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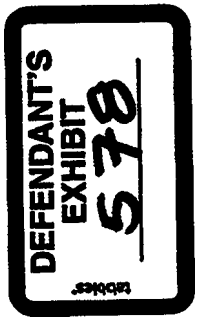
By L. Hamlin



Company Health Survey

American Brake Shoe Company Health Program to Reach Workers in 59 Plants, 23 States and Canada—X-ray All Employees.

By L. E. HAMLIN, M.D.

IN KEEPING with good industrial medical and hygiene practice the American Brake Shoe Company in 1942 adopted a program to protect the health of employees and make its plants better places in which to work. Believing that healthy, satisfied workers are one of its greatest assets, management from top executives down has given the idea enthusiastic support, and results have been well worthwhile.

The company has a rather unique organization and it is this feature which makes the present program of the medical department unusual. There are 59 plants in the company located in 23 states and Canada. Plants are grouped in nine divisions, each of which operates as an independent unit, running its own affairs but subject to general company policies and advice from a headquarters division. The operating units vary in size, some having 40 to 50 employees while others have as many as 1,000. The majority have from 175 to 500 workers.

Set Up in Chicago

In 1942 a medical department was set up in Chicago because of its central location and the fact that seven plants are operated in this area. At first the unit consisted of a medical director, industrial hygienist and clinical laboratory and X-ray technician. The late Donald E. Cummings, professor of industrial hygiene at the University of Colorado, was retained as adviser and consultant. Because of the great variety of operations and manufactured products, it was thought advisable to concentrate on representative plants in each division since measures adopted at one would apply generally to others in the same group. Carrying the idea further, those divisions which offered the greatest occupational hazards, such as lead poisoning and silicosis, were studied first.

Two Part Examination

One of the first steps was the initiation of an adequate physical examination system both for applicants for work and also for those already on the payroll. The physical examination record consists of two parts. Part one, on white paper, contains complete personal data, a record of previous employment from the time the individual started to work up to the present, along with dates of service and the type of work performed. Space is provided for proposed employment (in the case of new applicants), lost time since beginning work, family history and contact with tuberculosis.

On the reverse side of the form is a series of questions comprising a history of present complaints and symptoms. These are mostly "yes or no" questions. The form is filled out by the personnel department interviewer, after which the applicant or employee signs the record and authorizes the local examiner to report findings to the company medical director. The interviewer then witnesses the signature.

Part two, on blue paper, is the physical examination record and is filled in by the examining physician. Both forms are made out in duplicate and given to the applicant to take to the doctor in a sealed envelope. This is the doctor's authority to proceed with the examination.

Stop, Go Cards

When the doctor completes the examination he classifies the applicant or employee as to his fitness for work. This is done by means of green, yellow and red color cards, comparable to the "stop and go" traffic lights. If the examiner's physical findings are negative a green card bearing his name, the date, and a statement indicating that he has been examined as of that day, is signed by the doctor and placed in an envelope. The sealed envelope is then given to the applicant to take back to the personnel director, who immediately knows from the color of the card whether or not the man may be employed. If the applicant returns with a yellow or "caution" card, the personnel director knows some defect exists which will not necessarily prevent the man's being employed but which will require a discussion with the doctor to determine the type of work at which he may be placed. Red cards are for "rejection" cases and are not given to the applicant since he would not bother to return them if he had not passed the physical examination. The doctor sends these directly to the personnel manager.

All Employees X-Rayed

The color cards are filed by the personnel director and constitute his only record of the physical conditions of the men. He knows he must not transfer a man classified

THE AUTHOR

Dr. L. E. Hamlin, who tells the story of how one company handles industrial health problems, has been medical director of the American Brake Shoe Company, Chicago, since 1941. A graduate in medicine of the University of Toronto, Dr. Hamlin was surgeon at the Ford Motor Company, Iron Mountain, Mich., from 1924 to 1929, and was surgeon in charge of the Penn Iron Mining Company Hospital, Norway, Mich., from 1929 to 1941. He is a fellow of the American College of Surgeons, a member of the American Trudeau Society, of the Committee on Industrial Tuberculosis of the National Tuberculosis Association, and of the Industrial Hygiene Foundation.

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on a yellow or red card to other jobs without the approval of the doctor. In this way a confidential "doctor and patient" relationship is maintained between workers and the medical department. Examinations include Kahn or Wassermann tests for syphilis, hemoglobin and routine urinalyses.

Each employee, pre-employment or otherwise, is given a chest X-ray. In recent years, due to excessive labor turnover, applicants for work may not be X-rayed for a period of 30 days, depending on local plant preference. If an employee remains on the job beyond this period however, he must be X-rayed. All X-rays and physical examinations are filed in the medical department and checked personally by the medical director. Employees are notified of the results of physical examinations by means of printed slips, which are confidential. The individual is asked to consult his personal physician for advice and correction of defects.

Personal Interviews

When evidence of occupational disease is discovered, the employee is interviewed personally by the medical director. His condition is discussed frankly and he is shown his X-rays. Findings are explained in language he can understand and he is informed that he will be kept under observation. Employee reaction to this policy has been most favorable. The men sincerely appreciate being told of their physical condition, become much more cooperative and are made aware of the fact that the company is taking a real interest in their well being.

Periodic X-ray surveys are carried out in all plants, the interval of frequency depending on the existing local occupational hazards. A report of the survey is sent to the plant superintendent and operating head of the division. The medical department technician is provided with a mobile (G.E.D.-3) X-ray unit, especially designed for field work. The tube head, control unit and tube stand are arranged so that they fit in suitable carrying cases and all the necessary equipment is transported in a station wagon. Single films (14" x 17") are used and, in the hands of a good technician, highly satisfactory roentgenograms are obtained. The X-ray technician is also a qualified clinical laboratory man. He is equipped to do the required Kahn and routine urine examinations.

Set-up for taking chest X-rays and performing routine Kahn blood tests and urinalysis in the field. Note carrying case for GE mobile X-ray unit. Equipment is arranged in available space at the local plant and extra facilities such as tables, chairs, etc., are furnished by the management.

Special laboratory tests are performed only when indicated.

Financial Aid If Needed

A nurse arranges the survey with the plant superintendent and assists the local doctor in performing physical examinations. She checks on all records and sees that they are properly made out and forwarded to the medical department. She also assists the technician in his clinical work and cooperates with foremen to see that workers are referred for examination to the doctor or technician.

In cases where tuberculosis is discovered, the employee is asked to consult his doctor, and the local physician or plant nurse is requested to arrange further examination at a recognized chest clinic or sanatorium. Arrangements are made for admission to hospital where necessary and financial aid is given through plant welfare funds. Every effort is made to effect rehabilitation. In cases of minimal or indeterminate infection, individuals may be allowed to work under supervision and observation. Recheck X-rays are taken at intervals of from three to six months. All such cases are recorded on a tickler file by the secretary in the medical director's office and it is her duty to notify the various locations with regard to subsequent X-rays.

During the last two years the company has added a staff of 14 nurses to its personnel. A superintendent of nurses is in charge. She directs the nursing program and deals with nurses' local plant prob-

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CONSCIENCE PROMPTS RETURN OF SEAL MONEY

Apparently prompted by pangs of conscience, a letter enclosing a contribution of $4 was recently received by the St. Louis (Mo.) Tuberculosis and Health Society. The letter, exactly as received, follows:

Gentlemen:

The enclosure is what would probably be called conscience money. Years ago your Society sent some stamps to my mother and I sold them to the neighbors and kept the money. So I am taking the opportunity of making good my mistake. I would suggest that the person who opens this letter puts the money in the treasury where it rightfully belongs, or some day their conscience may catch up with them as mine has.

Sincerely yours,
(signed) JANE DOE?

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lems in cooperation with the management. In certain cities one nurse may serve two company plants, whether of the same division or not. Recently a conference was held in Chicago at which all the company nurses met to discuss the general program and iron out local difficulties. The meeting was so successful that it was decided to make it an annual affair. Each plant paid all expenses for its particular nurse. Management has become definitely aware of the value of the industrial nurse and it is expected that more will be added in the coming months.

Plant Surveys Made

A most important part of the medical department is the industrial hygiene laboratory. Under the direction of a highly competent industrial hygienist, plant surveys are carried out to determine occupational hazards, whether due to dust, chemicals, mechanical conditions or otherwise. Air sampling by means of the impinger, electrostatic precipitator and Konimeter is done through routine surveys and special hazards are checked frequently. Lead conditions are observed constantly by means of urine determinations using the polarograph. By this method as many as 400 tests are done monthly by two laboratory workers. Recommendations for general and exhaust ventilation are made and installations approved by the industrial hygienist. Findings of this department are checked with the results of medical surveys and the degree of correlation is often surprising as well as interesting. For instance, in one plant a man was employed dusting molds with silica flour. The count showed a high concentration of dangerous-sized particles at the breathing level. The industrial hygienist informed the plant superintendent that if he had any cases of silicosis among his workers he might expect it in this one. Several months later an X-ray survey of the group revealed only *one* case of silicosis—the man who dusted the molds! A satisfactory spray method soon completely eliminated this particular hazard.

Technician taking blood for Kahn test during routine periodic examination.

Since 1942 periodic surveys have been carried out in 35 plants and resurveys in two others. Reexaminations have been done on a large number of employees whose X-rays indicated evidence of disease, whether occupational or not. In surveys completed thus far eight cases of active tuberculosis have been discovered and placed under treatment. Seventeen cases of indeterminate tuberculous infection are under observation and 46 employees whose chest X-rays indicated healed infection are being watched.

Plan for Future

The war has complicated the program considerably and labor turnover has added a great burden. Like all other agencies the medical department has experienced losses in personnel which have interrupted the work to some extent, but plans are being made for further developments in the not too distant future. These include a central unit with adequate quarters for housing medical, nursing, hygiene, safety and insurance departments. It is felt that such an arrangement will result in better cooperation among the various groups, each of which is vitally interested in the work of all.