



# **GUIDELINES ON OCCUPATIONAL HEALTH SERVICES**

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MINISTRY OF HUMAN RESOURCES  
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## PREFACE

The purpose of this guidelines is to guide and assist employers and Occupational Health Practitioners in the implementation of appropriate levels of Occupational Health Services in their respective organizations. This guidelines is the outcome of discussion between the various stakeholders who are responsible for providing and utilizing Occupational Health Services.

The functions of an occupational health service are to protect and promote the health of workers, improve working conditions and the working environment and maintain the health of the organisation. These functions are carried by providing occupational health services to workers and expert advice to the employer on how to achieve the highest possible standards of health and safety in the interests of the particular working community.

The responsibility for compliances with the law and implementation of Occupational Health programmes in the workplace lie with the employer who creates the risk and the employee who works with the risk. It is recognized that employers are responsible for the provision of Occupational Health Services in their respective workplaces. The Department of Occupational Safety and Health (DOSH) as the main government department responsible for occupational safety, health and welfare of workers in the country plays the role of a facilitator and enforcer of occupational health-related legislation.

This guidelines present the mechanism on how to implement an Occupational Health Services, functions of an Occupational Health Services and qualification and roles of various Occupational Health practitioners involved in delivering the services. Methods for assessing the performance Occupational Health Services are also included. Indicators of the performance of Occupational Health Services must be monitored and services should be continuously improved to ensure excellence in Occupational Health programmes and services provided.

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## 1.0 GLOSSARY.

- 1.1 Occupational Health Services (OHS)** means services entrusted with essentially preventive functions and responsible for advising and assisting the employer, the workers and their representatives in the undertaking on:
- the requirements for establishing and maintaining a safe and healthy working environment which will facilitate optimal physical and mental health in relation to work; and
  - the adaptation of work to the capabilities of workers in light of their state of physical and mental health.
- 1.2 Provision of Occupational Health Services** means carrying out activities in the workplace with the aim of protecting and promoting workers' safety, health and well-being, as well as improving working conditions and the working environment.
- 1.3 Occupational Health Practitioners** include but are not limited to Occupational Health Doctor, Occupational Health Nurse, Occupational Hygienist and Ergonomist.
- 1.4 Occupational injury** means any injury such as a cut, fracture, sprain, amputation and etc., which results from a work accident or from a single instantaneous exposure to a hazard in the work environment.
- 1.5 Occupational poisoning or disease** means a poisoning or a disease arising out of or in connection with work. It includes acute and chronic disease or poisoning which may be caused by inhalation, absorption, ingestion, or direct contact with a hazard at the workplace.

## 2.0 OBJECTIVES.

The objectives of this Guidelines are:

- 2.1 to assist employers and Occupational Health Practitioners in the implementation of appropriate levels of OHS in their respective organisations;
- 2.2 to guide employer and Occupational Practitioners on how to form an OHS; and
- 2.3 to encourage all stakeholders to form an OHS.

## 3.0 LEGAL PROVISIONS.

The Occupational Safety and Health Act (OSHA) 1994 and its Regulations aim to secure the safety, health and welfare of persons at work, to protect others against risk to safety or health in connection with the activities of persons at work, and to promote an occupational environment for persons at work which is adapted to their physiological and psychological needs.

There are other legal provisions for OHS stated in the Factories and Machinery Act 1967, Food Act 1983, Atomic Energy Licensing Act 1984, and etc.

## **4.0 PROVISION OF OCCUPATIONAL HEALTH SERVICES.**

The components for consideration in the provision of Occupational Health Services are as follows:

- 4.1 Mechanism on how to implement the Occupational Health Services;
- 4.2 Functions of an Occupational Health Services;
- 4.3 Occupational Health Practitioners.
- 4.4 Mechanism on how to assess OHS performance.

## **5.0 MECHANISM ON HOW TO IMPLEMENT OCCUPATIONAL HEALTH SERVICES.**

### **5.1 Responsibility**

Under OSHA 1994, the responsibility for the provision of OHS lies with the employer. The employer has to make the necessary arrangements within its organization to ensure that there are budgetary (both financial and human resources) provisions for the implementation of the appropriate type of OHS.

### **5.2 Methods of providing Occupational Health Services.**

Each organisation may provide OHS by utilising;

- a. In-house resources;
- b. External resources i.e. acquiring the services needed from another unit or persons entitled; or
- c. A combination of the above.

### **5.3 Factors to consider.**

Each organisation will have to decide on how it wishes to organize its OHS bearing in mind the following:

- a. The nature of its operations, hazards involved and their associated risks
- b. The number of employees who are potentially exposed to these hazards
- c. The duration of its operations (e.g. one eight-hour shift or three eight-hour shifts or two twelve-hour shifts, etc).

## **6.0 FUNCTIONS OF OCCUPATIONAL HEALTH SERVICES.**

Comprehensive OHS should include the following elements:  
*(for summary please refer to the flow chart in appendix I and II)*

### **6.1 Management of workplace occupational health risks.**

### **6.1.1 Identification and Assessment of Workplace Hazards**

This involves identifying, anticipating, examining, and evaluating the workplace environment and environs for any hazards that may arise from work operations and processes, materials and equipment used, products, by-products and effluents. These hazards include chemical, physical, biological, ergonomics and psycho-social. Some of the activities involves include but not limited to:

- Review of projects, designs, and purchase to anticipate hazards;
- Identify workplace health hazards and understand their effects on people and their well being;
- Assess human exposures to hazards through combination of qualitative and quantitative methods to determine level of risks; and
- Determining the need for, an appropriateness, of biological monitoring in risk assessment.

### **6.1.2 Recommendations of occupational health controls at workplace.**

This involves interpreting results of the assessment or evaluation of the work environment in terms of the ability to impair health, nature of health impairment, worker's efficiency and community nuisance and/or damage. Specific recommendations on effective control measures to mitigate risks via the Hierarchy of Controls (elimination, substitution, engineering, administrative and personal protective equipment) are made. Other activities include but not limited to preparing and developing rules, standards, procedures and programs for the healthful conduct of work and prevention nuisance in the community. Examples of the occupational health controls are hearing conservation program, respiratory protection program, radiation protection program, etc

### **6.1.3 Risk Communication.**

This involves communicating risks and control measures to workers, management, and other stakeholders. Some of the activities here include awareness program, workers' training, community awareness, etc.

## **6.2 Management of Workers' Health.**

### **6.2.1 Pre-employment medical examination.**

This is a medical examination for prospective employees before commencing employment. This examination should be conducted to assess whether they are fit to work.

### **6.2.1 Pre-placement medical examination.**

Pre-placement medical examinations are performed for all employees who are new or transferred to jobs with special requirements;

- to provide an evaluation of an employee's health status to ensure he/she is physically and mentally fit to perform the job and/ or to wear the Personal Protective Equipment provided,
- to establish a baseline record of physical condition which later can be very important for stating if a health impairment had already existed before employment or if it could have been caused by workplace.
- to detect physical defects or disease which may be treated at an early stage,

### **6.2.2 Health surveillance.**

Any examination and investigations which may be necessary to detect exposure levels and early biological effects and responses, and includes biological monitoring, biological effect monitoring, medical surveillance, enquires about symptoms of occupational poisoning or occupational disease and review of records and occupational history.

### **6.2.3 Medical removal.**

Any cases of definite or suspected occupational poisoning or disease and excessive absorption must be removed from their work area. The worker should not return to work until the signs and symptoms, abnormal cytology and biochemical results have recovered and he/she is certified fit for work by an Occupational Health Doctor

### **6.2.4 Rehabilitation.**

Rehabilitation services are usually provided by external units which may be free-standing or hospital-based and staffed by rehabilitation specialists, occupational therapists, vocational counsellors and so on. There are some important aspects concerning the participation of occupational health services :

- playing an important role in seeing that workers recovering from injury or disease are referred for rehabilitation.
- exploring the possibilities of modifying the original job (e.g changes in work assignment, limited hours, rest periods etc)
- follow up the worker's progress.

Occupational Health Services can keep management informed of the probable duration of absence or limited capacity, or the extent of any residual disability, so that arrangements for alternative staffing may be made with minimal impact on production schedules. Occupational Health Services also maintains the link with workers by facilitating and better preparing their return to work.

### **6.2.5 Return to work.**

After an episode of disease or injury employee might sustain disability with limits his ability to perform basic activities of daily living, an Occupational medical examination should be performed before return to work. This medical examination is to assist the employee in returning to



and remaining effective in their jobs following an episode of disease or injury. These services can also be provided to employees with emotional disorders or alcohol and drug dependence.

#### **6.2.6 Follow-up of health of the vulnerable groups.**

The purpose of this is to observe the potential effects of work on a medical condition and to take early steps to reassign or rehabilitate the employee and to prevent further deterioration of the detected departure from health. This may include pregnant employees or those with chronic illnesses (e.g. ischemic heart disease, diabetes mellitus, epilepsy, etc.). The adaptation of work and the work environment to the worker particularly crucial for vulnerable groups as there may be a need to make adjustment to the work process, workplace or equipment to accommodate the physical and mental capability of the worker.

#### **6.2.7 Investigation of occupational poisoning or occupational disease.**

All cases of occupational poisoning or occupational disease must be investigated to identify their causes. This is to prevent similar cases from occurring in the future.

#### **6.2.8 Health promotion.**

Health promotion is organized to provide the workers and employers information about the hazards at the workplace. In this way, both the workers and employers can work together to minimize these health hazards by implementing work improvements. Efforts to help workers make modifications to their lifestyle (e.g. smoking cessation; healthy eating; exercise; weight control, etc.) are included in this activity.

#### **6.2.9 Post-employment medical examination**

This is performed at the end of employee's service. It helps to detect any change in health status that may be related to employment.

### **6.3 Participating in emergency response and disaster management.**

This covers arrangements for handling any form of emergency that may occur in the workplace from injury of individual worker to the catastrophic incident involving the whole worksite (e.g. fire, explosion, leak, spill etc). Appropriate training in first aid has to be organized for employees to ensure that they are competent to provide appropriate care in an emergency.

### **6.4 Provision of clinical services.**

Although the occupational health service is mainly preventive in nature, there may be a need to provide some clinical services in the event that the condition is amenable to treatment and the facilities are available.

### **6.5 Record keeping.**

- 6.5.1 The most common data collected is that of number of cases of work-related injuries, occupational poisoning or occupational diseases reported in a specified period, usually in a calendar year. Data on occupational hygiene workplace monitoring; worker's personal exposures and any biological monitoring conducted are also collected. All the data need to be analyzed to look for trends and whether there are any vulnerable groups within the workplace. Any work-related injuries occupational poisonings or occupational diseases shall be recorded as required by NADOPOD Regulations 2004 and reported to DOSH.
- 6.5.2 The findings of all occupational medical examinations must be treated confidentially. There is a need for care in the handling, safeguarding and transfer of occupational health records to avoid confidential information being disclosed to unauthorized persons or organizations. When required by law or when public health interests is at stake such information may be revealed to the relevant party.

## **7.0 OCCUPATIONAL HEALTH PRACTITIONERS**

Occupational Health Services required close cooperation and collaboration with all related experts. The collaborative team may include physicians(OHD) and specialist nurses(OHN), occupational hygienists, ergonomists, Safety and Health Officers and rehabilitation specialist. This team might also collaborate with chemists, toxicologists and public health specialist, and promote cooperation between relevant interest groups and sectors, in the formulation and implementation of strategies.

The following are elaboration of training, accreditation and roles of keys professionals involved in the provision of Occupational Health Services:

- a) Occupational Health Doctor (OHD).
- b) Occupational Health Nurse (OHN).
- c) Occupational Hygienist (OHyg).
- d) Hygiene Technician.
- e) Ergonomist.
- f) Safety and Health Officer

### **7.1 Occupational Health Doctor (OHD).**

The OHD should have a basic medical degree registered with the Malaysian Medical Council and a post-graduate certificate or Diploma or Masters or PhD in OH that is recognized by DOSH.

The OHD is expected :

- To conduct the pre-placement medical examination, medical surveillance and other health management activities for employees as mentions in para 6.2 above;

*It is recommended that all medical surveillance (e.g. audiometry as required in the Noise Exposure Regulations, spirometry as required under the Mineral Dust Regulations,*

*medical examination as required under the Atomic Energy Licensing Act) should, preferably, be conducted by an OHD.*

- to analyse Occupational Diseases and Poisoning and co-relate with risk assessment. Interpret and explain the results of investigations to the employee and employer and specify what further action is necessary;
- to notify cases of Occupational diseases and poisoning to DOSH and employer;
- to assist in implementation of occupational health programme in the workplace;
- to provide periodic education and advice to employees and employer on workplace health and safety issues.
- to assist in audit/evaluation of occupational health programme in the workplace; and
- to maintain the medical records of employees during the course of employment and post termination.

**Note :** *Please refer to appendix II for OHD requirement.*

## **7.2 Occupational Health Nurse (OHN).**

The OHN should have a basic nursing or medical assistant certificate, diploma or degree registered with the Ministry of Health and should have a valid annual practicing certificate (APC) from the respective body such as Nursing Board or Medical Assistant Board. OHN should complete a post-basic certificate, diploma or degree in Occupational Health.

Occupational Health Nurse should complement the role of OHD . The OHN is expected:

- to manage cases – provide treatment, follow-up and referrals and emergency care for job related injuries and illnesses;
- 
- to counsel and intervene in crisis – counselling workers about related illness and injuries, substance abuse and emotional problems.
- to promote health – health education programs that encourage workers to take responsibility for their own health;
- to advise employer on legal and regulatory compliance; and
- to assist in risk management.  
e.g. gathering health and hazard data, and using the data to prevent injury and illness.

**Note :** *please refer to appendix II for OHN requirement.*

## **7.3 Occupational Hygienist.**

The Occupational Hygienist should have a post-graduate degree in Occupational/Industrial Hygiene from an accredited college/university.

or

A Bachelor's degree holder from an accredited college/university in industrial hygiene, biology, chemistry, engineering, physics or a closely related physical or biological science who with a minimum of 5 years working experience in industrial hygiene and by virtue of special studies and training, has acquired competence in industrial hygiene. In addition, she/he is a full member of one of the internationally recognised professional IH organisations such as MIHA, AIHA, ACGIH, BOHS, AIOH, etc.

Qualified Occupational Hygienist by the virtue of his/her academic qualification and working experience may be a competent Chemical Health Risk Assessor, Competent Person for Noise Monitoring and Hygiene Technician

The Occupational Hygienist prime responsibilities typically include:

- to review projects, design and purchase of materials;
- to identify workplace health hazards and evaluate its severity;
- to assess human exposures to hazards(i.e. noise, heat, mineral dust etc) by both qualitative and quantitative methods;
- to recommend specific recommendations for effective control of the risks identified;
- to communicate risks and control measures to workers, management, and others affected; and
- to respond to emergencies, to develop Industrial Health programs, to regulate compliance, etc

#### **7.4 Hygiene Technician.**

The Hygiene Technician should have at least a diploma in Occupational or Industrial Hygiene or obtain other certificate of competency as described in the Guideline for the Registration of Hygiene Technician and USECHH Regulation 2004.

The Hygiene Technician should complement the role of Occupational Hygienist. The Hygiene Technician is expected :

- to conduct employee exposure monitoring; and
- to conduct the inspection, examination and testing of local exhaust ventilation system and other engineering control equipment as required by the presents Regulations.

#### **7.5 Ergonomist.**

The ergonomist should have either a basic degree in ergonomics; or a degree in engineering, work physiology, biomechanics, psychology or other related sciences with a post-graduate diplomat or master in ergonomics; and three (3) years of experiences in solving ergonomics related works.

The ergonomist is expected;

- to identify work-related ergonomic risk factors in the working environment;
- to assess work processes, tasks, designs and products, and assign risk level;

- to give advice to the management on control measures of ergonomic related problems based on accepted ergonomic best practices and with any published government laws, regulations or guidelines that related to ergonomics;
- to give advice to the management on how to manage work-related musculoskeletal disorders (MSDs); and
- to communicate ergonomic solving process with the OHD, OHN, and the management team of a company.

## **7.6 Safety And Health Officer (SHO).**

SHO should have a basic certificate or diploma or degree in Occupational Safety and Health that is recognized by DOSH.

The SHO is expected

- to advise the employer on the measures to be taken in the interests of the safety and health of the persons employed in the place of work;
- to inspect the machinery, plant, equipment, substance, appliances or process or any description of manual labour used in the place of work, is of such nature liable to cause bodily injury to any person working in the place of work; and
- to investigate any case of accident, near-miss accident, dangerous occurrence, occupational poisoning or occupational diseases. Duties of SHO are spelt out in the OSHA (Safety and Health Officer) Regulations 1997.

## **8.0 MECHANISM ON HOW TO ASSESS OHS PERFORMANCES.**

A number of different indicators may be used to assess the effectiveness and benefits of OHS in an organization. Compliance with occupational health related legislation, company safety and health policy, and occupational performance data are used to observe trends in the management of OH in the workplace:

### **8.1 Compliance with OH-related legislation.**

It is incumbent on all workplaces to comply with all appropriate OH-related legislation that apply to their business activities. This should be regarded as the minimal level of care that has to be achieved at all times. It is in fact a “license to operate” for an organization.

The identification of all related OH legislation and their elements have to be recorded first. The Occupational Health services should then determine the degree of compliance achieved for each element. The areas of non-compliance shall be highlighted and work plans towards compliance be discussed and agreed upon for action by specific individuals with clear datelines for completion set out.

Examples of such measures include:

- a) Number of audiometric test required
- b) Number of audiometric test conducted:
- c) Number of audiogram with standard threshold shift recorded:

## **8.2 Compliance with Company Safety and Health Policy.**

Management audit to assess the compliance with company or corporate safety and health policy should also be conducted.

Examples of such measures include:

- a) Number of OH-related training programmes planned;
- b) Number of OH-related training programmes conducted; and
- c) Number of employees attending OH-related training programmes.

## **8.3 Occupational Health Performance Data**

There are different parameters that may be used to measure the performance of OHS. One form of measure is to determine if it managed to fully complete all the activities it had planned for the year (e.g. number of statutory medical surveillance planned for compared with the number of such assessments completed successfully by the end of the year in question). This is an indicator of how realistic and serious the organization and its OH practitioners are in their planning and implementation of the programmes.

Another indicator of the effectiveness of the OHS is from the number of new cases of occupational diseases and/or poisonings reported. In fact, the report of any such case indicates the failure of the OHS in its preventive activity. This data is also useful for OH practitioners to focus their improvement efforts on specific parts of the work process or group of employees who may not fully appreciate the risks they are facing.

Examples of such measures include:

- a) Incidence of occupational/work related diseases reported;
- b) Incidence of occupational/work related poisonings reported;
- c) Numbers of areas required for noise reduction and completion status; and
- d) Employee exposure (i.e noise, chemicals) monitoring data.

## **9.0 CONCLUSION.**

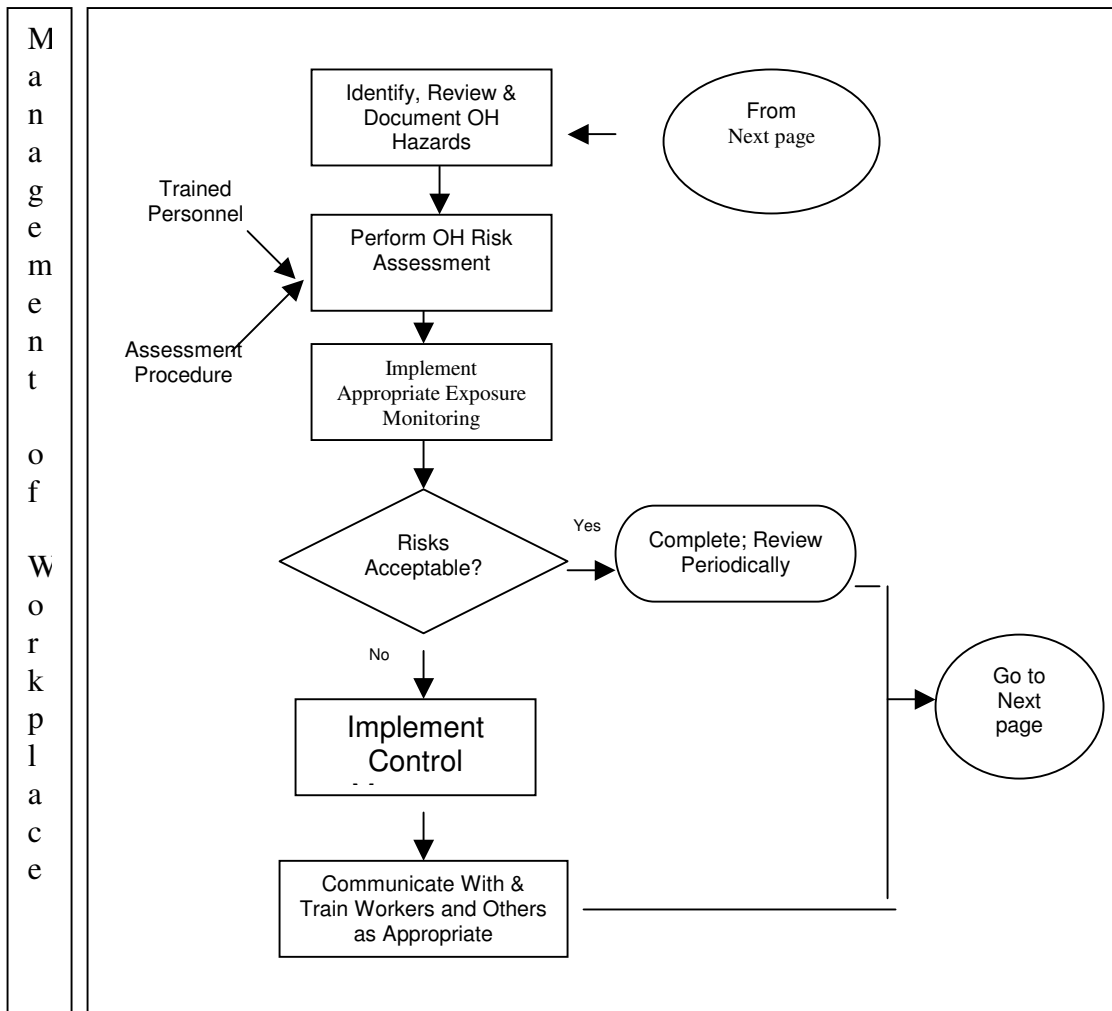
There is no doubt that the level of Occupational Health Services provided to all persons at work in Malaysia is patchy at best at the moment. The issues of occupational health management at the workplace are far from being addressed if we are to go by the provisions as spelled out in the ILO Occupational Health Services Convention and Recommendations, 1985.

There will be a need for the employers to adopt a paradigm shift from a reactive stance of dealing with occupational poisonings/ diseases when they occur to a more proactive one of prevention and promotion.

## **10.0 REFERENCES**

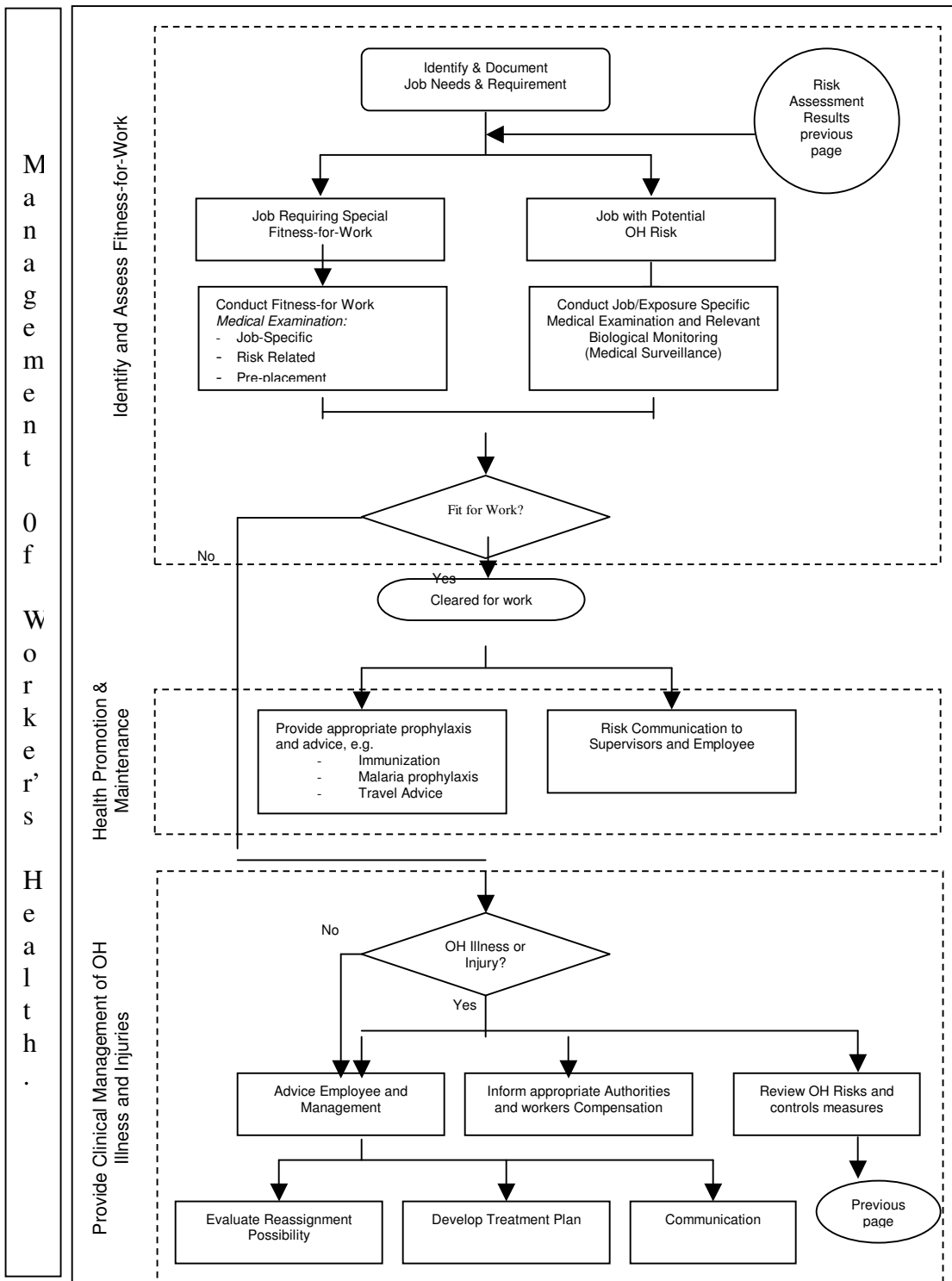
- a) Occupational Health Services – an Overview; WHO Regional Publications; European Series No. 26
- b) ILO Occupational Health Services Convention, 1985
- c) ILO Occupational Health Services Recommendations, 1985
- d) American Association of Occupational Health Nurses Inc. Fact Sheet
- e) Encyclopedia of Occupational Health and safety, 4<sup>th</sup> edition., ILO

Flow chart of functions of Occupational Health Services.





.....continue.



Appendix 3.

**Table : Occupational Health Doctor and Occupational Health Nurse Requirements.**

No. of workers	Occupational Health Nurse		Occupational Health Doctor	
	Part-time	Full-time	Part-time	Full-time
50 - 1000		X	X	
$\geq 1000$		X		X