

## INDUSTRIAL MEDICINE AS AN IMPORTANT PHASE OF PUBLIC HEALTH

BY

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### ABSTRACT

Industrial medicine, sometimes called industrial hygiene and industrial health, has been properly termed the clearing house of organized public health work.

In the words of Prof. C. E. A. Winslow: "Public health is the science and art of preventing disease, prolonging life, and promoting physical health and efficiency through organized community efforts, for the sanitation of the environment, the control of community infections, the education of the individual in principles of personal hygiene, the organization of medical and nursing service for the early diagnosis and preventive treatment of disease, and the development of the social machinery which will ensure to every individual a standard of living adequate for the maintenance of health; organizing these benefits in such a fashion as to enable every citizen to realize his birthright of health and longevity."

Industrial hygiene has been variously defined by different people, but perhaps the simplest definition is as follows: industrial hygiene is a specialized form of medical and public health practice combining certain elements of medicine, engineering, chemistry, toxicology, psychology, sociology, statistics, and the principles of the prevention of disease, to the end result that the physical and mental efficiency of the worker is increased and production bettered in quality, quantity, and permanence.

There are various interpretations of the field of industrial hygiene. Watkins, in 1920, expressed the following viewpoint: "It took the medical profession quite a while to realize that the possession of a sound medical education did not *per se*, qualify a man adequately to carry on the duties of a health officer. The profession has likewise been somewhat slow to recognize that the acquisition of sound surgical technique or skilled diagnostic ability does not qualify a man to carry on the duties of an industrial physician." Likewise, Dr. A. J. Lanza, who in 1931 was chairman of the Section on Preventive and Industrial Medicine and Public Health of the American Medical Association, stated in his chairman's address in Philadelphia: "Although there are able and experienced industrial physicians competent to deal with any situation which may confront them, one still finds all too frequently physicians who have had no real appreciation of the nature and effect of working conditions and only an imperfect conception of the pathology, symptoms, treatment or prevention of specific occupational diseases."

The fundamentals of industrial medical service have been variously defined, but very succinctly quite recently by Dr. James A. Britton, as follows: (1) Examination of all new employees; (2) periodic re-examination of all employees; (3) routine and regular inspection of all working conditions and special supervision of all those conditions where there is a definite health hazard; (4) consultation and advice to any employee on personal health problems; and (5) active cooperation in community health activities. These are stated to be the minimum requirements for an

industrial health service that is worthy of the name and it is added that the cost of a well organized competent medical department which regularly and satisfactorily carries on all these functions will not be an impossible burden on industry; if industry does less, it is not carrying its full share.

The personnel of industrial hygiene is quite large and varied in its scope and consists of those who minister to the human body and its functions (including the physician, nurse, dentist, nutrition expert, psychologist, and physical trainer); those who have to do with the physical environment (the chemist, sanitary engineer, and sanitary inspector); those who have to do with the social environment (the sociologist, the social worker, the statistician, lawyer and physical educator); and finally, those engaged in fighting enemies in the parasitic environment (the bacteriologist and the protozoologist). Not all of these persons will be found in any one modern industrial medical service, but each one of them will be found in widely scattered industrial medical units, and in certain of these it would be difficult to progress without them. The physician is and probably always will be the leading figure in industrial hygiene; his chief work is to coordinate the work of the rest of the personnel, in much the same way that the diagnostician coordinates the efforts of various specialists and determines the possible program in each case.

It has been rather difficult to measure the tangible results accruing from the application of the principles of industrial medical practice chiefly because of lack of records kept before and after services have been established. However, the results of recent surveys have shown that absenteeism has been decreased an average of fifty per cent; a reduction in accident frequency has been lowered forty-three per cent; and the reduction of compensation insurance costs in the neighborhood of twenty-eight per cent. These figures were based upon a survey including a large number of organizations.

Opportunities for future development in the field of industrial hygiene and medicine are without limitation. For instance, McCord, a prominent industrial hygienist, has stated that health services have not been applied to more than four per cent of the existing industries in this country. From an economic point of view, it is now possible to cause a health service not only to pay for itself, but to yield dividends in terms of decreased absenteeism, decreased labor turnover, decreased compensation costs, and decreased accident frequency.

Finally, a conservative point of view gives to industrial medicine unlimited chances for the betterment of human kind because it provides the possibility of health supervision of forty to fifty million employees, which opportunity is not available through any other source. Realizing these opportunities the well-known industrial phrase "the public health is dependent upon the health of a nation's workers," becomes not merely a slogan but an industrial and economic principle worthy of the highest consideration and development.