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Instruction in Industrial Medicine for Medical Students

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IN THIS age of tremendous achievement and general advancement in all scientific fields, it is regrettable that the teaching of industrial medicine has fallen behind that of the other branches of the art and science of healing. Why is it that our best medical schools devote only four or five lecture hours to industrial medicine in a four-year course? Why does the worker so often shun his company's medical department? Why do so few graduates of medical schools choose industrial medicine as a career?

It is easy to censure the companies for this laxity in placing industrial medicine in its rightful position. But we should ask ourselves honestly whether we as physicians must not share the blame. It will be admitted that a properly equipped industrial medical department with the necessary personnel is expensive to install and maintain, and it is hard to convince a company that this is a good investment when there is no concrete financial return in sight. Numerous companies have spent money for preventive measures, but in some cases they have been forced into it by law after a noticeable morbidity in operations; and in others, the high compensation rates for industrial hazards have made changes compulsory. In the most successful instances the improvements have been carried out through the company's faith in the physician, who has been able to demonstrate that such measures are not only right but will also prove to be an economy.

This is not a criticism of the heads of industry, but rather an example of the lack of foresight characteristic of all human nature; and the physician must share the responsibility for industrial medicine's present role. The physician has been an integral part of every successful company for many years now, and it is up to him to make for his profession throughout industry in general a place similar to that which it holds in the world at large.

IN TRACING the history of the physician in industry we find a gradual evolution; but how slowly this progress has been made and how woefully it falls behind general medical progress. Originally the physician was called upon to take care only of the man who was injured while at work. No questions were raised as to whether this worker was physically able to do his work. Later the doctor stayed on the company property during the heavy shift and could be called for emergencies. Then, with the specialization of modern industry, the training of each worker became an investment of time and money. It became imperative, therefore, that only

fit candidates be hired, and pre-placement examinations were found to increase the safety of the worker, the safety of his fellow workers, and the efficiency of the plant.

Following this trend, progressive companies organized classes in accident prevention, but even this instruction was seldom under the direct guidance of the physician. And now old and new manufacturing processes and materials are studied for possible health hazards as well as the hazards of environmental working conditions.

All of this sounds intelligent, progressive and encouraging. However, the lack of interest with its accompanying effects can be well remembered.

AT PRESENT the surgeon in industry is gradually giving place to the medical man as the idea of preventive medicine is supplanting the repair of the damage done. We have come to realize that laws are not passed in anticipation of unfortunate occurrences, but are enacted only after a situation has become anti-social and has been before the public eye long enough to demand penalties for its continued existence. Has the medical man taken advantage of his new opportunity in the change which has taken place? Is it not the fault of the industrial physician that his place is not more important? Is it not we who are to be blamed for the minor place of industrial medicine in the school curriculum? Is it not our fault that the employee so often lacks confidence in his plant physician?

It is estimated that industry employs 42,000,000 workers in this country at present. This means that more than one-third of our total population is spending 24% of its productive life under the possible supervision and guidance of industrial physicians. The field is a tremendous one and its opportunities are constantly enlarging. Why has a challenge of this sort been allowed to go so poorly answered?

Another challenge to the physician in industry is the responsibility being given to lay groups for the conservation of employee health and for employee safety. All important plants have such personnel, and the results of an energetic well-trained group of this type have been most beneficial to industry. However, is it not deplorable that successful companies with a low percentage of preventable accidents when asked, "What type of medical care is given the employees in your plant?" so often answer, "Our safety man takes care of that." No mention is made of the physician. The plant physician in many such companies is but a necessary evil, and essential only for caring for injuries occurring to employees on duty and for making routine pre-placement examinations.

Is it not lack of proper respect for his job that has pushed many industrial physicians into this secondary place? May not this trend, if permitted to continue, push all into that position in the near future? Certainly it is not humbling our eminent position as professional men to learn something of the type of hazard the workers must face. Is it not better that the physician investigate conditions himself and, with adequate engineering assistance, make recommendations to the employer than be told by the personnel or safety group to examine Mr. Jones for a disease after he has been exposed to its cause. I am not against these groups. I am all for them. They are essential to us. We need them and should cooperate and work with them. But I am not convinced that industrial physicians should be in a subordinate position in matters affecting the health and safety of our industrial workers.

Most of our laws concerning employee health and safety are the direct result of action by lay people, often by the worker, demanding explanation of hazardous employment and the installation of safety methods and equipment. The physician has merely followed along and improved his technique when and where it was imperative. This situation is in part due to the great majority of men who, when attempting to get started in practice, use the salary received for part time industrial work to pay the rent. They are not primarily interested in this field. They have had no training in it, and as a consequence are not working whole-heartedly. They are willing merely to follow instructions. It does not seem fair that industrial medicine should be handled in this manner.

The 1939 report of the National Industrial Conference Board covering medical and health programs of 301 establishments showed that even in the large plants with more than 5,000 workers, physicians were employed part time more frequently than full time; and that in plants with less than 500 employees, members of the medical profession were invariably maintained on a part-time or call basis. Since more than 60% of the wage earners in manufacturing establishments are employed in plants of the latter category it is apparent that the responsibility for their medical service rests most heavily on the general practitioner who devotes a portion of his time to industrial work.

WHAT is to be done to rectify this condition? First, industrial medicine should be properly emphasized, and the importance of its place in medicine and industry clearly outlined. This can be accomplished only by providing sufficiently well-trained men in this field. With the present interest evidenced by government, labor and industry in the conservation of manpower no salesmanship would be necessary to place such a group of understanding men.

This brings us to the second suggestion. Provide in the modern medical curriculum sufficient teaching on industrial medicine to present its scope and its future. This would allow the student to evaluate this branch of medicine for a future field as he does in choosing obstetrics, surgery, etc., for specialization.

Dr. S. Z. Levine, Professor of Pediatrics at Cornell, in his opening remarks to the students this year said, "If the physician is to take the leadership in the health program he must study not only the technique of healing but also such social factors as family income, housing, clothing, nutrition, education and employment." Such preparation, he declared, is either lacking or wholly inadequate in present-day medical education.

The field of industrial medicine is too far-reaching to be covered in undergraduate years, but certain hours should be given to prepare the student for a graduate course similar to the training demanded today for a person admitted to the various specialty boards now in existence. Such courses would fit a physician to be called a specialist. If such a curriculum were adopted and companies could secure pre-trained men, thoroughly acquainted with the problems to be met and handled, I feel sure they would properly remunerate them, and that they would be able to render value received.

SUGGESTIONS for instruction in the undergraduate curriculum would incorporate the following ideas:

1. Industrial medicine should be offered to undergraduates as a separate course. By merely referring to disconnected bits of information in various courses throughout the four-year curriculum as sufficient in-

struction in this field, the importance of the subject is lost.

2. The lecture hours should include well-chosen topics in a general vein. The scope of industrial medicine, its history and importance should be presented. Following this introduction, such broad groupings as:

- (a) Orientation and general considerations.
- (b) Placement of the worker from a physical standpoint.
- (c) Routine role of the physician in the plant.
- (d) Hazardous occupations, preventive measures, and care of employees under these conditions.
- (e) General health program for employees.
- (f) Research.

3. Field trips should be made to a well-organized industrial medical department, with demonstration of the above topics in action.

Such a program is entirely feasible if as little as 20 hours were given in any one academic year, but preferably the senior year. The surface of the subject would have been only scratched; but a stimulus for future study in graduate work would have been implanted in some; and the entire class would have been afforded sufficient insight into the subject to respect its importance.

I should like also to urge that much thought be given to providing adequate opportunity for graduate teaching in this special field of medicine comparable to the facilities and training offered in other special fields.

The faculty for both undergraduate and graduate instruction may be very readily gathered in the majority of the communities in which medical schools are located. It has been the experience of most of us in the field of industrial medicine that the time and energy of self-trained industrial physicians is available for such teaching. Men for the chemical and engineering phases are likewise readily available.

This presentation has been given as a challenge to you who carry the responsibility of medical education. Let us be able to offer to industry physicians with sufficient knowledge so that they may assume their proper responsibility and status. When these trained men are generally accepted as a necessary part of present-day industrial relations, their work will be a bulwark against certain socialistic trends which are constantly appearing on the horizon.

Industrial Morale

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AS A NATION, we are preparing ourselves for a grave emergency. Such an effort to cope with modern armed conflict implies a dislocation of normal industrial procedures, a confused, anxious period of waiting while our industrial strength is being made effective, and that an immediate and unprecedented importance will be attached to the morale of the ordinary industrial worker.

Industrial populations have assumed a strategic importance in current plans for total war. They are the centers of strength and the first points of attack. Ways and means evolved in the extinction of a dozen countries have been formulated into a polished technique of destruction aimed at industrial populations.

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