



**MMS Bulletin #66**

*Arbeit und Gesundheit*

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## ***Anticipation and Control of Hazards Arising in and from the Workplace***

# **WHO Programme in Occupational Hygiene**

Von Berenice I. F. Goelzer

*The ultimate objective of the World Health Organization is "the attainment by all peoples of the highest possible standard of health - one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition". As spelled out in WHO's Constitution, "health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". If the goal of Health for All, established by the World Health Organization and its Member States, is to be attained, the health of workers must be protected and promoted.*

As human beings, workers have an undeniable right to health. Moreover, workers ensure all the goods and services necessary for survival, health and leisure, hence they constitute the driving force of economic development. It should be remembered that development must also be social and sustainable; workers should not lose their health or have an unacceptable quality of life because of their indispensable work activities, and the environment should not be destroyed.

In view of the importance of ensuring protection and promotion of workers' health, world-wide, the World Health Organization developed a "Global Strategy on Occupational Health for All" (WHO, 1995a), in collaboration with the WHO Network of Collaborating Centres for Occupational Health, comprising 58 institutions in 35 countries around the world (WHO, 1995b), with the objectives of identifying the main needs and establish priorities for action at the country and global levels, and, to trigger the necessary awareness and political commitment to develop appropriate occupational health services, through intersectoral coordination and international collaboration. One of the fundamental principles of the Strategy is that "occupational health and safety is an integral component of the health concept, which is part of socio-economic development".

The protection and promotion of workers' health requires specialized scientific and technical knowledge which must be applied, adequately and integrated into a multidisciplinary approach involving biomedical and environmental sciences and professions, such as occupational

medicine and nursing, occupational hygiene, ergonomics, work psychology, among many others.

## Occupational Hygiene in WHO

"Occupational Hygiene is the science of the anticipation, recognition, evaluation and control of hazards arising in or from the workplace, which could impair the health and well-being of workers, also taking into account the possible impact on the surrounding communities and the general environment".

The occupational hygiene component of the Office of Occupational Health, WHO, has the following objectives:

- to promote the development of occupational hygiene world-wide, at a high level of professional competence, and as an integral part of occupational health multidisciplinary programmes, at the national, regional and international levels;
- to promote the development and adoption of adequate methodologies for the recognition of occupational hazards and for exposure assessment in the workplace;
- to promote the field of hazard prevention and control in the work environment, through appropriate technologies, also accounting for environmental protection and sustainable development, as a priority area in the field of occupational health;
- to promote international collaboration and the sharing of technical and scientific knowledge on occupational hygiene, among countries around the world, with a view to decreasing the, often wide, inequalities in this field.

## Key principles for Occupational Health Policies

According to the WHO Global Strategy on Occupational Health for All, the recommended key principles for international and national occupational health policies are:

- avoidance of hazards (primary prevention);
- safe technology;
- optimization of working conditions;
- integration of production with health and safety activities;
- government's responsibility, authority and competence in the development and control of working conditions;
- primary responsibility of the employer and entrepreneur for health and safety at the workplace;
- recognition of workers' own interest in occupational health and safety;
- cooperation and collaboration on an equal basis by employers and workers;
- right to participate in decisions concerning one's own work;
- right to know and principle of transparency, and
- continuous follow-up and development of occupational health and safety.

# Examples of Specific Occupational Hygiene Activities in WHO

**Development of Human Resources.** Adequate human resources are the most important asset in any field. In many parts of the world, there is an acute shortage of adequately trained occupational hygienists, therefore the promotion and development of human resources has received particular attention, through a number of activities that include the organization of and participation in meetings, workshops and courses; the preparation of related documents and educational materials, and, advice on curricula for occupational hygiene training.

A milestone was the publication "Occupational Hygiene in Europe - Development of the Profession" (WHO, 1992), because it reflects the consensus reached, among key European occupational hygienists, on the profile of the occupational hygienist, the required areas of knowledge for occupational hygiene training at a high level, and, the importance of professional certification. This was followed by the creation of occupational hygiene courses, at the graduate level, in certain European countries, for example, Germany and Switzerland.

**Hazard Prevention and Control in the Work Environment.** Whenever the vast knowledge available on hazard prevention and control in the work environment is correctly applied, occupational diseases are prevented and lives are saved. Moreover, particularly when dealing with airborne contaminants, hazard prevention and control in the workplace also contributes to the protection of the general environment.

In response to a world-wide need for further developments in and more effective application of hazard prevention and control in the work environment, as well as for increased exchanges of information on control solutions, an initiative for "Hazard Prevention and Control in the Work Environment: Prevention And Control Exchange (PACE)", was launched by the WHO Office of Occupational Health. The PACE initiative aims at promoting

- political will, required to trigger action;
- improved access to information;
- development of human resources;
- applied research, focusing on the application of existing knowledge into pragmatic control solutions rather than on the creation of new knowledge, and,
- applicability of preventive measures to small-scale enterprises;

while emphasizing:

- anticipated preventive action, including the selection of cleaner technologies and adequate design of equipment, work processes and new workplaces;
- control of occupational hazards preferably at their source through, for example, substitution of materials and modification in work processes;
- safe work practices and workers' participation;
- integration of preventive measures into well managed programmes, and,

- coordination with environmental protection.

As to the exchange and dissemination of information, a first version of the "PACE-Directory of Resources in the Field of Hazard Prevention and Control in the Work Environment" has been prepared, containing information which includes: published materials, relevant institutions and agencies, CD-ROM's and other databases (including on Cleaner Production), and Internet Resources. This Directory will be published, as well as disseminated via the Internet, in the near future; thereafter, it will be continuously updated.

As to the development of human resources, an activity focusing specifically on Dust Control was recently started under PACE, with the objective of "promoting and strengthening national capabilities in the field of prevention and control of dust exposure in the work environment, by contributing to the development of the required human resources." Initial steps include the preparation of a guideline document, entitled "Hazard Prevention and Control in the Work Environment: Dust Control", and a training video.

## Harmonization of Methodologies

Harmonized evaluation methodologies contribute to more reliable exposure data, indispensable for risk assessment, and, to ensure comparability of results, which is needed for joint international projects and for the establishment of quality assurance schemes. In order to contribute to the harmonization of methodology for evaluating exposure to airborne fibres in the workplace, the Office of Occupational Health, WHO, has recently published a recommended method (WHO, 1997).

## Technical Cooperation

WHO's work also involves technical cooperation particularly with developing countries and a number of such activities have been developed over the years in the field of occupational hygiene. Technical cooperation is carried out in a spirit of "partnership" by searching, together with national counterparts, for the most appropriate and feasible solutions. In order to be effective, any cooperation activity, be it international or bilateral, should be directed to the real needs of the countries, while accounting for the available resources and the socio-economic and public health context.

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