

essential and at least one special officer should be at work under the director of public health in every large province. Unfortunately two out of the three Presidencies have still no such guiding hand, and the consequent lack of co-ordinated effort on behalf of the women and children in Bengal and Bombay is a blot on the public health administration of these provinces. No real advance can indeed be expected without such provision. Were it made, resources could be husbanded and used in constructive effort instead of, as at present is too often the case, wasted on unprofitable forms of charity. The expense of employing such workers is often given as an excuse, but if one province can spare the money, is it not possible for another to do so?

Such child welfare work as is going on at present is almost entirely confined to the towns. The rural areas present a field almost wholly untouched, yet life in the villages is on the whole more advantageous to children than urban life, so that health work has more chance of success there if it could only be initiated. One factor which makes for possibilities in this direction is the advance in road development. This brings the village into touch with larger centres and widens the villagers' horizon. It also renders possible the visits of medical women or health visitors to individual villages or groups of villages. No single villager can hope to afford the services of a whole-time worker but one woman resident at a central point could influence a surrounding group of villages. In my opinion this should be the aim in the development of work in rural areas. With this could be combined the co-operation of a number of other agencies such as those alluded to in last year's report.

Depression in trade is also preventing the spread of child welfare work in industrial areas. It is, however, noticeable that business concerns and employers are beginning to realize the fact that care of the health of their employees and their families is an economic proposition. The position in the tea gardens of Assam, for example, is very different now to that in existence some years ago. The jute and cotton mills and the collieries have not as yet given much thought to this problem but there are signs that they too are waking up to the fact that better housing and greater amenities of life make for stable and contented labour. This is certainly the case in the Army where the increased attention paid to the health and welfare of women and children has led to success beyond all expectations.

Health work among women and children needs more and better forms of propaganda than are at present available. The material is poor and badly thought out, and many of the baby and health weeks are little more than 'tamashas'. This is all the more regrettable when one realizes that these could be made real stimulating and educative forces. Voluntary societies who are responsible for a great deal of this work would do well to pay more attention to this aspect of their activities.

A REPORT OF THE SIXTIETH YEAR'S WORK IN INDIA OF THE MISSION TO LEPERS. SEPTEMBER 1933 TO AUGUST 1934

This report concludes the sixtieth year of work of the Mission in India. It describes that the Misses began originally by those Dublin ladies, the Misses Pym, undertaking to collect between them £30 a year for the relief of lepers. In the first year they collected nearly £600. By the end of sixty years £1,899,372 had been raised, and the Mission is now at work in over twenty lands; and in India alone, still its main field of work, there are now 36 homes of the Mission with 6,700 inmates; 850 healthy children are being rescued by the special provision made for them; aid is given to another 15 homes with 1,600 inmates; and 6,000 outpatients attend the Mission's clinics; and an uncounted host of citizens have been served by

the fact that every contagious case cared for has meant diminished risk of infection for them.

The general report is a record of devoted service given by many workers, and a continuous steady expansion of the organization throughout the sixty years of its existence. This is followed by detailed reports from all the homes in India. The Mission is a highly efficient and important organization which is worthy of all the support it can get from the public, for its funds are carefully expended and the greatest possible use made of the money available. The report ends with a brief review by Dr. Muir of the medical work which is fully abstracted below.

A review of the year's medical work.—In looking through the statistics for the last year of the work in India of the Mission to Lepers, we find that many of the figures remain about the same as in the previous year. But the number now under treatment has increased by 665, or over 10 per cent. Also the outpatients under treatment have increased by 1,722, or over 58 per cent; and those who have improved under treatment are 54 per cent more than last year. In fact the outpatients are rapidly increasing and will soon at the present rate exceed the inpatients under treatment.

The popularity of treatment is a striking feature of these leper homes. When it is remembered that several years are often necessary before recovery can take place, this is the more remarkable. Another remarkable thing is that almost all this increasing inpatient and outpatient treatment has been done by practically the same medical and nursing staff as was previously employed, though doubtless much extra help is given by educated and trained patients. At the back of all this increased work are two things: sympathy and enthusiasm; and it is these that make the medical work of the Mission so popular and such a success.

I referred last year to the importance of children, and the splendid work that the Mission does in its many homes for the children of leprous parents. During the past year, the children problem has been emphasized more and more by workers all over the world. It has been shown that the age factor is one of the most vital in the spread of the disease. In early years resistance to leprosy is much lower than in adult life. Thus the infection enters and spreads through the bodies of young children, many of whom become the infectious cases of the next generation; whereas those infected after puberty become chiefly non-infectious cases. If all children under ten years of age could be effectively isolated from infectious cases of leprosy, the disease would, in all probability, become a negligible one within two generations; but that is a very large IF. The Mission to Lepers has so far led the way in 'Save the children' policy; and will, I believe, realizing the all-importance of this side of the problem, develop more and more their splendid children's homes.

Apart from the work which the Mission itself is doing, it is inciting others who share its spirit to undertake anti-leprosy work. As an example may be mentioned an ex-patient who is running three leprosy clinics in a highly endemic area, where no fewer than 125 patients are cared for every week.

Correspondence

SOME OBSERVATIONS ON DYSENTERY AND DIARRHOEA AT DARJEELING

To the Editor, THE INDIAN MEDICAL GAZETTE

SIR,—At Darjeeling there is a considerable increase in the incidence of dysentery and diarrhoea during the rains, but there is no indication of any epidemic.

The diseases are often referred to as the hill complaints and occur mostly amongst the visitors from the plains; the hill people are practically immune from them. Hill diarrhoea is equally prevalent at other hill stations, and also in corresponding circumstances in South Africa, South America and Europe. So far as Darjeeling is concerned, there is an impression amongst the visitors that the water supply contains mica, and it is sometimes suggested that mica in the drinking water causes irritation of the intestinal mucosa, with resultant diarrhoea. In a short note on 'The Mica Myth in Darjeeling Water' which was published in the *Indian Medical Gazette*, September 1934 (p. 537), the writer of this note has shown that the so-called mica theory in Darjeeling water is entirely unfounded, no mica being detected in the drinking water. As regards the climatic conditions of Darjeeling during the rainy season, it should be noted that the air is cool and nearly saturated with watery vapour and is consequently chilling. Major Hawley ('Hill Diarrhoea' by P. R. Hawley, *Military Surgeon*, 1927, Vol. 60, p. 140) maintains that in the production of hill diarrhoea there is unquestionably no specific causative organism; it is a mild hepatitis excited by chill in a person predisposed to hepatic congestion, and prevention consists in the avoidance of such congestion by exercise, moderation in diet especially consumption of alcohol, and an occasional dose of saline chologogue.

Lieutenant-Colonel H. W. Acton and R. Knowles ('Dysenteries of India' by H. W. Acton and R. Knowles, pages 9 and 146) regard hill diarrhoea as due to infection with Flexner's bacillus which does not cause dysentery in an individual so much as an initial diarrhoea which may be of 'hill-diarrhoea' type or a chronic diarrhoea contracted in the plains. It may be mentioned that in Poona also there is a rise in dysentery and diarrhoea incidence during the monsoon, and Lieutenant-Colonel J. Morison ('The Causes of Monsoon Diarrhoea and Dysentery in Poona' by J. Morison, *Indian Journal of Medical Research*, April 1915) attributed the cause to sewage pollution of the water supply from Lake Fife. Subsequently, the water supply was efficiently chlorinated, but the diseases persisted throughout the year with approximately the same seasonal rise as in previous years. Major J. A. Manifold and A. J. DeMonte ('Report on an Investigation of Dysentery and Diarrhoea in Poona' by J. A. Manifold and A. J. DeMonte, *Indian Journal of Medical Research*, January 1928) show that the Poona diarrhoea, 'Poonaitis' as it is called, is usually due to infections with Flexner's bacillus; the disposal of filth is extremely unsatisfactory and flies play their parts in the contamination of foodstuffs and are responsible for the large increase in these diseases during the monsoon period. So far as Darjeeling is concerned, the sanitation of the town and its suburbs is carefully attended to and there is no fly danger. The two common factors—the flies and the faeces on which the flies feed—in the production of the diseases are thus eliminated in this place. The water supply of Darjeeling is derived from a number of perennial springs situated in the midst of dense forests on the western slope of Senchal. The springs are connected with a covered concrete conduit and deliver into a reservoir (known as 'Senchal Lake') where a good deal of sedimentation and auto-purification takes place. The water is practically free from suspended matter or any irritating substance. The total solids, total hardness and chlorine respectively amount to 3.4, 1.0, and 0.4 parts per 100,000 parts of water. The organic matter in the water is too small to have any causal relation to the diseases. Bacteriologically, organisms of the *Bacillus coli* group are not detected even in 60 c.cm. of water in the greater part of the year. In the rainy season, they may be present in 20 c.cm. and only rarely in 10 c.cm. of water.

These organisms are again derived almost exclusively from the excreta of wild animals, the sources of springs being practically inaccessible to man and the collecting ground practically free from human habitation. Thus, during heavy rains the polluting materials on the soil may be washed into the spring and in consequence the water gets polluted to a certain extent, but it is not so seriously contaminated as to arouse any question of danger. The diseases must therefore be due to other factors than the water supply. It should be borne in mind that 'chronic infections with Flexner's bacillus are apt to lead to diarrhoea of the "hill-diarrhoea" type rather than to dysentery' ('Dysenteries of India' by Acton and Knowles, p. 112). The occurrence of hill diarrhoea in an individual at Darjeeling may therefore be looked upon as an exacerbation of a chronic type brought on by a chill or by fatigue, errors in diet or indulgence in alcohol. If the disease is contracted in the station, infectious are probably derived from carriers of Flexner's bacilli who spread the disease through the handling of foods, etc.—Yours, etc..

NISHI KANTA RAY, B.A.,
Bacteriologist.

VACCINE LABORATORY,
PUBLIC HEALTH DEPARTMENT,
BENGAL,
23rd January, 1935.

Service Notes

APPOINTMENTS AND TRANSFERS

LIEUTENANT-COLONEL R. S. TOWNSEND, Civil Surgeon, Lucknow, is appointed to officiate as Inspector-General of Civil Hospitals, United Provinces, with effect from the 21st December, 1934, *vice* Colonel A. H. Proctor, granted leave.

The services of Lieutenant-Colonel H. E. Shortt, an officer of the Medical Research Department, are placed temporarily at the disposal of the Government of Madras, for appointment as Officiating Director, King Institute, Guindy, with effect from the 18th December, 1934.

Lieutenant-Colonel G. Covell, an officer of the Medical Research Department, is placed on foreign service under the Association of the Pasteur Institute of India, Kasauli, for appointment as Officiating Director of that Institute, with effect from the 15th December, 1934.

Lieutenant-Colonel W. C. Spackman, on return from leave on the 17th January, 1935, to be Professor of Midwifery and Gynaecology, Grant Medical College, and Superintendent, Bai Motlibai and Petit Hospitals, Bombay, *vice* Captain H. S. Waters, transferred.

Major R. C. Wats, an officer of the Medical Research Department, is placed on foreign service under the Indian Research Fund Association for appointment as Assistant Director, Malaria Survey of India, Kasauli, with effect from the 15th December, 1934.

Major A. L. Robb, R.A.M.C., Additional Medical Officer, Army Headquarters, Simla, is appointed to hold charge of the duties of Civil Surgeon, Simla, in addition to his own duties, *vice* Lieutenant-Colonel B. Gale, granted leave.

The services of Major B. R. Chaudhuri are placed at the disposal of the Government of the United Provinces, for employment in the Jail Department, with effect from the date on which he assumes charge of his duties.

The services of Major D. P. McDonald and Captain R. T. Hicks are placed temporarily at the disposal of the Government of Burma, with effect from the 8th December, 1934.