units working among the civilian population was 53,10 more than in the previous year. The total number of examinations since October, 1943, was a little short of 6 million, and more than 30,000 examinations per week were being made throughout 1950. Of the total examined, some 95 per cent. were found to have no abnormal chest condition. Previously unsuspected active tuberculosis of the lung was revealed in less than 4 per 1,000 persons examined, but was the cause of more than 13 per cent. of the total notifications of respiratory tuberculosis. Steady progress was made with B.C.G. vaccination. It is estimated that up to the end of the year more than 20,000 persons had been vaccinated, of whom about one-third were hospital nurses and medical students.

## Diphtheria-Spectacular Fall

Diphtheria deaths also continued their spectacular fall of recent years. Compared with 1949, cases were nearly halved and deaths were roughly 60 per cent. of those in 1949. Compared with the average of the five years 1937-41, immediately preceding the beginning of the immunisation campaign, deaths in 1950 were no more than 2 per cent. "Nevertheless, every effort must be made to keep the proportion of the immunised in the child population up to the 70 per cent. level and to secure the reinforcing (boosting) dose for the children before school entry."

Two features which stood out in the epidemiology of the year were the severe epidemic of poliomyelitis, with an incidence of 7,750 corrected cases (only 16 below 1947's high record of 7,766 ) and 734 deaths, and the great outbreak of dysentery-17,270 cases and only 65 deaths-giving a case-fatality of 0.4 per cent.-less than half the previous lowest of 1949.
But on polio Sir John has a word of reassurance. An inquiry showed that for every 100 patients admitted to hospital, five or six died, nine or ten were severely paralysed, 17 or 18 had a degree of paralysis which, properly treated, would not stop them from working and the remaining 65 or 70 would either be left with a trivial paralysis which would pass almost unnoticed or would suffer no permanent illeffect whatever. Sir John estimates that two out of every three of the patients notified in 1950 recovered unscathed.

There were only eight cases of smallpox in 1950, but these were the harbingers of a sharp outbreak at Brighton.

The 65,889 notifications of scarlet fever were slightly fewer than in 1949 but deaths increased from 18 to 33. It was again a year of high prevalence in measles and notifications numbered 367,597 , but the case-fatality rate again fell to reach the very low level of 0.06 . The 157,752 notifications of whooping cough were the highest since 1941, with an unusual summer prevalence. Fortunately, the case-fatality was much the lowest ever recorded and half that of the two preceding years.

## War on Mosquitoes

England and Wales remained entirely clear of indigenous malaria, which is remarkable in view of the fact that during the past five or six years many thousands of service men infected with malaria have returned to this country and there has also been an influx of large numbers of Polish subjects, many of whom have been found to harbour malaria parasites in their blood. There were 263 notifications of the disease, all of which, except two induced for therapeutic purposes, were originally acquired abroad. The only species of mosquito proved to have been concerned in human malaria transmission in England is Anopheles atroparvus. It is specially abundant in certain animal houses and the greatest density occurs in low, ill-ventilated pigsties. During the past few years the reduction of the number of pigs in rural areas has led to a marked reduction in the anopheles density and this may, at least in part, have contributed to the absence of indigenous malaria.

Clinic figures for early syphilis reached a level well below that of 1939, the number of patients attending for the first
time falling from 6,812 in 1949 to 4,143 in 1950. " It is, however, significant that in 1950 the fall has not been so steep in some of the larger seaports as in the inland cities of comparable size and at two London dockside clinics, dealing largely with seamen the numbers of new infections have increased considerably. Though the home reservoirs of infectious syphilis at present stand at a record low level, it is as well to realise that they would rapidly become flooded in a national emergency and that they continue to be fed by a constant importation of infection from overseas."
The evidence at clinics of gonorrhoea also fell, 20,504 cases being diagnosed against 24,487 in 1949.
For typhoid fever corrected notifications numbered 211 and there were 15 deaths; for paratyphoid fever the corrected notifications were 291 and there was one death. The incidence continued at a low level and the majority of notifications represented single sporadic cases.

## Cancer of the Lung

Cancer deaths numbered 85,268 , an increase of 2,067 on 1949, the increase being rather larger for males. A puzzling problem is the increase of deaths attributed to cancer of the lung, deaths from which during the 28 years between 1922 and 1950 have risen from 612 to 12,241 . Allowing for improved diagnostic facilities it seems that there has been a real increase in the incidence of lung cancer. Various attempts have been made to account for this probable increase and work has been done on the effect of exhaust fumes, the inhalation of surface dust from tar roads and other possible sources, with little success. Tobacco has for some while been suspect because the known increase in the consumption of tobacco has been contemporary with a probable increase of cancer of the lung and the fact that the increase has been so much greater among males than among females is suggestive, in the light of the greater consumption of tobacco among males, at least until quite recently. But, says the Report, " Great care must be used before one can assume that there is any close connection between increased cancer of the lung and an increased consumption of tobacco."
The discovery in 1949 of the beneficial effect of Cortisone and A.C.T.H. on the symptoms of rheumatoid arthritis gave rise to great hopes that, at least in early cases, they might completely arrest the progress of this most crippling of the rheumatic diseases. "Unfortunately, few of the initial high hopes have been realised and it can truly be said that up to now they have posed more problems than they have solved. Although continued administration of either Cortisone or A.C.T.H. will certainly palliate the symptoms of rheumatoid arthritis and possibly arrest its progress, the underlying pathological processes seem merely to lie dormant under treatment so that, when the hormones are withdrawn or by reason of complications they can no longer be given, the patient relapses with disappointing promptness to a condition as bad or even worse than that before treatment was begun.'

The number of deaths from rheumatic fever in 1950 was 569 , the lowest on record.

## Infant and Maternal Mortality Rates

For the first time in the country's history an infant mortality rate of under 30 per 1,000 related live births was achieved. The rate was 29.9 compared with 32.4 in 1949. The stillbirth rate per 1,000 total births remained the same as in 1949 at 22.7 and the neonatal mortality rate declined to 18.6 per 1,000 related births, compared with 19.3.

The maternal mortality rate of 0.87 per 1,000 total live and stillbirths continued below 1 for the second successive year and was a slight improvement on the 0.97 of 1949. The birth rate of 15.9 per 1,000 of the population showed a further decrease from 16.7 in the previous year. The decline in maternal mortality for the last 50 years is reviewed in Chapter 6.

