suffering from one disease, say scarlet fever, is that persons isolated should not be thereby exposed to the risk of catching another disease, say small-pox, or vice versa, by reason of cases of the two different diseases being placed under the same roof, or otherwise, without efficient separation.

In conclusion, I would observe that, although the advance which has been made in the county in respect of this branch of preventive work is by no means insignificant, it is hardly such as to form a subject of much congratulation. Small-pox is at the present time spreading throughout England. During the last few years the neglect of vaccination has been growing apace. Medical officers of health, therefore, throughout England view with grave anxiety the threat of general epidemic prevalence of this disease, the main safeguard against which (*viz.*, vaccination) is in many places less accepted than heretofore. No doubt much of the indifference to vaccination has been encouraged by a vague idea that there is a system of preventing small-pox by means of notification and isolation. It cannot be too strongly insisted upon at the present time, that to depend upon notification and isolation as the main safeguard against small-pox is most dangerous. These measures are valuable, and under some circumstances indispensable, aids for the prevention of epidemic small-pox, the main safeguard against which is vaccination. The hospital isolation of small-pox is attended with exceptional difficulty, owing to the spread of the disease in populous districts round hospitals. The wonderful success which has resulted from the establishment of the hospital ships at Longreach may be pointed to in opposition to the views of those who seem to be opposed to the establishment of any small-pox hospital at all. Nevertheless, it cannot be denied that the danger arising from small-pox hospitals in populous districts has enormously increased the amount of opposition which is raised to their establishment. The same objection does not hold good in the case of scarlet fever, and I must, finally, again repeat that in districts of Surrey, where there is no provision for scarlet fever (against which there is no such protection as that afforded against small-pox by vaccination), the inhabitants suffer from a greater prevalence of the disease.

THE METROPOLITAN PUBLIC GARDENS ASSOCIATION has for many years been doing an unassuming but most important work in London in providing breathing and resting places for the old, and playgrounds for the young in the midst of densely populated localities. In the tenth annual report the Chairman of the Association (the Earl of Meath) gives a summary of the work accomplished by it during the last decade, which must commend it to all interested in the public health.

ON HOSPITAL ACCOMMODATION FOR SMALL-POX FOR LANCASHIRE.

By EDWARD SERGEANT, L.R.C.P., etc., County Medical Officer of Health.*

IN the quarterly return of deaths, which I have the honour to lay before you, it will be observed that small-pox is unfortunately making rapid progress in the administrative portion of this county, and there is reason to believe that many of the Lancashire county boroughs also are equally, if not more seriously affected. The cases of small-pox notified during the quarter amounted to 444, and resulted in 58 deaths, while in the first quarter of the year two cases and one death were notified, in the second quarter 18 cases and two deaths, and during the third quarter there were 119 cases and six deaths. The greatest spread of the disease has taken place in Warrington, which was accountable for 341 cases and 50 deaths; and of these, 112 cases and 15 deaths occurred in October, 156 cases and 20 deaths in November, and 73 cases and 15 deaths in December. The diminution in the number of cases notified continues, and there are other evidences to show that the epidemic is satisfactorily declining.

From the first occurrence of disease in July and August, the greatest care was exercised in isolating the infected and with respect to revaccination and disinfection. But it was soon found that the available accommodation at the Borough Infectious Hospital was not sufficient, and many of the earlier cases had to be treated at home until additional accommodation could be provided. As a consequence the patients were imperfectly isolated and the spread of the disease was facilitated. It must also be admitted that the proximity of the small-pox pavilion to a crowded portion of the district may have assisted materially in the distribution of infection. The dangers mentioned are fully recognised by the Warrington Corporation, and on the 13th inst. I had, by request, a conference with a sub-committee on the subject, and it was suggested that as small-pox could not be safely treated in ordinary infectious hospitals, the County Council should obtain powers for providing special hospitals sufficiently isolated and in every way suitable for the treatment—without danger to the public—of this highly infectious disease. I therefore recommend you to favourably consider the proposal made; and as there is daily evidence of the rapid spread of small-pox from one district to another, unavoidable in the case of small areas separately governed, it becomes apparent that in order efficiently to curtail the spread of this disease, a large supervising body like the County Council must be deputed to undertake the work for the good of the whole administrative area.

* A report to the Public Health Committee of the Lancashire County Council, January, 1893.

To carry out this purpose in an effectual manner it would be necessary to provide hospitals in various parts of the county and keep them constantly in an efficient state; ambulances, disinfecting apparatus, and probably means of quarantine would be required, besides a staff able to act with promptitude on the occurrence of small-pox in any district within the jurisdiction of the supervising body. Already infectious hospitals have been suggested, and, as you are aware, a Bill for dealing with this want was last session introduced to the House of Lords. The proposition now made is a further development of the hospital scheme, and arises out of the fact which has been sufficiently demonstrated both at Warrington and Chadderton that small-pox, if treated within 250 yards, or even more, of a crowded district, is likely to spread disease, and it is also a danger to patients suffering from other diseases when treated in an ordinary infectious hospital. The experience of Chadderton supports the view above expressed, that small-pox may infect at long distances. This was pointed out by Dr. Patterson, medical officer of health of that district, in 1888, when an outbreak was attributed to infection from small-pox cases in the hospital under the charge of the Oldham Corporation; and a similar distribution of small-pox is taking place at the present time in that portion of Chadderton nearest to the hospital, the streets and houses being almost identical with those affected during the outbreak in 1888. The Corporation of Oldham have recently decided to establish a separate small-pox hospital, but, in the meantime, the aggregation of patients in their infectious hospital continues to distribute disease to the adjoining district.

On December 15th I conferred with the Chadderton Local Board, and suggested to them the desirability of urging the Oldham Corporation to provide some temporary hospital accommodation for the treatment of small-pox. The Board have, I believe, submitted their views, but so far have not been able to secure action in the particular direction mentioned.

I may further state that the spread of small-pox and other infectious diseases in the county is greatly assisted by the inadequacy of hospital accommodation, which in 1891 was reported to be less than one-fourth the amount required, and much may be attributed to the unsatisfactory condition in which many of the existing hospitals are usually kept. Notification of infectious disease is still not adopted by Boards representing 25 per cent. of the population, and therefore their officials are, as a rule, unaware of the progress of infection until an outbreak has become established. In 100 districts apparatus is wanting for efficient disinfection of clothing, bedding, etc., so that reliance has to be placed on the most inefficient methods. Only 31 districts have appliances, but less than half of them are really satisfactory. In view of the

possible serious extension of small-pox, sanitary authorities would do well to look to the efficiency of vaccination and revaccination in their districts, and be prepared with precautionary measures for dealing promptly with the disease, should necessity unfortunately arise.

THE NOTIFICATION OF MEASLES.*

By T. ORME DUDFIELD, M.D.

MEASLES, it may be mentioned, is notified in many places, including Edinburgh, and much interesting information bearing on this subject is contained in a pamphlet entitled, "Ten Years of Notification in Edinburgh," by Dr. Harvey Littlejohn, son to the medical officer of health to that city, and himself medical officer of health to Sheffield. The statistics contained in the said pamphlet, supplemented as they were by additional information courteously given to me by Dr. Harvey Littlejohn, and also by the Medical Officer of Health to Edinburgh himself, may enable us to estimate to some extent the probable effects to be anticipated from notification of measles in London, regarded as a means for lessening the spread and reducing the mortality of the disease. Nearly 30,000 cases of measles were notified (at a cost in fees of £3,500) in the ten years, 1880-89, dealt with by Dr. Harvey Littlejohn, without obvious benefit—the cases in the second half of the period having been 2,600 more than in the first five years—unless it be that the case mortality, which in the ten years was 3·1 per cent., was 1·0 per cent. less in 1885-89 than in 1880-84. This apparent advantage, however, disappeared when the figures for 1890-91 came to be added to those for the preceding ten years, for dividing the twelve years (1880-91) equally, it appears that in the first half-period, 1880-85, the notifications were 14,418, the deaths 520, and the case mortality 3·8 per cent.; whereas in the second six years, 1886-91, the notifications were 22,032, or 7,614 in excess; the deaths 730, or 210 in excess, and the case-mortality 3·7 per cent., or 0·1 per cent. only below that in 1880-85. Some allowance must, of course, be made in respect of number of notifications, and of deaths, for increase of population—at the rate of about 3,300 annually—in the inter-censal period 1881-91; but this does not affect the question of case-mortality. The fact remains that the apparent benefit of notification in the shape of a reduced percentage of mortality in the latter half of the ten years' period (1880-89) disappears when the figures are extended so as to include the twelve years period (1880-91).

Referring to the lower mortality in 1885-89, compared with 1880-84, Dr. Harvey Littlejohn, in a communication with which he favoured me, observed, that "Epidemics of measles appear to

* Extracted from Dr. Dudfield's Annual Report to the Kensington Vestry for 1891.