The next place to become stricken was the triangular area lying between Symonds Street, Karangahape Road, and the boundary of Eden Terrace, with natural drainage towards Arch Hill Gully. No water-closets are allowed in this area owing to lack of a sewerage system. The drains carrying slop and other waste waters are in places old and undoubtedly faulty, having in all probability clay-joint connections, as has been found to be the case with many drains laid down before the present model by-laws of the City Council as to drainage came into operation. In this respect Auckland is fortunate in having all new drains inspected by Mr. Haynes, Chief Sanitary Inspector, to whose teaching is due much of the success in sanitary science and plumbing of the Auckland Technical students. In addition to this area, part of which is under the control of the Eden Terrace Road Board, the portions affected within the city proper were the immediate neighbourhood of St. Paul's Street, Wakefield Street, Vincent Street, and the district between College Hill Road and the foreshore at Ponsonby. Here at least one-third of the houses have water-closets, the rest privies. Here also possibly the application of the smoke or other drain tests on the remodelling of the drainage will probably reveal defects.

The last but by no means least severe outbreak occurred in the otherwise healthy district of Grey Lynn, more especially in the vicinity of Cox's Creek, towards which the drainage from the slope southward of the western portion of Ponsonby—previously affected—discharges through a gully, practically an open sewer. Although the City Engineer has had the channel cleared, it is recognised that if practicable it would be advisable in the interests of the residents to commence the construction of a sewer here simultaneously with, if not even previously to, the contemplated commencement of the outfall sewer at Orakei. If this can be done without invalidating the general scheme the City Engineer will probably push this work forward. Naturally, in investigating an outbreak of enteric which speedily ran into treble figures, our first inquiry was directed to the commonest source of infection—water. The fact that the infected areas received the same supply as districts such as Parnell, parts of Remuera, and Epsom, which, as to the first at least, remained quite immune, together with the negative evidence as to the absence of contamination as shown by repeated reports by the Government Bacteriologist, the City Bacteriologist, and the Colonial Analyst, eliminated any suspicion as to specific contamination of the water at its source, the Waitakerei Ranges. Faulty drainage in certain areas infected, as contrasted with efficient drainage in some other areas not infected, might suggest possible contamination of the water after reaching individual districts, as was the case in Melbourne some years ago owing to leakage of sewage through fire hydrants.

In no area investigated, however, could water be blamed. Similarly with the milk-supply. As regards the Auckland outbreak, analysis of the cases showed no connection therewith. Not so with regard to an acute outbreak just previously in Hamilton. In this flourishing inland town, the pride of the Waikato, no less than eighteen cases occurred in rapid succession directly traceable to one milk-supply—a Frankton dairy. The first victim was the wife of the dairyman, one of the last the dairyman himself. Inspector Middleton on the 20th September reported that four cases of enteric in Hamilton had one point in common—that of the milk supplied from a dairy already marked down as previously associated with two cases notified six days previously.

As a matter of fact, the milk-vendor's wife who had been in hospital a week was actually suffering from typhoid, the symptoms, however, not having been so marked as to suggest a Widal test previous to the eve of the admission of the husband. Inspector Middleton visited the farm with the avowed intention, after investigation on the spot, of prohibiting the further supply of milk, only to find on arrival the dairyman himself so ill that *after his last milk-round* he had decided on his own initiative to go to the hospital. During the next five days eight further cases occurred, all of whom obtained milk from the same source. This outbreak is without precedent in works of reference on preventive medicine in so far as there was hardly a vestige of doubt the cause of the outbreak was direct contagion from *the hands* of the milker—first an enteric contact through nursing his wife, occupying the same bed, whilst she was suffering from the disease for a fortnight previous to her admission to the hospital, where he followed her a week later, himself an enteric —actually milking the cows and unwittingly distributing the disease to his customers, eighteen out of forty of whom contracted the disease. This conclusion was indorsed by Messrs. Gilruth and Lyons, the Chief and District Veterinarians, who assisted me in investigating the outbreak. It is of interest also to note that a previous resident of this farm had been down with typhoid only a year previously, whilst two years anterior to the last outbreak an epidemic in Hamilton attracted attention to this same farm where one of the initial cases occurred. A visit from the previous patient, probably the typhoid-carrier, possibly started the whole chain of fresh cases. It is also worthy of record that all the cases recovered in the Waikato Hospital. No nurse contracted the disease. Unlike the Auckland epidemic, none of the cases were of a severe type, a feature frequently remarked in connection with milk-borne epidemics, not peculiar to typhoid, but also seen in outbreaks of scarlet fever and diphtheria.

Where cases are not removed to hospital it would be useful to have a placard placed on each infected house warning visitors of the danger of infection. A regrettable incident was the occurrence of eleven cases among the nurses of the Auckland Hospital—more especially in this connection, as illustrating direct infection. The chairman of the honorary staff drew my attention to the fatality after an operation for perforation in which the patient recovered, but both the nurse and the porter, who cleaned the operating theatre, fell victims to the disease, resulting in the latter case in the loss through death of a faithful old servant of the Hospital. It seems only by the education of a special automatic sense of appreciation of rigid asepsis at times of extra work such as is expected of a nursing staff during an epidemic that the conveyance of infection by the hands can be avoided by those removing typhoid discharges or soiled linen.