

PETRONAS TECHNICAL STANDARDS
HEALTH, SAFETY AND ENVIRONMENT

MEDICAL EMERGENCY MANAGEMENT
(GUIDELINE)

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PREFACE

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AMENDMENT RECORD SHEET

Chap. No.	Sect No.	Description	Issue No.	Date	Rev No.	Date	App by: (initial)
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1 INTRODUCTION

OBJECTIVE OF THIS DOCUMENT

PTS 60.0102 HSE Management System (reference 1) requires an OPU/JV to have emergency response procedures in place, including plans for medical emergencies.

These guidelines, which are intended for Line Managers and their health advisers, describe how an OPU/JV should draw up its Medical Emergency Response Plans as part of its overall emergency response procedures. Such procedures form part of the 'Recovery' step of the Hazards and Effects Management Process (HEMP) in HSE Management Systems.

Medical Emergency Response Plans shall contain provisions for the management of all foreseeable medical emergencies that might result from any aspect of an OPU/JV operations. Plans must be regularly exercised and reviewed to ensure they remain fit-for-purpose. Additional detailed advice for medical staff is provided in reference 4.

SCOPE

These Guidelines apply to all OPU/JV operations and installations including all operations conducted by OPU/JV personnel and contractors working on OPU/JV premises.

They also apply to contractors working on non-OPU/JV premises when it has been concluded that OPU/JV management controls should be applied. Additional guidance on which contractor activities should be considered to be under operational control is provided in PTS 60.0505 'Incident Classification and Reporting'.

A risk-based approach should be adopted to decide the extent to which these Guidelines apply to employees who are normally working away from OPU/JV locations and facilities, e.g. drivers, sales representatives, home workers. Specific procedures need to be developed to cover these situations. Guidance on the specific case of road transport operations is provided in PTS 60.2221 'Road Transport Management'.

2. **BACKGROUND**

All industrial activities involve some risk of illness of, or injury to, the workers. Whilst the main emphasis of the Hazard and Effect Management Process (HEMP) is on hazard 'Identification', 'Assessment' and 'Control', injury or illness may nevertheless occur, and it is necessary to define and implement a system to manage the 'Recovery' element of HEMP.

Recovery actions related to illness or injury whilst at work should be described in a Medical Emergency Response Plan. Appropriate actions range from basic first aid administered on the work site to evacuation of a patient to a hospital or medical attention on the site of the emergency. The aim is to prevent further damage to a person's health and, as far as is practicable, to assist their full recovery.

The guiding principles of effective medical emergency management are to:

- Create awareness of emergency situations and of their potential for escalation.
- Develop an integrated approach to the management of medical emergencies, allowing for several levels of expertise to function in a co-ordinated manner.
- Ensure that every worker understands how the system operates as they may play a crucial part in it; he/she may be the only person able to take immediate action when an emergency occurs.
- Have a good network of communications from one level of the health care team to another in order to provide continuous medical support from immediate care on the spot through to treatment in hospital.
- Provide the resources required to carry out these responsibilities.
- Conduct regular training and exercises to test procedures, and provide learning and feedback of experience.
- Evaluate the effectiveness of Medical Emergency Response Plans as part of incident investigation, audit and review of the HSE Management System.

The document is organised along the lines of PTS 60.0102 HSE Management System.

3 **MEDICAL EMERGENCY MANAGEMENT SYSTEM**

POLICY AND STRATEGIC OBJECTIVES

As part of the Hazards and Effects Management Process, the Recovery element aims at limiting the consequences of incidents.

The objective of the Medical Emergency Response Plan, an integral part of the OPU/JV's overall emergency response plan, is therefore:

To minimise the consequences of acute illness or injury occurring at the work place.

Where illness or injury occurs at an installation under operational control (e.g. an office, a depot, a refinery or chemicals manufacturing site, an off-shore facility etc. etc.) this objective can be achieved by a tiered response:

- Tier 1: First aid on the emergency site
- Tier 2: Professional patient stabilisation prior to transport (Medevac)
- Tier 3: Professional attention at the nearest available hospital
- Tier 4: Referral to an appropriate specialist hospital in the country of operation or other country

An OPU/JV shall decide, as its strategic objectives, how each of these four tiers are to be fulfilled in its operation. Within reasonable operational constraints, employees should be provided with a standard of medical emergency treatment that is at least equivalent to that available to typical employees in the employee's base country.

Medical Emergency Response Plans shall also take account of medical emergencies that arise away from installations under operational control. A risk-based approach should be adopted in planning the appropriate response. In many countries it may be perfectly appropriate to rely on the national emergency services. However, in countries where these services are not of a reasonable standard, or for activities which incur specific risks of accident or illness away from sites under operational control, the OPU/JV's Medical Emergency Plan shall make specific provision for off-site incidents.

ORGANISATION, RESPONSIBILITIES

An OPU/JV should have access to professional health advisory services, normally from an appropriate qualified doctor. Depending on the local circumstances this may be an in-house doctor employed full or part-time, or an external medical practitioner whose services are used as and when required by the OPU/JV. In this document this individual is referred to as 'OPU/JV Health Adviser'.

Advice to OPU/JVs on the most appropriate approach to the provision of health advisory services, including guidance on engagement of a competent Health Adviser, is available from the Petronas Group Chief Health Adviser, Kuala Lumpur, Malaysia.

The organisation of a typical tiered Medical Emergency Response Plan for an installation under operational control is detailed in Table 1. The development of the plan and its implementation is a responsibility of line management.

Table 1 Organisation of the tiered medical emergency response

Tier	Action required	Action party and resources	Maximum time required after Injury
1	Secure immediate safety of patient	First Aider	4 minutes
	Basic Life Support [BLS] (cardiopulmonary resuscitation, control of bleeding, care of the unconscious including maintaining open airway, spine protection)	First Aid Kit	
	Work-specific: chemical & heat burns, frostbite, eye injuries, heat-stress, gassing etc.)	MSDS for all chemicals used	
	Assess need for Tier 2 activation		
	Communicate with Tier 2 personnel		
	Initiate call out if required	Supervisor, any other person	asap
2	Assess injury, need for Medevac (Tier 3)	Paramedic/emergency technician, offshore medic, nurse, site doctor, OPU Health Adviser	One Hour
	Take first professional Advanced Life Support [ALS] actions to stabilise patient (IV drip, pain killers, defibrillator, oxygen, etc.)	Resuscitation /Trauma bag First aid room Ambulance, stretchers, defibrillators	
	Maintain contact with OPU Health Adviser		

	Organise Medevac if required	Management, OPU Health Adviser	
3	Receive patient at local hospital	Medical/surgical specialist	Four hours
	Assess condition	Local hospital	
	Take best locally available professional action		
	Monitor progress/Follow up Documentation	OPU Health Adviser	
4	Appropriate specialist medical care required for further treatment of the injury or illness	Appropriate specialist hospital in the country of operation or others	Depending on case
		Medical Specialists and OPU Health Adviser / Management	

Competence and training

The following levels of competence and training are defined:

Level 0: All employees and supervisors

Level 1: First Aider (Tier 1)

Level 2: Paramedic/emergency technician, offshore medic, nurse, site doctor, OPU/JV Health Adviser (Tier 2 and 3)

Level 3: Medical/surgical specialists (Tier 3 and 4)

Appendix 1 gives the minimum competences required from each of the parties likely to be involved in a medical emergency so they can adequately discharge their responsibilities. Basic life support and advanced life support competencies will require re-certification every 2 years. For further details see reference 4.

Competence levels shall be verified upon employment and at regular intervals thereafter.

Resources

Level 1 personnel are normally OPU/JV staff, dedicated or not to first aid duties.