

Cholera, small-pox, and influenza gave increased admissions, and fevers, chest diseases, and bowel complaints fewer. The incidence of small-pox was curiously exactly the same in the three groups, but its mortality higher among prisoners. Scurvy was rather more prevalent than in the preceding year, giving an admission rate of 4.1. Regiments on the frontier, where vegetables are scarce and dear, suffered exceptionally. The disease is more common than the figures, which take note only of severer cases, indicate. The admission rate in prison was 1 per 1,000. In the decennium 1886-95 native troops and prisoners furnished rates of 2.8 and 2.7, while the rate in European troops was only 0.7 per 1,000. The admission rate from guinea-worm was 4.2 in native troops, representing 534 cases, which occurred principally in South-Eastern Rajputana, Central India, and Gujrat. There were only 4 cases in the European army, and 439 among prisoners. In the Madras command 81 cases of beri-beri occurred; there was no case in the European army, and only 24 in gaols. One hundred and forty-one cases of ankylostomiasis were entered in gaols, and none in the other two sections. The inhabitants of prisons, destitute of the saving influences of age and selection, participate more than do soldiers in the pathogenetic factors potent in unhealthy years and seasons, and in addition suffer from the disadvantages and depression of confinement and crowding. It is therefore satisfactory and creditable to find that the statistics of 1896 compare favourably with those of previous years, and that the figures indicating losses through cholera, remittent fever, dysentery, diarrhoea, anæmia, and debility are decidedly less than those of the decennium 1882-91. Ague and bowel complaints are the chief cause of sickness, and dysentery, pneumonia and phthisis of mortality in the gaols of India. A mortality of 15.64 in the Punjab gaols is a fact of very high value. The prisons of the famine districts give indication of the general insalubrity, the Central Provinces exhibiting a death-rate of 72.36, mostly from scorbutic dysentery, and Bombay of 33.56. The Assam gaols gave a rate of 56.56, although the province was exempt from scarcity. The rate for India was 27.69, against 29.77 and 34.11 for the two preceding quinquennia.

VACCINATION AND SMALL-POX.

The year was unfavourable for vaccination on account of the unrest caused by famine and the employment of vaccinators on famine and plague duty; still, 8,019,836 operations were performed, against 7,912,086 in the preceding year. Infant vaccination is still backward in many provinces. The use of animal lymph is rapidly growing, both in pure form and in combination with glycerine, vaseline, and lanolin. The fact that 141,443 persons died of small-pox in British India in 1896 ought to stimulate the department to strenuous and sustained effort. The death-rates of protected communities were about one-fifth less than of the population at large, and very much smaller than of some sections of the population where the disease was rampant. Detailed information regarding sanitary works in military cantonments, and in cities, towns, stations, and districts, is systematically and minutely recorded. Notwithstanding the impediment caused by extensive failure of crops and scarcity of food, the works undertaken to promote the three cardinal sanitary desiderata of improved water supply, drainage, and conservancy, proceeded, and local bodies spent a satisfactory proportion of their revenues on sanitary establishments and operations. Mention of these proceedings is made in the notices published from time to time in the BRITISH MEDICAL JOURNAL of provincial reports. Endeavours are being made in some provinces to strengthen the Sanitary Boards and to invest them with more substantial authority and control with respect to sanitary undertakings demanding skilled criticism and professional direction.

THE PREVENTION OF TUBERCULOSIS.

At the tenth annual meeting of the South Durham and North Yorkshire Veterinary Association held at Darlington on October 7th Mr. C. G. HILL, the President-elect, delivered an inaugural address in which he prophesied that town and rural authorities would awaken to the fact that it was to the interest of the public to adopt abattoirs and appoint veterinary surgeons as meat inspectors, who should combine the office of dairy inspector and devote the whole of their time to the duties of that position. This could be done only by

showing to the public that they were what they claimed to be, scientific men able to keep pace with collateral branches of science with which their profession was so closely connected.

Dr. MANSON read a paper on Human and Bovine Tuberculosis; their Interdependence and Prevention. On this subject, he said, the attitude of the medical and veterinary profession was that of allied armies against a common foe, which every year slew 150,000 people. After referring to the great diminution in the mortality from consumption which had occurred in the last thirty or forty years, he expressed a hope that, on the present lines of advance, in a few years more they would be within calculable distance of being able to stamp it out of the land as effectually as the leprosy of the Middle Ages had been got rid of. In pathology, in its mode of attack, in its endemic character, and in the fact that it was uninfluenced by climate and temperature, leprosy was akin to tuberculosis. After referring to the Association formed recently with the object of disseminating knowledge as to the modes in which tuberculosis was acquired and of enlisting public interest in the adoption of measures of prevention and the establishment of sanatoria, he went on to deal with the subject of infection. He suggested that bovine infection might be caused by the disease germ being conveyed to pastures by manures charged with the bacillus-laden sputum, fæces, and urine of persons and animals suffering from phthisis. The tubercle bacillus resisted considerable extremes of temperature, of dryness, and of moisture. The storing of hay in a badly-ventilated cow byre might also be a source of contagion. The inhalation of bacillus infected in this way was another means of conveying tuberculous disease, and in this connection the habit of spitting about streets could not be too emphatically condemned. In other countries such offenders against public health and decency were fined, and such countries were wise in their generation. The dust collected from our streets thus became bacillus laden, and instead of using it as manure he would burn every atom of it. He hoped that when the electric installation at Darlington was complete, a public destructor would be established as part of the plant, and that the engines or the dynamo would be driven by steam from boilers whose fuel was the dirty dust and refuse of the town. As regards prevention, Dr. Manson said the most effective means in regard to the human species was by ventilation or the swilling and flushing of our houses with fresh air. A valuable means of checking the disease would be its compulsory notification, thus enabling the sanitary authority to exercise supervision over the house in which the disease occurred, and in case of death to employ methods of thorough disinfection. The argument that such a procedure would create a scare was inimical to the best interests of the country. He thought notification of bovine tuberculosis should also be made compulsory, although the object might be attained by the adoption of Professor Delépine's suggestion that each sanitary authority should employ a veterinary surgeon to examine all animals brought into its area of control, and that all cattle in each area should be registered and marked. He further urged that persons suffering from tuberculosis should be isolated; indeed the true policy would be isolation by legislative enactment. Diseased animals should not merely be separated from the healthy, but should be slaughtered and subsequently cremated. Dr. Manson demurred to the recommendation of the Royal Commission on Tuberculosis that as regarded the meat of tuberculous animals, the carcass should be condemned only when the disease was generalised. The term "generalised" was too vague, and no animal suffering from tuberculosis was fit for food. He summed up the points on which imperial or local legislation was required for the effective prevention of tuberculosis as follows:

1. Compulsory notification of the disease in man and beast.
2. Compulsory destruction of tuberculous animals, the owners to be recompensed by the State.
3. Compulsory periodical examination of all bovine animals, and the application of the tuberculin test by skilled Government or County Council officials.
4. Skilled inspection of all meat offered for sale as food.
5. Prevention of the importation of foreign milk, butter, or cheese, unless after competent inspection.
6. Co-operation between adjacent sanitary authorities with regard to inspection of cows, cow byres, and milk.
7. Closing insanitary property.
8. Destruction by fire of all town dust and ashpit refuse.
9. Prohibition of public expectoration.