

SOCOCY-VACUUM OIL COMPANY, INC.

THIRD ANNUAL MEDICAL MEETING

Dearborn Inn
Dearborn, Michigan

September 23 and 24, 1948

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LIST OF PEOPLE ATTENDING MEDICAL MEETING

AUGUSTA, KANSAS

Dr. Frederic O. Epp
Mrs. Elnora Tinker, R.N.

BUFFALO, NEW YORK

Dr. Marshall Clinton
Mrs. Ann Lanier, R.N.

CASPER, WYOMING

Dr. Allan McLellan
Mrs. Judith Oppedahl, R.N.

EAST CHICAGO, INDIANA

Dr. D. R. Johns
Miss Antoinette Smoljan, R.N.

EAST RIVER OPERATIONS

Dr. M. N. Howard
Miss Julia Bergess, R.N.
Miss Helen Balgleish, R.N.

EAST ST. LOUIS, ILLINOIS

Dr. T. C. St. John
Miss Paula R. Kierle, R.N.

OLEAN, NEW YORK

Dr. N. P. Johnson
Miss Madeline E. Averill, R.N.

PAULSBORO, NEW JERSEY

Dr. N. K. Chesley
Miss Elizabeth K. Lafferty, R.N.
Miss Katherine Wilhelm, R.N.
Miss Irene Ruggaber, R.N.

TRENTON, MICHIGAN

Dr. M. R. Schmidt
Mrs. Helen Hertel, R.N.

MILWAUKEE, WISCONSIN

Wadhams Division - Marketing

Dr. J. J. Gaunt
Miss Louise M. Tullgren, R.N.

LOS ANGELES, CALIF. - General Petroleum

Dr. E. P. Luongo

HOME OFFICE, NEW YORK CITY

Mr. C. F. Seatty
Mr. W. H. Montgomery
Mr. R. G. Harmon
Mr. J. H. Herbert

Dr. A. E. Hoag
Dr. H. L. Rutzler
Miss Olga A. Ericson, R.N.
Miss Marge V. McHugh, R.N.
Mrs. Doris K. Krieger, R.N.
Miss Dorothy M. Mehl, Sec'y.

GUESTS

Mr. C. P. Baker
Mr. F. G. Barrum
Mr. R. S. Baxter
Mr. J. A. Brooks
Mr. G. E. Copeland
Mr. P. M. Feldmose
Mr. J. W. Glass
Mr. N. J. Holton
Mr. F. L. Hutton
Mr. A. D. Jamieson
Mr. S. G. Keller
Mr. E. F. Kendall
Mr. W. E. Krueger
Mr. J. E. Mahannah
Mr. W. K. Phipps
Mr. E. T. Pummill
Mr. S. H. Reed
Mr. W. W. Reed
Dr. Irwin Schulte

MINUTES

THIRD ANNUAL MEDICAL MEETING

September 23 and 24, 1948

WELCOMING ADDRESS -- Mr. C. F. Beatty, Director in Charge of Industrial Relations 26 Broadway, New York City

Mr. Beatty was introduced to the members of the Third Annual Medical Meeting by Dr. A. E. Hoag, Medical Director. Mr. Beatty gave the welcoming address to the group in which he said that these Medical Meetings are a very live subject with the Directors of Socony-Vacuum Oil Co., Inc. Mr. Beatty continued by saying that absenteeism is mostly caused by physical difficulties rather than by serious accidents. He urged the doctors and nurses not to think of the people they are treating merely as cases, statistics or reports and that there is more to it than making them physically well. Patients should not be thought of as cases, but as individuals who may be laboring under great difficulties. Mental health is of great importance to the Company so that the employees can express themselves properly in their jobs.

GROWTH AND DEVELOPMENT OF THE SOCONY-VACUUM MEDICAL DEPARTMENTS

A. E. Hoag, M.D., Medical Director, 26 Broadway, New York City

In 1945 there were no Medical Clinics throughout the Socony-Vacuum Refineries or the Marketing Division, with the exception of Magnolia Petroleum. General Petroleum had a most excellent Medical Department located at Vernon, California. During the war this department was dismantled and the equipment disposed of so that at Vernon and Torrance only First Aid rooms are maintained. At the Home Office, pre-placement examinations and examinations for foreign service were made.

At 26 Broadway we were carrying on a Medical Department in a small way due to lack of space. Since we were given the go-ahead signal in July of 1945, Medical Departments have been established in all of our Refineries with the exception of East Providence, R. I. and Franklin, Pennsylvania. East Providence is now in the process of establishing its Medical Department. Milwaukee (Wadhams Division) was the first Marketing Division to set up a Medical Department. Boston will be the second. Management has cooperated most heartily in the Medical program.

Dr. Hoag presented the following informative figures compiled from the monthly reports of all our Refineries for the six-month period January through June, 1948:

Total number of Employees Using Medical Department . . .	7,467
Total number of Visits	41,140
Total number of Periodic Examinations	1,607
* * * * *	
Total number of Visits in 1947	62,820
<u>Estimated</u> Total number of Visits for 1948	84,280

GROWTH AND DEVELOPMENT OF SOCONY-VACUUM MEDICAL DEPARTMENTS (Continued)

Our Medical Departments are striving for the following: (1) Preventive Medicine, which includes Periodic Health Examinations, with correction of all abnormal conditions where possible and a followup system maintained on such cases. (2) To work with the Safety Department in an advisory capacity to cut down accidents, prevent and control industrial hazards, sanitation, etc. (3) Human relations.

We offer our employees a more extensive medical coverage than does any other industry. We do not interfere with doctors in private practice; in fact, we try to help them. We stress that we are treating individuals rather than groups of people.

The amazing strides which have been accomplished in Socony-Vacuum Medical Departments makes it outstanding in the field of Industrial Medicine. This is due to the fine cooperation of the doctors and nurses in the organization. If it were not for this teamwork and cooperation, we would not be one of the leaders in this field. Through our close association and our interchange of ideas, we hope not only to maintain our present standing, but also to continue to advance it.

FUTURE OUTLOOK OF OUR MEDICAL DEPARTMENTS

Mr. W. R. Montgomery, Manager, Industrial Relations, 26 Broadway, New York City

Mr. Montgomery opened his remarks by stating that the Industrial Relations Advisors are always glad to have the opportunity of attending the Annual Medical Meeting, because they receive a great deal of help in being able to discuss various problems.

Originally, our Medical Departments were looked upon primarily as First Aid Units. Now we find we cannot run a Medical Department on this basis. Our view goes far beyond this. Our aim is to give thorough pre-placement examinations, complete periodic health examinations and proper treatment for each case, in order to use our manpower to the greatest advantage.

Pre-placement examinations are a very important part of our Medical Departments because as future employees for the Company, we must take into consideration whether or not an employee will cost the Company a great deal of money over a long period of time during his employment.

Periodic health examinations cover such situations as when an employee is being transferred from a certain type job to another which is entirely different as to its physical requirements. Also, periodic check-ups are extremely valuable in that various phases of bad health may be located during such an examination and by discovering them early and correcting them, we have a much more efficient employee and a happier one. This factor is definitely an important one because of the fact that so many Socony-Vacuum employees are long-term employees. Also, in recent years we have come to recognize the importance of psychosomatic medicine in our examinations.

It should be noted that during 1947 the cost of running the Medical Department

FUTURE OUTLOOK OF OUR MEDICAL DEPARTMENTS (Continued)

in one of our large operations was \$2,000,000. However, all the above factors must be taken into consideration and all contribute to the efficiency of the Company and in this way our Medical Departments justify such set-ups.

The future outlook of our Medical Departments is, therefore, a bright one. The Boston (Marketing) Division is now trying to make arrangements for more Medical facilities. Now the real future problem is that of getting facilities where there are only a few employees in one location.

HYDROFLUORIC ACID ALKYLATION

Dr. N. K. Chesley, Plant Physician, Paulsboro, New Jersey

Hydrofluoric Acid is used as a catalyst in the treatment of Butane Butene Stock as received from the various types of cracking processes for the production of Iso Butene, light and heavy alkylates.

Safety precautions and instructions consist of protective Neoprene gloves, boots, clothing, hats with transparent shields and external air supply. The area is supplied with frequent emergency shower locations and a central First Aid Room with an alkaline bath, eye washing fountain and supplies used in treatment of the burns.

The employee should be instructed in the peculiarities of H.F. burns. That is, that the burn of the aqueous solutions may be an hour or more in developing, even after the man has left the plant. That the burn of the Anhydrous Hydrofluoric Acid is felt immediately and produces a white blanched area. In either case the important and fundamental steps are (1) promptness, (2) prolonged washing with water, (3) application of H.F. paste.

The men are given an instruction sheet covering (1) burns noticed at home and (2) after-care of burns treated at the Plant.

The above safety precautions and first aid instructions should be made clear to the men, but should not be over-stressed.

From the viewpoint of the Medical Department, treatment of H.F. burns may be divided into two classifications -- mild and severe. The mild H.F. burn presents a white blanched area and should be washed with running water for five minutes, swabbed lightly with 20% ammonia solution, and washed again with running water for fifteen to thirty minutes, or until blanched areas appear pink in color. Then a paste consisting of Magnesium Sulfate, 30%; Magnesium Oxide, 4%; Glycerine, 15%; Procaine, 1/2%; water base QS is applied. If evaporation occurs, sterile water may be added. (Never use ointments or greases).

The patient is given a sheet instructing him to moisten and change the bandage at stated times.

HYDROFLUORIC ACID ALKYLATION (Continued)

The severe burn case is often in shock and indicated treatment is instituted. The severe H.F. burn itself is treated in the same manner, but may require longer washing period before the blanching disappears -- when blanching does not disappear after a reasonable time, one hour, infiltration of the tissues under and surrounding the burn with 10% Calcium Gluconate is done to prevent further necrosis by the formation of innocuous calcium fluoride from the calcium gluconate and hydrofluoric acid.

The burns which are neglected or untreated may require incision to allow penetration of medication and release of contaminated serous fluids.

In unusual exposures, the following routines are used: (1) Inhalation of concentrated fumes: inhalation of weak ammonia fumes, oxygen tent and routine pulmonary treatment. (2) Oral ingestion: gastric lavage with lime water, sodium bicarbonate solution or calcium gluconate solution continued for 1/2 hour. Suitable shock therapy, and injection of 10cc or 20cc of 10% calcium gluconate intravenously is used in both (1) and (2). (3) Eye burns should be anaesthetized with 4% cocaine or 2% procaine. The eye is flushed with water and frequent applications of Milk of Magnesia, using an eye cup, are made for a period of fifteen minutes washing out all Magnesia particles carefully from the eye. Holocaine and epinephrine are finally applied. (4) Burns under the nail require novocain anaesthesia and resection of the distal half of the nail followed by routine treatment of the area. (Do not permit ammonia to get into the eye).

INSTRUCTION SHEET FOR EMPLOYEES

Hydrofluoric Acid burns any part of the body that it comes in contact with, as does any other acid. For this reason, protective clothing and safety procedures are instituted and should be carefully followed.

In case you come in contact with Hydrofluoric Acid, report immediately to your foreman or sub-foreman. If they are not available, immediate washing of the parts with running water for fifteen minutes or until medical treatment is available.

After your treatment at the Medical Department, you will be given gauze bandages and special H.F. paste. The dressing should be moistened with cool water, that has been boiled, every 2 or 3 hours. A fresh dressing with H.F. paste spread on gauze should be applied and loosely bandaged every 4 to 6 hours.

In case you should notice a burn after leaving the Plant, wash the parts with running water for fifteen to twenty minutes and apply Milk of Magnesia and bandage lightly. Call the Plant for further instructions or treatment. DO NOT APPLY A GREASE OR "BURN OINTMENT" TO HYDROFLUORIC BURNS.

OCCUPATIONAL CANCER

Dr. Marshall Clinton, Plant Physician, Atlas Works, Buffalo, New York

Unfortunately, there has been considerable loose talk in the lay press concerning the prevalence of cancer among workers in petroleum refineries and in filling stations which has reflected on the industry a certain air of misunderstanding and bad feeling.

There are many isolated reports of carcinoma developing as a result of exposure to various petroleum fractions. Many of these are poorly documented and fail to stand critical inspection. There are certain publications by certain authors, however, which indicate that a real and serious problem exists. The most convincing reports are the following:

A. Scott and others have reported the occurrence of a significant incidence of cancer among workers in Scottish shale oil refineries. A total of 65 cases of skin cancer among these workers was reported by Scott in 1929.

B. Another group of occupational cancers reported primarily in England is the so-called "mule-spinners" cancer, occurring among workers in the cotton textile industry in England. These are the most common cancers associated with petroleum products.

C. Still another group of occupational cancers occurring among workers exposed to petroleum products are the epitheliomata noted among pressmen operating the filter presses used in separating paraffin from the fairly heavy paraffin distillates.

D. The final convincing group of cases are those reported by Schwartz, Tuligan and Beck. They examined 743 oil field workers in California. Of these, 146 were found to have keratotic lesions on the hands, forearms, face or neck; and seven had epitheliomas on the exposed surfaces of the body. Most of the epitheliomas occurred among blond workers, although brunettes predominated. -- Various other reports of occupational cancer due to exposure to petroleum substances are encountered in the literature.

The role of coal tar and soot in producing cancer is well established. Probably one of the earliest known and certainly one of the most notorious types of occupational cancer is the chimney sweeps' cancer encountered in England. Coal tar and pitch are said to be the most common causes of occupational cancer. The tar and pitch derived from gas works are the most carcinogenic. Another group of occupational cancers which by some are considered as produced by coal tar derivatives are the bladder carcinomas encountered in the aniline dye industry. The offending carcinogenic agents in the dyestuff industry apparently are aniline, benzidine and beta naphthylamine.

There are several metals which have been associated with the development of occupational cancer. The information on the development of occupational cancer due to exposure to metals (almost invariably in the form of soluble salt) is not as precise as would be desirable, but the following will perhaps be of benefit:

OCCUPATIONAL CANCER (Continued)

A. Arsenic is well known as a keratogenic agent, and when handled by many years may result in the development of epitheliomas. Specific and apparently reliable reports in the literature include three cases developing after many years' exposure to sheep dip containing arsenic; an individual using an insect poison containing 4% arsenic for about four years; and four instances in vineyard workers using arsenic sprays.

B. Thirty cases of pulmonary carcinoma were reported by various authors among workers exposed to chromates and bichromates in Germany and recently an extreme incidence of bronchogenic carcinoma has been encountered in the United States in a plant producing bichromates.

C. Rare or occasional instances of occupational cancer occurring as a result of exposure to cobalt, lead, iron oxide and other metals have been reported, but the case against most of these is obscure.

The role of radiant energy in the development of occupational cancer is well known. Cutaneous cancer among workers exposed to bright sunlight is common and cases exposed primarily to infra-red radiation have been reported. The occurrence of malignancy as a result of exposure to ionizing radiation is well known. Cancers, especially epitheliomas, are known to be frequent among radium operators, doctors, nurses and technicians who work with radium or X-ray.

Occupational cancer represents a definite hazard in a variety of industries, not the least of which is the petroleum industry. In those exposed to petroleum products, a considerable incidence of occupational cancer has so far been encountered primarily among refiners of Scottish shale oil, among cotton textile mule spinners in England, among paraffin pressmen in many areas, and finally among oil field workers in California. These isolated findings indicate beyond doubt that the production of cancer in man as a result of contact with petroleum substances does occur, and that a problem exists.

One cannot escape the conclusion that the production of occupational cancer by petroleum substances is poorly understood. There appears to be a great need for further surveys to obtain accurate information on the incidence of such cancer and for a means of correlating the information obtained in surveys with experimental information on the composition and potential carcinogenicity of the products to which the workers are exposed.

It must be emphasized that the information presented above indicates the situation with respect to petroleum refinery processes involved in use prior to the introduction of modern catalytic refining.

It is urged that the Medical Departments of the various refineries pay particular attention to the possible development of malignancy among workers who may be exposed to such materials, and that frequent periodical examinations be performed on this group so that any trouble which may develop can be spotted early and appropriate remedial measures introduced before any serious consequences occur.

APPLICATION OF PSYCHOSOMATIC MEDICINE IN INDUSTRY

Dr. H. L. Rutzler, Associate Physician, 26 Broadway, New York City

The practice of Psychosomatic Medicine, which considers a person's mind and body indivisible, is especially important to the Industrial Physician for so many aspects of Industrial Medicine are directly related to Industrial Relations problems. Because of the relationship between the doctor and the patient, the employee frequently "lets his hair down" and the physician then learns what in the interpersonal relationships of the plant are causing trouble. Absenteeism, company discipline, accident proneness, supervisors, shop grievances and alcoholism are among the things which people working for a living react to emotionally and instinctively. The extent to which they react is proportionate to the number and severity of the worker's own personal problems which make for substandard adjustments to the job and faulty interpersonal relationships generally. These faulty adjustments frequently turn up in the doctor's office as bodily manifestations of psychological tensions and anxieties.

Emotionally upset people, because their basic, fundamental needs, motives, goals and objectives in life are being thwarted or frustrated in their fulfillment, may react with fear, anger, resentment, worry, envy, disgust or hatred. These oftentimes lead to industrial disease and disability, including the invalid habit.

Absenteeism, very costly annually to industry, is frequently caused by individuals converting their unpleasant emotions into bodily symptoms. In addition, there are hordes of inefficients and ineffectives not sufficiently ill to be absent.

Shop discipline, or lack of it, also contributes a number of patients to the psychosomatic practice. The staff likes discipline, properly carried out by the supervisor. It feels it is beneficial to them as a group and thereby the work is distributed equally and fairly and "favoritism" is not being practiced. Therefore, the supervisor should be oriented, not only in how to get out production and administer top-management policy, but also in how to lead men. Employees are vitally interested in what the supervisor will fight for, fight against and whether he will make any positive effort at all so far as they are concerned. They are dependent upon their foreman, sometimes for their very security. Quite aside from the cash income and other considerations which come from a job, there is a psychic income which is even more important. It is the satisfaction of the job, of a job well done. Too many are depending on their jobs to provide satisfactions and security they are not receiving elsewhere in their lives. Thus their very security depends on it. Therefore, poor interpretation or execution of company policy by the supervisor never fails to brew discontent, production goes down, the illness rate increases and absenteeism soars. Shop grievances are commonly due to faulty human relations between foremen and workmen and among the workers themselves. Although we cannot make minor psychotherapists out of foremen, they should know that much and a little more. A person cannot be an effective worker if he is worried or full of bad feelings of one sort or another, because he cannot keep his mind on his work. This is especially true of individuals with worries at home. The emotional problems of living affect our every activity and the job is a large share of our activity.

APPLICATION OF PSYCHOSOMATIC MEDICINE IN INDUSTRY (Continued)

This is applicable to accident proneness in which it is known that very few accidents are accidental. They are a product of a tendency of certain individuals with emotional and mental problems; of the individual whose main defense is to act out impulsively a psychic conflict, rather than to consider it and deal with it rationally. The accident represents a deliberate, if unconscious, attempt to injure himself, usually as propitiation for some guilt, and they are unable to inhibit impulsive expressions of hostility. Perhaps more careful selection of candidates for employment, both by the employment office and the Medical Department and a more close cooperation between the two may reduce the accident rate. Each candidate should be rated on the degree of his general emotional stability before employment and then it behooves the supervisor to promptly recognize shifts in mood which foretell possibility of an accident (manipulation, dexterity, rhythm, reaction time and visual acuity), because emotional stability is a fluctuating factor even in the most stable people.

By the same token, since good workers don't always make good supervisors, candidates for advancement from minor to major positions within the company should be subject to survey as to emotional aptitude. This, the Medical Department should be prepared to advise management about. Hypertensives at age 40 are not only psychosomatic subjects, but their work as well as their life expectancy may be shortened. Their usefulness to the company will be of shorter duration. Likewise, many who climb the ladder of advancement and do very well, may be emotionally unable to take the final jump without reacting with too much worry about the added responsibility.

In the sphere of psychosomatic medicine, physicians have achieved much and must achieve more in defining the functional history of emotional ill health; in delineating situation complexes which produce tension, fear, frustration and disappointment, which in turn lead to physical and mental breakdown, accident proneness and repeated illness. The work situation is all-important in determining mental health and there is a causal connection between interpersonal stress and labor-management problems. Even those of us in the rigidly specialist practice of medicine must recognize the importance of the emotional causation of maladies and include in our treatment the psychological approach. Without such an approach, we cannot successfully treat a large segment of our patients because we are failing to recognize typical syndromes of mind-body interplay.

Osler wisely said, "The practice of medicine is an art, not a trade; a calling, not a business; a calling in which your heart will be exercised equally with your head. Often the best part of your work will have nothing to do with potions and powders, but with the exercise of the influence of the strong upon the weak, the righteous upon the wicked and the wise upon the foolish."

SUPERVISION OF WORKERS EXPOSED TO LEAD

Dr. M. N. Howard, Plant Physician, East River Operations, New York

The presence of lead in the human body has been described in many scientific articles, and around oil refineries by many unscientific phrases and in strange

SUPERVISION OF WORKERS EXPOSED TO LEAD (Continued)

anatomical locations. However, it was not until October of 1947 that the toxicology of lead was of much concern at the East River Paint Mill.

After first being introduced to the lead poisoning problem here, certain objectives were set up -- (a) To determine and to establish satisfactory clinical measures to diagnose lead absorption before lead intoxication developed. (b) To determine if hazardous lead exposure was present during any of the manufacturing processes in the Paint Mill and to correct such conditions.

Primarily, lead is absorbed into the body by inhalation of air containing lead dust or lead vapors. Through the lungs it goes directly into the general circulation so that none of it can be excreted, without first being absorbed. Only organic lead compounds such as tetraethyl lead are absorbed through the skin in significant amounts.

Once in the general circulation, lead reaches all parts of the body. The main storage sites are in the bones, liver and muscles. It may also be deposited in the gums giving a familiar lead line. Lead is excreted by way of the urine and feces. Normal individuals with no known exposure to lead also excrete some amounts of lead so that we have so-called normal levels. Excess lead excretion not only occurs during active absorption, but also weeks and years later when mobilized from some storage point. This mobilization may be spontaneous, as a result of intercurrent infection, or may be due to a change in individual metabolic processes, or may be brought on by a de-leading therapy.

A sharp distinction is made between lead absorption and lead intoxication. The first implies more than normal absorption but without symptoms developing. Lead intoxication or poisoning refers to lead absorption sufficiently great to disturb the individual's wellbeing. This is the stage of toxicity. The difference is, therefore, a clinical one rather than by laboratory methods. Thus a worker may absorb lead and show a gum lead line or have constipation or poor appetite and show such absorption in his blood and urine; if he goes about his work unaware that there is anything amiss, he is considered a case of lead absorption.

In clinical lead poisoning, three characteristic clinical syndromes are described: (1) Gastro-intestinal disturbances, (2) Neuromuscular disturbances, (3) Central nervous system disturbances. The first step in the treating of lead intoxication and poisoning is to bring the exposure to lead to an end. During the acute attack of lead poisoning, no medication must be given to promote lead excretion, such as potassium iodide and ammonium chloride. The abdominal pain, usually the most prominent and disturbing symptom, is best relieved by calcium, such as calcium gluconate. Hot water bottle, atropine and other antispasmodics may be used. Be sure of diagnosis before catharsis is given. If serious cerebral symptoms exist, sedation preferably using large doses of barbiturates rather than morphine to control the excitement, mania or convulsions. De-leading treatment is only to be used after all acute symptoms of whatever type have disappeared. Then it is open to question. There is danger in this procedure of recurrence of lead intoxication.

SUPERVISION OF WORKERS EXPOSED TO LEAD (Continued)

Perhaps the best way to describe this work is to show what was actually done at the East River Operations. From the medical side, we instituted periodic supervision of the workmen by complete physicals, selecting those most exposed to the lead products. The various symptoms were noted, blood smears were done and, where indicated, complete studies of the urine and blood. A systematized periodic survey was set up to spot cases of increased lead absorption before poisoning could occur.

Our next step was to discover if any serious flaws existed in our manufacturing processes that would create an undue hazard. This problem was worked on in cooperation with the chemists of the Technical Service Laboratories. We wished to have air samples, taken from different sites in the Paint Mill, and at different times in relation to the manufacturing processes, analyzed for concentration of lead. Some of the findings were startling in that they revealed a quite high concentration, usually however at known times and places where the men wore respiratory masks. A campaign of cleanliness about the plant was instituted to prevent the accumulation of dust. Rather than an intake of air, an exhaust system is desirable.

A new Paint Mill is now in the process of construction. Although the changes contemplated are minimal in the old plant, as a result of the studies made, the plans for the new factory have been improved. Attention has been paid primarily to the proper design of the manufacturing facilities so that there will be a minimum of lead free in the working environment. Wherever feasible, closed processes will be used. Although the proper design of a plant and its equipment is by far the most important factor in the problem of prevention of lead intoxication, our experience proves that constant vigilance must be maintained to be sure that faults do not develop in the mechanical apparatus, that individuals do not absorb lead excessively. Prevention is still advisable in terms of health as well as money.

TREATMENT OF PAINFUL BACKS

Dr. N. P. Johnson, Plant Physician, Olean Refinery, Olean, New York

Dr. Johnson stated that the causes of low back pain are more apt to be lumbosacral rather than sacro-iliac. Before he uses manipulation with any of his patients, he tries to measure the limitations of the individual. Preliminary massage is given, followed with strapping and heat treatments. Novocain injections are given and the use of a hard bed and heat are recommended for relief. Most of the employees stay on the job during the treatment.

Following these opening remarks, Dr. Johnson showed a very descriptive and interesting movie on back manipulation.

A MEDICAL PROGRAM FOR PRODUCING AND PIPE LINE WORKERS

Dr. E. P. Luongo, Medical Director, General Petroleum Corporation,
Los Angeles, California

With the variety of activities involved in the widely divergent operations of General Petroleum (refining, merchant marine, production, office work, marketing and pipe line) there can be no one definite medical program or set-up which will meet the needs of our various operations. Geography and job variations made the task much more difficult than establishing a program for an industry where operations are more or less uniform and under one roof.

The scope and standards of the program are divided as follows:

1. Preventive Services, such as physical examinations. The purposes of these examinations are to inform employees as to the condition of their health and how to maintain or improve their physical condition. Also, to aid management in the judicious placement of employees in jobs they can perform efficiently without being a hazard to themselves and others. Adequate environmental hygiene is promoted to aid the departments and divisions of the company in matters relating to adequate lighting, ventilation, safe water supply, distribution of food, disposal of garbage and insect and rodent control. In fatigue prevention measures assistance is given in an advisory capacity in noise reduction, on questions of adequate rest periods, vacations and posture aids. Control of communicable diseases such as tuberculosis and venereal diseases is maintained. Other preventive services include mental hygiene, health education, conservation and utilization of eye sight.

2. Advisory and diagnostic services include acquainting the worker with his physical condition and assisting him in maintaining good health. Evaluation of employees' symptoms using such diagnostic methods as seem appropriate to the physician in charge, for the purpose of referral to private physicians. In general this service is limited to cases involving sick absenteeism, incompatibility of individuals and job, and those borderline cases where symptoms proximate or simulate disease caused by employment.

3. Treatment -- Prompt and efficient handling of illnesses and injuries arising out of or during the course of employment by providing treatment on the spot, and where necessary, referral to proper outside medical facilities for complete and adequate care. Treatment on the job of minor non-compensable diseases and injuries, with the object of keeping the employee at work.

The producing and pipe line workers depend almost entirely upon the services of Company-selected physicians, except in unusual cases of injury or disease and except for personal liaison work between the Medical Director and the Company-selected physician. Periodic examinations by the Corporation Medical Director, of production and pipe line workers at scattered locations has been tried unsuccessfully. It is very impractical to have adequate stationary examination facilities distributed in the field for this purpose.

The mobile unit is the solution to the old problem of providing physical examinations throughout scattered production and pipe line operations and in remote sections of the country. The unit should be completely equipped with a modern

MEDICAL PROGRAM FOR PRODUCING AND PIPE LINE WORKERS (Continued)

X-ray machine, a photographic dark room, an electrocardiograph, a sight screener for rapid eye examination, and full facilities for routine laboratory examinations including microscopes, centrifuges, sterilizers, and other instruments or supplies needed for complete physical examinations. The staff of a mobile unit should consist of one physician, a laboratory and X-ray technician, and a nurse.

The services of the unit should be sold on a voluntary basis. This is not difficult when proper educational steps are taken with both employees and management. Examinations must be complete and the results given to the employee. Diagnoses are not furnished management and they receive placement information only in those few cases where a condition is found which might render the employee a hazard to himself or others. It goes without saying, that all dealings between the physician and the employee must be strictly on a physician-patient relationship. These units should perform diagnosis only and if ailments are found, employees should be referred to their private physicians for treatment.

In addition to the advantages obtained from the standpoint of preventive industrial medicine, such a unit is a definite factor for good morale in making production and pipe line workers feel something is being done for them even though the services are not on as great a scale as those in a central stationary medical department.

Dr. Luongo then showed colored slides of the producing and pipe line work and the proposed mobile unit. (Further comments regarding the mobile unit will appear later in the minutes).

HOW CAN OUR CLINICS GIVE MORE EFFICIENT CARE TO OUR EMPLOYEES?

Dr. M. R. Schmidt, Plant Physician, Trenton Refinery, Trenton, Michigan

In our relation to the employee, the care given should be on a personal basis, not that of the impersonal type so often found in clinics. The purpose of our clinics is that of adequate care of the health of the industrial workers.

Industry is not in the business of practicing medicine, but has established clinics to provide the necessary care required by law. It is industry's right to determine how much more, above the requirements of the law, that they will assume in giving medical care to the individual. Many industries assume more responsibility in caring for the employee than they are required by law. It is the physician's responsibility to see that the employee has the best of care possible.

In order to provide these things, our clinics should have adequate space for their department, sufficient supplies, equipment and trained personnel. The duties of the medical personnel include: (1) To ascertain by examination the physical and mental fitness of employees for work. (2) To maintain and improve the health and efficiency of those already employed. (3) To educate the worker in accident prevention and personal hygiene. (4) To reduce lost time and absenteeism from illness and injury.

HOW CAN OUR CLINICS GIVE MORE EFFICIENT CARE TO OUR EMPLOYEES? (Continued)

To care efficiently for the employee, the medical personnel must be intimately acquainted with the hazards of the industry to which they are attached. Thus an employee can be treated for his illness or injury without lost motion. The clinic should be arranged so that the equipment and supplies are readily available for use. Adequate records should be kept and referred to whenever necessary. This helps the nurse or doctor to keep informed on each individual's past plant and personal problems that they have. A medical secretary should be attached to each department to facilitate the keeping of records.

Some of the functions of the Medical Department are: Pre-placement examinations, sanitary control, safety education, health programs, (tuberculosis, cancer, and venereal diseases), annual physical examinations, care of the sick and injured workers.

Pre-placement examinations are essential in that they weed out those physically and mentally unfit. With the sick and accident insurance program associated with our plants, it seems inadvisable to employ anyone with a physical disability. When such a person is hired, the industry assumes responsibility of his future illness and adds a further economic hazard to the insurance program. --- Sanitary control includes ventilation, water supply, food, lighting, housing and toilet facilities. These should be kept in good working condition, otherwise illness in the plant will increase, along with absenteeism. --- Safety education is primarily the function of the safety department, but often the Medical Department can give advice. --- Health programs such as tuberculosis, cancer and venereal education can be aided greatly through the Medical Department. The employees can be informed of the benefits of such programs and are more readily amenable to suggestions by the medical personnel than otherwise. --- Annual physical examinations should be done. During the course of each examination, health or other problems can be discussed with the individual and advice given. --- Injuries should be treated to the best of our abilities at the clinic. How much can be done depends upon the equipment present. --- Advice in illness can, and should be given to all employees, but the patient-physician relationship should not be encroached upon. Each individual employee has the right to choose his own physician and the medical personnel should never try to impose themselves upon the individual employee.

The efficiency of our clinics can not be measured by the number of patients that are treated daily or by the time consumed. It should be judged more by the results produced, the morale of the employees and the degree of absenteeism.

To give the most efficient care to employees, the Medical personnel must be fully cognizant of the hazards of the industry to which attached; the type of employees and the physical characteristics of the clinic in which they work.

THE ANNUITANT'S PLACE IN INDUSTRIAL MEDICINE

Miss Olga A. Ericson, R.N., Head Nurse, 26 Broadway, New York City

The Industrial Relations Department has recently developed a system whereby all Annuitants are contacted, preferably by personal call at least once each year.

THE ANNUITANT'S PLACE IN INDUSTRIAL MEDICINE (Continued)

This is done by the Department in which he was employed at the time of retirement. The visitor inquires, among other things, as to the Annuitant's health and well-being and this information is reported on a printed form. These completed reports are sent by the Department Heads to the 26 Broadway Industrial Relations Advisor, where a record is kept covering every 26 Broadway Annuitant. Any reports of illness are especially noted and in turn the Medical Director is advised and he arranges for a further personal visit by a representative of the Medical Department.

In doing this type of work, one realizes in full the value of being an employee of Socony-Vacuum. The very fact that an employee, upon retirement, does not become the "forgotten man" is priceless in itself. We must acknowledge the fact that with the approach of old age, there are always numerous fears. Being left alone, illness, becoming a charge and last, but not least, being deserted by our friends. It is true that the average individual, in this busy world of ours, has very little time to visit the chronically ill.

In visiting, one must diplomatically ascertain the annuitant's physical, financial and medical status, as well as their surroundings. Such questions cannot be asked directly, either of the patient or the family. They must be drawn out in casual conversation.

After each visit, a detailed report is sent to the Medical Director, who in turn sends it to the 26 Broadway Industrial Relations Advisor. Stress is laid upon the requirements necessary. If it is possible for a change to be made, recommendations to that effect are sent in. The case is then brought before the Annuity and Insurance Committee and special consideration is given to each case. The Medical Department then assists in carrying out such recommendations as may be approved.

CARDIAC CONDITIONS AND PRE-PLACEMENT EXAMINATIONS

Dr. T. C. St. John, Plant Physician, East St. Louis Refinery, E. St. Louis, Ill.

Our problem in the Socony-Vacuum Oil Company is an unusual one because we have such a great number of long-term employees. Our Pre-placement examinations, relative to cardiac conditions, must be conscientious and searching in order to aid in reducing non-occupational disabilities, to place a person physically suited for the particular job he is to perform as well as to allow scientific follow-ups.

Pre-placement examinations are necessary to assure an equitable supply of healthy men and women who will be able to carry on the duties of their jobs for the long-term employment with our Company. We can reduce the non-occupational disabilities, in cardiac cases, by determining the type of worker at the time of the Pre-placement examinations.

We evaluate our cardiac cases at Pre-placement by noting the following factors: (1) Previous history, including personal, military service and insurance company histories. (2) Objective signs as shown by physical examination such as cyanosis, edema, dyspnea, liver enlargement and rales in bases of the lungs. (3) Murmurs.

CARDIAC CONDITIONS AND PRE-PLACEMENT EXAMINATIONS (Continued)

(4) Size and contour of the heart. (5) Blood pressure and pulse exercise tolerance test, including rate changes, irregularities, cynosis, dyspnea and blood pressure changes from the normal. (6) Ability to hold breath for a reasonable period of time. (7) Laboratory aids when they are available.

Our Pre-placement examinations, relative to cardiac cases, are strict. We are faced with the problem of an ever increasing number of pathological cardiac cases which need proper placement in employment. The placement depends upon the needs of our industry and the availability of manpower.

The following are cases which we reject: (1) Hypertensives with history or reading of 150/100. We believe a hypertensive, especially the younger hypertensive, must not be started on a long-term program, as in our Company, since their physical condition will not stand it and the man and the Company both will suffer by the experiment. (2) Myocardial disease with signs of decompensation. (3) History of Coronary Thrombosis. (4) Leukic heart disease. (5) Proved aneurysm. (6) Enlargement of the heart with thyrotoxicosis. Ventricular extrasystoles in persons above 40 years of age. (8) Heart block cases. (9) Auricular flutter and auricular fibrillation cases. (10) Acute rheumatic cases with high temperature, high white blood cell count, high sedimentation rate and alterations in the electrocardiographic tracing.

Our periodic and special examinations, relative to cardiac cases, are less of a "weeding out" process and more of a proper placement process. We are more interested in our employees than in an applicant for work and we make use of the laboratory aids to a much greater extent in these examinations. These examinations are voluntary and the worker knows his employment status is not influenced, even if adverse physical conditions are found at examination.

The periodic and special examinations, during the course of employment, allows the physician to watch the development of cardiac cases in specific instances. When the onset of a disabling heart disease and disability is detected, the physician may correct and prolong useful life expectancy of the worker.

Prognosis in cardiac cases is valuable to industry. It gives industry a chance to train someone to replace a key employee. A prognosis is possible when a case is observed often during the period of years and when we have the kidney tests, the electrocardiographic tracing, the ophthalmoscopic examination, chest plate etc. to assist us.

A favorable prognosis is possible if periodic physical examinations bring about a proper placement of the employee and when ailments are detected and early treatment is instituted.

We consider every heart case on probation until his capacity to do this particular type of work is definite and proved. Cardiacs should not be exposed to respiratory infections, heavy lifting, climbing or cold temperatures. We recognize the fact that cardiac cases are most difficult to place because of the progressive nature of the disease. They must be placed in jobs within the limit of their physical capacity. --- Each cardiac case is an individual placement problem.

THE SOCONY-VACUUM INDUSTRIAL NURSE

Mrs. Doris K. Krieger, R.N., Consulting Nurse, 26 Broadway, New York City

Our Medical Director wants our Medical Departments to meet all the requirements of the American College of Surgeons. If the Medical Departments and Nurses meet the following requirements, this can be done.

Industrial efficiency with maximum production at lowest cost, is the goal of every industry. The most important factor influencing this objective is the physical and emotional status of each individual employed. To secure and maintain a healthy working force, it is the aim of management and it is the Medical Department's responsibility to see that this is done as well as possible.

An important qualification for our nurses is to have an interest in and the ability to work with all types of people. Tact and diplomacy to cope with conditions that may arise unexpectedly, are essential. She should be temperamentally fitted for the various kinds of demands made upon her resources. The nurses in our Medical Departments must be ambitious not for personal gains, but anxious and enthusiastic to help those with whom she works. One of her outstanding qualities should be initiative. She should be able to do a job without detailed instructions. Management will assume that her professional qualifications have been verified by a physician and she knows what should be done and will give her leeway to do what she sees fit. Along with initiative there must be a good portion of judgment. A good nurse can take great professional pride in her work and should know that her work will be appreciated.

The nurse should prepare and assist in Pre-placement and Periodic physical examinations done at the plant and become somewhat familiar with the feeling and deficiencies on any particular examination. These findings should not become public property. The nurse should participate in helping create a health consciousness on the part of the workers, and should be familiar with the community benefit and welfare association so that she may refer her patients to them when necessary.

The nurse should see all employees when they return to work after being off, due to sickness. In this way, she can keep a check on what is causing lost time in the plant. Another function is consultation with the employee on personal health problems. In this way she can do a lot of preventive work. First, there is the matter of personal cleanliness and cleanliness of surroundings. Many employees need help and guidance along these lines. They may never have had training in personal hygiene and have little regard for their co-workers or for Company property.

One of the outstanding functions of the nurse is to act as confident to the employee and emissary of management. Because of the nature of her relationship with employees, the nurse is in favorable position to know what is going on in the plant. A great deal of the information is brought freely to the nurse and if used intelligently, it can be a tremendous aid in smoother operation.

It is a recognized principle that all nursing care should be given under the direction of a physician. Every nurse should have a book of Standing Orders to direct her as to what to do under given conditions or in an emergency. This must be signed by the plant physician. This is a legal protection for her own activities.

THE SOCONY-VACUUM INDUSTRIAL NURSE (Continued)

The Industrial Nurse must know or learn how to keep proper and adequate records of all the work that is done in the Medical Department and how to assemble monthly reports and statistics from this information. Not only are records required by law and by insurance companies, but they are important to the Company to prove the work of the department.

To keep the records properly and accurately, it is absolutely necessary for a Medical Department to have a full-time stenographer. It is impossible for the nurse to carry out her other work and also keep the records as they should be kept.

An industrial health program reflects itself favorably in efficiency, production and human relationship between management and workers and it is a definite advantage to both. The atmosphere throughout the plant improves greatly.

MEDICAL DEPARTMENTS IN MARKETING OPERATIONS

Dr. A. E. Hoag, Medical Director, 26 Broadway, New York City

Due to the wide distribution of their personnel, the setting up of Medical Departments in Marketing is much more difficult than in our refineries, where the employees are more or less under one roof.

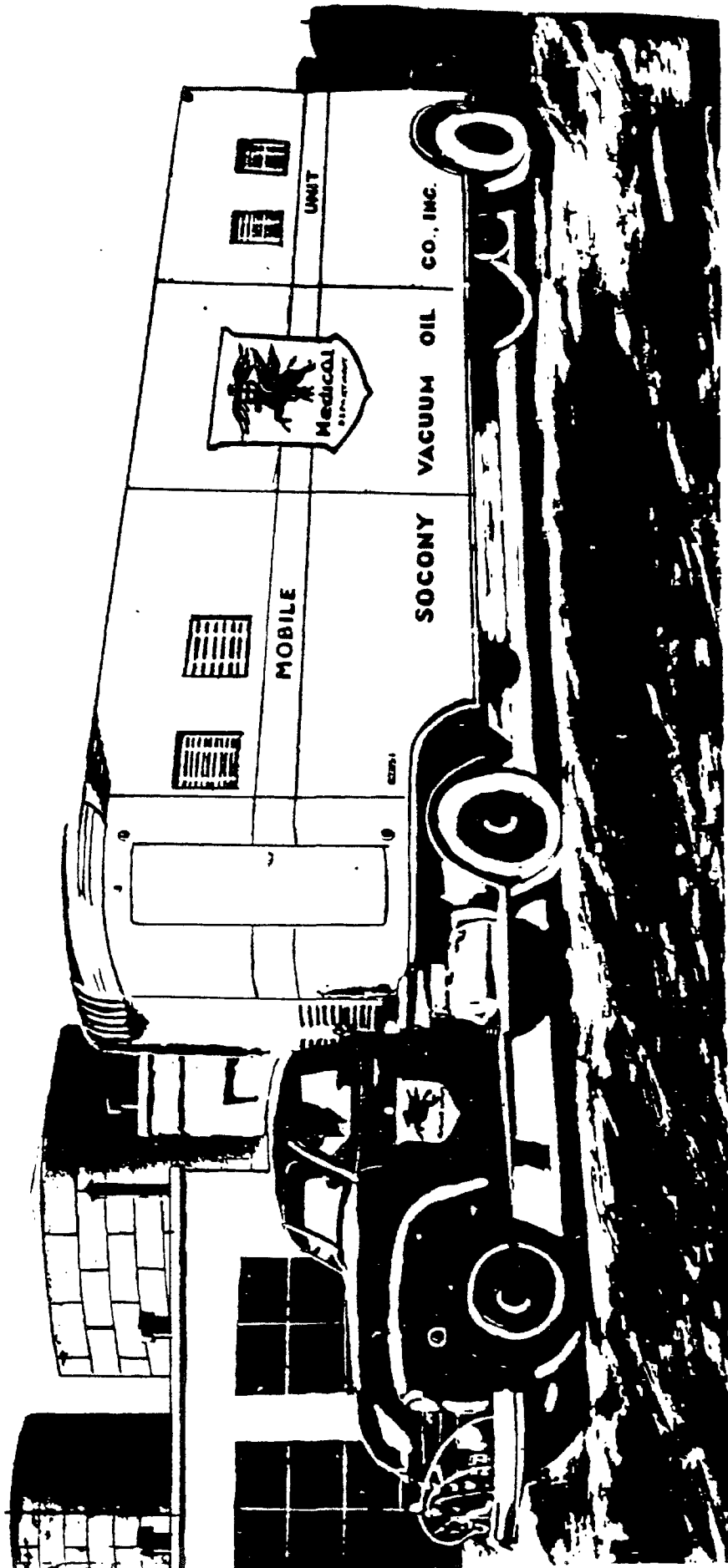
In Marketing, by combining the division office force with the nearest bulk plant, or similar operation, we have a sufficient number of employees to support a Medical set-up consisting of a full-time nurse and a part-time physician. We have such a set-up in Milwaukee now, which we are proud to say is functioning very well. We are expecting almost any time now to have a Medical Department in the New England Division.

The only figures we have to work with at the present time are from the Eastern Division. New New England Division has a concentration in the Boston area of 634 employees. The Medical Department, which is almost complete, will serve these employees. This leaves 956 employees with only Company-selected physicians in the area in which they are working.

The Albany Division has 496 employees, which warrants setting up a Medical Department in Albany. This would leave 778 employees to be cared for by the Company-selected physicians.

The City Division has a total of 525 employees at Hanson Place and North Henry Street, where a Medical set-up could be used. This would leave 906 to be served by Company-selected physicians.

The Philadelphia Division has a total of 310 employees at the Philadelphia Office and Gibson Point. A Medical Department could be set up here. 414 employees would then be served by Company-Selected physicians.



PROPOSED MOBILE UNIT
FOR CARE OF EMPLOYEES
IN OUTLYING DISTRICTS

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MEDICAL DEPARTMENTS IN MARKETING OPERATIONS (Continued)

The Lakes Division has 373 employees at Buffalo which could be served by a Medical Department. 299 would then be left to be under the care of Company-selected physicians.

Detroit, St. Louis and Kansas City are now working on the problem of local Departments, but space seems to be very difficult to obtain.

It has been brought to our attention by the Industrial Relations people that the employees in the non-concentrated areas are really orphans when it comes to any kind of Medical attention. Even though the Company has granted a free Medical examination on a voluntary basis, only 10% of the employees have availed themselves of this offer. The criticism has been that the type of examination which is given lacks the thoroughness and interest desired. Just how much an employee benefits by these periodic examinations is unknown. We have no way of knowing whether they follow the advice given them by the Company-selected physician or whether they go to their family physician for correction or treatment of conditions found.

We have 3,353 employees in the New England, City, Albany, Philadelphia and Lakes Divisions who come under the classification of the so-called orphans. These could all be served by a Mobile Unit. This Mobile Unit would consist of a trailer divided into three compartments. (1) Examining room and small Surgery; (2) X-Ray Unit, with Electrocardiograph and Eye Screening Test; (3) Laboratory with a dark room for developing.

This Mobile Unit could be manned by a nurse fully trained for this work, and a combination driver-technician. Local Company-selected physicians who have been instructed as to the type of examinations we require, would be used. The Unit would go from bulk plant to bulk plant, the itinerary being laid out beforehand, so that very little time would be lost. In this way, all of our employees would get proper Medical care.

* * * * *

MEDICAL DEPARTMENTS IN MARKETING OPERATIONS --- FURTHER COMMENTS

Mr. W. E. Krueger, Industrial Relations Advisor, Wadham Division,
Milwaukee, Wisconsin

Mr. Krueger opened his remarks by saying that the Manufacturing Division has many more Compensation cases than the Marketing Division. However, upon survey the Wadham Division found that they had quite high expenses in connection with their Medical work. They estimated approximately \$40.00 to \$50.00 per employee and were alarmed by this.

As a result, a full-time nurse and a part-time physician were employed, to take care of the various Medical services. The success of the Medical Department really depends on the nurse in charge. Previously, there were no accurate records available. At the present time, new forms are being used and are working out very well.

MEDICAL DEPARTMENTS IN MARKETING (Continued)

The problem at the present time is that of trying to get the periodic examinations done. The examinations which have been done in the past by Company-selected physicians were not always satisfactory. For one thing, Mr. Krueger stated, that he felt that the PM-4 Form (Information for Examining Physicians) was not clear enough and did not explain the requirements satisfactorily to these Company-selected physicians.

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MEDICAL DEPARTMENTS IN MARKETING --- FURTHER COMMENTS

Mr. R. G. Harmon, Assistant Manager Industrial Relations -- Marketing,
26 Broadway, New York City

Mr. Harmon added to Mr. Krueger's remarks by stating that there are about 11,000 employees in Domestic Marketing with 1,000 locations where the plants are so small that there is only one employee.

The Marketing Division has tried to establish a partial Medical program by offering voluntary examinations to be performed by Company-selected physicians. But only 10% of the employees have taken advantage of this opportunity. Mr. Harmon stated, however, that he felt that this was true because there had not been a real effort to promote the idea to the employees regarding the advantages of such examinations.

REHABILITATION OF INJURED WORKERS

Dr. D. R. Johns, Plant Physician, East Chicago, Indiana

It is very important to raise the morale of employees with disabilities. During the last twenty years, not too much has been done along this line, but since World War II, there again has been much more done for these people.

Rehabilitation is as important as the actual treatment of employees. What has been done since World War II has been a stimulation to the industrial physician.

The first step is to evaluate the extent of the disability. It is good to institute treatment early in the man's illness with placement in a job best suited to the employee's disability. The physician should acquaint himself with the various phases of rehabilitation so that he knows some of the requirements. Returning of a person to employment within a reasonable length of time is quite important. Neurosis develops from having a man away from work too long. The main thing is that this man should be looked after and given early treatment.

Amputees who have been returned home were instructed how to use their new limbs. For the most part, those of us who are industrial physicians, have not followed these men as we should have. Workshops are very essential while the amputees are convalescing.

REHABILITATION OF INJURED WORKERS (Continued)

Industry also has a problem on the subject of Tuberculosis. After release from the hospital, these patients should still be given a chance to earn a good living. Silicosis in the middle western states is a problem and must be taken care of.

In brief, we should improve our methods of rehabilitation. The physicians and industry, together, should carry on where the armed forces have left off with their treatment.

VALUE OF PERIODIC PHYSICAL EXAMINATIONS IN AN INDUSTRIAL MEDICAL PROGRAM Dr. M. N. Howard, Plant Physician, East River Operations, New York

The material for this paper was drawn from the records of our Medical Departments at the East River Manufacturing Operations. 462 physical examinations performed during the past two years were reviewed. The results summarized below will help to prove how valuable periodic physical examinations can be in the discovery and treatment of incipient disease and the improvement of the health of the individual employee by the correction of minor defects.

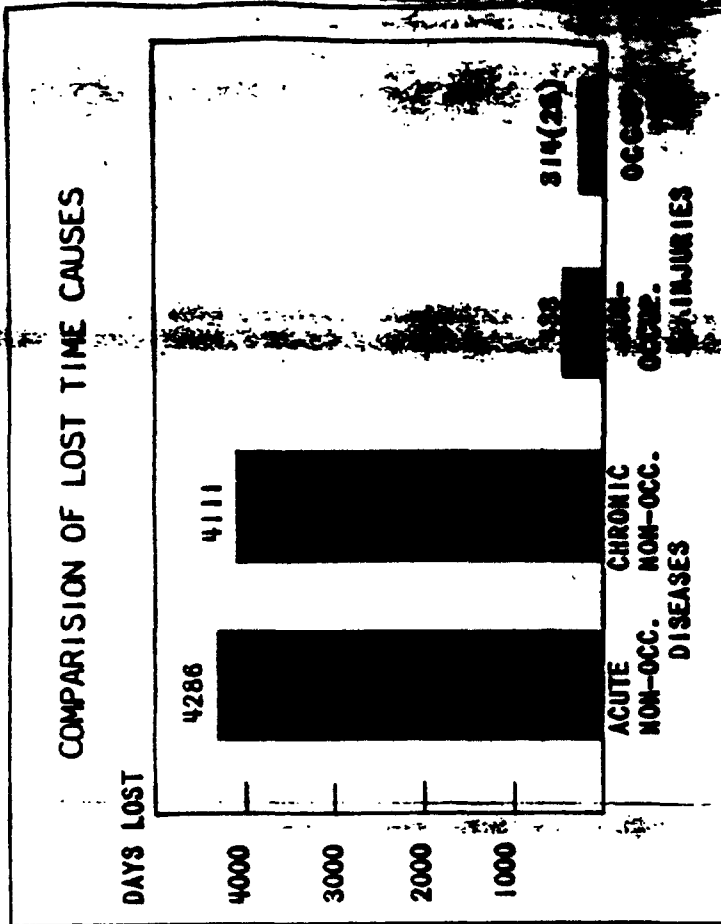
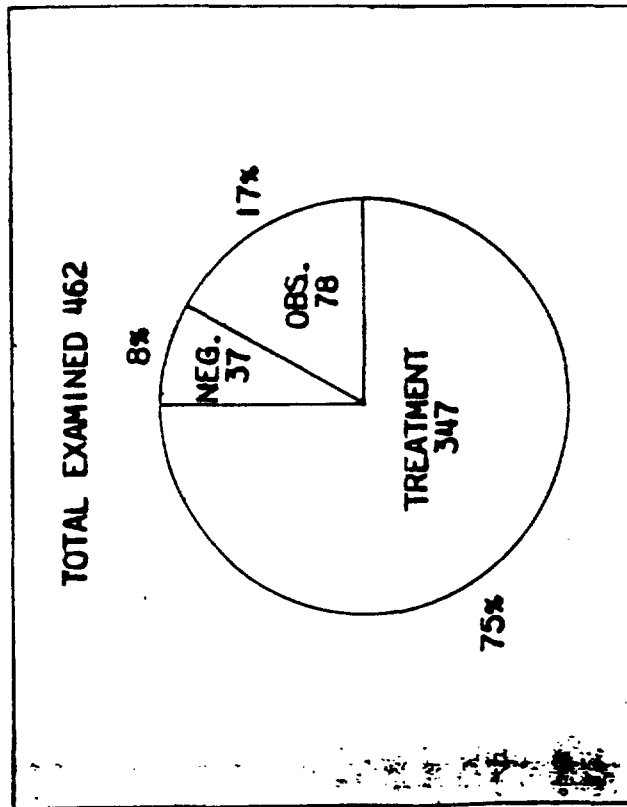
Of the 462 employees examined, only 37 (8%) had normal findings. ~~347 (75%)~~ had some defect for which active treatment was indicated. In 78 (17%), abnormalities were discovered which, although not needing immediate treatment, required periodic observation to detect progression to a stage necessitating remedial measures. (Figure 1). These figures are startling in that the great majority of the individuals had no knowledge of any disease process existing.

The conditions found were listed according to the system of the body affected. They were further broken down into three groups:

1. Those who knew about their disease, but of which we had no record (318).
2. Those who had symptoms but no knowledge of any disease (389).
3. Those who had no symptoms of any kind (382).

Thus, the greatest number of defects were in groups 2 and 3 and were uncovered as a result of the periodic examinations. Many of the disorders found were of minor nature, but there were others that urgently required management for the protection either of the individual or of his fellow-workers. The measures taken varied with the condition. Some employees were given sick leave to correct their state of health. Others were able to do this while continuing on the job, under supervision and in others a change of work was effected.

Although the charts listing the diseases found are too detailed to reproduce here, certain findings warrant singling out for comment. 81 cases of psychoneurosis were discovered, varying from individuals who were referred for shock treatment to those having mother-in-law difficulties. Many of these individuals, like the girl about to get married, needed only a sympathetic ear and a reassuring pat on the back to get them back to work. Others needed such a supporting post more frequently, and assistance has been offered to them.



VALUE OF PERIODIC PHYSICAL EXAMINATIONS (Continued)

There were 31 cases of peptic ulcer, 19 of which were found as a result of the symptoms elicited during the examination and confirmed by subsequent X-rays. The finding of these cases and the institution of a proper regime should not only improve their health, but also avert or postpone further complications. 16 cases of hernias were found, their existence unknown to the patient. 11 cases of defective vision, 31 needed glasses at this time. Eight cases of cancer were found, one case of primary syphilis. In the cardiac group were 11 cases of heart failure, 15 cases of heart murmurs, and 53 cases of high blood pressure. There were 3 cases of diabetes discovered, all unknown to the patients.

Not included in the above were 140 cases discovered to have stationary defects which needed no treatment but were important to note to define the extent of possible aggravation by future injuries. For example, noted were soars of fingers, hands and face, amputation of fingers or toes, congenital deformities and joint disabilities which had not been previously recorded. It can readily be appreciated that such records may play an important role in future disability claims. They are also of importance in assigning these men to tasks where the defect would be a handicap or a hazard.

A study was made of a group of 28 foremen and assistant foremen. Of these, 5 averaging 51 1/2 years in age had died of coronary thrombosis during the preceding three-year period. Five others averaging 56 years of age were alive but had active symptoms of arterio-sclerotic heart disease. These figures are noteworthy. We are dealing here with men whose loss effects a large segment of an industry as well as the individual alone. It serves to focus attention on the possibility of measures of preventing these diseases in this group. As a result of the above study, a comprehensive yearly check-up including laboratory studies has been set up for the 'executive' personnel.

The subject of 'socialized medicine' is a prominent one in current events. Industrial medicine has often been accused of being a harbinger of 'controlled medicine'. It has been our assertion that a properly conducted industrial medical program will, by discovering conditions unknown to the person, serve to increase the practice of private physicians. It was, therefore, interesting to find that as a result of our periodic physical examinations in this group of 462 employees, there were 315 conditions found and referred to private physicians for treatment. Most of these were referred to specialists rather than to general practitioners since the specific condition had been defined, but this is sound medicine. In addition, another 137 cases were referred for dental care. Not included in these counts are the numerous cases that were referred for laboratory work to establish diagnoses.

The time lost by employees as a result of sickness or injury during the past year was analyzed. The acute non-occupational diseases caused 4,286 man-days lost, whereas the chronic caused 4,111 days. To date, most of our efforts have been directed to the reduction of lost time due to acute illnesses. The success of these efforts may be judged from the 6,089 days lost for a comparable period in 1946-47 as against the 4,286 cited in the 1947-48 period. There was thus a reduction of 1,803 man-days in the group of acute non-occupational diseases. (Fig. 3). The

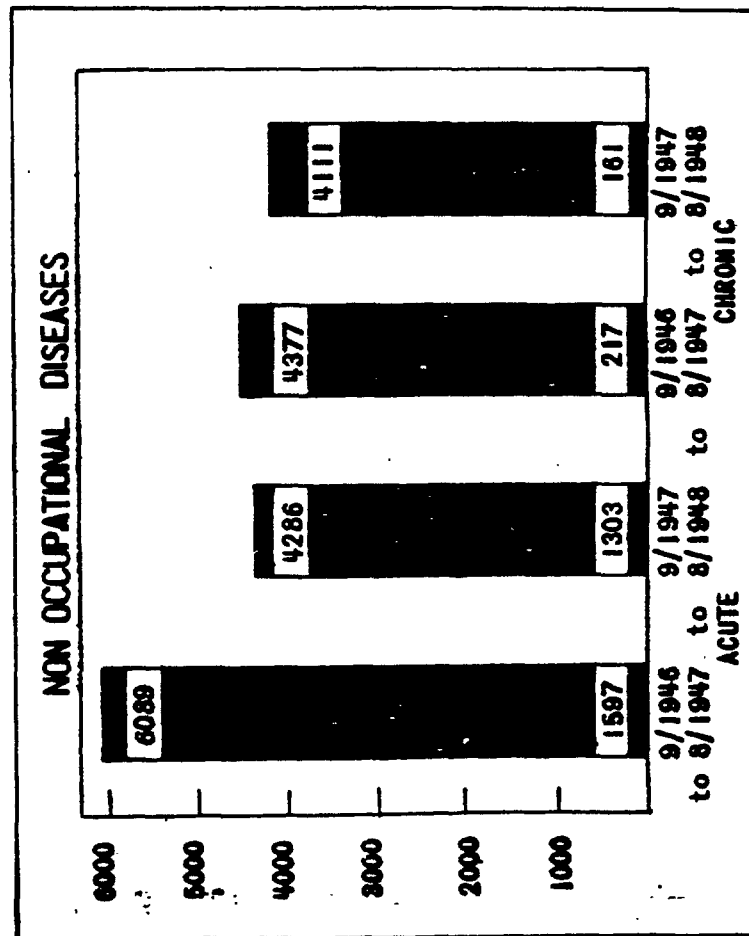


FIGURE 3

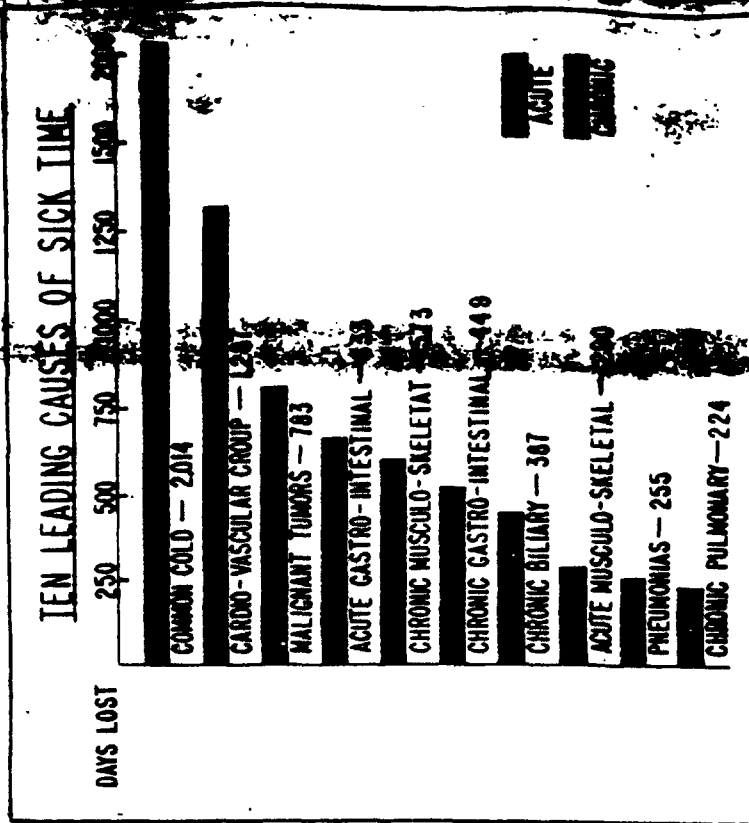


FIGURE 4

VALUE OF PERIODIC PHYSICAL EXAMINATIONS (Continued)

most important illness in this group remains the infections of the upper respiratory tract ('common cold') which accounted for 2,014 days or about 50% of the lost time. Whereas noted above there was a decrease from the acute diseases, there was very little change from one year to the next in the lost time due to chronic diseases. In the 1942-43 period, 4,111 days were lost, whereas in the 1943-44 period 4,377 days were lost making a decrease of only 266 days. Listed below are the ten leading causes of sick time during the past year: (Fig. 4)

1. Common Cold	2,014 Days
2. Cardiovascular diseases	1,287 "
3. Malignant tumors	783 "
4. Acute gastro-enteritis diseases	633 "
5. Chronic musculoskeletal disorders	573 "
6. Chronic gastro-intestinal disorders	449 "
7. Chronic biliary disorders	387 "
8. Acute musculoskeletal disorders	290 "
9. Pneumonias	255 "
10. Chronic pulmonary diseases	354 "

It will thus be seen that the chronic group of disorders is a more prominent cause of illness than the acute group. Statistically, it has been demonstrated that the average age of our population is increasing with a larger proportion of older people. This same condition will obtain among our employees, although eventually in our groups a stabilized age will be reached. With this increasing group of older people comes the increase in the chronic degenerative disorders that characterize the aging process in man. The causative factors of this group of disorders are obscure, multiple and accumulative. Their onset is slow and silent, but characterized by persistent progression. They rarely kill quickly, but are characterized by long periods of disability and invalidism. To detect these chronic progressive disorders early so that worthwhile measures of control may be instituted, they must be anticipated and sought for rather than waiting for symptoms to appear. The periodic physical examination is the only means of bringing this about. Many of the chronic conditions discovered in the course of such examinations have resulted in measures of care which should show results in the coming years in cutting down the lost time from these diseases. The individuals not only should be healthier and happier, but also continue to contribute to, rather than to drain, the resources of the Company and the country.

It is interesting to note in comparison with the above figures that occupational injuries during the same period resulted in 314 days lost from work and non-occupational injuries resulted in 438 days lost. (Fig. 2). This is strong proof, as has been stated before, that the primary concern of industrial medicine is not the first-aid treatment of cuts, bruises and burns, but rather the prevention of diseases common to the general population. For it is the latter that causes the greatest suffering to the individual and is the greatest expense to industry in terms of production and money.

Mr. W. H. Montgomery: With the figures shown by Dr. Howard, I feel that Industrial Medicine is an assistance to private practice rather than taking practice away from them. Records take a great deal of time and effort, but help to develop policies and plans for the future. The Industrial Relations men must have the statistics in order to prove to management the points which we are trying to make.

ROUNDTABLE DISCUSSION

A. Periodic Health Examinations

1. Compulsory or voluntary

In the refineries, the periodic examinations are usually on a voluntary basis.

Mr. C. P. Baker: In East St. Louis, we are not in favor of compulsory examinations, except for pre-placement examinations. We are now trying to sell the idea of periodic examinations.

Mr. R. G. Harmon: Management has the right to ask for compulsory examinations in some instances, especially when a job is a hazardous one.

Mr. W. E. Krueger: In the Wadham's Division, 40% of our employees have been examined on a voluntary basis. Many of the employees are afraid to have a physical examination for the simple reason that they feel that the doctor will find something wrong with them.

Mr. W. H. Montgomery: I feel that top management should have periodic examinations first, then they can stimulate the interest of the other employees. However, these examinations still should be on a free-will basis. Periodics should be very thorough, not just superficial. The Marketing Divisions have a problem in that the Company-selected doctors are not as interested in the examinations as the Plant Physicians are.

Dr. J. J. Gaunt: Generally speaking, selling the idea of periodic examinations must be done a great deal by the nurse and the doctor.

2. Complete Check-up on Return from Sick Leave

It does not seem that it is necessary to give complete examinations after a sick leave, but it makes a good time to get periodics done.

3. Extent of Examination

Urinalysis and X-ray of the chest are quite necessary. An Electrocardiogram is not absolutely necessary unless it is indicated by other findings.

ROUNDTABLE DISCUSSION (Continued)

4. Who will Pay for Supplementary Cost of X-rays, Laboratory Work, etc.?

Where it is thought that it will be of benefit to the Company, such work should be paid for by the Company. The decision must be left to the discretion of the doctor as to whether or not the work is to be done. If such special work is for the man's own welfare, then he should pay for it himself.

B. Records

It was brought out that Monthly Reports were important and were made by the Medical Department so that Management and Industrial Relations could evaluate what was being done in their various Medical Departments. Such reports or statistics of any type, to be of value to themselves or industry at large, must be complete. Minor changes were advocated, such as leaving out the foremen's names, but retaining the names of the various departments. Accident reports are very important for review by the Physician. He can evaluate the type and frequency of accidents by departments and determine the accident-prone employees. This is not for censure by Management, but to work out the cause from the psychosomatic side and to remove the cause by study of the individual.

C. Accident Histories

While every state has a Compensation Law, requirements for filing such Compensation claims vary in individual states and are handled differently by individual refineries and Marketing Divisions.

(1) Medical: A complete history in the patient's own words as to how an accident happened, time and place. A good Medical history is of utmost importance. The Medical Department does not fill out any forms that have anything to do with State Compensation except Medical forms, when requested.

(2) Safety: Investigations as to how an accident happened may be taken by the Safety Man from the injured. All forms should be edited, cleared and filed with the state authorities by whomever handles Workmen's Compensation matters. It is the responsibility of Safety that applicable state forms in Workmen's Compensation are properly made out and referred to the proper department for transmission to the State Compensation Department. All occupational accidents and diseases seen by the Medical Department should be reported immediately to the Claim and Safety Department (or by whatever rule is laid down by this department) so that proper investigation may be instituted. There may be some exceptions to this procedure in various Management set-ups.