

for variations of age distributions of patients in this comparison, but it cannot account for more than a small share of the difference between London and the provincial towns. Perhaps if we contrasted Leicester alone with London, the comparison might be adduced as convincing proof of the efficacy of eucalyptus inunctions, but at Brighton this latest fad has not hitherto been adopted. Nor can it be urged that in London we have to deal with the possibly greater virulence of an advancing epidemic wave, while in the other towns the wave is receding. In all three towns there was a declining prevalence of scarlet fever during 1894. Something may be due to the social condition and previous nutrition of the patients admitted in these instances. This point it is impossible to test. We are personally inclined to lay greater stress on the *increased virulence of scarlatinal (and diphtheritic) infection caused by aggregation of patients on too large a scale, and possibly the non-intermittent use of large wards for patients.* Whatever the reason, the comparatively high case-mortality of scarlet fever in the hospitals of the Metropolitan Asylums Board deserves to be carefully watched and its causes investigated. Among other facts which would help in elucidating the problem, we may suggest statistics of the case-mortality and of the frequency and character of complications in the first, second, third, and fourth quarters of the year after a given ward or hospital has been emptied and thoroughly disinfected and cleansed.

THE EXPENDITURE ON ISOLATION HOSPITALS

IN a table published in Dr. Nunn's annual report for Bournemouth, some interesting information as to the relative cost of fever hospitals in certain selected towns is given. It appears that, not making an allowance for receipts from patients, the cost per patient per week was 13s. 3d. at Folkestone (total number of patients treated in the year, 183), 16s. 8d. at Brighton (419 patients treated), £1 2s. 7d. at Portsmouth (391 patients treated), £1 4s. 3d. at Bournemouth (149 treated), £1 8s. 7d. at Southport (111 treated), £1 15s. 3d. at Torquay (50 treated), £2 2s. 1d. at Scarborough (78 treated), £2 18s. 10d. at Wimbledon (98 treated), £3 7s. 11d. at Eastbourne (91 treated), £4 10s. 2d. at Hove (49 treated), and £6 19s. 9d. at Southampton (31 treated).

The number of patients in each place are given in brackets, as the administration must obviously be more expensive on a small than on a large scale. This does not, however, appear sufficient to account for the immense discrepancies shown in Dr. Nunn's table. Are the figures as to nett cost per patient really comparable? We are strongly inclined to think not. The expenses of a hospital rightly come under three heads:—(1) Original cost of site and

buildings, for which there is an annual charge of interest; (2) Cost of additions or alterations or extensive repairs during any single year; (3) Current expenditure of maintenance of patients and staff.

There is no indication in the table that the expenses have been calculated on a uniform basis. It is almost certain that they have not been so calculated. The majority doubtless do not include in yearly expenses the interest on cost of site and buildings, but a few probably do. In some cases the cost of horses and ambulance and disinfecting station are included in hospital expenditure; in other cases they are not so included. Some include the medical officer's salary, others do not. Some include expenses of garden, others do not. It is unfortunate that such variations of classification should render comparisons of the kind attempted by Dr. Nunn misleading, as it is of great importance that medical officers should be able to contrast the expenditure per head in their own fever hospital with that in other fever hospitals.

THE RELATION OF SUBSOIL WATER TO PUBLIC HEALTH.*

By M. A. ADAMS, F.R.C.S. Eng., M.O.H. of Maidstone.

I HAVE now completed ten years' daily observation on this subject in Maidstone, and find the mean height of the subsoil water level during that period to have been 198 inches below the surface at my laboratory. The mean highest point to which it rises is 186·75, and the mean lowest to which it sinks 205·48 inches, consequently giving a mean range of movement of 18·73 inches. The extreme highest level, 176·88 was reached during November last year, and the extreme lowest level, 212·4, occurred during August, 1885. The annual range of movement has fluctuated between a minimum of 10·32 inches in 1889, and a maximum of 24·48 in 1885.

1894 was characterized by the highest level that has occurred during the period of these observations; it was abnormally high throughout the year, and the lowest point to which it fell is barely an inch below the mean level of the ten years; notwithstanding this high level of the subsoil water, its range, 22·08 inches, was much above the mean, 18·73, of former years. I have reason to believe this increased movement, when contrasted with the more stagnant condition, is salutary, probably because it is a means of washing and aerating the soil, purging and purifying it from disease organisms. My observations seem to indicate that the *quality* of diphtheria is controlled by it; the reasons for this, together with the evidence upon which the belief is based, may be found in a paper published in PUBLIC HEALTH for October, 1894.

* From DR. ADAMS'S Annual Report for 1894.