PROCEEDINGS OF THE ASSOCIATION OF INDUSTRIAL MEDICAL OFFICERS, 1943-4

Thirty-fifth Meeting

The thirty-fifth meeting of the Association was held on January 22, 1944, at the London School of Hygiene. Dr. J. C. Bridge expressed his appreciation of the honour shown to him by the Association on his election as Chairman. He paid tribute to his predecessor, Dr. M. W. Goldblatt, who had given so much of his time and thought to the interests of the Association. He would to the best of his ability try to maintain this high standard during his term of office. His first official duty had been the sad one of representing the Association at the memorial service to the late Dr. G. C. Anderson, Secretary of the British Medical Association.

The Chairman then stated that, in accordance with the wishes of members, the Executive Committee had studied and taken legal opinion on the constitution. As a consequence various resolutions would be put to the meeting. As soon as the proposed alterations were agreed it was intended to publish a revised version of the constitution, in the form of a booklet, for distribution to all members. This was an urgent need as for some time it had been impossible to give new members a copy. The constitution was out of print and out of date. The resolutions put forward were debated in detail, and a good measure of agreement was obtained; but there were several items to which the Executive Committee was requested to give further study and submit amendments at the next general meeting.

The following were elected to represent the Association for the year 1944 on the Industrial Medical Service Sub-Committee of the British Medical Association: Drs. J. C. Bridge, W. Blood, M. W. Goldblatt, G. E. Graves-Peirce.

Dr. Patricia Shaw was elected to represent the Association on the National Advisory Committee for War-Time Rest Breaks for Industrial Workers.

A deputation to meet the Social and Preventive Medicine Committee of the Royal College of Physicians of London, at its request, was nominated as follows: Drs. J. C. Bridge, W. Blood, M. W. Goldblatt, R. E. Lane.

It was thought that machinery should be devised whereby members could be better informed of the activities of various committees and organizations upon which the Association is represented. The matter was referred to the Executive Committee.

A discussion then took place on 'Injuries, Infections, and Burns of the Hands,' opened by Mr. R. M. Handfield Jones, followed by Mr. P. H. Jayes whose paper appears at p. 106.

Mr. Handfield Jones said that the commonest minor injury in his experience affected the distal segment of the finger. Fibrous trabeculae divided the pulp of the finger into a series of narrow compartments. So operation for drainage of a pulp infection must open all the infected compartments at once. Pulp infections must be differentiated from lymphangitis. In the latter incision was contra-indicated; the patient should be regarded as a potential fulminating case and be put to bed; the arm should be raised to 45 degrees; antiphlogistine can be applied locally; and early massive doses of sulphanilamide should be given. Complete return of function in cases of tendon sheath infection could never be guaranteed; early incision was essential for good recovery. When the middle palmar space was involved swelling was not so marked as in the ballooning of infections of the thenar space. These conditions were usually caused by spread from other parts, and were rarely direct infections. Compound fractures of the hand should be treated as inpatients. The wounds, having been cleaned, should be packed with sulphanilamide powder, loosely stitched, and subjected to some form of traction. Early active movement was essential. It was easier to avoid stiff joints than to loosen joints that had been allowed to become stiff. Position in treatment was important; oedema could be minimized by raising the arm on a wooden frame—have it lying on a pillow was not enough. If a stiff joint appeared inevitable, the hand should be kept in the proper position for function. Stiffness in an unsuitable position produced a useless hand.

Thirty-sixth Meeting

The thirty-sixth meeting took place on March 4, 1944, at the London School of Hygiene. At the private business session various amendments to the constitution were agreed, and the Honorary Secretary was now instructed to prepare the new constitution booklet and send it to all members as soon as possible.

It was decided to form an Education Sub-Committee as follows: Drs. J. C. Bridge, W. E. Chiesman, T. A. Lloyd Davies, Donald Hunter, R. E. Lane, T. G. Maitland, D. C. Norris, Kenneth Perry, C. L. Potts, Donald Stewart.

The Chairman reported on a meeting held between the Social and Preventive Medicine Committee of the Royal College of Physicians and a deputation from the Association. The following were the main subjects discussed: (1) Medical supervision of hotels and catering establishments, of stores, and of small factories. (2) The teaching of industrial medicine both to students and graduates. (3) Co-

The next meeting of the Association is to be held on May 26 and 27, 1944, at Birmingham.

Public business took the form of a discussion on ‘The Influence of Industry on Obstetric and Gynaecological Conditions.’ The speakers were Mr. R. A. Brews, Dr. Catherine Swanston and Dr. Joan McMichael.

Dr. Catherine Swanston said she intended to confine her remarks to two particular classes of workers: firstly, pregnant women and, secondly, women undergoing the menopause. There was no reason why expectant mothers should not be employed on factory work, as in most cases the healthy body adapted itself to the extra strain imposed by the physiological process of pregnancy. Pregnant workers should be encouraged to report early to the medical department, and it should be made quite clear that pregnancy did not entail dismissal. It was important to remove them from certain toxic hazards, particularly liver or blood poisons. It was advisable to remove them from night work after the fourth month, as women in the later months of pregnancy required extra rest which they would not obtain if they were working in the factory by night and in their own homes during the day-time. Hyperemesis gravidarum, which caused lateness and absenteeism on the early morning shift in a certain number of women, could be alleviated by transferring the worker permanently to the afternoon shift where the three-shift system was in operation, or by giving permission to clock in later in the morning where the two-shift system operated. Heavy work, particularly weight lifting, should be avoided, and pregnant women should be kept away from ladders, overhead machinery and driving bands, unless very adequately guarded. Work involving a dermatitis hazard should be avoided. Much assistance could be rendered to transferred or unmarried women by the medical and welfare departments in factories, as these women were often at a loss to know where to go for advice when they became pregnant. No expectant mother should be refused her release from work if she applied for it.

A recent analysis of a group of pregnant factory workers showed that most of them worked until the fifth, sixth and seventh months, the largest number being discharged during the sixth month. All unmarried women worked on until the later months of pregnancy; 12 per cent. of married women and 25 per cent. of unmarried women returned to their pre-confinements jobs. There appeared to be a preponderance amongst single women of those who left late and returned early, the probable underlying motive being financial.

Women undergoing the menopause often presented a much greater problem to the factory medical officer than the one with menstrual irregularities. Signs of increased irritability of the nervous system and a tendency to project menopause symptoms on to other conditions, such as a works injury, often caused these workers to become regular visitors to the factory surgery. It was essential that the underlying condition should be recognized and treated, and in these cases the help and advice of the consultant gynaecologist was most valuable.

An analysis of sickness absence of a large group of factory women showed that about 5 per cent. of all sickness was due to gynaecological causes. Pregnancy accounted for nearly half the time lost. Uncertified sickness, which was under 2 per cent., showed that a relatively large number of women, both married and single, took odd days off from time to time without obtaining a doctor’s certificate. The probable cause for some of this absence was menstrual trouble.

An analysis of the reasons for the medical discharge of a group of over 1000 women factory workers showed that 36 per cent. were released for pregnancy and 6 per cent. for gynaecological conditions. Of the latter figure three-quarters obtained their release for menopause symptoms sufficiently severe to interfere considerably with their working capacity, or for menorrhagia. It would therefore appear that the majority of women released from work for gynaecological conditions are suffering from some menopausal disturbance.

The factory medical officer rarely obtained a clear picture of the gynaecological troubles of his work-people. This was due, firstly, to the ignorance and indifferance still widespread amongst the female population; and secondly, because these complaints were usually carried straight to the patient’s own doctor. It was essential in any investigation into the influence of occupation on health for two criteria to be fulfilled before there could be any true correlation between occupation and disease. Firstly, the medical officer in the factory must be aware of the correct diagnosis; and secondly, the consultant and private practitioner must have a true picture of the patient’s work.

Dr. Joan McMichael said that obstetrics and gynaecology must inevitably play a considerable part in the work of an industrial medical officer in a factory where a large proportion of the employees are women. In her factory 62 per cent. of the workers are women, and sickness absence in January, 1944, was 5·9 per cent. out of a total absence of 12·2 per cent. Of this 0·11 per cent. was certified as gynaecological. In addition anaemia accounted for 0·32 per cent., debility for 0·53 per cent. and genito-urinary for 0·08 per cent., and it is probable that the certificates in these cases masked a certain number of gynaecological cases. The number of visits to the surgery for mild dysmenorrhoea averages about 270–280 a month, mild sedative treatment such as aspirin, propax and a hot drink being usually all that is required.

In relation to pregnancy there have been 85 new
cases attending the ante-natal session in the past 15 months, of whom the great majority (45 out of 55 in 8 months) left between the 20th and 32nd week. As many expectant mothers held skilled and responsible jobs affecting production, and many of them wished to stay for personal or financial reasons, it was agreed that some form of ante-natal supervision was desirable. In consequence Thursday afternoons were reserved for an ante-natal session at which the necessary adjustments in relation to the type of work, hours and night-shift could be arranged. A note to the personnel department ensures that expectant mothers are taken off any form of heavy work or weight lifting; off machines if there is any tendency to faintness or giddiness; and that they are allowed to come in an hour later (at 8 a.m. instead of 7 a.m.) if any morning sickness. Expectant mothers are normally taken off night-shift and overtime when they first report. Women are encouraged to attend their own ante-natal clinics regularly, and conversely the doctors at some of the clinics encourage patients from the factory to report to the factory doctor. Attention is paid to such questions as to whether they are getting their milk and eggs, cod-liver oil and fruit juices, and it is hoped to arrange the distribution of the two latter at the factory; and whether they would benefit from ultra-violet rays or special exercises.

Other problems of concern to married women such as birth control, sterility and sex maladjustments, including dyspareunia, frigidity and even impotence (at second-hand), are dealt with in the ordinary course of work, and patients encouraged to attend their own doctors for guidance—sometimes with the concrete assistance of a letter explaining the symptoms they find most difficult to explain to a man. In recent months several prospective Canadian and American brides have been examined for their routine Wassermanns; and one congenital syphilitic for her regular treatment, by arrangement with the hospital, to save production time.

The purely gynaecological cases are mainly dysmenorrhoeas, menorrhagias, metrorrhagias, leucorrhoeas with or without pruritus, and menopausal conditions. A highly qualified and capable physio-therapist achieves considerable success with the milder dysmenorrhoeas by massage and exercises and the reassuring influence of her own personality. For the more severe types the patients' doctor usually welcomes this form of treatment in addition to his own therapy. With the menorrhagias, it is important to investigate the type of work they are doing and to take them off weight lifting or heavy foot work. In addition haemoglobin estimations (Haldane's method) are carried out and results sent to the patient's own doctor.

BIRMINGHAM GROUP

At a meeting on December 1, 1943, Dr. J. G. Billington in the chair, Mr. J. Johnstone Gracie, Joint General Manager, G.E.C., Witton, read a paper on 'Payments by Results.' In view of the nature of the address invitations had been extended to works managers and welfare and personnel officers. Mr. Gracie gave an account of the history of the principles involved in the payment of wages. He discussed daywork rates and pointed out the increase in the practice of payment on a daywork basis in the U.S.A. He referred to the system used by some firms of payment by 'measured daywork.' This system was only applicable to certain operations such as the assembly of some standard unit. The times for the different series of operations in the whole process were studied individually and a programme of speed worked out. The rate was then fixed for the whole job, and any member of the team working on this unit had to keep to this rate. In this method of payment there was a definite incentive.

He then discussed the problems of payment by results. Differences in output had been definitely proved to occur in the various systems of payment. It was an established fact that the output on a system where there was payment by results was far in excess of the production obtained by payment on a daywork basis. The methods of fixing piece-work rates of payment in the past had given rise to suspicion and warfare between management and labour. He described the different systems of fixing payments for results, and showed the undoubted evils in many of these systems which caused an unhappy atmosphere throughout the factory. What labour wished was a fair wage for the job, and such fair wage should be possible of fixation. In the past the rate fixed for a job was often a matter of haggling between management and workers rather than a rate fixed on a scientific study of the job. He put forward his personal views concerning the need for a national scheme of fixing basic rates for all types of work. It should be possible to assess the comparative value of every occupation. Then there was the question of the reward for the results obtained at work. This could only be obtained if the rates for the piecework were fixed on a national basis. The information required to set up such a national scale must be based on the scientific time study of the operation. A register of national rate-fixers should be formed, rather akin to the national register of doctors and nurses. In this way an unbiased rate would be possible of fixation.

On January 18, 1944, Dr. J. A. Scott in the chair, Dr. C. L. Potts opened a discussion on 'Preplacement Medical Examinations.' Dr. Potts said that there is little doubt that workers' organizations are not altogether satisfied about the value of medical examination before employment. However, in the House of Commons on October 14, 1943, the Minister of Labour, in reply to a question on this point, had no evidence that medical examination lead to the imposition of unnecessary high standards of physical fitness in prospective employees.

The purpose of medical examination is two-fold: (a) to provide work suited to the worker's mental and physical capacity, and (b) to prevent danger to
the worker's health from his work. Medical examination is therefore in the worker's interest; but clearly also it is in the employer's interest. It is sometimes assumed that medical opinion is biased in favour of the employer who pays for the service. But medical opinion is an unprejudiced opinion based on evidence. In medico-legal cases it may appear to be biased in a particular direction. This does not necessarily mean that doctors are particularly dishonest and will sell their opinions to the highest bidder. The human mind is so complex when evidence available is capable of more than one honest interpretation. Even where there is definite physical disability the attitude of mind of the worker can completely confuse the issue.

The form of medical examination depends on its purpose; for employment the standard should be the minimum standard of fitness for the particular job. A detailed medical examination is therefore seldom required. Unless his standard of health is accurately known before he starts work it is seldom possible to assess the extent of danger to health from work. If the possible dangers in some industries are not precisely known, a more thorough examination will have greater subsequent value from this point of view.

In carrying out preplacement medical examinations the medical officer's function is purely advisory. The determination of employment rests with the management. Obviously action is generally taken in accordance with medical opinion, and the statement that examination tends to transfer the determination of employment into the hands of the doctors appears to be justified. But is not this a good thing? If an employer wants to employ a man who is not fit, any doctor would run such a risk in sanctioning it that he certainly would not do so. Supposing the worker wants to do work for which he is considered unfit. In such cases the criterion should be the possibility of danger to other workers. Cases of active tuberculosis and epilepsy should not be allowed to work where the disability endangers others. With this qualification a worker should not be prevented from doing a particular job by reason of medical examination, provided he clearly understands the risk involved. It has been said that medical examination increases unemployment. If this were true it should be prohibited. The reverse, however, is the case. Suitable employment can be found for persons who otherwise would not be able to get employment. This will be a problem in peace-time when labour is plentiful. If employers obviously prefer fit men medical examination might tend to prejudice the less fit worker's chances of getting work. At the present time employment is determined by the Ministry of Labour which transfers workers and directs them for particular employment without any reference to their state of health. When a worker is rejected or released after a medical examination it is common practice for the medical officer's opinion to be submitted to the Ministry. This should help in placing such workers in suitable employment. The Ministry may make some use of this evidence, but not much. With the human material now available high medical standards would almost preclude an employer from obtaining any labour at all. The fittest men and women are taken for the services, and release from employment is granted for few other reasons than ill-health.

At a meeting held on February 10, 1944, Dr. C. L. Potts in the chair, Dr. Leonard Colebrook of the Medical Research Council showed a film on 'The Modern Treatment of Burns,' and opened a discussion on this subject. He explained that the M.R.C. Burns Unit had now been set up at the Accident Hospital instead of the Glasgow Royal Infirmary. He proposed to continue the work which he had started there, with particular reference to infection. Haemolytic streptococci remain viable for long periods in dust, and are freely disseminated by the sweeping of floors and the shaking of blankets and other bedding. There is no doubt that flesh burns are frequently contaminated by such causes. Blankets are seldom sterilised at the laundry, and because of their frequent contamination with pathogenic organisms should on no account be allowed to touch the burned surface. These and other points are dealt with in full by Colebrook, Gibson and Todd on p. 99.

A meeting was held on March 10, 1944, Professor H. P. Gilding in the chair, when Dr. Donald Stewart opened a discussion on 'Industrial Aspects of Rehabilitation.' With the development of industrial medical services it should be known how far they could take part in rehabilitation. The word was now used for many purposes; for example, rehabilitation of Europe, of housing, of industry and social rehabilitation. It could be divided into three main phases—reconditioning, retraining and resettlement. The problem under discussion, however, was the rehabilitation of the sick and injured worker. At present this was largely in the hands of hospital services either within hospitals themselves, or at special rehabilitation centres in the country not necessarily attached to any one hospital. With good treatment the need for special rehabilitation decreases. There is a risk that it may be plugged too hard at the expense of earning capacity, and occupational therapy in particular may be overdone. The policy of setting up social service departments at hospitals had been successful; for example, that at the Glasgow Victoria Infirmary. The function of the almoner was changing, and she was an important contact between industry and the sick and injured worker.

Industry, and in particular the employer, could contribute to rehabilitation by promising continued employment and removing the fear of insecurity; by arranging alternative work, under medical control, for temporarily unfit workers—larger firms could retrain their own permanently
disabled workers, Government schemes should deal with the smaller firms; by giving assistance on matters arising under the Workmen’s Compensation Act; and by providing sheltered workshops for convalescent sick and injured workers in the larger organizations—these could be set up on a communal basis for the small factories.

Objections to alternative or light work are—it is difficult to find in many industries; it is difficult to keep under medical control and may actually retard recovery; it increases factory overheads and may not be popular with managers or the worker’s mates; alternative work may become nothing more or less than a scrap-heap if the patient becomes ‘lost’ in the works on some quite unsuitable job; it is sometimes abused by Insurance Companies who ask for it in order to reduce county court settlements. But if properly selected and controlled, and with adjustment of overheads, it is possibly one answer to the problem.

Where firms attempt to set up rehabilitation centres on their own, without regard to hospital services, industrial medicine can be brought into disrepute. Isolationism in this respect can only bring failure.

Personnel management must play its part in supervision of return to work. In factories with less than say 300 workers this function becomes the direct responsibility of the manager. Education of works managers and foremen therefore becomes increasingly important.

The industrial medical officer should analyse the various occupations in his organization in relation to working capacity. Many jobs can be done by cripples who frequently compete successfully with normal workers. Certain jobs can be allocated to both temporarily and permanently disabled workers. The industrial medical officer must maintain close contact with hospitals in both medical and surgical cases.

The speaker contended that where more than 5000 workers were employed an essential development of industrial medicine must be a rehabilitation or sheltered workshop at the place of work under the joint medical supervision of works doctors and hospital specialists. In groups of this size it was estimated that every day up to 5 injured workers and up to 30 sick workers could be given true occupational therapy during treatment by hospitals or general practitioners. Rehabilitation must include convalescent sick workers, who outnumbered injured workers by at least thirty to one.

Mr. William Gissane, speaking next, had recently been at a meeting addressed by the Minister of Labour who had stated the Government policy in connection with the Disabled Persons (Employment) Act. Mr. Bevin had emphasized that employers could do a great deal of rehabilitation work on production lines, and this had been promised him by many industrialists. It is the Government’s view, therefore, that employers will act as the chief agents in implementing the Act. Only when the employer cannot carry out the work will the Government set up its own rehabilitation arrangements. Whatever facilities are set up by employers will be examined by the Government, and if found adequate will be augmented by certain grants and maintenance costs.

During the last 12 months the Accident Hospital had co-operated with a large engineering works in an experiment on rehabilitation, now apparently a part of the Government policy. A sheltered workshop had been set up for injured employees of the firm, most of whom were his patients at the hospital. The principle was that the disabled worker was given remunerative work during treatment. It was possible to harness to production machines the repetitive exercises necessary for loosening up stiff joints and strengthening muscles, and by this method of remedial exercises the attention of the worker was on the job he was doing, rather than on his disabled limb. This was something very difficult to obtain in hospital treatment. Mr. Gissane then showed a short film dealing with his experiment.

Mr. Farrer, the manager of the rehabilitation shop shown in the film, was present by invitation. He described his part in the experiment and how he dealt with the workers. He interpreted surgical advice into terms of machinery and production. Out of 200 cases that had gone through the shop he had only been unsuccessful with one. He had frequently to remove certain fears from the minds of workers; fears connected with compensation, future employment, and wages. He had frequent talks with workers on many subjects such as accident prevention and cleanliness in the factory. The shop itself was a model shop from these points of view, and had done something to educate workers and management in good factory housekeeping.

Dr. S. Wand stressed the importance of including medical cases in any rehabilitation scheme. Without this wider view there could be no full rehabilitation service, nor could it form part of a comprehensive medical scheme. Professor Seymour Barling had recently seen many returned wounded soldiers. He was impressed by the high amputation rate which was greater than in the last war. There was much need, therefore, for retraining permanently disabled soldiers. Retraining must be considered a specialized problem. Dr. W. J. Lloyd maintained that the resettlement phase of rehabilitation should be accompanied by an intelligent assessment of injuries. There should be some system set up whereby skilled medical officers could interview workers and make recommendations to industry. Knowledge of the physical requirements of different jobs by industrial managers and doctors would do much to help in this assessment. There was no mysticism in rehabilitation. Group Captain O’Malley said that the R.A.F. were concerned with resettlement within industry of permanently disabled air crew and other personnel. They had set up a special mechanism to deal with this, and recommendations about special work which these men...
could do would be communicated to the Ministry of Labour and to industry.

Sir Anthony Bowly asked how far the experimental rehabilitation shop had paid for itself. Dr. N. T. Glyn, the medical officer at the factory concerned, and in medical charge of the shop, replied that approximately 80 per cent. of the cost had been met by the products manufactured. When a better flow-through of materials was obtained the net cost to the firm would be even less. Mr. Farrer said that it was proposed to plan for the manufacture of groups of units which together would compose some finished article produced entirely by the shop. In this way his workers would have an interesting incentive; they would know what they were making and have some goal to aim at. In answer to another question by Sir Anthony Bowly he explained that payment in the shop was by day-rate and not by piece-work methods. Because of the financial incentive with piece-work men might further retard recovery of injured parts by working too hard, and so defeat the real aim of the experiment.

GLASGOW GROUP

At the inaugural meeting held on November 11, 1943, Dr. H. M. Roberts in the chair, office bearers for 1943-4 were elected. Dr. R. S. F. Schilling, Secretary of the Industrial Health Research Board, London, present by invitation at this first meeting, spoke on 'Present Trends in Industrial Medicine.'

The first record of a works doctor dated back to 1830. At that time the public were complaining that children were being crippled by long hours and conditions of work in the textile mills. As a result a worsted spinner with an unusually high sense of duty appointed a medical officer to visit his mill daily to watch the effect of the work on the children's health. The report of the Poor Law Commissioners on sanitary conditions in the labouring population of Great Britain recorded in 1843 that a Mr. John Smith, of Deaneon, near Stirling, retained the services of a medical gentleman to inspect the workpeople from time to time to give them advice and as far as possible prevent disease.

Under the Factory Act of 1844 Parliament gave power to factory inspectors to appoint certifying surgeons for the purpose of examining young persons about to be employed in factories, to certify the ages of these children, and to make reports on accidents. This was the first occasion on which the Government recognized the need for medical supervision in industry, but the powers of the medical officers appointed for this purpose were very limited. In 1898 Sir Thomas Legge became the first medical inspector of factories. His duties were largely to give advice to the Factory Department on problems of health, particularly in respect of industrial diseases. So in the last century the need for applying medical practice to industry was barely recognized. There was one medical inspector of factories and two or three industrial medical officers.

Since 1898 there have been vast changes. There are now 13 medical inspectors of factories and over 800 whole-time and part-time medical officers in industry. In some measure these changes are due to more enlightened public opinion which led to an extension of factory legislation, not only to safeguard the worker against dangerous machinery but also to protect him from the less dramatic evils of an unhealthy working environment. Nevertheless 400 Factory Inspectors and 1700 Examining Surgeons cannot give all that is required to safeguard the health of over ten million workers, and it must be realized that industrial disease is only a minor cause of ill health among industrial workers. As a result of a survey made in 1936 in over 100 firms in the U.S.A. it was shown that the average industrial worker lost fifteen times as much time from non-industrial as from industrial injuries and illness, thus showing the need for medical services which act continuously within industry itself.

There was no obvious development in industrial medical services until after the last war. This sudden development was possibly due to the previous findings of the 1915 Health of Munition Workers' Committee. By the beginning of the present war the number of whole-time medical officers in industry had risen to about 50. It was not until 1940 that legislative action was taken to ensure an expansion of industrial medical services. The Factory Medical and Welfare Services Order gave the Chief Inspector of Factories power to prescribe medical services in factories manufacturing munitions of war. Since then the number of medical officers had risen considerably, and in April, 1943, there were 164 full-time and 673 part-time medical officers working in factories.

In future medical services will have to give more attention to prevention and achievement of positive health. There must be a vast extension of the existing industrial medical services, for it has been estimated that only 25 per cent. of the working population are covered. With this expansion ahead now is the time to understand industrial medicine. At present there is a tendency for it to become entirely a casualty service or a panel service at the place of work. Industrial medical officers have not been trained in preventive medicine and therefore tend to concentrate on the branch of medicine which they know, at the expense of the aspects with which they are not familiar. The three tasks ahead are the improvement of working environment and the placement of workers in proper jobs, the prevention of occupational disease, and the prevention and treatment of injuries at work including some phases of rehabilitation.

Just under ten years ago there were scarcely more than 20 whole-time industrial medical officers in Great Britain, with no common meeting ground. Because of this two of them met in a pub one day and planned to overcome difficulties by forming an association or group for scientific study, social intercourse, and mutual help. The resulting formation of the Association of Industrial Medical Officers in 1935 was followed by a period of steady progress in
membership and activities. Regular quarterly meet-
ings and discussions took place, and many of the
ideas and suggestions relating to industrial health
first propounded at these meetings have since become
recognized as matters of national interest and im-
portance. By 1937 membership was increased to
8 honorary members and 46 ordinary members, and
by this time the Association was beginning to acquire
influence. It gave evidence before the Interdepart-
mental Committee on Rehabilitation of Persons
Injured by Accidents, and in March 1938 the
A.R.P. Department of the Home Office invited the
Association to discuss the problem of air-raid pre-
cautions in factories. In January 1939 the Associa-
tion gave evidence before a Royal Commission on
Workmen's Compensation.

With the onset of war and despite the difficulties
of travel and extra duties it was agreed to carry on.
As a result of the greatly increasing number of part-
time doctors it was decided in March 1941 to open
associate membership to them, and to-day there are
some 400 members organized in various groups
throughout the country. This was a wise move, for
whatever may be the future organization of industrial
medicine, there will always be a number of men and
women engaged part-time in the practice of medicine
within industry.

NOTTINGHAM GROUP

The seventh meeting took place on January 13,
1944, when Dr. G. F. Keatinge opened a discussion
on the hazards of coal mining. Coal mining being
a basic and essential industry was one of the most
dangerous, accidents being about twice as frequent
as in industry in general. The general plan of a
colliery both above and below ground, coal getting
by hand-cutting and by machine methods, and the
methods of transporting coal underground were
described. The specific nature and causes of acci-
dents meant that specific measures for prevention
had to be devised. Recent work on miners' nystagmus led to the conclusion that improved light-
ing was an important factor in prevention. It
reduced accident incidence and raised morale to an
outstanding degree.

General diseases most frequently met with
amongst miners were rheumatism and respiratory
conditions, but there was a rather high incidence of
digestive complaints often with a psychological back-
ground due to working in semi-darkness and under
dangerous conditions. Methods of prevention of
sickness and accidents, and the findings of the Medical Research Council's Committee on In-
dustrial Pulmonary Disease were discussed. X-ray
films were shown to indicate problems in the
differential diagnosis of silicosis.

TEES-SIDE GROUP

At the fifth meeting held on December 15, 1943, the
subject for discussion was 'The Tuberculous Patient
in Industry' opened by Dr. C. A. O'Neill, who said
that there is a large number of tuberculous workers
employed in industry, as in any normal cross-section
of the population. Cases can be divided into:
(1) symptomless or unrecognized, (2) active cases
with symptoms but still unrecognized, (3) recognized
but wanting to work, perhaps pending treatment
or because they cannot afford to be off, or (4) resuming
work either cured or incurable. All these classes
present a problem, and industry requires control of
such employees from the following points of view:
(1) capacity for work, (2) health of other workers,
(3) co-operation with those responsible for treatment,
and (4) vocational selection. From the point of
view of the employer the problem is complicated by
social and economic factors; from the point of view
of the tuberculous patient it depends on the varying
attitude of different employers. Some employers are
co-operative but others less so, to the detriment
of the patients.

In spite of apparent deficiencies facilities for
diagnosis and treatment of tuberculous cases in this
country are considered to be the best in the world.
Sufficient attention, however, has not yet been paid
to after-care when patients leave the sanatorium.
Convalescence is a very protracted affair and during
this period suitable work is most important. This
is largely within the control of employers, and
co-operation between works medical officers who
know the various types of work and tuberculosis
officers who recommend light work is most im-
portant. Mass radiography will shortly be intro-
duced into the North-Eastern district. The chief
objection to this is that it has been introduced before
adequate sanatorium space is available for the
accommodation of cases detected. It was thought
that making submission to mass radiography a con-
dition of employment was worth consideration.
Industrial environmental conditions are often blamed as a cause of tuberculosis. There is no
definite evidence in support of this with the exception
of trades with a pneumoconiosis risk. The incidence
of tuberculosis varies also with the standard of living.
Work done at the Papworth Settlement and the
British Legion Village near Maidstone, Kent, has
led the way in rehabilitation. Industrial medical
officers could be of assistance to tuberculous em-
ployees resuming work by arranging for the patient
to be employed on work with as much fresh air as
possible, and free from contamination by fumes and
dusts. The work should also not be too heavy and
it should also be interesting. Fatigue from all
cases including noise should be avoided. There is
usually a 60 to 80 per cent. remaining disability in
all cured cases of fairly extensive tuberculosis.
Some inducement should be offered to employers to
take on partially disabled healed patients. The
present practice, because of shortage of beds, of
turning chronic carriers out of institutions to spread
the disease among the public was severely criticized.

The sixth meeting of the group was held on
January 12, 1944, when a discussion on 'Skin Dis-
orders in Industry' was opened by Dr. W. Gillies
Annan. He emphasized the need for co-operation
between industrial medical officers, general practitioners and dermatologists in dealing with skin cases. Dermatologists should be acquainted with processes and working conditions in local industries. This would be of assistance to them in dealing with skin cases from these industries. Nomenclature should be standardized. The term 'dermatitis' by itself is unfortunate; by custom it has grown to be associated in the lay mind only with occupational skin diseases. The term should never be used without qualifying it by the type or cause. Adequate selection of employees would do much to prevent usually susceptible people being placed among irritants which might cause them skin trouble. A number of cases of so-called 'occupational dermatitis' are caused, not by trade irritants, but by methods of cleansing and even by substances used for first aid. Irritant drugs should not be used for first-aid purposes. Among such drugs are mercurial compounds, picric acid, sulphur, and acriflavine. Suggested safe first-aid dressings are weak sodium bicarbonate, potassium permanganate, gentian violet or tannic acid.

It was important to make a full examination of all skin cases. Without this scabies, syphilis and impetigo could well be diagnosed as industrial dermatitis. There were limitations to the patch test. It is of extremely limited value and should not be used as a routine measure. Barrier creams are useful for protection of the skin but should only be used when all other methods of reducing contact between irritant and skin, e.g. by proper design of plant cleanliness, have been tried and in spite of this a risk still remains. Propaganda may be useful in educating people about the risks of dermatitis and methods for preventing it, but too much can produce anxiety about the danger of dermatitis and may be followed by an unhealthy attitude of mind towards the problem of dermatitis.

What is the value of desensitizing eczematous patients allergic to some particular irritant? Cases were quoted to show that desensitization may be accompanied by severe anaphylaxis. Desensitization occurs in some patients by natural means if they continue at work and in contact with the irritant while having treatment. Because occupational dermatitis due to dusts or liquids is associated with compensation, whereas eczema or dermatitis of non-occupational origin is not, there is a tendency for workers with skin trouble to try to get it labelled 'dermatitis' to claim compensation which provides a higher rate of pay than National Health Insurance. This was a factor which considerably complicated diagnosis and treatment in many cases. We must look forward to a time when all disabilities whether occupational or non-occupational would be paid the same allowances when incapable of work.

In answer to a question as to what was a suitable cleansing medium for cleaning tar and grease off the skin, sulphonated oils were recommended. Degreasers should not be used for regular skin cleansing, but there was no objection to their use as a first-aid measure for cleansing wounds. The dermatologist should limit drugs for general use to a very small number: for infected or inflamed conditions, dilute potassium permanganate; when the condition is starting to resolve, dilute subacetate of lead; as a weak reducing agent, sulphur; as a strong reducing agent, salicylic acid; tar was useful for chronic cases; and the aniline dyes were useful antiseptics; a base for ointments was ung. zinc. co. (Lassar's paste), or vaseline.

The following remedy for 'athlete's foot' was recommended:

- Cignolin . . . . . gr. 4
- Salicylic Acid . . . . . gr. 10
- Zinc Oxide . . . . . gr. 120
- Starch . . . . . ad oz. 1

This preparation should be applied to the affected area both morning and evening for 5 days without washing. Disinfection of socks and shoes must be carried out. Socks are disinfected by boiling, and shoes by enclosing in a biscuit tin with formalin for three or four days.

Dr. Annan drew attention to two useful books on industrial skin conditions: 'Essentials of Industrial Health,' by C. O. Sappington, M.D., published by Lippincott; and Prosser White's 'Occupational Affections of the Skin.'

The seventh meeting was held on February 9, 1944, when Mr. J. B. Reid opened a discussion on 'Orthopedics and Industry.' The latest method of treatment for sprained backs, including those with fractures of the transverse processes, was by injection of local anaesthetic into the painful areas. It had given good results in 70 per cent of cases, provided injections were made within 24 hours of the accident. Cases should therefore be sent to hospital within this time.

In this part of England fractures and orthopedic cases were dealt with by the local hospitals. In the interests of efficiency all orthopedic work should be centralized in one clinic. At the present time personnel and equipment were wasted by having the work done at several hospitals. An advantage of centralization is that a team of resident doctors can stay long enough at the clinic to ensure a continuous high standard of treatment. Under present circumstances house surgeons leave after six months and new ones have to be retrained.

Many orthopedic cases requiring in-patient treatment really mainly required rest. A convalescent home for such cases would release hospital beds. The present massage departments at the hospitals are not adequate. On the other hand the somewhat grandiose Government scheme was more than was required and would be more expensive. In this area it should be possible to have a rehabilitation centre attached to one of the present hospitals or to the proposed orthopedic clinic. Works medical officers should co-operate more closely with hospitals in rehabilitation. Factories could co-operate by providing light work which provided use for the injured part. This would assist in reducing incapacity.
periods. A film was shown of a rehabilitation shop at a large engineering works in the Midlands. In the shop special suitable work is found for patients who have completed part of their hospital treatment but who require special rehabilitation to train them to full working capacity. Machines are provided with special handles and fittings for this purpose. As the patient's condition improves these fittings are gradually altered, up to the time of maximum recovery. During their stay in the shop patients are under medical supervision by the factory doctor in consultation with a hospital surgeon specializing in the treatment of accidents.

The following points were made in the subsequent discussion. The first thing that was required in this part of the country was re-organization of the local hospitals. There was a marked lack of cooperation between various hospitals, not only with orthopedic cases but with eye cases and other types of injury and illness. There was a great need for improving methods of rehabilitation. While the methods shown in the film were admirable in works of a certain type they were not necessarily applicable to industries on Tees-Side. Employers should be educated to understand that the provision of light work did not mean putting the injured worker on to a sweeping-up job. Each case should be treated on its merits and suitable work provided for every patient individually. Changes in hospital organization would have to come about by outside pressure, perhaps by the Government or the Nuffield Trust. There might be a place for a special rehabilitation factory for the common use of employers in the district; all cases requiring occupational rehabilitation would work here between the time they left hospital and when they were fit to resume normal employment. Such a factory would have to be under medical supervision.