



GUIDELINES ON FIRST-AID IN THE WORKPLACE

(2nd Edition)

**DEPARTMENT OF OCCUPATIONAL SAFETY AND HEALTH
MINISTRY OF HUMAN RESOURCES
MALAYSIA
2004**

JKKP : GP(I) 06 / 2004
ISBN : 983-2014-43-3

PREFACE

“First-aid” is the assessment and interventions that can be performed by a first aider during an emergency with minimal equipment until appropriate medical personnel arrive. The life of an injured or ill worker or member of the public within the vicinity of the workplace may depend on proper first-aid being given within the first few minutes of an accident or an illness. Besides saving lives, first-aid treatment is important in preventing further complications from injury and pain and in promoting recovery. It is also important for minor injuries such as burns, sprains, cuts, etc.

This guidelines help employers, occupiers and Occupational Safety and Health personnel, to plan and provide proper first-aid facilities in factories or other workplaces. It is presented in a simple format for quick and easy reference. It is hoped that it will meet the needs of industry.

ACKNOWLEDGEMENT.

Department of Occupational Safety and Health (DOSH) Malaysia is grateful for the valued input and content recommendations from the following contributors for the second edition of this guidelines:

Prof. Dr. Krishna Gopal Rampal
Senior Lecturer of Occupational Health
Medical Faculty
University Kebangsaan Malaysia.

Dr. Abu Hassan Samad
Medical Adviser
Exonmobil Malaysia.

Dr. Nik Hisamuddin Nik Ab. Rahman.
Lecturer of Emergency Medicine
School of Medical Sciences
University Science Malaysia

Dr. Agus Salim Mohd. Banon
Manager
Occupational Health Division.
NIOSH

Dr. Jefferelli Shamsul Bahrin
Occupational Health Physician,
BASF PETRONAS Chemicals Sdn. Bhd.

Dr. Faridah Amin
Occupational Health Physician
Industrial Health Division
DOSH, Headquarters.

Dr. Norsayani Mohd. Yaacob.
Occupational Health Physician
DOSH, Pahang.

Mr. Haniff Yahaya
Executive
Occupational Health Division.
NIOSH

Dr. Siah Chui Khim
Master Student
Social Preventive Medicine
University Malaya.

Mr. Mohamad Husain Sajahan.
Lead Paramedic
BASF PETRONAS Chemicals Sdn. Bhd.

DOSH also acknowledge and appreciate the prior hard work, dedication, and foundation provided by the editors of the prior edition, Dr. Abed Onn, Dr. Ling Kin Hong, Mr. D. Muniady, Major(R) Raja Harun Raja Ismail, Dr. Rosidah Ibrahim, Dr. Sarfuddin Osman, Hjh. Maimunah Khalid, Dr. Sarojiji S, Ir. Hj. Abu Bakar Che Man, Ir. Mohtar Musri, Mr. Anuar Mokhtar and Mdm. Muaziah Abd. Rahman, and the many users of the *Guides* who submitted recommendations concerning the revision. Their input was essential to creating this edition of *Guides*.

Ir. Hj. Abu Bakar Che Man
Director General
DOSH, Malaysia.

Ir. Hj. Zainuddin Abdullah
Deputy Director General
DOSH, Malaysia.

Table of Content

	Page
1. DEFINITIONS	1
2. LEGAL PROVISION	2
3. COMPONENTS OF WORKPLACE FIRST-AID FACILITIES	
3.1 Major Components	2
3.2 Factors to Consider	2
4. FIRST-AIDERS	
4.1 Number Required	2
4.1.1 General Guide	2
4.1.2 Shift Work	3
4.1.3 Work-site With More Than One Employer	3
4.2 Provision of Information about First-Aiders	3
4.3 Selection	3
4.4 Training	3
4.4.1 Recognized Course	3
4.4.2 The Need for Further Training	4
4.4.3 Training Record	4
4.5 Responsibilities	
4.5.1 Management Of Casualty	4
4.5.2 Maintenance Of Treatment Record	5
4.5.3 Responsibilities For Maintenance Of First-Aid Facilities	5
5. FIRST-AID BOX	
5.1 Design	5
5.2 Location	5
5.3 Contents	6
6. FIRST-AID ROOM	
6.1 Design	6
6.2 Location	6
6.3 Items In First-Aid Room	7
7. SPECIAL FIRST –AID REQUIREMENTS	
7.1 Provision For Mass Casualties	7
7.2 Special Instructions	7
7.3 Protective Clothing And Equipment	7
7.4 Cleaning Up	7
8. REFERENCES	
Appendix 1 – Institutions Recognized by the DOSH for providing training on First-Aid in the Workplace	9
Appendix 2 – Course Content for First-Aider	10
Appendix 3 – Record of Casualty and Treatment given by First-Aider	12
Appendix 4 – Recommended Content of First-Aid Box	13
Appendix 5 – Checklist for Components of First-Aid requirements	14
Appendix 6 – Checklist For First-Aid Box	15
Appendix 7 – Typical Layout Of A First-Aid Room	16
Appendix 8 – Recommended Facilities For First-Aid Room	17

1. DEFINITIONS

- 1.1 **First-aid** in the workplace includes the provision of first-aid facilities, services and personnel required for the initial treatment of persons suffering from injury or illness at a workplace. It is the immediate treatment or care given to a victim of an accident or sudden illness before qualified health personnel attend to provide treatment.

The aims of first aid are to:

- Preserve life;
- Prevent illness or injury from becoming worse;
- Reduce pain;
- Promote recovery; and
- Care of unconscious.

- 1.2 **First-aid** facilities includes

- first-aid box;
- first-aid room; and
- first-aid equipment, e.g. oxygen tanks and stretchers.

- 1.3 **First-aid** requirement means the requirements for first aid facilities, services and personnel at a workplace;

- 1.4 **First-aid services** means any procedure or method associated with the provision of first-aid at the workplace;

- 1.5 **First-aider** means a person who has successfully completed a first-aid course and has been awarded with a certificate of proficiency in first-aid by an institution listed in *Appendix 1*.

- 1.6 **Risk** means the likelihood that a hazard will cause harm.

- 1.7 **Universal Precautions** means a set of precautions designed to prevent transmission of blood-borne pathogens when providing first aid or health care.

2. LEGAL PROVISION

An employer has a duty to provide information, instruction, training and supervision about first aid facilities and services for employees.

2.1 The Factories and Machinery Act 1967

Section 25 of the Factories and Machinery Act 1967 (Act 139) and Regulation 38 of the Factories and Machinery (Safety, Health and Welfare) Regulations 1970 state the scope of responsibility of an occupier with regards to first-aid provision. The scope includes:

- providing and maintaining a first-aid box or cupboard of such standard as may be prescribed and ensuring the box is readily accessible at all times;

- assigning the responsibility to upkeep a first-aid box or cupboard to a responsible person, and for a factory with more than 20 person employed, specifying that the responsible person should be proficient in first-aid treatment; and
- providing and maintaining a first-aid room in a factory where more than 150 person are employed.

2.2 The Occupational Safety and Health Act 1994

Section 15(1) of the Occupational Safety and Health Act 1994 (Act 514) provides that every employer and the self-employed person must ensure, so far as is practicable, the safety, health and welfare at work of all his employees. The provision of first-aid facilities and first-aiders is in compliance with the welfare component of this general duty of employers and self-employed persons.

3. COMPONENTS OF WORKPLACE FIRST-AID.

3.1 Major Components

There are four major components of workplace first-aid, namely;

- first-aider
- first-aid box
- first-aid room
- first-aid equipment

3.2 Factors to Consider

When deciding on the number of first-aiders, first-aid box, first-aid room and first-aid equipment for the workplace, the following factors should be considered:

- type of industry
- number of workers
- number of work shifts
- location of workplace and status of infrastructure in relation to the nearest medical clinic or hospital

4. FIRST-AIDERS

4.1 Number of first-aiders Required.

4.1.1 *General Guide*

Description	No. Of Workers	No. Of First-aiders
a. workplaces with low risk hazards (e.g. office)	less than 20 21- 150 more than 150	one (1) two (2) two (2) for every 150 workers or part thereof.
b. workplaces with high risk hazards (e.g. chemical plant, shipyards, construction sites)	less than 20 20 or more	one (1) per shift one (1) for every 20 workers or part thereof.
c. Workplaces with more than 400 workers		two (2) for every 150 workers or part thereof and in addition a registered nurse or medical assistant must be employed on site.
d. Logging		one for every “tree felling gang”**

*** a tree-felling gang is a group of workers involved in tree felling operation which normally consists of a tree-feller, a tractor driver, a wireman and the supervisor.*

4.1.2 *Shift Work*

If there is a shift work schedule, there should be a sufficient number of first-aiders for each shift based on the guideline in paragraph 4.1.1.

4.1.3 *Work-Site With More Than One Employer*

In a work-site (e.g. a construction site) where employees of different employers are working together, Act 514 requires the principal employer to provide and maintain safe systems of work which include provisions for adequate and appropriate first-aiders, first-aid box, first-aid room and first-aid equipment.

However, the relevant employers may make arrangement whereby one of them agrees to provide adequate and appropriate first-aiders, first-aid box, first-aid room and first-aid equipment to comply with the above guidelines. The agreement should be recorded in writing and a copy of the agreement should be kept by each employer concerned.

4.2 Provision of Information About First-Aiders

An employer should display a notice, in a prominent place in the work-site, of the names and locations of first-aiders. First-aiders should also be provided with a form of identification (e.g. badge, arm band) for easy recognition.

4.3 Selection

An employer shall, from time to time, recruit or select suitable persons to go for first-aid training. The employer should consider persons with the following qualities to be trained in first-aid:

- physically fit
- free from blood borne infectious diseases, e.g. Hepatitis B, HIV/AIDS
- free to leave their work immediately to respond to an emergency

4.4 Training

4.4.1 *Recognised Course*

A course on first-aid conducted by institutions listed in *Appendix 1* are recognized by DOSH as meeting the first-aid training requirement. The course should have contents listed in *Appendix 2*.

4.4.2 *The Need for Refresher Training*

First-aiders need to undergo a recognized course (appendix 1) once every three (3) years.

4.4.3 *Training Record*

The employers should keep a record of the dates on which first-aiders obtained their training and the dates on which they received refresher training.

4.5 Responsibilities

4.5.1 *Management of Casualty*

In the management of an injured worker or ill worker, first-aiders should:

- give immediate first-aid treatment, keeping in mind that a casualty may have more serious injuries and illness; and
- arrange without delay for the injured worker(s) to be sent to a doctor, hospital or home, according to the seriousness of this condition.

- Apply the principle of Universal Precautions while delivering the responsibility to protect the first-aiders from acquiring blood borne pathogen e.g. Hepatitis B and HIV.

This first-aider's responsibility ends when the casualties are handed over to the care of health care personnel.

4.5.2 Maintenance of Treatment Record

A record of the casualty and treatment given by the first-aider should be made as in **Appendix 3**. This record shall be kept by the employer for a period of **five years**.

The record should include information on:

- the immediate treatment;
- details about the incident/accident including information about the work process involved;
- details about injury or work-related illness;
- any referral arrangements made, e.g. usage of local ambulance service, referral to local hospital; and
- subsequent casualty management.

4.5.3 Responsibilities for Maintenance of First-Aid Requirement.

This first-aider is responsible for maintaining the first-aid box. He/She should ensure that only first-aid material is kept inside the box. He/She should check them periodically and ensure that the contents of the box are regularly replenished (as recommended in **Appendix 4**).

However, it must be remembered that the absolute responsibility for maintaining first-aid facilities lies with the employer. Hence, the employer must ensure that the first-aider carries out his/her assigned responsibility.

The employer should review annually the first-aid requirement (as in **Appendix 5**) to ensure that the services are adequate at all times.

In places where a state registered nurse or medical assistant is employed, he or she is responsible for the supervision of the first-aider and the responsibility for maintenance of the first-aid facilities.

5. FIRST-AID BOX

5.1. Design

First-aid boxes should be made of sturdy material and be portable so that it can be taken to the site of an incident. The boxes should also be clearly marked.

5.2 Location

Each first-aid box should be placed in a clearly identifiable, well-illuminated and accessible location. Where a workplace covers a large area, an adequate number of first-aid boxes should be provided. The box should be kept locked and the key thereto kept by responsible person available during all working hours [section 38 (iii) FMA (safety, Health and Welfare) Regulations]. The employees should be informed of the location of all first aid boxes.

5.3 Contents.

First-aid boxes should contain a sufficient quantity of suitable first-aid materials. They should not contain oral medication of any kind other than those required for first-aid treatment.

It is essential that first-aid boxes be checked frequently so as to make sure they are fully equipped and all items are usable. Materials used should be replaced as soon as possible. *Appendix 4* recommended the contents of a first-aid box. *Appendix 6* is an example of a checklist which can be used for checking the appropriateness of the contents of the first-aid box.

6. FIRST-AID ROOM

6.1 Design

A first-aid room should be provided where there are more than 150 employees in the workplace..

The room should be large enough to hold a couch and still have space for people to move about. There should be emergency lighting in the room.

The walls made of foldable or removable type to enable the room to be expand to the requirement size, floor and ceiling should be of material which does not collect dust and is easily cleaned. Floors should be of non-slip material.

Privacy must be ensured, by obscuring windows if necessary. Temperature and humidity should be maintained at a comfortable level.

It should also be clearly identified as a first-aid room by means of a sign. A typical layout of a first-aid room is shown in *Appendix 7*.

6.2 Location

When choosing a site for a first-aid room, bear in mind the following factors:

- proximity to shower for cleaning or decontamination purposes.
- proximity to lifts and main passageways which are wide enough to allow a stretcher or wheelchair through

- accessibility to work areas
- accessibility to car park, so as to facilitate transfer of the injured person to an ambulance

6.3 Items in First-Aid Room

The items that should be provided in a first-aid room are as listed in *Appendix 8*.

7. SPECIAL FIRST-AID REQUIREMENTS

7.1 Provision for Mass Casualties

In a workplace where there is a potential risk of mass casualties, provisions should be made for a safe place for evacuation and for the availability of adequate equipment e.g. stretchers, wheelchairs, sheets, bandages, blankets, etc.

7.2 Special Instructions

In any place of work where a chemical hazardous to health is used, the current Chemical Safety Data Sheet (CSDS) for that chemical or a copy thereof shall be kept in a conspicuous place close to each location where that chemical is used and shall be easily accessible to the employees (Chemicals hazardous to health are as in USECHH Regulations 2000). First-aiders working for companies dealing in chemicals should receive special training on how to provide early management in cases of chemical poisoning (i.e decontamination).

7.3 Protective Clothing and Equipment

Protective clothing and equipment should be provided where there is a possibility that the first-aiders may need protection to avoid becoming a casualty himself while administering first-aid. Protective clothing and equipment should always be properly stored and checked regularly to ensure that they remain in good condition.

The principle of Universal Precautions is encouraged when dealing with a casualty. Extra precaution should be taken when there is possibility of coming in contact with blood or body fluids. It is recommended that a first-aiders be immunized for Hepatitis B.

7.4 Cleaning Up

First-aiders should wash their hands or any other surfaces of their body splashed with blood or other body fluids as soon as possible with soap and water. Contaminated surfaces should be cleansed and disinfected.

8. REFERENCES

1. The Factories and Machinery Act 1967
2. The Factories and Machinery (Safety, Health and Welfare) Regulations 1970
3. The Occupational Safety and Health Act 1994
4. Code of Practice for First-Aid in the Workplace, Department of Employment, Vocational Education, Training and Industrial Relations, Victoria, Australia
5. Your Guide to First-Aid Facilities in Factories, Department of Industrial Health, Ministry of Labour, Singapore
6. Guidance Notes on providing First-Aid Equipment, Facilities and Training, Department of Labour, New Zealand
7. Laws of Malaysia Act 162 – Malaysia Red Cross Society (Change of Name) Act – 1975.
8. Malaysian Trauma Life Support Course Manual , Dato Dr. Abu Hassan Asaari Abdullah.

Appendix 1

Institutions Recognized by the Department of Occupational Safety and Health, Ministry of Human Resource, Malaysia, for providing training on First-Aid in the Workplace

Organizations

Institutions under Ministry of Health

Hospitals under Ministry Of Education

National Institute of Occupational Safety and Health (NIOSH)

Malaysian Society for Traumatology and Emergency Medicine (MASTEM)

Malaysian Red Crescent Society

St. John's Ambulance, Malaysia

Any organization with qualified first aid trainers who were trained by any of the above institutions and approved by Director General of DOSH.

Appendix 2

Course Content for First-Aider

First aid training shall be conducted using the conventional methods of training such as lecture, demonstration, practical exercise and examination (both written and practical). The length of training must be sufficient to ensure that trainees understand the concepts of first aid and can demonstrate their ability to perform the various procedures contained in the outline below.

At a minimum, first-aid training shall consist of the following:

A. Part One – Basic Life Support

1. Chain of Survivals
2. Common cause of Death
3. Introduction to Cardiovascular System
4. Introduction to Respiratory System
5. Coronary Heart Diseases and Risk Factors
6. Cardiopulmonary (CPR Technique's) – DR. ABC
7. **Practical session :**
 - Adult one rescuer CPR technique
 - Adult two rescuer CPR technique
 - Airway Obstruction – Conscious (Heimlich Manoeuvre)
 - Airway Obstruction – Become unconscious
 - Airway Obstruction – Found Unconscious Victim
 - Care of unconscious victim (Recovery Position)
8. Assessment on Theory and Practical

B. Part Two – First Aid / Basic Trauma Life Support

1. Introduction to First Aid – Definition and requirements
2. Introduction to basic anatomy
 - Musculoskeletal system
 - Central nervous system
3. Introduction to Basic Emergency Principles (DR. ABC)
4. Patient Assessment
 - Rapid victim assessment (head to toe)

- Identifying life treating conditions - shock, chest injury, internal injuries, chest injury, etc.
 - Managing injuries based on priority
 - Communication to the health care provider
5. Management of Spinal Injury
- Identifying spinal injuries
 - Care of the injured victim
 - Immobilisation and transportation
6. Management of Medical Shock
- Type of shock
 - Identifying shock (sign and symptom)
 - Treating shock (first aid)
7. Management of Fracture (including amputation)
- Identifying fracture (sign and symptom)
 - Type of fracture (closed and open)
 - Immobilisation of fracture (upper limb, lower limb and extremities)
8. Management of Wound
- Type of wound
 - Treating the wound (first aid)
- 9. Practical Session :**
- Patient assessment
 - Spinal care and transportation
 - Immobilisation of fracture
 - Wound management (bandaging ,etc)
 - Managing multiple injury (exercise/simulation drill)
10. Assessment on Theory and Practical

First-aid training may also contain the following (optional):

This should take into consideration the specific industrial needs ;

1. Other injuries :
- Burn and scald – fire, hot water, chemical, etc.
 - Heat related disorder – heat stroke, hypothermia, etc.
 - Ear, nose and throat injuries – eye injury (chemical), bleeding from nose, etc.
 - Sports injuries - sprain/strain
 - Sting and bites – insect bites, allergic, etc.
 - Chemical contact – inhalation, absorption, ingestion, exposure, etc.

Appendix 3

Record of Casualty and Treatment given by First-Aider

A. Particulars of Company:	Date:
1. Name: 2. Address:	
B. Particulars of Casualty:	
1. Name : 2. Work unit	
C. Brief History of Incident:	
.....	
D. Briefly describe treatment given:	
[please attach the CSDS if incident involve chemical(s)]	
.....	
(.....)	

Name & Signiture of the First Aider

Appendix 4

Recommended Contents of a First-Aid Box

1. 5 Triangular bandages 130cm x 90cm x 90cm
2. Sterile eye pads
3. Non-sterile 4x4" gauze pads
4. Sterile 4x4" gauze pads
5. Sterile 10x10" gauze pads
6. Elastic bandage
7. 4 Roller bandages 7.5 cm
8. 4 Roller bandages 3 cm.
9. 4 Roller bandages 2.5 cm
10. Cold pack compress gel
11. Burn sheet/dressing
12. Pairs of gloves (disposable/ non sterile)
13. Stainless steel bandage scissors
14. Adhesive tape
15. Sterile multi-trauma dressing/gauze
16. Alcohol prep pads
17. Cetavlon
18. Cotton buds
19. Barrier device for CPR (pocket mask, face shield)
20. Elastoplasts/sterile adhesive dressing
21. Safety pin for triangular bandages
22. Thermometer

23. First aid manual
24. Waterproof waste bag
25. Inventory of box contents (checklist)

Checklist for Components of First-Aid Requirement

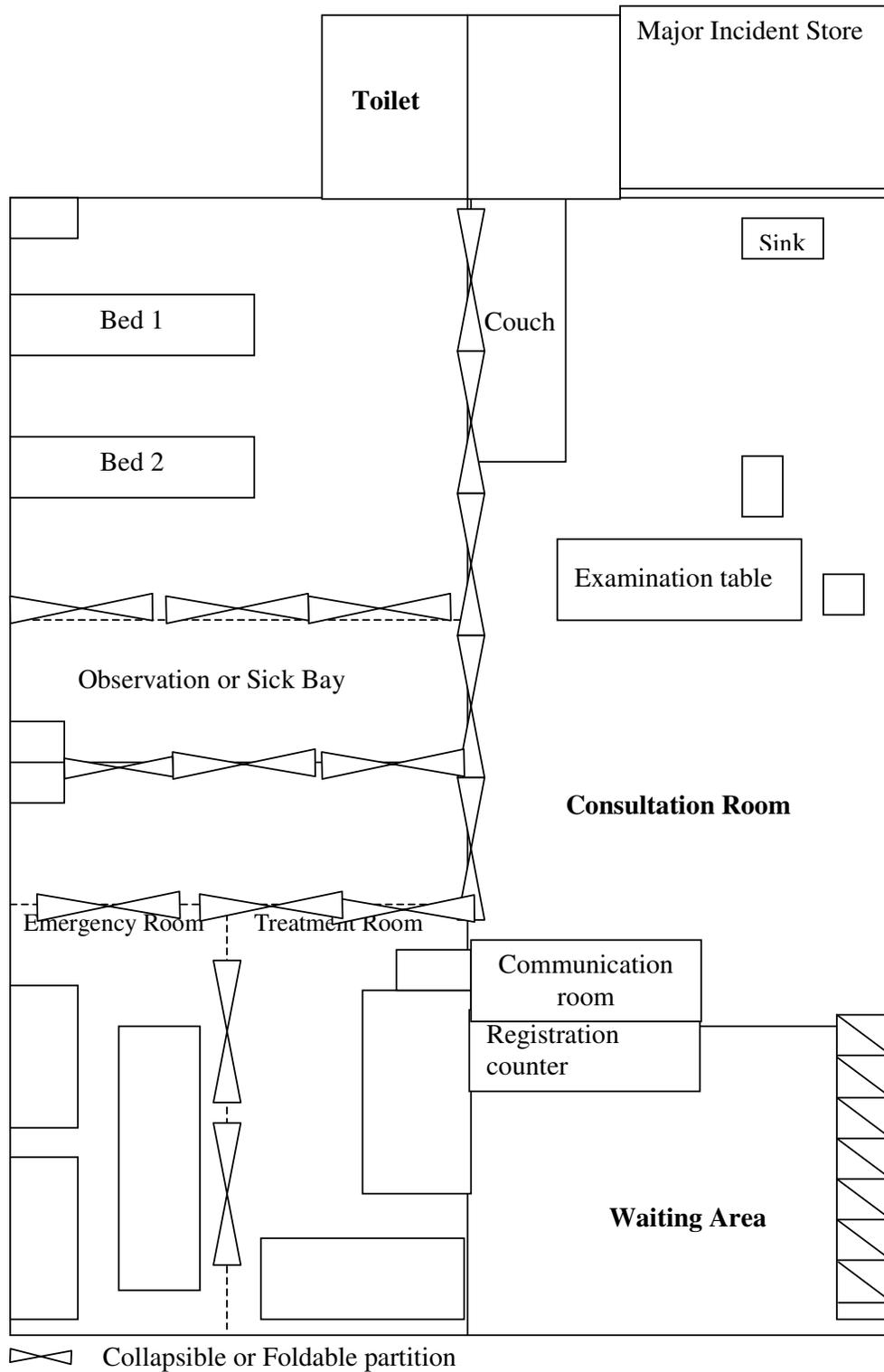
Description of Workplace	Number of First-Aider Required		First-aid boxes		First -aid room	
	Total No. of Workers	No. Of First-aiders available	Location	Content	Location	Items
a. workplaces with low risk hazards i.						
b. workplaces with high risk hazards i. ii.						
c. Workplaces with more than 400 workers						
d. Logging						

Checklist for First-Aid Box

The purpose of this checklist is to check the appropriateness of the contents of a first-aid box. Indicate by ticking (/) the relevant box. Where the answer to the question is “no”, further action may be necessary.

		Comments (if any)
1.	Location	
a.	Is the first-aid box located in a prominent and accessible position?	Yes <input type="checkbox"/> No <input type="checkbox"/>
b.	Are employees informed and aware of the location of the first-aid box?	Yes <input type="checkbox"/> No <input type="checkbox"/>
c.	Do all employees have access to the first-aid box during all work shifts?	Yes <input type="checkbox"/> No <input type="checkbox"/>
2.	Identifiability	
a.	Can the first-aid box be clearly identified as a first-aid box?	Yes <input type="checkbox"/> No <input type="checkbox"/>
3.	Contents	<input type="checkbox"/> <input type="checkbox"/>
a.	Are the contents appropriate for the likely injuries and illnesses at your workplace?	Yes <input type="checkbox"/> No <input type="checkbox"/>
b.	Does the first-aid box contain sufficient quantities of each item?	Yes <input type="checkbox"/> No <input type="checkbox"/>
c.	Is an employee trained in first-aid responsible for maintaining the first-aid box?	Yes <input type="checkbox"/> No <input type="checkbox"/>
d.	Are the contents appropriately labeled?	Yes <input type="checkbox"/> No <input type="checkbox"/>
e.	Are the contents within their “use by” dates?	Yes <input type="checkbox"/> No <input type="checkbox"/>
f.	Are the contents adequately stored?	Yes <input type="checkbox"/> No <input type="checkbox"/>
4.	Relevant information	
a.	Is there a list of contents provided in the first-aid box?	Yes <input type="checkbox"/> No <input type="checkbox"/>
b.	Are emergency telephone numbers clearly displayed?	Yes <input type="checkbox"/> No <input type="checkbox"/>
c.	Are the name, location and extension number of the nearest first-aider clearly indicated?	Yes <input type="checkbox"/> No <input type="checkbox"/>
d.	Is the CSDS readily available (if chemical hazardous to health is use in the workplace)	Yes <input type="checkbox"/> No <input type="checkbox"/>
5.	Training	
a.	Have selected employees received training in the use and maintenance of first-aid box?	Yes <input type="checkbox"/> No <input type="checkbox"/>
6.	Responsible Person	
a.	Is a person appointed to take charge of first aid arrangements (supervisor).	Yes <input type="checkbox"/> No <input type="checkbox"/>

Typical Layout Of A Treatment Room At A Workplaces.



Recommended Facilities For A First-Aid Room

The following should be provided in a first-aid room:

1. First aid box
2. Sink with tap water
3. Antiseptic hand wash soap
4. Paper towels
5. An examination/treatment couch with pillow & blanket
6. Portable stretchers
7. Splints (upper & lower limbs)
8. Disposable plastic apron
9. Separate disposable waterproof waste bag/basket for hazardous & non-hazardous materials
10. Spinal immobilization equipment (cervical collar, spinal board)
11. Torch light
12. Chairs for waiting room
13. Cupboard for storing first aid equipment (as in the first aid box) for top up purposes