

Special Articles

Summary of Seminar on Administrative Practices in Occupational Health

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A SEMINAR on administrative practices in occupational health, sponsored by the Division of Occupational Health, Public Health Service, U. S. Department of Health, Education, and Welfare, was held in Cincinnati, Ohio, on Jan. 23-27, 1961. The agenda was oriented toward the theme "Looking forward through the 60's," enabling state occupational-health-program directors to consider their needs in the coming decade.

The participants were divided into four study committees: occupational health goals for the future; legislation; manpower and training; and medical aspects of occupational health.

Each committee presented a detailed report at the annual meeting of state and local occupational health directors with the staff of the Division of Occupational Health, U. S. Public Health Service, during the April, 1961, American Industrial Hygiene Conference in Detroit.

Seminar highlights included the following observations:

1. With changing patterns of industry, the sociologic aspects of occupational health are becoming more important.
2. Job dissatisfaction promises to become a major occupational health problem.
3. New industrial processes require new concepts in industrial hygiene protection.
4. Forces shaping the practice of occupational health include workmen's compensation; humanitarian considerations; scientific, technical, and sociologic developments; automation; patterns of medical care; and medical cost.
5. There is an important role for local health departments in occupational health.

6. Present-day occupational health legislation is obsolete and inadequate.

7. There is a critical shortage of trained manpower and a dearth of students being trained.

Program Planning

Several economic and employment trends that will mark the 1960's were emphasized: the increased rate of power consumption and the economy's increasing dependence upon petroleum and natural gas fuel; the consequently decreasing dependence upon coal as a source of energy; the impact and limitations of automation of work processes; the growth of the general population and the working force, with an increasing proportion of the latter finding its way into commercial and service activities; the current status and anticipated growth of fringe benefits and their significance in limiting the mobility of labor and increasing cost burdens to management; and job specialization and fringe benefits, which are inducing a new occupational health hazard—job dissatisfaction, with lowered morale, productivity inefficiency, and labor grievance arising from the absence of worker identification with the tangible achievement of his work.

Job dissatisfaction was defined as the most serious occupational health problem confronting the future American economy. Increased specialization and automation in a complex technologic society obscure the relationship of the work process to the end product. The vesting potential of pension and other fringe benefits tied to tenure entraps the individual worker in his work process and company, regardless of his dissatisfaction. The opportunities for advancement and new challenges become more limited as the work process becomes more functionalized and as the emphasis on capital investment replaces

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that on manpower investment. Thus, the worker becomes the captive of the machine.

The resulting sociologic problems of the next decade will require mental health counseling, and in this area, occupational health faces a serious challenge and deficiency.

Chemical-producing plants, which will continue to expand at a rapid rate, will tend to locate close to consumer markets and resort more and more to automation to offset the tight profit squeeze resulting from higher production and distribution costs.

New materials and manufacturing methods will be introduced in civilian industry to meet military demands. The very exacting conditions of fabrication make it necessary to build protection for the operator into the process itself. Thus, the fabricating and basic extraction of beryllium are very elaborately and precisely managed to prevent exposure of operators to levels of atmospheric beryllium dust beyond those tolerable. An example of a specific problem is how to enable a roomful of operators to survive in an atmosphere of highly purified argon gas. Production of high-energy fuels involves corresponding precautions. The industrial plant health officer will increasingly have to participate in the initial planning of new production systems, to ensure that adequate protection is provided integrally, along with the other inherent controls required to make the process effective.

The present occupational health approach in the nation is a two-pronged one, involving (1) the identification and study of occupational disease and (2) occupational disease control and worker health maintenance through optimal utilization of industrial hygiene and preventive medical services. Forces shaping the future practice of occupational health include such diverse influences as workmen's compensation, humanitarian factors, scientific and technical advance, automation, patterns of medical care, absenteeism and medical care costs to labor and management, and availability of trained manpower.

At the federal level, the Public Health Service is strengthening its environmental health activities to cope more effectively with the changing national health scene. The increasing importance of the occupational health segment was recognized in the recent creation of the Division of Occupational Health. This division will carry out an expanded research program to yield better techniques, materials, and equipment for use in the prevention, diagnosis, and treatment of occupa-

tional disease. Research efforts will be intensified in toxicology and in related fields of clinical medicine, engineering, chemistry, and physics. Also, the physiologic and psychologic factors in the work environment will come under more penetrating study. Greater emphasis will be placed on training, and state aid services are to be expanded.

At the state level, there are eight states which do not provide occupational health services to industry. With the exception of programs in several of the industrialized states, most state programs are deficient in resources and manpower. Personnel shortages continue to plague officials.

The trend in the administration of occupational health services is to place them under bureaus of environmental health. Radiologic health and air pollution control are separate divisions of the Public Health Service, but in most of the states, they are still functions of the occupational health agency. State and local occupational health programs of the future will be affected by the climate of the times, the state of scientific progress, such as impetus provided by new discoveries and concepts, and the extent of understanding and appreciation by public health officials and others of occupational health as an integral part of community health.

Future emphasis will be on physiologic and biochemical changes as a result of environmental toxicologic exposures; socioeconomic effects of occupational diseases; work physiology and man; epidemiology of industrial populations in which the family unit represents the basic one; and systematic development of guide lines for maximal allowable concentrations. Because of the need to emphasize the technical and sociologic concept of the over-all problem, state agencies will need to rely upon universities for assistance.

Small plant health services are realistic, but methods of promoting them have been unrealistic. The industrial park holds promise for development of cooperative health services for small plants. Promotional plans must consider limitations of financial support, employee numbers, operational difficulties inherent in small plants, and realistic needs of the employer.

Local health departments can effectively implement state programs of occupational health because they possess particular skills, such as knowledge of community resources; technics of community organization, education, and motivation; and close contact with organized medical and industrial groups. Local health departments,

except in limited numbers, have not assumed responsibilities in occupational health because those in the field have not defined goals in comprehensible terms and local health officers have not received adequate training in occupational health.

There are a number of mechanisms for generating interest and implementing occupational health programs in local health departments. According to the California experience, the annual completion of the local health department plan for occupational health, which gives examples of functions, has been an excellent device for stimulating interest in the program. Another is the monthly distribution of occupational disease reports to each of the local health departments.

Training of local health department personnel in occupational health is basic to the undertaking of any activity. This training should be related to existing public health programs, onto which can be grafted programs directed toward the health of workers. For example, sanitation lends itself naturally to integration of environmental aspects. Delineation of health functions is necessary if the local health department is to plan constructive action.

Discussion from the floor brought forth many other problems of administration and programming, concerning which ideas and experiences were exchanged. Among these problems were: obtaining good publicity; preparing budget justifications; maintaining confidentiality of records, particularly in court cases; selecting the proper recipient for plant reports; obtaining clearance for work in defense contract plants; arranging visits to defense research facilities to observe operations and potential health problems; tackling problems of dynamics of human relationship; maintaining working relationship with other groups; evaluating services in occupational health in terms of community needs and demands; licensing and inspection of A.E.C. isotopes; and utilizing federal grant monies for occupational health projects.

Occupational Health Legislation

Most of the legislative activity in occupational health during the past 10 years has been concerned with passage of radiation and air pollution control bills. Laws have been enacted or regulations adopted concerning radiologic health in 33 states and concerning air pollution control in 18 states. In the specific area of industrial hygiene, 14 states either enacted some type of en-

abling legislation during the past decade or adopted or revised rules and regulations related to prevention or control of occupational diseases.

There is a pressing need for a critical review of existing industrial hygiene laws and regulations. Present legislation is nonuniform and obsolete. Confusion and misunderstanding result from the diversification of authority among several state agencies, with occasional overlapping of responsibility.

Industry welcomes technical information on occupational health hazards as well as advice on control and maximal allowable concentrations. Industrial hygiene codes should be enacted and administered as guides to industry; police powers should be exercised only when a recalcitrant industry fails to comply with reasonable rules.

The subject of second injury funds should be of concern to occupational health agencies, since such laws involve employed handicapped workers.

Program accomplishments through the regulatory approach as compared to the educational approach were the subject of a thorough discussion. The educational approach was thought to be preferable in the nursing and medical phases of occupational health and in individual or small groups. The regulatory approach comes into clearest focus in the environmental program. Many acute situations are encountered that require action backed by law and cannot be solved by education alone. Industry for the most part is in favor of reasonable regulatory measures. It was agreed, however, that for most effective results, a combination of regulatory and educational approaches is desirable.

Manpower and Resources and Training

The potential personnel needs of the future and the factors which will influence these needs were considered along with present-day needs. It was recommended that appropriate steps be taken to develop a formula for determining minimal personnel requirements for each discipline.

A panel discussion brought out the belief that universities should educate the "whole man," not just the technician, since the critical need of occupational health is the enlargement of its horizons.

Despite efforts to date, the average physician is unaware of preventive aspects and thinks only in terms of diagnosis and treatment, whereas the engineer limits his scope to the correction of the environment.

There is no dearth of facilities for graduate training. In fact, there is declining use of existing facilities. The problem is motivating people to enter the field and providing them with leadership and opportunities. The glamor and pres-

tige of occupational health need to be emphasized if we are to compete successfully for qualified personnel with other fields.

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The Division of Occupational Health of the U.S. Public Health Service A Series of Four Related Courses

A series of four related courses for industrial hygienists, engineers, chemists, and chemical engineers in the field of occupational health will be presented at the Occupational Health Research and Training Facility in Cincinnati, Ohio, Apr. 23 through May 18, 1962.

The courses "Industrial Hygiene Engineering" and "Industrial Hygiene Chemistry" will be given concurrently April 23-May 4. For the first week trainees in both courses will receive instruction conjointly in industrial hygiene and medicine, toxicology, and principles pertaining to evaluation of the environment. Meeting separately the second week, the engineering group will cover temperature and humidity measurements, illumination, noise measurement and control, and industrial ventilation; the chemists, laboratory analyses for lead, free silica, and solvents; and spectroscopy, polarography, X-ray diffraction, electron microscopy, and gas chromatography. Much time in each course will be spent in the laboratory.

"Heat Stress and its Control," which will be given May 7-11, will cover methods of measurement and control of industrial exposure to extreme physiological stress caused by temperature and humidity, with attention also on associated personnel problems. Course time will be divided about equally between lectures and laboratory exercises.

The course "Solvent Analysis Techniques," which will be given May 7-18, will include lectures and laboratory exercise on distilling-column fractionation and gas chromatographic separation of the components in binary and complex solvent mixtures, on the principles and application of simple physical and chemical tests, and on ultraviolet and infrared spectrophotometric procedures for identification and determination of separate components.

Full descriptions of these courses are given in the training program bulletin which is available on request. Trainees may register in single or related courses. Applications or requests for information should be addressed to the Chief, Training Program, Robert A. Taft Sanitary Engineering Center, 4676 Columbia Parkway, Cincinnati 26, Ohio, or to a U. S. Public Health Service Regional Office.