

THE BULLETIN

The American Association of
Industrial Physicians and Surgeons

VOLUME IV

JANUARY, 1930

NUMBER 1

The Industrial Physician and Surgeon of the Future

By

J. ROLLIN FRENCH, M. D.
Golden State Hospital
Los Angeles, Calif.

The evolution of physical service in industry is a subject of great interest and worthy of careful scientific and business study before the forming of conclusions relative to the establishment of a standardized policy of physical service to business in the future.

For the sake of broadening our vision, let us substitute the term "BUSINESS" for "INDUSTRY," assuming that industry is only a unit of service in the universal business program. If the term industry is used, there is a tendency to let the mind picture only the workroom of our factories, while as a matter of fact the successful service in the future must include a program which is as practical for the president and business management to follow in the uptown city office as for the laborer in the yards. In order to accomplish this constructive program for the future, at least one basic thought must be accepted and utilized. Perhaps it would be better to say two basic thoughts in combination to express a common purpose. The one thought could be expressed by saying "Better Physical Service in Business"; the other, "Better Business in Physical Service." In other words, business has recognized that it is necessary to give scientific thought and consideration to the physical welfare and care of industry's human machinery if it is going to endure the stress and strain of modern business in the future. In order to accomplish this purpose, modern business standards will have to be applied by the profession in the practical application of such an organized system of physical service to business.

The system of physical service to industry in the future must be flexible enough to accommodate the practical application of a scientific standardized system of service, as well as business-like enough to appreciate the value of business standards in a department of physical service to business.

In the past there has been a tendency for the speeding march of business to predominate, and in many instances, has swept the identity of the physician and surgeon from the level where he belongs to that of subservience to a superintendent of some minor department. This common practice has developed an "inferiority complex" in the minds of many physicians and surgeons which has, for the want of proper business guidance, reduced the system of physical service to a level of minor importance when, by all standards, it should rank with the departments of first importance. At the present time the physician and surgeon so subservient has no authority to put into practical operation his ideas as to the scientific care of the employees, but must theorize relative to the practical application of such principles. Business has been rapidly striding ahead, deprived of the full value of such a service which would add materially to its efficiency and be for the best interests of all.

In order to bring this important point emphatically to our attention, let us ask ourselves a few pertinent questions. First, Is business responsible for the present situation with reference to the inadequate consideration of the welfare of its employees? The answer is, No. The next logical question is, then, Who or what is responsible? The answer is, The industrial physician and surgeon is responsible for this deplorable condition, because heretofore there has been no effort made on his part to inject standardized business methods

(Continued on page 4)

te

g

o

e

s

c

so

s

o

The Industrial Physician

(Continued from page 1)

into a standardized practical system of physical service to business. The next question which naturally follows is, How is the situation to be corrected?

Before attempting to solve this problem, it might be well to hark back to the days of the so-called "company doctor," who assumed only sufficient responsibility for the physical welfare of the employees to appease public sentiment, and who is rapidly following into oblivion the corner grocer, the teamster, the iceman and many others. Do not misconstrue this statement to mean that business is eliminating the necessity for professional services. On the contrary, business is awakening to the fact that sixty-five per cent of its commercial success is dependent upon the potential physical value of its man-power; therefore, business will necessarily demand more of the physician and surgeon in the future than it has in the past to further the welfare and to protect this valuable commercial asset.

Business has long since proven that mechanical efficiency has been greatly improved by the foresight of a "Maintenance Department" replacing the ante-dated "repair man." In other words, overhead costs have been reduced and production increased by the proper application of foresight. The timely inspection and scientific use of the oil can and adjusting wrench has reduced repairs to a minimum. Inasmuch as the human element in business represents sixty-five per cent of its commercial efficiency and success, even greater thought and consideration should be anticipated, and to such a department of service more power and authority given, so that in protecting the physical welfare of its personnel it is improving the efficiency of its man-power and will reduce "repairs" here also to a minimum. It is true that the maintenance department must provide in its system a department for repairs to care for the unpreventable accidents and natural wear and tear, but with a proper vision the emergency repairs are negligible. In the same manner, scientific professional physical service in business must replace the old traditions of the company doctor.

The preponderance of evidence proves beyond a reasonable doubt the inadequacy of the physical service to business in the past, thus depriving not only business of the full value of its human element, but also depriving the employees of better health conditions to which they are justly entitled. How this condition is to be corrected is a serious problem for consideration at this time. In changing the old order to the new, the essential elements of success may be divided into two classifications, namely (a) The establishment of a standardized practical system of service to meet the respective requirements and (b) An educational campaign which will tend to establish the practical value of a better system of physical service to

business. The second problem will not prove difficult after the solution of the first.

At the present time industrial physicians and surgeons are attempting to solve the problem in their respective districts with no idea of conforming to a system of approved standards; therefore, for the want of organized support backing their efforts to establish such a system of service, they receive but little recognition from the business or scientific world.

A new constructive standardized program will be of material assistance to the industrial physician and surgeon of the future. It will outline a method of practical application of standardized physical service to the respective types of business and, if given official recognition and support by the professional scientific associations, will soon be adopted as a universal standard. Practical propaganda relative to the value of better service will then necessarily receive the thoughtful consideration and recognition of the business world. The industrial physician and surgeon of the future must therefore be one who not only recognizes the value of a complete standardized physical service, but also one who has enough business ability to organize and put such a system into practical operation in a manner that will automatically impress business with its economic worth from a commercial point of view, as well as to recognize its value to the welfare of the employees.

There is too great a tendency to confuse industrial physical service with traumatic surgery. An industrial surgeon may be a traumatic surgeon or vice versa, but in referring to traumatic surgery as a unit of service, it does not represent more than thirty per cent of the potential value of a unit of industrial physical service. A unit of industrial physical service as a whole must include:

First, a well-located and well-equipped emergency station at or near the site of an industrial plant. The personnel should consist of properly trained individuals for rendering emergency first-aid and the keeping of records and statistics.

Second, a properly organized department of employment examination for the purpose of obtaining records of the physical findings at the time the employee makes application for employment. The purpose of these examinations is two-fold, and of equal value to the employer and the employee. From the viewpoint of the employer these examinations inform him of the physical efficiency of prospective employees. From the angle of vision of the employee, he is reassured as to his fitness or is made aware of physical defects of which he may be unaware, and is thus enabled to correct them, which course may assure him a longer life and greater happiness.

Third, periodical physical examinations for the purpose of an early diagnosis of preventable disabilities and diseases.

Fourth, a complete diagnostic department supervised by a competent diagnostician supported by clinical, laboratory and X-ray services for the purpose of rendering more complete service which cannot reasonably be given at the emergency station.

Fifth, a treatment department segregated into divisions of the various specialties under the direct supervision of competent specialists in each of the several specialties represented, such as internal medicine, neurology, traumatic surgery, general surgery, eye, ear, nose and throat, skin, etc.

Sixth, a post-medical and surgical treatment department.

Following the necessary medical and surgical treatment, there is a period of convalescence caused by muscle fatigue and atrophy, the result of non-use, which is more quickly relieved by a systematized program of muscle training with the proper use of physio-therapy, hydro-therapy, electro-therapy, mechano-therapy and occupational therapy, making it well worth the establishment of this important service.

Seventh, a department of welfare and rehabilitation. The psychic element which develops in all minds, especially those of the industrially injured or sick, is well recognized and is worthy of proper consideration. At the time of physical adversities the mind is more susceptible to suggestion and hence proper care of this element is most necessary. A properly trained welfare and rehabilitation department is of great value to the proper functioning of the physical service department of business.

Eighth, there are many other minor departments of value in industrial physical service. However, lack of space here prevents enumerating them.

The first question in the mind of the industrial physician and surgeon relative to the above constructive program for physical service to business would naturally be, Will the cost of such a service be prohibitive for the average industrial plant to maintain? Under ordinary circumstances the impression that it would be, is correct. An individual unit of service could only be supported by concerns employing five thousand or more employees. However, from a practical point of view the employee of the smaller concern is entitled to the same degree of service; also, the smaller company is entitled to the same degree of protection. In fact, in order to meet competition the smaller company must have the same protection; therefore, ways and means must be devised to arrange to give it at practically the same pro rata of overhead as is given the larger one. If five thousand employees represent a unit of service, one concern with five thousand men in its employ may maintain such a unit, or five concerns with one thousand each, or one hundred concerns with fifty employees each, (and so down the scale) by proper co-operation could avail themselves of the efficient service of

a well organized unit.

As the industrial concerns will not take the initial steps to organize these units, the industrial physician and surgeon of the future must face this problem. It is for him to organize properly equipped units of service and present them for the betterment of service, efficiency and co-operation, to business. The units will have to be developed by an individual with sufficient capital and experience to arrange for the diversified services which are necessary, or by group practice representing the respective specialties. The practice of practical physical service must be uniform, outlined and approved by a governing body, which could aid materially in standardizing the system and which would soon be recognized by the business world.

This and similar systems of complete physical service to industry are not new. Some companies now have a practical system in operation, but for want of official approval by such an organization as the American Association of Industrial Physicians and Surgeons, the plan has not been standardized for universal guidance, hence a full degree of efficiency, either from a commercial economic point of view or from that of the welfare of the industrially injured or sick, is wanting.

This system of physical service points toward a new era in the economics of business as well as in the welfare, happiness and productive ability of the industrially employed. It will make the human machine run with as little friction as does the mechanical one, reduce repairs, losses and inefficiency, and insure the betterment of all concerned.

General Gorgus was one of the first medically trained men to prove the merits of this system of better physical service to business. His professional foresight, accompanied with his business ability to organize a systematic unit of professional service, made it possible for the uneventful completion of the Panama Canal after hundreds of millions of dollars and thousands of human lives had been sacrificed because business had not previously recognized the value of prophylactics and "Better Physical Service."

The successful physical service to business in the future will be represented by organized or group practice, supervised by a physician or surgeon who possesses the ability to recognize the value of "Better Physical Service in Business" and the necessity of "Better Business Methods in the Application of Scientific Physical Service to Business."

"The medical department of an industry is, almost without exception, an index of the economic value the management places upon health service rather than its being what the medical officer desires. If better medical service is needed in industry it is not so much a problem of better physicians in industry as it is of the education of the management to the value of such a service."

The Health Course in Industry*

By HENRY S. BROWN, M. D.
Medical Officer, Michigan Bell Telephone Co.
Detroit, Michigan

For a long time the vital importance of accident prevention and safety education campaigns as well as elaborate first aid training courses has been felt by all types of industrial and mercantile organizations. Where large numbers of male employees are found—especially where the work is of a hazardous nature—great pains have been taken to install safety devices and the dissemination of safety news bulletins have continually placed before the minds of employees the importance of care in their occupational work. In some of the larger concerns the medical administrative work has been extended even to families of employees.

But up to the first of 1925 there had been very little if anything done in the way of giving concerted health education to the employees who cared to take it.

For some time prior to this it had occurred to the officials of the American Telephone & Telegraph Company as well as those of several subsidiary companies that considerable good might be done by instituting a plan of health education within their own ranks.

To the minds of those greatly interested in the promulgation of preventive medicine teachings it seemed that an organization such as the American Telephone & Telegraph Company, with all its subsidiary companies comprising a vast number of young women with a large annual employment turnover, would be a very fertile field for health education.

An annual course of health instruction would provide for all female employees ample opportunity to learn how to live and, inasmuch as the greater majority of employees of the Bell system comprised potential wives and mothers, it seemed an unusual chance to broadcast public health teaching which would be inestimable in its extent and scope.

Even if but a small proportion of those taking the course remained as permanent employees a certain amount of benefit from this instruction would accrue to the company as well the vast amount that would accrue to those who might leave to become wives and mothers or even to seek other kinds of employment.

It seemed that there might be sufficient gain in time lost on account of illness as well as in efficiency of work actually done to warrant the undertaking.

With the feeling of one about to attempt a problematical experiment the officials of the American Telephone & Telegraph Company called together in New York in September, 1925, a general conference to which went delegates from all the associated Bell companies. Plans were

formulated then and there for instituting the so-called "health course."

It was decided to hold annual institutes conducted by competent faculties that would present the subject matter of the course to a group of young women who would then organize classes of employees and do the actual teaching.

In July, 1926, the first instructor's conference or institute was held by the Michigan Bell Telephone Company in the Bell Building at Detroit.

At this conference assembled about fifty young women who were to be the first group of instructors for this company. They were selected from various departments in Detroit and also from the larger cities of the state. This selection was made by departmental heads and each was asked to choose a girl who was popular among her associates and yet who would in their opinion be an apt scholar and good teacher. This proved a difficult task, but was accomplished much more readily than had been anticipated.

The institute was inaugurated by brief introductory remarks by company officials including the medical director, when the purpose of the institute was stated. Courses of instruction were then begun, including anatomy, physiology, psychology, teaching methods, practical bedside nursing, dietetics, personal hygiene, preventive medicine and first aid treatment including bandaging, these lectures being interspersed with classes in corrective and postural gymnastics and group quizzes.

The instructors of these various courses included members of the medical department of the company, members of the faculty of the Detroit College of Medicine, members of the health department of the city of Detroit, members of the health department of the state of Michigan and members of the staff of the Herman Kiefer Hospital of Detroit. In all cases services were rendered gratis and the enthusiasm of both teachers and pupils was very evident.

After several weeks of concentrated study the institute disbanded and the work of organizing classes was begun.

In 1936 the course was offered to approximately 4,541 employees in the traffic department, only 953 enrolling. Of this number, 681 or 71.5% graduated. There seemed to be some hesitation about enrolling the first year—the proposition was a new one and doubtless seemed too much like returning to school to some. But the enthusiasm which pervaded the first year's work added a stimulus to the enrollment the second year and of 5,341 who were offered the course, 1,199 enrolled and 896 or 74% graduated; the third year the course was offered to 5,561 and the enrollment was 1,271—of whom 1,025 or 80.7% graduated.

In 1928 it was decided to arrange for some work among the small town exchanges and in seventeen places

*Read at the 14th Annual Meeting of the American Association of Industrial Physicians and Surgeons, Detroit, Mich., May 10th, 1929.

a textbook course was given by the chief operator—being offered to 235 girls of whom 158 enrolled and 149 completed the course. These girls did not officially graduate, inasmuch as they were not taught by a graduate of the institute, but were coached by their own chief operators.

In the first year 166 girls in other departments of the company completed the course and qualified for graduation, the second year there were 97 and the third year 101.

An effort is made by the company to recognize the completion of the course by suitable graduation exercises. A diploma is given each girl, suitably inscribed by the Vice President and General Manager and the Medical Director as well as the class instructor. Departmental heads and representatives of the medical department attend the exercises and deliver brief congratulatory remarks and the girls are urged to put into actual practice what they have learned.

Two successive institutes have been conducted with certain changes in faculty personnel and also some alteration in the curriculum, but on the whole these were arranged to cover the same ground as the first one.

It is the plan of the company to conduct an annual institute for instructors and provide a health course for employees as long as there remain a sufficient number of those who have not taken it to warrant such an undertaking. With about a thousand graduates a year and an annual addition of several thousand new employees it may be several years or longer before the entire personnel have had an opportunity to obtain the course.

Those taking the institute course as instructors did so as part of their regular employment and in case the work required time outside of regular working hours they were paid as for overtime.

Those taking the regular course did so entirely upon their own time, spending twelve periods of 1¼ hours each or a total of 15 hours.

The American Telephone and Telegraph Company and the associated Bell companies are as far as can be learned the pioneers in this work. The Eastman Kodak Company is doing some excellent work in instructing their personnel in regard to the correct principles of nutrition. There may be other organizations who are undertaking special work, but so far as information has been obtained no other company or group of companies is covering the entire subject of personal hygiene so thoroughly.

The Michigan Bell Company is now faced by the problem of providing a similar opportunity for male employees. Numerous requests have come in from departmental heads and just how to care for these is one of the present problems to be solved.

At the present time it is not possible to give any statistical report of the good that may have been accom-

plished by all this effort. In a brief experience of three years there are not enough figures to fortell what the future may hold in store.

Because of the large annual turnover of traffic employees—at least fifty per cent—it will be very difficult to obtain figures which will either justify the value or prove the worthlessness of this stupendous effort.

From the enthusiasm and interest manifested by the young women who took the institute courses—and it was my pleasure to give lectures at each one—I am impressed by the thought that even though it may never be possible to establish tangible evidence by actual figures, there can be no doubt but that the teachings given will be—over a long period of time—productive of tremendous good, and the assurance of this fact should be in my humble opinion ample recompense for the effort expended together with the realization that we are to the letter carrying out orthodox teaching of hygiene and preventive medicine as Taylor would have us do—"teaching men to live most and serve best."

Congress on Medical Education, Hospitals, Medical Licensure and Public Health

American Conference on Hospital Service

Tuesday, February 18, 1930

Palmer House, Chicago, Illinois

Morning Session

Symposium, "COST OF MEDICAL CARE"

From the point of view of:

(a) "The Hospital"—Dr. Bert Caldwell, Executive Secretary, American Hospital Association; (b) "The Hospital Staff"—Dr. James B. Herrick, Professor of Medicine, Rush Medical College, Chicago; (c) "The General Practitioner of Medicine"—Dr. Arthur Tenney Holbrook, Milwaukee; (d) "The Layman"—Mr. Wilford S. Reynolds, Executive Secretary of Council of Social Agencies, Chicago.

Discussion—Dr. Ray Lyman Wilbur, Secretary of the Interior; Dr. Lewis L. McArthur, Chicago; Mr. Alfred C. Meyer, Chicago; Dr. Frank L. Rector, Chicago; Mr. Asa Bacon, Chicago; Mr. Charles Wordell, Chicago.

Afternoon Session

Symposium, "HOSPITAL SERVICE FOR THE NEGRO POPULATION"

(a) "Hospital and Out-Patient Facilities Which Will Afford Adequate Care of the Sick"—Dr. Peter M. Murray, formerly Dean, Medical School, Howard University, Washington, D. C.

(b) "Provision for Adequate Facilities for the Training and Education of Colored Medical Students"—Dr. Basil C. C. Harvey, Dean of Medical Students and Professor of Anatomy, University of Chicago.

(c) "Provision for Adequate Facilities for the Training and Education of Colored Nurses"—Miss Adda Eldredge, Director Bureau of Nursing Education, State of Wisconsin.

Discussion—Dr. D. J. Davis, Dean of Medical School, University of Illinois; Dr. Julian H. Lewis, Department of Pathology, University of Chicago; Miss Belva L. Overton, Superintendent of Nurses, Provident Hospital, Chicago.

"The difference in the effect on life expectancy of deciding to stay upon the farm or to go to work in a modern industry is approximately eight years in favor of the farm." (Hayhurst)

Applications for Membership

Henry M. Michel, Augusta, Ga.
 Roy K. Keech, Cedar Rapids, Iowa.
 Ralph M. Carter, Green Bay, Wis.
 Emery B. Neff, Moline, Ill.
 E. P. Zeumer, Cincinnati, Ohio.
 Samuel C. Beach, Chicago, Ill.
 Maurice P. Rogers, Rockford, Ill.
 Alfred H. Whittaker, Detroit, Mich.
 Wellesley P. Magan, Covina, Calif.
 Horace F. Pierce, Santa Barbara, Calif.
 Arthur J. Langan, San Pedro, Calif.
 Shaun S. Magan, Covina, Calif.
 George P. Shidler, Torrance, Calif.
 Grant Irwin, Quincy, Ill.
 Stanley Sprague, Pawtucket, R. I.
 Arlington F. Lecklider, Detroit, Mich.
 Llewellyn Hall, Andover, Mass.
 John F. Hull, Alhambra, Calif.
 N. N. Brown, Bakersfield, Calif.
 William H. Chapman, Blythe, Calif.
 H. J. Gregg, Calexico, Calif.
 William S. McCausland, Chula Vista, Calif.
 Frank H. Pritchard, Colton, Calif.
 Romeo R. Root, Corona, Calif.
 Herman Baer, Elsinore, Calif.
 Harold B. Osborne, Fillmore, Calif.
 John H. Lang, Fullerton, Calif.
 H. R. Boyer, Glendale, Calif.
 Leslie J. Clark, Hemet, Calif.
 C. Maxwell Anderson, Hermosa Beach, Calif.
 Russell M. Gray, Indio, Calif.
 Joseph W. Camp, La Habra, Calif.
 Seth H. Savage, Lancaster, Calif.
 Richard W. Baker, Los Angeles, Calif.
 Clayton G. Stadfield, Hollywood, Calif.
 Calvert L. Emmons, Ontario, Calif.
 Frank F. Abbott, Ontario, Calif.
 Joseph K. Swindt, Pomona, Calif.
 Edward H. Burke, Redlands, Calif.
 Howard G. Hill, Redlands, Calif.
 Ernest G. Butt, Redondo Beach, Calif.
 Ralph M. Smith, Riverside, Calif.
 Charles R. Geith, Riverside, Calif.
 Philip M. Savage, San Bernardino, Calif.
 Samuel B. Richards, Victorville, Calif.
 Herbert S. Anderton, San Diego, Calif.
 A. Russell Moodie, Taft, Calif.
 Jesse S. Lancaster, Torrance, Calif.
 Charles B. Canby, Van Nuys, Calif.
 Benjamin F. Miller, Whittier, Calif.
 Clarence J. Ryan, San Pedro, Calif.
 Everett C. Beach, Oxnard, Calif.
 Daniel L. Carmichael, Arcadia, Calif.

William E. S. Jackson, Brea, Calif.
 Charles F. Schmid, Hermosa Beach, Calif.
 Henry J. Lund, Los Angeles, Calif.
 Averell H. Owen, Los Angeles, Calif.
 John B. Tyrrell, Los Angeles, Calif.
 F. M. Dryden, Pasadena, Calif.
 William A. DeTuncq, Pasadena, Calif.
 J. B. Keaster, Pasadena, Calif.
 Lynn H. Case, Santa Monica, Calif.

Dr. Cassius H. Watson, Medical Director of the American Telephone and Telegraph Company, in a paper read at the Annual Meeting of the American Heart Association in New York, N. Y., February 4th, 1929, says, "Once having determined that a given applicant for employment has heart disease, there are certain examination facts which will decide against recommendation for employment and these may be listed as follows:

- "1. Inspection signs of cardiac disease and accompanying decompensation or phenomena of endocrine dyscrasia.
- "2. Any diastolic murmur or thrill.
- "3. Auricular fibrillation.
- "4. A rate, after rest, that is persistently above 90 or below 50 or a pulsus alterans.
- "5. Paroxysmal tachycardia.
- "6. A persistent systolic blood pressure, in adults up to forty years of age, of 160 or more, or of 100 or below after complete horizontal rest for ten minutes."

An article in the New England Journal of Medicine for October 10th, 1929, on "Industrial Hernia" by Dr. Edward L. Young, Jr., enumerates a number of conditions and cites cases to illustrate them that may be mistaken for hernia. He "emphasizes the need of careful study and the great danger of using the word 'hernia' or 'rupture' when it is not entirely proven, inasmuch as in many patients it starts a chain of mental trauma which is very hard to eradicate later." * * * "There should be a wider recognition of the variety of the conditions which may cause pain in the groin and a greater caution in making the diagnosis of 'hernia' in doubtful cases."

Dr. Otto Geier of Cincinnati, a member of our Association, says "that in industry the losses from sickness are eight to ten times those due to accidents. If the average number of days lost by each worker by reason of illness is seven per year, the loss totals two and a half billion dollars yearly. Most of this is preventable." No organization occupies a more advantageous position for the promotion and sale of "sickness prevention" or health protection than the American Association of Industrial Physicians and Surgeons. Why can not we make it one of the major objectives of our Association?