

HEALTH EDUCATION OF THE ADULT WORKMAN

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## HEALTH EDUCATION FOR THE ADULT WORKMAN.

The workman's only real asset is his health, upon which his strength depends; it is his working capital. When he loses health he loses everything; he becomes a burden to himself, to his family, his friends, and the community. He lives by the wages he gets just as employers live by the work he does. How to maintain health under industrial conditions is the subject to be considered. The term industrial hygiene is used much more today than at any time in our history. It signifies the dawning of a new era, wherein the man, rather than the machine, receives the most anxious and skilled attention. At least this is the goal which we are hoping to attain. Industrial hygiene involves the medical, economic, and social conditions of the workers in industry. It is that branch of medical science which aims to conserve the health of the worker and increase his productivity. This we hope to accomplish by a program of health education which will result in health consciousness.

There is nothing new about this. Since the time of the Industrial Revolution efforts have been made to provide the worker with some substitute for the loss of personal relations that existed in primitive industry. Yes, even before this we may go back to the twelfth century; the Jubilee of Her Majesty devoted the bulk of subscriptions to the founding of an institution for the training of nurses to visit homes. This resulted in the Queen Victoria Jubilee Institute. It is connected with an ancient charity which was founded 1148 A.D. In 1273 this hospital was chartered by Queen Eleanor and became the center of the great national movement for visiting the sick. Charles Dickens in his American Notes writes of the first industrial



hospitals," at some distance from the factories and on the highest and pleasantest ground, stands the hospital or boarding house for the sick; it is the best house in those parts. It is not parceled out in wards, but is divided into convenient chambers, each of which has all of the comforts of a comfortable home."

Before we found trained visiting nurses going into the homes of the sick employee, we had the employer's wife or maiden sister visiting workers and giving ~~them~~ advise or material relief, always with the idea of being charitable or philanthropic. It was because of their unskilled technique that the 'charitable' employer clung to organized industrial welfare in its earlier days, hindering its development, causing much misunderstanding between capital and labor and was frequently the cause of discontent and animosity toward the employer. This does not sound much like a health education program as we know it today, but the foundation was being laid on which we can build a larger program in accordance with the knowledge of preventive medicine we now possess.

One has but to consider industrial history to see why a departure from traditional practice in health maintenance is the need. In former days work was performed without the stress and pressure of today. Men did their work in the open air; he had more personal volition and mingled with his friends, who were his fellow workers. Occupational risks, chemicals, fast running machines, belts and wheels were hardly known and the worker was, perhaps, generally healthier and happier in production than now.



The death rate was high, it is true, but not from occupational causes. Modern industry has changed all that. We live in a period of mass production, which means a mass of human beings as well as a mass of production and with the human cooping up, there comes a problem of ill health and unhappiness which demands rectification.

Coming now to discuss the more immediate question of industrial sickness we find that there is a large amount of more or less serious disabilities, which give evidence of the need of a more comprehensive scheme for health maintenance. According to a study made of eight million wage earners in industry, it can be foretold to a certainty about 10% are absent from work all the time and half the absences are due to sickness.<sup>1</sup> Many statistical estimates have been made of the amount of sickness prevailing in industry and it is generally agreed that about nine days are so lost per employee per year. We have been long indeed in ascertaining the extent of industrial sickness merely because there is no means of doing so unless a medical department has already been established. Very often the employer cannot be interested in the subject because he has no evidence at hand to justify the move. Legislation has placed the responsibility for accidents squarely on the shoulders of the employers. Doubt as to the place and origin of sickness has prevented the possibility of laws such as in the case of accidents. The edison experience has shown that sickness causes twenty times as many cases of absentees as accidents and is responsible for seven times as much loss of time from work.<sup>2</sup> The industrial death rate from

1. Health Maintenance in Industry, Hackett P. 29

2. Health Maintenance in Industry, Hackett P. 29.



tuberculosis in the age group 45 to 54 is three and onethird times that for males in the ordinary or non-industrial group.<sup>1</sup> The machinist is essentially a trained man whose usefulness might be expected to continue till at least the age of 65. Figures disclose that 85% of them die before that age.<sup>2</sup> The English Industrial Welfare Society estimated recently that British industry loses, through diminished effort due to indifferent health or actual illness no less than \$ 10,000,000 a week and the interesting claim is made that proper medical supervision could reduce this vast sum substantially.<sup>3</sup> For every dollar lost in wages the employer loses three times as much in lessened production and increased overhead. Howard Cheney in advocating health supervision in industry recently suggests that the employer should consider the following items in estimating his losses due to sickness in industry: (a) the cost of training new employees to replace those whom death or disability has removed; (b) the cost of idle machinery; (c) the extent to which production has been reduced because of the lowered vitality of workers who have been ill. The total amount of these losses in their own establishment, has been estimated to be approximately \$ 60 per person per year.<sup>4</sup>

For years the general health of the community has been improving, due to the decrease of smallpox, diphtheria, tuberculosis, and other diseases and the average term of life has been materially lengthened. But this is not true of the working population. the death rate increases over that of the general population at a time when the worker should be reaching maximum

1. Handbook for Labor Statistics. P 632.

2,3,4. Health Maintenance in Industry, Hackett.



efficiency. The fact is that under industrial conditions the health of the worker is deteriorating and this leads to an enormous though unperceived loss to every plant. Elimination of preventable sickness, through a plan of health maintenance will compensate the employer for the expenditure involved.

Attention to the physical situation of the worker had its origin in a need which has become more apparent with every step in industrial development. Yet medical service might not have been accepted in industry for another generation without a fortuitous circumstance. It was providential that accident prevention introduced the doctor into industry just at the right time. Nothing less than a fland movement of the kind could have brought about such a radical change in factory routine. It was easy to show that prompt attention to injuries effected a great saving and thus the doctor's reputation became secure. As a result of this departure it was inevitable that the doctor should busy himself with the cure of sick workers. Sickness is more prevalent in the plant and in any case nine-tenths of the apparatus and equipment has already been provided. When later, state health insurance became an issue, and the extent of industrial sickness became known, its systematic treatment became part of the regular work of the surgeon.

A revolution of ideas is taking place in industry. Had any one proposed, even a few years ago, that a medical man should be one of the regular staff of all large plants, he would have been looked on as a visionary. But the impossible has almost been accomplished, and we now find medical and hygienic science being developed in some well managed plants in the country.

Industrial medicine, it should never be forgotten, operates



on the theory that disease is preventable; in fact, preventability is the foundation of the scheme. Not only can a doctor prevent sickness more easily than he can cure it, but the nature of such sickness as are found in industry and the environment of the plant are specially adapted to the gospel of prevention. "This is one of the salient facts and if the plant doctor cannot accommodate himself to its practice he had better not engage in industrial medicine. The employer naturally desires to keep the worker continually at work, and the physician's success must be gaged by how far he attains that end, not by his success in curing patients."I The justification for industrial medicine lies, not in reducing the days of absence from illness, important as that may be. A far more signal service is that of prolonging the lives and usefulness of the older and more experienced employees. As we have said the average life of the people as a whole has been lengthened in the last few decades but the industrial population has shown no relative increase, if medical service can prolong the life of the skilled worker by even a few years the benefit to industry will be substantial. It is not alone the reduction of the monetary loss, or the physical improvement of worker that justifies industrial medicine. The Worker who knows that his health is protected that his earning capacity is maintained and increased, and that he is in a measure relieved of medical expense, thereby gains in peace of mind which, in itself is a factor in increased efficiency.

Any employer would be unwise to introduce a doctor into the plant unless he can do substantially better for employees than they can do for themselves. A medical department should supplement, not displace the family doctor, and this situation should be



explained to the employees. The service should aim only to improve health. It should not be used as a means of blacklisting workers on any grounds but health. It should neither patronize nor aim to censor morals or manner. In a word, it will fail unless the motives and spirit behind it are unquestionably sincere, apart altogether from the question of technical capability. It is always advisable to begin modestly and expand slowly, taking the most obvious needs first and gradually enlarging as the necessity arises. Except in isolated plants there should be no attempt to follow the worker to his home. Nevertheless, the doctor cannot ignore the factor of living conditions. It is, at least, advantageous to attempt in the plant to educate the worker in the art of living hygienically in order to reduce the incidence of sickness in the plant.

Industrial medical work differs in one respect very materially from general medical work. In industrial medical work all the potential patients are a fairly homogeneous group gathered under the same roof and subjected to somewhat similar conditions for a substantial portion of the day. They can be more easily reached and influenced than when scattered in widely separated homes. The prevention of sickness is an economic as well as a humanitarian duty in the plant, and to be successful it must cover a wide field. It is in this field that the industrial nurse has made her contribution.

Probably the first trained nurse that entered industry in America was Miss Ada M. Stewart, R.N. She was employed by the Vermont Marble Co. in 1895 to visit the homes and care for the sick workers and their families. Two years later the Benefit Association of the employees of a large department store in



New York employed a trained nurse to visit its sick members and see that its funds were distributed fairly. It was thought that her nursing experience would enable her to do this work well and no consideration was given to her ability to be of help in any other way. Experience proved to her that her services could best be used by giving first aid where needed, by providing prompt and suitable medical care and nursing for sick and injured, by following up work to see that medical orders were carried out, to see that patients returned to the Doctor when necessary, that the men returned to work when able and see that financial anxieties and family cares did not retard recovery. The relationship in this instance between nurse and patient was particularly happy, because the nurse received her salary from the funds of the benefit association. She was appointed by the elected representatives of the group and was really the employee of the workers. When this arrangement exists it is possible for the nurse to make occasional visits solely for investigation as the workers recognize the justice of such visits and the necessity for the protection of their own funds.

About the time the trained nurse entered the field, far sighted employers began to realize that certain forms of industrial welfare and especially industrial nursing are good business. The cost is now quite generally charged to overhead expense where formerly it was often charged to charity or occasionally even to advertising. Altho there has been a change of heart in the employer it sometimes remains for the nurse to do her part in bringing clearly before the employee the motives and kindly aims of the company for which she works. She must also teach the worker and his family in the plant and in the home how to live in order



to keep well and how to avail himself of proper medical care when sick or injured. She shows him that his fears of hospitals and doctors are groundless, persuades him to avoid quacks and patent medicines and points out to him the folly of depending on kindly neighbor for gratuitous medical advice.

Altho the entry of the nurse to the plant has usually been by the way of the first aid room she has seldom stopped there. She soon found that the giving of first aid was one of the least of her duties, that it was only one of the many ways in which she found opportunities for service. Her value in industry, both to the employer and to employee steadily increased as she entered in to the field of prevention. In the plant she was often able to discover cases of illness while in the first stages and still curable. She was often the first person to observe the early symptoms and while she of course, made no diagnosis, the worker often accepted the nurse's statement that a thorough medical examination was wise. She found health and accident hazards and was able to secure with the company's assistance, their correction. The growth of her work was only limited by time, by her strength and vision, and by the initiative allowed by her employer.

Health insurance will open to the nurse a still broader field. As legislation for accident compensation has lessened the number of serious accidents in industry while increasing the number of reported injuries, so health insurance when it comes, will lessen the total industrial disease and other illness while probably greatly increasing the number of persons under medical care. As the industrial nurse has been found indispensable in caring for accidents and their prevention, so will the demand for her services



increase health insurance for the worker, whether provided by the employer, by the worker, or by both, or by the state with a tax on both employer and worker, becomes general. Whatever the final settlement of industrial problems, the nurse cannot be spared from industry. When capital and labor have learned that cooperation and mutual understanding are essential to human welfare, she will reach her full usefulness. She will continue to serve employer, worker and community as long as worker suffer accident or illness and while the laws of health are unknown or disregarded in plant, home, or neighborhood.

Since the nurse must be an interpreter between employer and employee there must be definite cooperation with various department throughout the plant. She plays a definite part in the safety program. Every day she sees the results of carelessness and the need for safety at work. She frequently can get from the injured worker a more detailed account of his accident and its causes than the plant physician. Many operatives will talk more freely to her in this regard, feeling that they receive more sympathy from a woman than from the physician. Moreover she is apt to do the subsequent dressings more frequently than the company doctor and has an opportunity to talk to the injured person each day. In the case of the woman employee these chances are increased. When she is receiving his dressing he will be in a more receptive mood and the nurse must not lose sight of this opportunity to give a lesson in health--be it prevention of infection or a safety talk. It is because of these distinct opportunities that the nurse should be recognized and given a chance to assist in the safety program. She learns in her talks with first aid workers of occasions where employees injured have delayed reporting their injuries or have never reported them. She may find a case posing as having been



injured at work who really was injured outside the plant but believes the safest way is to blame the job. These cases she can clear up may time and the employee realizing the watchfulness of the nurse is not so apt to malingering. In the plant the nurse may witness operations here and there that are unsafely performed, but which to the overseer long accustomed to the work may not seem so. In private she can talk over these hazards with the foreman. Again, she may observe a worker carrying out an operation in an unsafe manner, taking chances which are unnecessary, and here she can point out to this operative the need for care in his work. If her aid is sought in an effort to reduce accidents, she can draw on her experience with injured workers, telling of the regrets expressed to her that they had taken chances they were not called upon to take, such as cleaning machines in motion or reaching in between gears and shafts rather than take time for longer but safer method. By contributing to the plant publication or bulletin board she can further express her observations on the possibilities for safety. There are certain workers who are injured again and again. These individuals take their misfortunes lightly unless they have had a really severe accident with the loss of an eye or a portion of an extremity. They seem to give the impression that it is actually all in a day's work and he who has not been injured is really not one of their chance taking kind, does not belong, in other words, and is rather looked down upon. Here a nurse can perform a very useful service in disabusing such a person of his mistaken ideas to what constitutes doing his job well, with due regard to its hazards, and what really constitutes foolhardiness. When such a man comes to a plant dispensary and awaits his turn to be dressed with other injured, the



nurse's opinion on accident prevention as properly practiced will frequently deter this type of worker from giving too free vent to his bravado. Another field in which the nurse can play an important role in prevention is among the married female employees in ascertaining at the time of employment if they are pregnant. She can by cooperation with the women aides in the mill, learn if there are pregnant women whose work entails a risk of miscarriage. She may in a talk with the worker advise her when to stop work and call attention of the plant physician to these cases and make appointments for their examination. Now and then there may be confided to the nurse some inkling of domestic discord and, in a friendly way, she may help in straightening out the difficulties, placing the employee in a better frame of mind when his family troubles no longer hang before him like a cloud blinding him to the ever present hazards of his task.

With the many things that the nurse may find to do to improve the health both mentally and physically of the worker she must never lose sight of her relation to the physician. It is the fundamental principle of all nursing, that care of the sick be given only under the direction of a licensed physician. The direct responsibility for treatment of the sick and injured is a medical one and except in emergency does not come within the field of nursing. The nurse works under the orders of the attending physician in applying her technical skill. The methods by which the industrial nurse thus correlates her service with that of the physician may be direct or indirect. In the direct method, the physician is giving his service full time and is constantly within reach to give orders and to supervise the care of each case. In the indirect method he may be on part time or on call, in which case he assumes responsibility for the treatment of accidents and illnesses by issuing



written standing orders to be used as a guide for the nurse in treating cases in his absence. Without written standing order, the services of the nurse, in medical or surgical conditions, should be limited to first aid only. Further care would be a violation of the medical practice act unless the nurse was carrying out orders under the direction of a physician. Standing orders should be issued to give her protection from such violation. In a recent study that has been made it has been found that in only 315 of the 1,006 establishments did the nurse have written standing orders.<sup>1</sup> The nurses employed in these establishments represent 31.5 % of all nurses included in this report. From these findings it is clear that many industrial nurses are failing to follow one of the fundamental principles of a nurse's training, and are exposing themselves to possible legal difficulties. In 631 establishments, or 68% of those reporting, the nurse is professionally responsible to the physician, while in 277 other she is responsible to the management, the director of the personnel department, or to some other plant department. This apparently divided responsibility may account for the failure of the nurse to provide herself with standing orders. This makes us realize the need for well qualified nurses for this branch of the service.

The profession has accepted the standards for public health nurses as laid down by the N.O.P.H.N. generally, the only field not accepting is that of industrial nursing. This does not mean that the industrial nurse has a much simpler job, and that it is unnecessary for her to know as much as the other public health nurses, for her work certainly demands all the knowledge and skill that she can muster; but it is rather to be accounted for by the fact that most industrial nurses are employed by lay people who have no knowledge of nursing educational standards, the industrial



group being practically the only one where employment is not largely under the direction of the nurses themselves. If the industrial group is to remedy this and to accept standards of professional fitness equal to those of the profession as a whole, special effort must be made by them in two directions: First, each nurse must take the initiative for remedying her own educational deficiencies, for at present few industrial nurses are fortunate enough to work where modern staff education programs are provided for them, as is done for the community nurse. Such preparation will come largely through her own interest and desire. This preparation may take the form of postgraduate study; or in large cities it might well mean getting staff education programs under way on a community rather than an agency basis, to which she will have the same access as other community workers. Secondly, the public health nursing profession as a whole must educate the industrial employer to an appreciation of the difference between a well trained and a poorly equipped nurse. The average layman's knowledge of nurses is confined largely to experiences with them in time of family illness, and his knowledge of nursing education standards is lacking because we have neglected as a profession to enlighten him. It is our responsibility as a group to make him see that if community agencies can no longer afford to employ the totally untrained person, surely industry can not, so long as better prepared workers are available.

If we are then to recommend postgraduate study for the nurse that is to enter industry, what should the course offer? Fundamentally important from a practical point of view, the courses all attempt to make clear the role of the public health



nurse in the field of preventive medicine and public health; which in this case means concretely the relationship and contribution of the nurse to the industrial health and safety program, the primary objective of which is prevention.

Second, the courses attempt to break down the feeling of professional isolation which develops in each of us who live so close to the details of our work that we fail to "see the woods for the trees." If the industrial nurse is to view her work as a conscious part of the community as well as of the industrial health program, she herself must have a comprehension of the public health nursing profession as a whole, its development and evolution, the problems which have arisen and the solutions which have seemed wise, the relationship of her professional group to that of the allied ones of medicine, social work, and education. She, as an individual, must be able to build her work on the past, profiting by group experience, not duplicating mistakes which come when the trial and error method is substituted for education.

Third, postgraduate study should teach the student what resources communities must provide to keep their people well, so that she can guide her own industrial community groups wisely in the development of such facilities; and on the other hand she must learn how best to use these resources, once established, for the good of the individuals for whom they are planned- how the various health and social agencies are related to each other and to the whole field of public health nursing.

Fourth, since the work of any public health nurse is largely that of teaching, she must be taught how to teach more effectively, for long ago we exploded the theory that good teachers are "born."



Fifth, the work of the public health nurse concerns itself always with people-attempting to change their habits to conform to the knowledge of science-and this means that she must understand and like them if she is to be successful. She needs to be helped to a better understanding of them and of herself as one of them. Psychology and mental hygiene contribute much to her increased effectiveness.

Sixth, but perhaps most important of all a postgraduate period of study offers opportunity to practice in the field the work which the nurse will be called upon to do later, but under the guidance of nurses who are themselves experienced in the arts of their profession, thus gaining proficiency without exploiting in the process.

For the nurse who knows definitely that she is to enter or return to a specialized field, such as school or industrial nursing, the postgraduate courses try to give opportunity to study the problems peculiar to those fields. In the case of the nurse entering industry, time should be given to the study of industrial hygiene, safety, and sanitation, and to consideration of such problems as those of industrial relations. In this fashion the student is trained not as a specialist, seeing only her little field, who if her position is suddenly closed to her is fitted for nothing else, but as a member of an ever enlarging profession, able to seize whatever opportunity for service presents itself. Education becomes then not a luxury, a superimposed accessory, but a part of life itself.

No one claims for a minute that postgraduate study is a cure-all. It cannot create a strikingly successful public health nurse out of a person who lacks adequate elementary education, or dislikes working with people. Because such types-unsuccessful



wherever they work-often crowd the college class room in vain effort to better themselves, without result, college courses often are judged as of little value, Given a person of fair personality, sufficient preliminary education, and a real desire to be of service to people with whom she genuinely enjoys working, postgraduate study will prove a short cut to professional attainment which in the long run is economical to both employer and nurse. The time has passed when any industry can afford to engage untrained personnel and educate them at company expense. Mistakes are too expensive, unproductive work too costly. In most instances the well prepared nurse would ask no higher salary than that which industry is already paying; at least such industrial salaries as have come to my attention have compared favorably with those offered by community health organizations.

Dr. Redden says when discussing professional qualifications of nurses for industry, " It is a curious thing that nurses in their training are taught to do nothing except under medical supervision and yet nurses expect to come out of that training and go into industry and handle emergency and first aid cases without any supervision. I was talking to the supervisor of nurses in the Massachusetts General Hospital and I asked her how much first aid training they gave their nurses, and she said, 'we are not going to teach our nurses first aid; we haven't time to do it. It ~~isn't~~ isn't part of the hospital work'. I said 'Allright, but when they get out of the hospital and are up against the problem, they will know less about giving first aid treatment than a lot of laymen who are hired by the Telephone Company, and they are certainly going to be up against it.'



I want to add to the training you have suggested a definite thorough, standardized first aid course. The best one I know of is the one given by the American National Red Cross. They have a standard textbook which is the bible of first aid, and if you follow that you can't go wrong; and out of that you can develop other things, because you must certainly know how to meet emergencies. You are not supposed to give pills without the doctor's standing orders. Nevertheless, when you go into industry, you immediately become a pill peddler. You have been taught to give pills under medical supervision, as you have been taught to do a lot of things, and instinctively you say, 'This is the thing. I am not a doctor-mental, moral, or spiritual-therefore, I will give this pill for a headache, and I will give another pill for something else, and I have done my job.' Now, unless you, as nurses, can get away from that idea and begin to realize you are an individual entity and at least have the privileges of a mother toward you group of children in industry, and get your doctor to give orders for you to follow-yes, to follow routinely, you will not be doing all you can. When you are able, not only to cut down your pill giving to the minimum, but to increase your spiritual and moral advice to the maximum, then you will be going to become a good industrial nurse." He add, " the industrial nurse today is up against it. It is the most poorly organized group of nursing in the country. If you ever going to get anywhere in your development and education you have got to get together, have meeting and discussions and see whether you have white mice or black cats. You have got to bring you problems out on the table." I



The employer who thinks that he has too few employees to warrant the salary of a well prepared nurse often compromises by taking an untrained person whom he considers less expensive, or puts the nurse at part time work in other departments of the plant, or, most commonly, goes without public health nursing service altogether. Far better than that of satisfying one's self with makeshifts, is the plan sponsored by the N.O.P.H.N whereby small industries buy service at an hourly rate from the community public health nursing agency. For then they secure not only the hours of service arranged for, but in addition, if the agency is a good one, qualified nurses properly trained and constantly supervised, who bring to their work in addition to nursing skill, a knowledge of the community-its health needs and plans-who can fit the needs of the wage earning group into the picture of community and family health.

According to a study dealing with welfare activities in Industrial Establishments<sup>I</sup> it was found that there existed from the most meager accomplishment, to the plants having the most elaborate set of health education for their workmen. Among some of the most important things that are being done for the employee are; well established and equipped hospitals with well prepared staff to care for the accidents and illness, health education through classes for both men and women, educational dinner speakers to take advantage of the noon hour, lunch rooms and nourishments at intervals between the main meals, safety campaigns, regular sanitary surveys, recreation halls, and arrangements with commercial agencies for a complete vacation for the workman with pay. Although it may seem by this



the majority of the needs of the worker are cared for, but we must remember that is a collection of all that is being done for him and not any one company provides them all. It appears that the greatest needs are found in the small plant where the employer feels that he cannot afford medical care more than the law requires. However it is in many cases the failure of the management to be sold to the idea, which goes back to the fact that somewhere, someone has failed to do their part in bringing before him the facts--it pays financially.

We may say that industries are like Will Rogers' description of the Ford. After doing repair work on the Thousandth Ford he says, "I've fixed over a thousand of them things and I ain't ever found the same thing the matter with no two of 'em." Industries are so different in size, kind of work, technicalities, that the nurse must make the pattern fit the industry into which she has been inducted. It must be constantly kept in mind by those doing industrial nursing that their program is the only program worth while for the health education of the workman must go hand in hand with all agencies, interested in the worker whether it be health or otherwise, because we have learned that cooperation is necessary in our complicated civilization and competition.

In conclusion, health maintenance in industry is as yet largely an unmined field the possibilities of which have scarcely been realized. It is not alone useful because it is a real aid to production; it is also a symbol of good will and tends to smooth out one of the underlying causes of friction. Medical attention helps the worker by relieving pain and suffering; it



lessens the economic burden of medical costs when no wages are coming in, and, whether the worker admits it or not, a good medical service stands as a bulwark against the fear of sickness which is always present among those workers who have saved little or who have earned too little to save. The industrial plant as a unit lends itself peculiarly aptly to the practice of preventive medicine. The value of preventive, as distinguished from curative, medicine in industry can hardly be emphasized sufficiently. There is no longer any mystery about the mechanisms of health conservation in industry. Plant medical work has gone beyond the purely experimental stage and enough is now known to indicate what should be done as well as what should be avoided. No employer should, from mere impulse, attempt to impose medical service on unwilling employees; rather should he proceed from his intelligence, having ascertained their desires. One of the extraordinary facts about health conservation in industry is its unequal development. Some few employers have, here and there developed the subject highly while other have not as yet benefited, nor attempted to benefit by these experiences. The physical examination, of course, is not to eliminate but to place properly the individual in industry according to his physical condition. No matter how small or how extensive may be the service that may be offered the industry, it should be administered by the best trained and qualified persons. The program should be one of cooperation with outside health agencies and other agencies interested in the worker as well as the divisions of the industry in itself.

A few recommendations which would seem to be warranted by this study will be included. I. Examinations of executives



and supervisors should be included in the health program but such examinations must be inaugurated diplomatically. 2. "That medical files be not available to anybody but the medical force, and when an employee is reported ill and off on sick leave, neither his foremen department heads nor executives are advised why. The medical department says that man should not be at work. It is up to them to take that responsibility. In that way we have had no trouble getting it over to the men. They go to the medical department without any fear that anybody but the doctors and medical department will know anything about their situation. I think possibly that has been very prominent in other places and I think if that could be corrected some of the troubles would be corrected." I 3. Educate the managers of small plants that it is beneficial to keep the health of the workers at an operable point by demonstrations as to how much sickness costs and how much lost time costs, both to production and management. Studies made along those lines will help in a large measure to convince small plant owners that the thing to do is to make some real efforts along these lines, in order to help solve the problem of efficient production at a lowered cost and a higher quality of human health in the workshop. 4. Scientifically conducted surveys to find the needs of the workmen in their daily tasks in order that they may be protected either by legislation but better still educating the managers to the need. These surveys to be conducted by a person qualified and trained for this purpose and had a public health viewpoint. 5. More emphasis



on developing close cooperation and all other official and non-official agencies, social and health agencies. 6. Sympathetic understanding of the health department by employer and employee. 7. Higher educational standards for foremen and employers, along the lines of understanding human behavior. Courses or lectures to this group and perhaps the workers themselves would profit by them of applied psychology. "In these days of mechanical safeguards, 95 per cent of all accidents are due to man-failure," says Carney. "Attention of those interested in safety, therefore may well be devoted to the mental causes of 'man-failure.'" 1. 7. Recreational facilities for sound mental and physical life. It may be suggested here that the nurse may play a large part in this program. If she had learned while in her postgraduate work some physical education and taken practical sports as tennis or various ball games she may win her way into many homes through this method of meeting on the court or even teaching the actual game to the workers. If she is able to sponsor or be a leader for clubs she may have the interests of the younger group or children which will be to her advantage. 8. Industrial nurse should have a medical-mental-social viewpoint and should feel her responsibility as part of a large group of nurses doing definite health teaching. 9. Psychiatric course for all nurses doing any phase of public health nursing. Although such cases should be transferred to the psychiatrist or to the personnel department, if there is one, the least one should expect of the nurse would be an intelligent understanding of the diagnosis and ability to help in carrying out treatment. In smaller industries



the responsibilities of the nurse are proportionately greater as the medical staff decreases in size. A constant factor is her contact with employees, whose confidence it is her first task as a mental hygiene worker to win. Her usefulness thereafter extends in as many ways as the spokes of a wheel. She will find people suffering from anxiety because of illness of unhappiness in the home, inadequate finances and for a hundred other reasons both real and imaginary. The present insecurity of unemployment makes particularly pertinent the understanding of worry as a cause of mental ill health. 10. There is urgent need for all health agencies to unite in an effort to reduce the number of deaths from heart disease and to limit the amount of disability it causes. The industrial nurse is in a strategic position to aid in the supervision of the cardiac at work. By being informed of the causes of heart disease, its symptomatology and the effect of adverse working conditions and faulty home environment in lowering or exhausting cardiac reserve, she may do much to prevent breakdowns and loss of time.