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OCCUPATIONAL HEALTH PROGRAMMES

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INTRODUCTION

The Twenty-fourth World Health Assembly adopted a Resolution[1] on Occupational Health Programmes recommending that Regional Committees discuss in 1971 means of developing occupational health services.

This paper is prepared to serve as background information for discussions by the Twenty-first Session of the Regional Committee for the Eastern Mediterranean Region.

I OBJECTIVES AND SCOPE OF OCCUPATIONAL HEALTH

The Second Meeting of the Joint ILO/WHO Committee on Occupational Health[2] defined the objectives of occupational health as follows: "the promotion and maintenance of the highest degree of physical, mental, and social well-being of workers in all occupations; the prevention among workers of departures from health caused by their working conditions; the protection of workers in their employment from risks resulting from factors adverse to health; the placing and maintenance of the worker in an occupational environment adapted to his physiological and psychological equipment, and, to summarize: the adaptation of work to man and of each man to his job".

Such a definition of objectives appears to envisage occupational health as dealing not only with the health problems related to work and the working environment but also with the total health problems of the gainfully employed segment of the population. Although this interpretation is increasingly becoming accepted, some quarters continue to have a limited approach and envisage occupational health as dealing only with the health problems related to work and the working environment, i.e. occupational diseases and accidents.

Regardless of how this definition is interpreted, there is really only one basic objective, namely, to protect and promote the health of gainfully employed persons. This basic objective, however, has several components which would constitute the scope of occupational health. Of course, there

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[1] WHA24.30
[2] Wld Hlth Org. Techn. Rep. Ser., 1953, 66.

is no blue-print for the content of an occupational health programme for universal application. Clearly the problems to be tackled will vary from one country to another and even in the same country from time to time. Each country will have, therefore, to decide for itself in the light of the prevailing circumstances, precisely how far it can go in aiming at providing a comprehensive occupational health programme. However, the following points may be of assistance in making such a decision:

1. The working population in the countries of the Region represents an important segment of the countries' population. They are the breadwinners of the families and the backbone of economic and social progress. Their health is an important factor in productivity. It is important, therefore, that countries of the Region should give a high priority to the provision of occupational health services, at this stage of their development, to avoid the risks that may gradually evolve from uncontrolled and unhealthy industrial expansion; such risks can be more difficult and costly to control at a later stage.

2. The health of the working population is influenced by many factors - working environment being only one - and it has been frequently noticed that not more than 5 to 10 per cent of the working days lost in industry are due to occupational causes while the remaining 90 to 95 per cent are caused by pathological conditions not specifically related to the job.

3. It is difficult to separate the prevention of occupational disease from that of general diseases in developing countries. There is no line of demarcation possible in view of the many types of ill-health that affect workers and are added to, and complicated by occupational diseases, and reflect upon work performance and exposures. Man's health is indivisible and the approach to it should account for all epidemiological and environmental factors including the working environment.

4. In many developed countries, the health needs of the gainfully employed may or could be taken care of by the authorities or institutions outside the

place of work. Whereas the conditions in many countries of the Region, due to lack of health and medical resources, will often leave all or most of the health needs of workers to be organized and provided for through the place of employment.

5. Experience in developed countries has demonstrated that measures for the protection and promotion of the health of the worker can only be planned effectively and economically when they are integrated within the health programme of the community where he is working. Similarly, it has been found that many of the public health techniques could be more effectively applied to workers at their place of employment, where easy contact can be made with the working adult, just as children can be easily reached through health services at school.

6. It has now been realized within the occupational health circles in institutes, centres, academies, universities and societies, that occupational health should go beyond the prevention of occupational diseases and accidents, although this should continue to develop in view of the ever increasing specific problems resulting from the introduction of new chemicals and industrial processes. In everyday health practice, among workers, diseases are discovered whose causes may or may not be related to work but in all cases affect or get affected by work. With the success of control of physical and chemical hazards in some advanced modern industries, occupational health gives a different emphasis; medical placement of workers with chronic diseases, study of the effects of night-shifts on health, the problem of hard physical performance in forestry and heavy industry, the adaptation of machine to man, the practice of mental health in industry, etc. Occupational health has, therefore, developed many sub-specialties but the overall practice has become more oriented to a total health approach without at all affecting its definite profile, as a specialized field of public health, practiced by a team of several disciplines including preventive medicine, occupational hygiene engineering, occupational hygiene sciences, nursing, psychiatry, psychology and sociology.

II OCCUPATIONAL HEALTH SERVICES IN THE REGION

1. Labour authorities

Following the historical development of occupational health in highly industrialized countries, the occupational health services in many countries of the Region concentrate on factory inspection by the Labour Administration. These labour inspection services are mostly concerned with general labour conditions, wages, hours of work, employment of women and children, and simple occupational safety. The labour legislations in force, though comprehensive, are usually not properly adapted to local, social and cultural conditions. The enforcing machinery is often weak and untrained. They usually lack the supporting technical laboratory facilities and field equipment necessary for the assessment and control of the working environment which constitutes the scientific base for dealing effectively with the health problems of workers, or with the environmental hazards in the great number of medium-sized and small establishments which employ the majority of the working population. The labour legislations in few countries of the Region require the provision of medical services covering all or some specific types of establishments according to the size and nature of occupational hazards.

2. Health authorities

The pre-occupation of the health services with the formidable health problems they have to face, coupled with the lack of human material resources, has made the national health authorities in a number of countries of the Region unaware of their leading role in occupational health. In others, due to the competition between the various administrations, the role of health services has been ill-defined, and limited to curative services without due consideration to the causes of illness, or the taking of preventive action. In some countries, however, the health administration has developed a unit or division of occupational health for the training of health personnel, standard-setting, research and day-to-day preventive services, particularly for groups of small industries, leaving the enforcement of labour

legislation to the labour administration, but maintaining a close co-operation and co-ordination.

3. Teaching institutions

A few teaching institutions in the Region have established well-developed departments of occupational health for training and research, as well as advisory services. The impact of these departments is not yet felt, as they are relatively new. However, it is hoped that they will assume a leading role in developing sound occupational health programmes in their respective countries.

4. Social insurance

A number of countries of the Region have organized social insurance schemes for workers, providing medical care, sick benefits for temporary disability, pensions for permanent disability, and cash benefits to surviving dependents. In some instances, a parallel system of workmen's compensation is also in existence. Most of these schemes are spending large sums of money on cash benefits and curative medical services, with little or no interest in preventive services and occupational health. However, there is some indication that a few of these schemes are becoming interested in occupational health.

5. Labour and employers' organizations

Labour organizations are relatively developed in most countries of the Region. So far, they are mainly concerned with wages, hours of work and cash benefits. For understandable reasons, they have not as yet assumed an important role in promoting comprehensive occupational health programmes.

Employers' organizations do exist in most countries of the Region but, so far, they do not seem to be fully aware of the economic benefit of comprehensive occupational health programmes.

6. Plant level

Apart from a number of large establishments, particularly in the oil industry and railways, which have developed excellent occupational health

services, the practice of occupational health at the plant level in the Region leaves much to be desired, particularly in medium-sized and small establishments. The following would help to give a picture of the difficulties encountered:

(a) The plants are built without due consideration to site or prevailing climatic conditions.

(b) Overcrowding is common, house-keeping, maintenance and sanitary conditions tend to be on the poor side, there is a marked need for potable sources of drinking water, and a safe method for the disposal of refuse, sewage and industrial wastes.

(c) Machines and equipment are installed without attention to safety rules, and there is a notable lack of machine guarding. Safety committees when present, lack technical support and supervision.

(d) Dust, fumes, gases and vapours are produced without proper use of exhaust ventilation at the source; noise is excessive; monitoring of the working environment is rarely done.

(e) Personal protective equipment is deficient, and when available, is either of poor quality or improperly used.

(f) First-aid equipment is often of a rather low standard and there is a marked scarcity of trained first-aid workers.

(g) Health education programmes are lacking, or when present are limited to a few posters.

(h) Industrial feeding is often lacking, and, when provided, is usually of poor quality, both from the nutritional and sanitary points of view. Some excellent feeding programmes do exist, but are not usually patronized by workers to the full extent due to lack of supporting nutrition educational programmes.

(i) Plant health services, when present, are usually poorly housed and staffed. The Health Officers in charge may work on a full- or part-time

basis, and may be engaged in large numbers of establishments. They are rarely qualified in occupational health. They seldom visit the work places. Emphasis is placed on curative services at the expense of preventive programmes. Pre-placement and periodic medical examinations are only carried out occasionally. Medical records kept are usually poor and inadequate. The occurrence of occupational diseases and accidents is usually not investigated and poorly reported.

Certainly, there are exceptions to the above picture, since well-built, healthy plants and excellent services do exist, but they are not as common as one would like to see.

III INTEGRATING OCCUPATIONAL HEALTH IN THE PUBLIC HEALTH SERVICES

A. Role of health authorities

If it is accepted that human beings are the most important single development resource and the central factor in all development programmes, it is essential that any country wishing to achieve industrialization without paying an excessive price in human values should accord a very high priority to measures for the protection and promotion of the health of the working population. When it is recognized that the health of the worker's family has a complementary effect on the health and productivity of the worker himself, it becomes clear that occupational health services can best be planned effectively and economically when they are integrated into the health programme of the community where industry is situated. These services are especially important in developing countries where the bulk of the labour force is drawn from the rural population who are unfamiliar with the hazards of machinery, toxic processes and the disciplines of factory life. Consequently, health authorities have the responsibility of participating actively in the planning and implementation of all aspects of the occupational health programme.

Health authorities should, therefore, participate in:

1. The development and enforcement of labour codes designed to protect the health and safety of workers.

2. The preparation of factory legislation.

3. The control of the working environment including air quality, humidity, air movement, light, noise levels, the provision of safety devices, personal protective equipment and sanitary facilities.

4. The determination of which work is suitable for females and young employees and of the age requirements for workers.

5. The placement of workers in relation to physical capacity through a system of pre-placement and periodic physical examination.

6. The development of social insurance schemes.

7. The training of all types of personnel necessary for the implementation of the programme.

B. Reasons behind non-integration

All countries of the Region have an organized public health service to look after the health of the people. In some countries the public health services are more than 100 years old, in others they are relatively young. The majority, however, have not as yet assumed their role in occupational health due to a combination of the following reasons:

1. The historical evolution of occupational health and safety acts as a part of overall labour protective acts and the adoption of this pattern from industrialized countries.

2. The misinterpretation and faulty definition of the scope and objectives of occupational health and the long-standing limitation of its activities to the control of environmental hazards at work to prevent occupational diseases and accidents without regard to the workers' total health.

3. The remarkable pre-occupation of public health services with the prevention and control of communicable diseases coupled with the limited available resources.

4. The absence of information as to the magnitude of the problem of health of the working population and its reflection on economic development.

C. Indications for integration

The indications for including occupational health programmes within the framework of public health services can again be summarized as follows:

1. The working population is the most important sector of the community in size and in respect of the economy. It is also a high risk group and public health services cannot ignore this vital responsibility.

2. Industrial enterprises not only harbour hazards that may affect the health of the worker but also influence the total human environment by the effluents and pollution which they produce.

3. Basic health services are about the only means by which the masses of workers engaged in small industries can be served. In most industrialized countries, there are as yet no schemes developed to deal with this large group.

4. In view of the limited number of qualified personnel available it is to the best advantage of public health services to group health activities under one roof. All types of health programmes including health education, control of communicable diseases, nutrition and epidemiological research have proved to be more effective when performed among the working population.

5. Administrative and financial burdens are already being borne by the health services in an ad hoc and unrecognized manner. Workers seek medical care in state-run clinics, out-patients' clinics and hospitals.

Since this is the case, it would be better to handle the health problems of workers in a more constructive and positive way by a properly planned occupational health programme.

D. Initiation or development of the programme

It should be realized from the beginning that the organization of such a programme in many countries of the Region would encounter a number of difficulties due to shortage of trained personnel, material and money. It is important to realize, therefore, that some sort of organized programme is better than nothing at all and that it is often easier to build up from a small beginning than to try to start with an elaborate programme.

When considering the initiation or development of an occupational health programme within the framework of public health services, it is important for countries of the Region to bear in mind that:

1. Their major health problems almost entirely arise from inadequate basic health services.

2. The health problems of industry, although important, form only a relatively small proportion of the whole.

3. The occupational health programme should be developed together with the development of industry to avoid the need for expensive salvage services at a later stage.

4. The experience of developed countries has exposed the weakness of setting up ad hoc occupational health services.

Countries of the Region should therefore give serious consideration to the development of existing public health programmes by extending these into the field of occupational health rather than by trying to build up a completely new structure which might well produce duplication, overlapping of effort and confusion of responsibilities.

It should also be remembered that no practical approach to the solution of a problem can be made unless the nature and extent of the problem has been

defined. Therefore, an expert evaluation of the present situation of occupational health in a country should be first carried out. This should include:

1. Study of the existing labour laws and codes as well as the extent of their enforcement.

2. Analysis of other programmes and activities that relate to occupational health.

3. A nation-wide survey of all industrial and other enterprises to determine the extent of occupational health problem.

4. A census of all available medical, paramedical and auxiliary personnel and those with special training in occupational health and related fields.

5. Investigation of all possible sources of financial and technical assistance.

The initiation of such a programme does not necessarily need a large corps of highly trained and experienced personnel because, as pointed out before, it is possible and often necessary to start in a modest way with only a nucleus of trained personnel. In addition, careful consideration should be given to the proper use of auxiliary personnel to relieve professional workers from unskilled tasks.

A number of countries in the Region have in the various professions individuals who have been trained in occupational health. Such persons might be physicians, chemists, engineers and nurses. Whenever possible, these qualified staff should be assigned or induced to accept positions in the occupational health services.

It should also be mentioned here that agriculture is increasingly becoming an industry and from the standpoint of capital investment and the number of persons employed may be termed "big business". However, agricultural workers though they represent a large segment of the working force,

do not as yet receive the attention accorded to workers in other occupational pursuits. While occupational health in agriculture is a very special problem because of the unique characteristics of agriculture as an occupation, it is felt, however, that an occupational health service in agriculture should basically have the same functions as that for industrial workers, slightly modified in order to meet the circumstances of agricultural workers.

No programme can justify its existence unless its short-range and long-range objectives can be clearly defined. In the case of many countries of the Region, a short-term objective may be as simple as the establishment of a basic occupational health unit to assist in defining the occupational health problems of the country. A long-range objective would aim at the provision of a full range of occupational health services for the entire employed population.

E. Pattern and scope of the service

The ways in which occupational health can be organized to meet the needs of the countries in the Region will vary extensively depending on the social, cultural and economic conditions of each country. They will also depend on the pattern of government machinery. There can, therefore, be no simple single blue-print for universal application and the final decision concerning the pattern of an occupational health service and the scope of its activities can only be made by individual countries in the light of existing circumstances.

The time is now opportune for the countries of the Region to extend or adapt their health services to deal with the health problems of the gainfully employed segment of their population. It would naturally be desirable to have all the spectrum of activities in occupational health, including legislation and inspection, under one governmental administration. This may not be feasible on account of administrative and political factors. However, the existence of labour inspection services outside the health services should not necessarily lead to overlapping and duplication because the nature of the

occupational health service provided by public health will be different from and complementary to the labour inspection services as it will have different demensions.

The Joint ILO/WHO Committee on Occupational Health in its third report[1] made a number of recommendations concerning the scope and organization of an institute of occupational health, the establishment of which represents in the Committee's opinion a useful and wise approach to providing for the specific requirements of an occupational health programme. However, this term might be misleading in that it suggests an elaborate type of organization which might be beyond the means of developing countries. Therefore, it is proposed to start with a limited unit which may be called a "Basic Occupational Health Unit". Such a unit could be staffed by a small number of trained staff and would only need limited space and basic laboratory and field equipment. The total cost involved in establishing such a unit is certainly within the reach of most countries of the Region. Such a specialized unit could be a section, a division or a department in the national public health service and would be responsible for the planning, execution and technical supervision of programme implementation.

Consideration should be given to the addition of occupational health to the functions of the health services, both at intermediate and local levels, throughout the country particularly in the productive areas.

Direct day-to-day services to workers in the workplaces, including pre-employment and periodic medical examination, monitoring of the working environment, health education, nutritional programmes and mass health campaigns can be provided through special arrangements with employers of large enterprises or through co-operative schemes for small ones. In cases where such arrangements are not possible the basic health services must be responsible for providing a comprehensive health programme to the workers within the reach of the health units.

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[1] Wld Hlth Org. Techn. Rep. Ser., 1957, 135.

In all the above arrangements, the national health services should supervise the services provided to ensure compliance with different health standards, including prevention of diseases and injuries as well as the compilation of adequate health statistics.

IV THE PROGRAMME IN OCCUPATIONAL HEALTH FOR THE EASTERN MEDITERRANEAN REGION

Since its inception, the Regional Office programme in occupational health has been directed towards helping Member States to develop their occupational health services to meet the challenge imposed by rapid industrial development. The approach differed from one country to another depending on the need and the stage of development of the country concerned. Since the lack or shortage of trained personnel in the manifold disciplines with which occupational health is associated is a major difficulty facing all countries of the Region when developing their programmes, high priority was given to the education and training of personnel in this important field of public health to ensure that countries would have a nucleus of trained staff qualified to develop the occupational health services. Apart from the granting of fellowships and assistance to medical and public health institutions, the Regional Office has organized a number of regional and interregional seminars and training courses to arouse interest in and spread knowledge of occupational health problems. Physicians, engineers, chemists and nurses have been invited to participate in these meetings and the faculties have also been drawn from different professions in order to promote team spirit among all those concerned with the health of the gainfully employed.

The assistance provided so far could be summarized under the following headings:

(a) Consultants

These were provided in response to requests for advice from governments, ranging from advice in solving specific occupational health

problems to advice on the organization of a nation-wide occupational health service. WHO consultants were provided to Iran, Kuwait, Lebanon, Sudan and the United Arab Republic.

(b) Fellowships

More than seventy long-term and short-term WHO fellowship were awarded to thirteen countries of the Region.

(c) Seminars and Training Courses

In addition to participation in ten inter-regional seminars and training courses the Regional Office was responsible for the following:

(i) Regional Training Course on Industrial Health, Alexandria, 1959.

(ii) Inter-Regional Training Course in Occupational Health, Alexandria, 1961.

(iii) Inter-Regional Seminar on the Health Aspects of Industrialization, Dacca, 1963.

(iv) Inter-Regional Joint FAO/ILO/WHO Seminar on Industrial Feeding, Alexandria, 1965.

(v) Regional Industrial Hygiene Course, Zagreb, 1970.

It should be mentioned in connexion with the last course that the Regional Office is fully aware of the increasing recognition of the importance and in fact the indispensability of industrial hygienists in occupational health and the lack of this important category of personnel in the Region. Realizing that formal teaching in this field is available only in a few institutions in highly industrialized countries and that the courses offered are not suitable for preparing graduates to meet the needs of developing countries, due consideration has been given to finding a means whereby these specialists can be trained to deal with the types of occupational health problems encountered in the Region. Finally, it was agreed with the Andrija Stampar

School of Public Health, Zagreb, to organize a specially tailored ten months' course leading to a Diploma in Industrial Hygiene. Ten candidates (from Iran (2), Iraq (1), Pakistan (2), Sudan (2), United Arab Republic (1), Philippines (1) and Ceylon (1)) completed the course in August 1971. It is planned to repeat the same course in 1972 to give an opportunity to the other countries of the Region to make use of this course.

(d) Assistance to divisions of occupational health in national health administration

Assistance was provided in the form of advisory services, supplies and equipment and fellowships to:

(i) The Division of Occupational Health, Kuwait

(ii) The Division of Occupational Health, Sudan

(e) Assistance to departments of occupational health in teaching institutions

Assistance was provided in the form of advisory services, supplies and equipment and fellowships to:

(i) The High Institute of Public Health, Alexandria

(ii) The School of Public Health, Teheran

(iii) The Institute of Hygiene and Preventive Medicine, Lahore

(iv) The School of Tropical Medicine, Dacca

The Regional Office, within the limits of its regular budget and the contribution that could be made available from the UNDP/TA and Special Fund, is planning to expand its programme of assistance in occupational health to respond to requests from countries of the Region.