

smallpox, how could sanitation at home protect postmen going from door to door day after day in the infected districts? In Leicester, how could sanitation account for the revaccinated nurses escaping smallpox, and the nurses who had refused revaccination taking smallpox? How could sanitation cause smallpox to pass over vaccinated children and seize on unvaccinated children in houses invaded by smallpox in Dewsbury and Leicester and Gloucester? How can sanitation have caused the fatality of smallpox cases to be much less among the vaccinated than among the unvaccinated in these towns, especially if vaccination weakens the system and makes it less resistant to disease as is alleged by anti-vaccinationists? How could sanitation cause children with three or four vaccination marks to have a less fatality from smallpox than children with one or two vaccination marks? In Glasgow, while sanitation was going from bad to worse in the early part of the century, vaccination was introduced and smallpox underwent an enormous diminution, though hospitals and isolation and disinfection were entirely out of the question. In Gloucester vaccination had been neglected and in 1891 the secretary to the anti-vaccination league declared to the Royal Commission that Gloucester was a very clean town and had always been well abreast of sanitary improvements, and that its death-rate was very low. The Board of Guardians also wrote to the Commission on the same lines. But smallpox came, and the town suffered from a terrible epidemic, and ever since then the anti-vaccinationists have been declaring that there was a great want of sanitation in Gloucester. What was wanting was vaccination.

For convenience the Registrar-General many years ago grouped together places whose death-rate was low and classified them as "healthy districts." They were nearly all found to be sparsely populated rural districts where, though houses may be damp and overcrowded and other insanitary conditions prevail, there is little opportunity for infection. In such places, in spite of bad sanitation, there is a lower death-rate than in towns, because, independently of sanitary effort, the atmosphere is purer. Also there is less small-pox, and it comes at a later average age, because there is less facility for spread of infection on account of the smallness of the population and the distance of house from house and village from village. In such circumstances, though there is little sanitary effort there is little small pox, and unvaccinated persons have a better chance of escaping small pox attack than they have in large towns where sanitary arrangements are more elaborate.

11. Though isolation of small-pox cases in hospitals is a useful auxiliary to vaccination it is no substitute for it.

In an unvaccinated nation it would be utterly impracticable to provide sufficient small-pox hospitals. For whooping cough and measles hospital accommodation has not been seriously attempted, though these diseases cause an enormous mortality. Where, owing to vaccination liability to small-pox is limited, hospitals are very useful and help to give time for general revaccination. But in an unprotected community their almost certain breakdown is obvious. Who would have attended to the