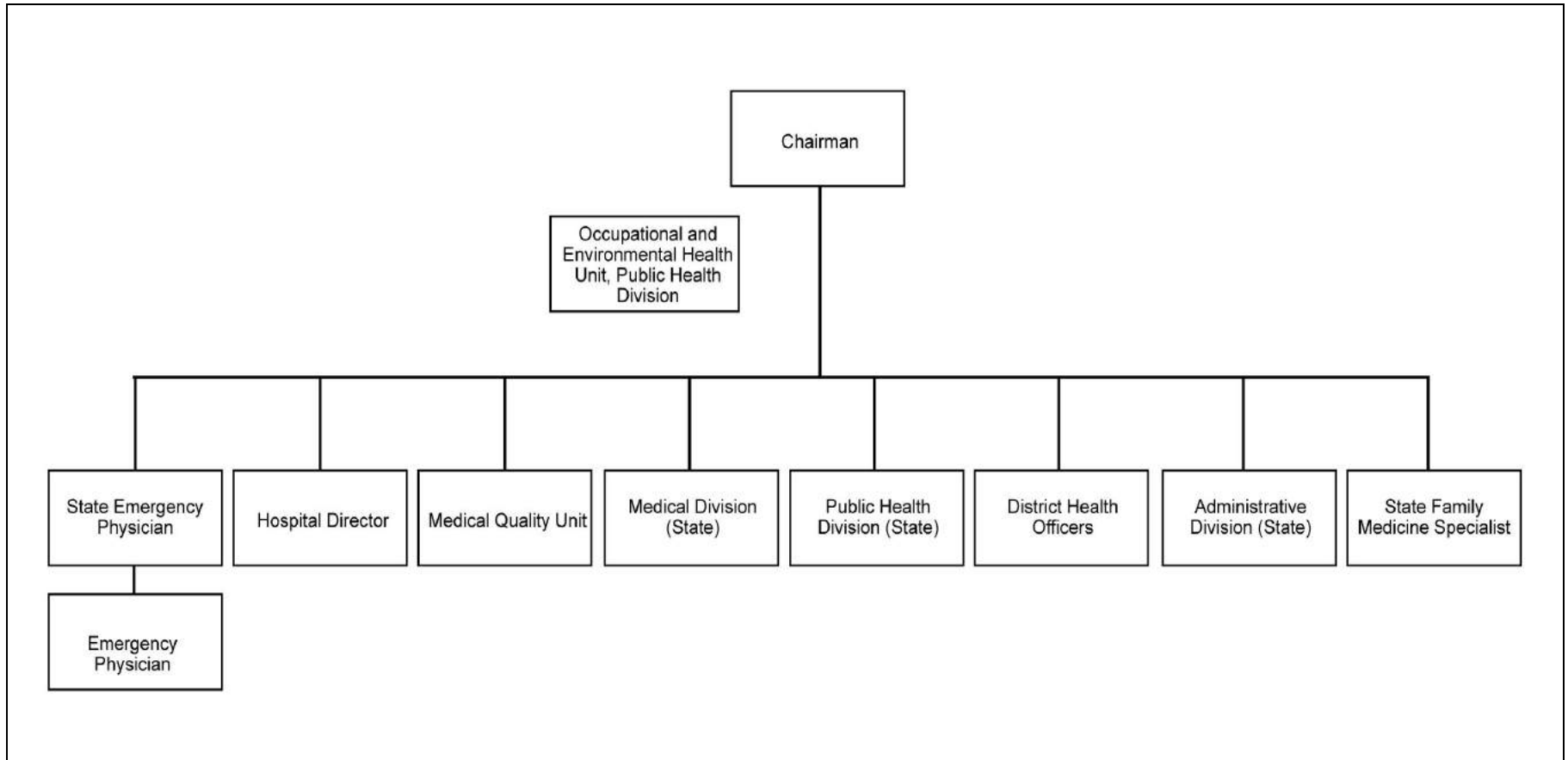
NATIONAL AMBULANCE SAFETY COMMITTEE



STATE TECHNICAL COMMITTEE ON PRE HOSPITAL CARE AND AMBULANCE SERVICES



STATE AMBULANCE SAFETY COMMITTEE



**BORANG NOTIFIKASI INSIDEN DAN KEMALANGAN MELIBATKAN AMBULAN
KEMENTERIAN KESIHATAN MALAYSIA**

A. JENIS NOTIFIKASI INSIDEN

| | |
|---|---|
| Jenis Insiden: <input type="checkbox"/> Kemalangan <input type="checkbox"/> Laporan insiden keselamatan | |
| Tarikh: (Dd/Mm/Yy) | Masa Kejadian: <input type="checkbox"/> Am <input type="checkbox"/> Pm |
| Lokasi kejadian: | |
| Daerah: | Negeri: |
| Kategori Individu yang mengalami kecederaan (nyatakan bilangan)* | <input type="checkbox"/> Tiada kecederaan () <input type="checkbox"/> Penolong Pegawai Perubatan () <input type="checkbox"/> Penolong Perawat Kesihatan () <input type="checkbox"/> Pesakit () |
| Kategori Individu yang mati : (nyatakan bilangan)* | <input type="checkbox"/> Doktor () <input type="checkbox"/> Jururawat () <input type="checkbox"/> Pemandu Ambulan () <input type="checkbox"/> Waris Pesakit () |

* insiden melibatkan kematian atau kecederaan kakitangan hendaklah diserahkan bersama borang WEHU A1/A2

B. MAKLUMAT ORGANISASI

| | |
|---|---------|
| Nama hospital atau klinik atau organisasi | |
| Daerah: | Negeri: |
| Nama Pelapor: | |
| Nombor Telefon | Email: |

C. BUTIR RESPON

| | |
|---|--|
| Jenis Respon Ambulan: <input type="checkbox"/> 999 (primary respon) <input type="checkbox"/> Interfasiliti Kecemasan <input type="checkbox"/> Interfasiliti Bukan Kecemasan <input type="checkbox"/> Lain-lain | |
| Nombor rujukan panggilan MECC: (Bagi respon 999 sahaja) | Kod Triage Panggilan MECC: (Bagi respon 999 sahaja) |
| Penggunaan Pemanduan Lights and Siren <input type="checkbox"/> Ya <input type="checkbox"/> Tidak | Fasa Respon Ambulan: <input type="checkbox"/> Perjalanan kembali ke hospital <input type="checkbox"/> Ke lokasi kejadian atau destinasi |
| Penumpang di dalam kenderaan (Nyatakan bilangan) | <input type="checkbox"/> Pemandu Ambulan () <input type="checkbox"/> Penolong Pegawai Perubatan () <input type="checkbox"/> Penolong Perawat Kesihatan () <input type="checkbox"/> Waris Pesakit () |

D. BUTIR KEMALANGAN DAN JALANRAYA (HANYA BAGI INSIDEN KEMALANGAN)

| | | |
|--|--|--|
| Deskripsi kemalangan | <input type="checkbox"/> Ambulan kemalangan sendiri tanpa melanggar orang, kenderaan atau objek lain <input type="checkbox"/> Perlanggaran antara ambulan dengan objek statik jalanraya seperti pokok, tiang, pembahagi jalan dan lain-lain <input type="checkbox"/> Perlanggaran antara ambulan dengan kenderaan yang statik (tidak bergerak atau parkir) <input type="checkbox"/> Perlanggaran antara ambulan dengan kenderaan lain yang bergerak <input type="checkbox"/> Perlanggaran antara ambulan dengan pejalan kaki <input type="checkbox"/> Ambulan yang statik (tidak bergerak atau parkir) dilanggar kenderaan lain | |
| Jenis Jalanraya | <input type="checkbox"/> Lebuhraya; nama: <input type="checkbox"/> Jalan Persekutuan <input type="checkbox"/> Jalan di kawasan perumahan <input type="checkbox"/> Jalan di Pusat Bandar <input type="checkbox"/> Dalam kawasan letak kenderaan <input type="checkbox"/> Dalam kawasan hospital <input type="checkbox"/> Laluan lintasan keretapi | |
| Kemalangan berlaku di persimpangan atau selekoh jalan? | <input type="checkbox"/> Tidak <input type="checkbox"/> Berdekatan pintu masuk atau keluar tol <input type="checkbox"/> Simpang dengan lampu trafik <input type="checkbox"/> Simpang tanpa lampu trafik <input type="checkbox"/> Persimpangan pusingan "U" <input type="checkbox"/> Lain-lain: (nyatakan) | |
| Keadaan cuaca semasa kemalangan | <input type="checkbox"/> Terang bermatahari <input type="checkbox"/> Mendung <input type="checkbox"/> Hujan <input type="checkbox"/> Berkabus <input type="checkbox"/> Jerebu <input type="checkbox"/> Lain-lain: (nyatakan) | |
| Pencahayaan jalanraya kemalangan | <input type="checkbox"/> Terang (Cahaya matahari) <input type="checkbox"/> Subuh atau senja <input type="checkbox"/> Gelap dan tiada lampu jalanraya <input type="checkbox"/> Gelap tetapi mempunyai lampu jalanraya | |

E. BUTIR KENDERAAN AMBULAN YANG TERLIBAT DALAM KEMALANGAN

| | |
|--|--|
| Jenama atau Model Ambulan: | Model Chassis dan Tahun |
| Nombor Pendaftaran Kenderaan | Tahun Pendaftaran Ambulan |
| Tarikh Akhir PPM | Tarikh Akhir Servis Kerosakan |
| Kerosakan dan Fungsi Ambulan Selepas Kemalangan (lakarkan kawasan kerosakan pada gambarajah ambulan) | <input type="checkbox"/> Kerosakan tidak melibatkan komponen chassis dan masih digunakan <input type="checkbox"/> Kerosakan tidak melibatkan komponen chassis tetapi tidak boleh digunakan sehingga proses baik pulih <input type="checkbox"/> Kerosakan melibatkan komponen chassis dan tidak boleh digunakan sehingga proses baik pulih <input type="checkbox"/> Dijangka berlaku proses BER. |
| Gangguan Perkhidmatan akibat kemalangan | <input type="checkbox"/> Tiada gangguan perkhidmatan dijangka <input type="checkbox"/> Gangguan perkhidmatan interfasiliti sahaja <input type="checkbox"/> Gangguan perkhidmatan respon primer 999 sahaja <input type="checkbox"/> Gangguan semua perkhidmatan pra hospital (tiada ambulan gantian) |

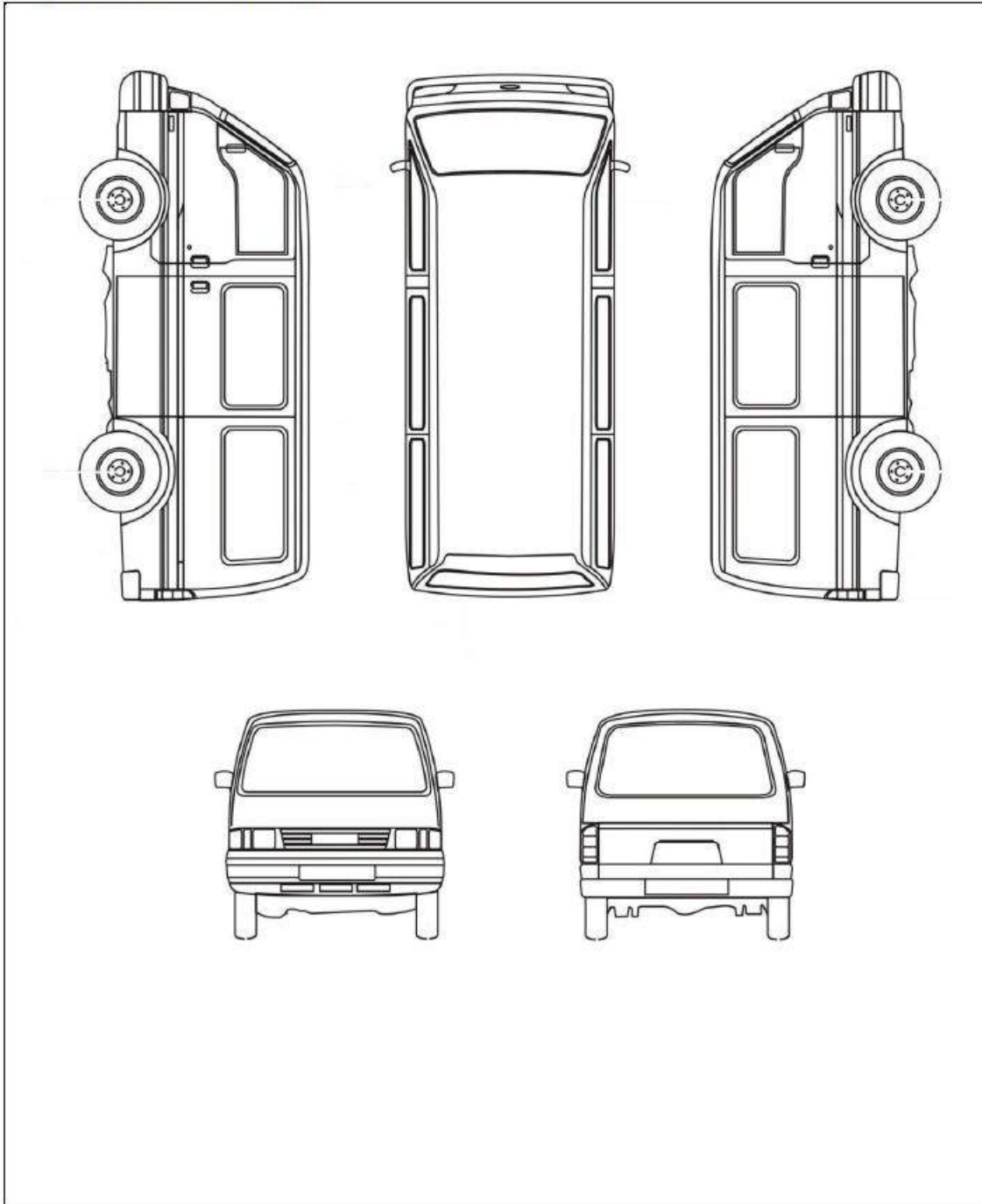
F. BUTIR PEMANDU AMBULAN (HANYA BAGI INSIDEN KEMALANGAN)

| | | | |
|---|---|--|--|
| Nama Pemandu Ambulan: | | | |
| Nombor Kad Pengenalan: | | Jumlah Tahun Berkhidmat Sebagai Pemandu: | |
| Persijilan Kursus Pemanduan Berhemah (nyatakan Tahun) | <input type="checkbox"/> Ada () <input type="checkbox"/> Tiada | Pernah terlibat dalam kemalangan semasa bertugas sebagai Pemandu Ambulan? (nyatakan tahun) | <input type="checkbox"/> Ada () <input type="checkbox"/> Tiada |
| Menghidap sebarang penyakit berikut: | <input type="checkbox"/> Darah Tinggi <input type="checkbox"/> Sawan <input type="checkbox"/> Strok / Angin Ahmar <input type="checkbox"/> Masalah Pendengaran | <input type="checkbox"/> Kencing Manis <input type="checkbox"/> Sakit Jantung <input type="checkbox"/> Masalah Penglihatan <input type="checkbox"/> Lain-lain: Nyatakan | |
| Adakah mengambil sebarang ubatan? (nyatakan dalam lampiran berasingan jenis ubat dan dos) | <input type="checkbox"/> Ada <input type="checkbox"/> Tiada | Pernah menjalani ujian pemeriksaan kesihatan dalam tempoh 2 tahun? (nyatakan tahun) | <input type="checkbox"/> Ada () <input type="checkbox"/> Tiada |
| Jadual bertugas dalam tempoh 48jam sebelum waktu kemalangan: | | | |
| Jumlah Syif (nyatakan bilangan): | | Jumlah jam bekerja dalam syif tersebut di atas termasuk waktu oncall (nyatakan dalam jam): | |

G. BUTIR TAMBAHAN YANG DIFIKIRKAN PERLU DILAPORKAN

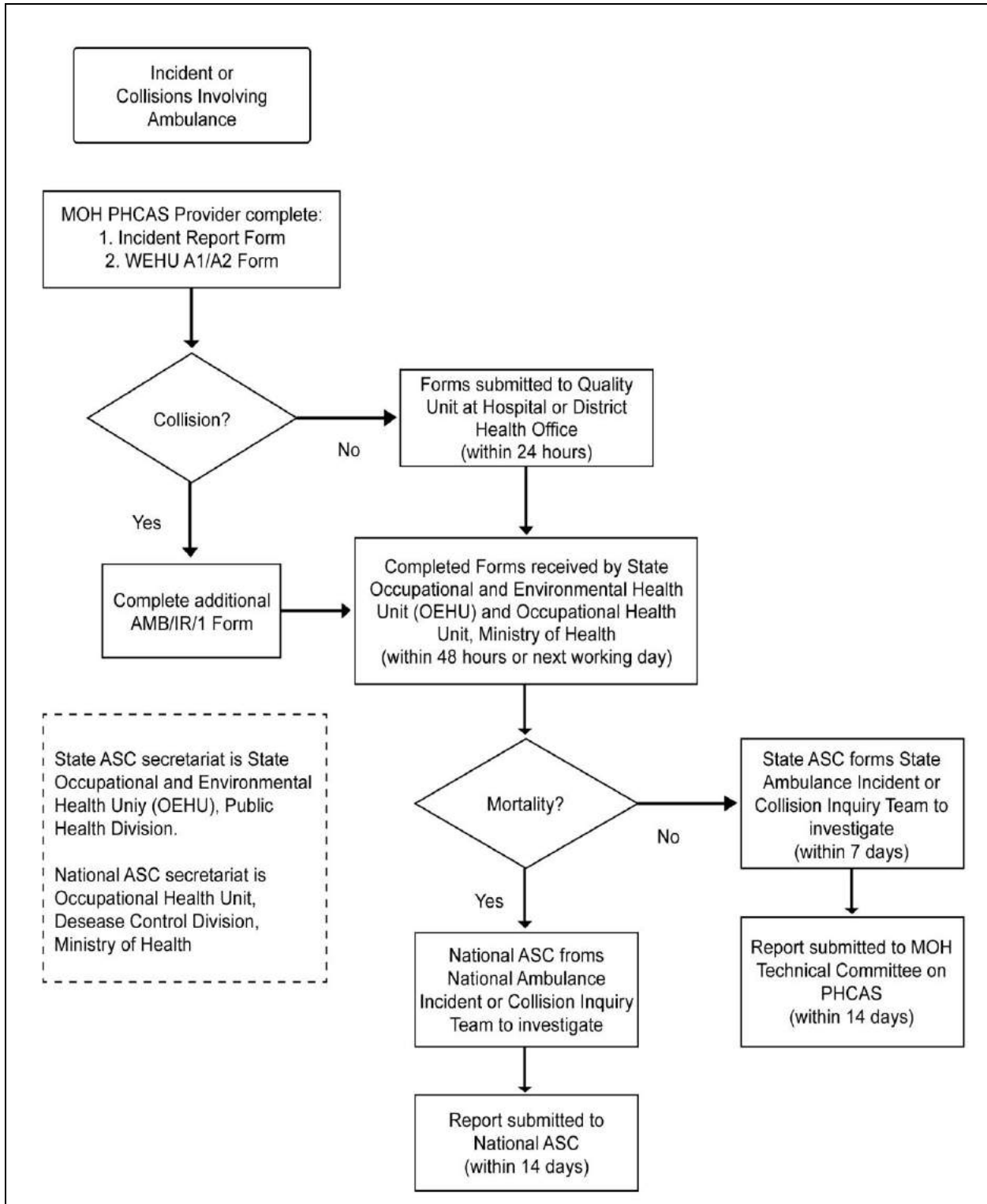
Tandatangan dan Cop Nama Pelapor

GAMBARAJAH KEROSAKAN AMBULAN:



1. Tandakan kawasan serta ringkasan kerosakan yang dihadapi.
2. Bagi peralatan yang tiada dalam rajah seperti lampu siren ambulan, tandakan kawasan peralatan serta kerosakan yang dihadapi (jika ada)

AMBULANCE SAFETY INCIDENT AND COLLISION INVESTIGATION FLOW



SAFETY ELEMENTS IN LAND AMBULANCE TECHNICAL SPECIFICATIONS

1. CHASSIS OF AMBULANCES

- 1.1. Ambulance chassis shall meet the operational requirements, such as the local barriers, terrain and hazard challenges, of the service.
- 1.2. Specific manufacturer recommendations pertaining to the chassis must be strictly adhered to during the design process.
- 1.3. The chassis of ambulances shall meet current accepted local or internationally accepted standards for Frontal Collision Impact Test and Lateral Collision Impact Test.

2. PASSIVE VEHICLE SAFETY TECHNOLOGY

- 2.1. All ambulances shall be provided with current vehicle safety technology systems.
- 2.2. All ambulances shall also be provided with run flat tyre protection systems.

3. AMBULANCE INTERIOR, SEATING AND RESTRAINTS

- 3.1. Seating allocation and maximum allowable occupants within a vehicle shall be calculated based upon the permissible Gross Vehicle Weight specified by the chassis manufacturer.
- 3.2. Each occupant shall be provided with a seatbelt for all seating positions. All seatbelts shall comply with the current accepted local or international standards.
- 3.3. The fixtures and installation in the patient compartment shall be free of all sharp projections, edges or corners.
- 3.4. The interior surface finishing shall be of material which allows disinfection and decontamination cleansing processes using soap, water, and disinfectants for infection control.
- 3.5. Patient stretchers shall have a stretcher secured and occupant restraint systems.

- 3.6. The stretcher occupant restraining system shall include restraints for shoulders, pelvic and legs. It shall be adjustable to accommodate occupants' weight ranging from 15kg to 150kg. It also shall have a quick-release mechanism.

4. VEHICLE VISIBILITY

- 4.1. Ambulances shall be provided with a standard highly visible base body colour that promotes maximum visibility during dusk, daylight, and dawn and night time.
- 4.2. To further promote visibility and recognition regardless of weather, terrain or environment, additional colours may be used on the external surface of ambulances.
- 4.3. The use of micro-prismatic reflective material that adheres to current accepted local or international standards shall be used to facilitate night time visibility. It shall indicate the outline and direction of the vehicle.
- 4.4. Ambulances shall be equipped with an integrated light and sound system with an audible emergency siren and a warning light system with flashing lights. The system adheres to current accepted local or international standards.
- 4.5. Ambulances shall also be equipped with emergency warning lights at the forward edge of each front fender that flash in an alternating pattern. The emergency warning lights shall serve as an intersection warning lights system.

5. MEDICAL EQUIPMENT

- 5.1. All medical devices, equipment and objects shall have specific stowing, fixation or restraint systems to prevent damage or injury to occupants whilst the vehicle is in motion.
- 5.2. Resuscitation equipment shall be located within reach of the responder in the rear facing seat with minimal movement.
- 5.3. All ambulances should be equipped with current technology designed to free the hands of responders during transportation.

6. COMMUNICATIONS EQUIPMENT

- 6.1. Ambulances shall be equipped with a communications device that allows exchange of information through various medium between the vehicles and the coordinating MECC.
- 6.2. Ambulance's staff should use current hands-free technology during communication.
- 6.3. All vehicles shall be provided with a Navigation System or equivalent for tracking and monitoring purpose.

Ambulance Passenger Indemnity Form

I _____, NRIC number
_____ acknowledge to have received information regarding risks of
travelling in an ambulance by
_____ a staff of Ministry of
Health Malaysia.

I hereby irrevocably and unconditionally undertake and agree to the following:

1. Indemnify MOH and ambulance staff against all actions, claims, demands, costs (including legal costs), losses and expenses;
2. Not to hold MOH and ambulance staff responsible or make any claim against MOH and ambulance staff in respect of any loss, damage or injury arising as aforesaid;
3. I will keep confidential and not disclose any and all information relating to MOH, ambulance staff and patients;
4. I will not film, photograph or record any of your patients or any other without first obtaining the verbal consent of such patient;
5. I will not film, photograph or record any of MOH staff without first obtaining the verbal consent of such staff;
6. I will not film, photograph or record on private property without first obtaining the verbal consent of those persons responsible for the property;
7. I will not publish any of film, photograph or record as mentioned above in any form of public media unless permitted by the MOH.

DATE:

SIGNED by

NAME:

WITNESS:

Signature: _____

Occupation: _____

REFERENCES

1. Emergency Medicine and Trauma Services Policy Ministry of Health Malaysia.
2. Tata Amalan Industri Keselamatan dan Kesihatan Pekerjaan bagi Aktiviti Pengangkutan Jalan 2010; Jabatan Keselamatan Dan Kesihatan Pekerjaan Kementerian Sumber Manusia, Malaysia
3. Akta Pengangkutan Jalan (APJ)1987
4. Sentinel Events Policy and Procedures, Joint Commission of Health; 2017
5. EMS Provider And Patient Safety During Response And Transport: Proceedings Of An Ambulance Safety Conference; Pre hospital Emergency Care; 16(1); 2012
6. Medical Vehicles and Their Equipment – Road Ambulances; DIN EN 1789: 2010-11
7. Australian/New Zealand Standard Ambulance Restraint Systems; AS/NZS 4534:1999
8. Ambulance Vehicle Standards Code, January 2010, Emergency Health Services, Health Policy and Service Standards Development Branch, Alberta Health and Wellness.
9. Ambulance Crash Characteristics Defined by the Popular Press: A Retrospective Analysis; September 9, 2009.
10. The Frequency of Medical Examination as a Pre-Condition for Licensing Of Commercial Vehicle Drivers in Malaysia (2009). MER06/2009, Malaysian Institute of Road Safety Research.
11. American National Standard on Safe Practices for Motor Vehicle Operations; ANSI/ASSE Z15.1 – 2012
12. Pekeliling Perbendaharaan WP 4.1/2013: Pengurusan Kenderaan Kerajaan.
13. Pekeliling Perbendaharaan WP 4.2/2013 : Kemalangan Kenderaan yang Melibatkan Kenderaan Kerajaan
14. Garis Panduan Penyelenggaraan Ambulans Di Hospital Dan Klinik Kesihatan 2014, Bahagian Perkhidmatan Kejuruteraan Kementerian Kesihatan Malaysia.

COMMITTEE MEMBERS

Advisors

1. YBhg Datuk Dr Noor Hisham b. Abdullah
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Former Deputy Director of Health (Medical)
3. YBhg Datuk Dr Hj. Rohaizat Bin Hj. Yon
Deputy Director Of Health (Medical)
4. YBhg Dato' Dr Hj Bahari Bin Dato' Tok Muda Che Awang Ngah
Director Medical Development Division
5. YBhg Datin Sri Dr Asmah Bin Samat
Deputy Director Medical Development Division

Chairman

1. Dr Sabariah Faizah bt Jamaluddin
Former Head of Emergency Medicine and Trauma Services, MOH
2. Dr Mahathar Bin Abd Wahab
Head of Emergency Medicine and Trauma Services, MOH

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Secreteriat

1. Puan Noor Azmah bt Ahmad Zaki
2. Cik Yusfarina bt Yamsuri



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KEMENTERIAN KESIHATAN MALAYSIA

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