and clotting for a considerable time, still it did not kill off the organisms as it does in water.

This I suggest is due to the chlorine being unable to penetrate the fat globules and possibly the other albuminous constituents of the milk, so that organisms are not killed off, when the chlorine is first introduced, later on they grow freely again when introduced into the MacConkey lactose bile salt broth. It would seem that chlorine to be efficient must be able to get at the organisms quickly and in a free state; any fatty or albuminous substance present seems to eat up the free chlorine and so prevent its action on the organisms themselves. In fact milk appears to prevent efficient sterilization by reasonably small quantities of chlorine in much the same way as highly polluted and cloudy water will do unless the water is previously clarified.

REFERENCE.

Reports.

TRAINING COLONIES IN THE TREATMENT OF TUBERCULOSIS.

SUMMARY OF THE TRANSACTIONS OF THE TENTH ANNUAL CONFERENCE OF THE NATIONAL ASSOCIATION FOR THE PREVENTION OF TUBERCULOSIS.

By Colonel J. C. Kennedy, C.B.E., K.H.P.
Royal Army Medical Corps.
One of the delegates.

Dr. Kay Menzies opened the discussion on the part played by training colonies in the treatment of tuberculosis, and began by answering the question "What is a colony?" He showed that the colony was originally evolved as a supplement to the sanatorium, in order that while under medical supervision the patient might be gradually rendered fit to return to his civil employment, or, if that employment were unsuitable, trained to take up a more suitable pursuit. He proceeded to discuss the advantages and disadvantages of two forms of colonies—the vocational training colony and the village settlement—examples of both of which are now in existence. The village settlements such as Papworth Hall and Preston Hall were founded for the benefit of the tuberculous ex-service man and his family, and while serving this purpose, in the case of the pensioned man, can hardly be considered as practical propositions by local authorities, by reason of capital expenditure, and the heavy annual cost of maintenance.

The vocational training colonies, however, he considers to be in a
different category in so far as they amplify the need for a continuance of extended sanatorium treatment. He pleaded for a recognition of this fundamental object of such a colony and pointed out in what ways many of them had failed in their purpose.

Lack of success in these training colonies could be attributed to:

(a) Too great ambition in initial outlay—such as the purchase of large country houses, etc.

(b) Failure to select suitable men. It is of the greatest importance to select those who are physically and temperamentally suitable for colony life.

(c) Failure to recognize that training must be secondary to treatment.

(d) Absence of an organization to provide a suitable post for every colonist before leaving the colony. The colony must be closely linked up with a care organization.

He then referred to the Burrow Hill colony, and closed with a summary of fundamental principles which should be kept in view in making provision for dealing with tuberculosis.

Dr. A. Sandison (A.D.M.S., Ministry of Pensions) followed with a statement as to the relation of the Ministry of Pensions with the tuberculous ex-service man, and pointed out the favoured position of the ex-service man in comparison with the non-pensioned tuberculous patient of the same class.

It was evident that any discussion on the future of training colonies must take this absence of financial aid for the non-pensioned into consideration. Furthermore, the difficulty of organizing a complete change of occupation for disabled men in middle life is almost insuperable, involving the co-operation of Government departments, local authorities, care committees, employers and employees, and if these difficulties are overcome one has still to reckon with the personal factor of the man himself, and of his employers, together with the difficulties of the labour market.

In conclusion, he emphasized the absolute necessity of providing for the dependents of the man while he is in the colony.

In the course of further discussion, the unfairness of saddling industry with the unremunerative consumptive labourer was emphasized, and a great point was made of the preventive method of dealing with the spread of infection by isolation of infective cases, and Lancashire and Cheshire were instanced as cases in point.

The Secretary of the Tuberculous Ex-service Men's Society, Leeds, was very emphatic in his statement that the settlement was the real solution of the problem, but he agreed that it was too expensive. He was opposed to the combination of treatment and training, and considered farm work to be out of the question. He referred to the unsteadiness, both mentally and physically, of the tuberculous person, and deprecated any excessive expenditure in training. He was strongly of opinion that local care
committees could find schemes where a great deal of capital expenditure is not required, and where medical men could co-operate with business men. He instanced Leeds, where there has been established a practical scheme which is employing from sixty to one hundred tuberculous people and is self-supporting.

The Conference passed the following resolution:—

"That this Conference resolves that what is most needed in the work of prevention of tuberculosis is better provision for after-care, including workshop schemes, and that the Council of the National Association for the Prevention of Tuberculosis be instructed to give special consideration to the matter, and to submit definite proposals to the Minister of Health."

CARE COMMITTEES.

The afternoon session was devoted to discussion on the organization of care committees in farm and rural areas. The discussion was opened by Lieutenant-Colonel J. A. Ellis, Lecturer for the Association. His paper was very carefully thought out, but treated the subject more or less from an academic point of view, and was criticized as being unpracticable. The subsequent discussion was of considerable interest in that numbers of lay delegates contributed their experiences of the organization and practical uses of care committees. It was obvious that by a pooling of the methods employed by the committees in various districts, a very sound and practical line of work could be established throughout the country.

BURROW HILL TRAINING COLONY.

The visit to the Burrow Hill training colony was an interesting experience, and brought out most emphatically the difficulties associated with the scheme.

The colony was started in 1917 to meet the sudden need of the tuberculous ex-service men, and is supported by a grant from the Ministry of Health and subscriptions through the agency of the National Association. Small contributions are also forthcoming from local health committees for their respective patients. There are three pavilions containing 80 beds; 20 of these are for cases requiring sanatorium treatment, the remaining 60 are for men who are sufficiently recovered to undertake some occupational work. These latter (trainees) are all pensioners. The colony provides three courses of training which last about two years, e.g., market gardening, light farming, and rural carpentry.

The members of the Congress were shown round the estate and after lunch met in the recreation hall to hear the report of the Superintendent. A very illuminating discussion followed, and as the meeting was open to whomsoever cared to walk in, many of the patients were present, and through the agency of several of the lay members, town councillors, etc., were able to voice many grievances, supposed or real. The situation was difficult, but was ably handled by the Chairman, Sir Robert Philip.

Complaints were made that their life in the Colony did not necessarily improve their health, that the nature of the instruction did not fit them to
start on their own when they left the Colony, that starting on their own in the labour market was impossible without capital, and though the Ministry of Health made certain provision, it was inadequate, that they desired to have a say in the running and the management of the Colony, and that the food was not always what it should be, in their opinion.

This gives an indication of the feeling amongst the trainees; how much was genuine, and how much was fostered by indiscreet investigation on the part of certain of the visitors, is difficult to say. My own impression was that complaints could be traced to two causes, or perhaps three:

(1) The feeling of uncertainty as to the future, in some cases amounting to hoplessness.

(2) The temperament of many being absolutely unsuited to the environment. To put it plainly, some of the men were of the "street corner" type, who never would put hand to regular and steady work.

(3) Separation from family.

The Superintendent's report covered the period July 10, 1922, to December 31, 1923. During that period 106 were admitted to the sanatorium and 125 as trainees; 172 were discharged. The men came from all parts, and their occupations prior to enlistment were very varied, but the large proportion are classified as labourers.

A point of interest is that of 125 trainees admitted only 43 had suffered from the disease for less than four years. This, the stage and duration of disease, must be an important factor in the success of the scheme. It is noted that 37 of the 125 trainees showed T.B. in the sputum. The after history of 87 trainees shows that 40 completed courses of training, while 38 proved unsatisfactory for training, and nine were discharged on domestic grounds. Nine of the 40 trained men took up carpentry, and seven found employment, the other 31 were trained in market gardening, and only seven of them found employment.

The cost per head, per week, is stated to be: for the sanatorium £2 6s. 10d., and for the training colony £2 12s. 6d., and the farm is self-supporting.

Sufficient has been said to indicate the difficulties, quite apart from the financial cost, inherent in this scheme. But the energy of the National Association, assisted by the Care Committees, and the co-operation of the Tuberculous Medical Officers, Local Health Committees and the Ministry of Health, should go a long way to find some means of surmounting these difficulties and ameliorating the lot of the tuberculous subject.