

DIPHTHERIA IMMUNISATION CAMPAIGN.

A national campaign for the immunisation of children against diphtheria was launched by the Ministry of Health towards the end of 1940.

The long-term intention was to stamp out diphtheria as an epidemic disease. The short-term object was to guard against the danger that diphtheria would increase owing to war conditions.

The campaign got under way in 1941. From the next year to the end of 1947, figures for both notifications and deaths steadily declined, with new low records established in each successive year.

Fall in our Diphtheria Figures since 1940.

Pre-war figures for diphtheria averaged more than 50,000 cases and about 2,900 deaths a year. The 1947 figures (the lowest ever recorded) show that cases are now little more than one-sixth and deaths less than one-tenth of the pre-war average. Though it must not be forgotten that diphtheria epidemics are liable to a certain periodicity, these figures indicate that the immunisation campaign has already gone a considerable way towards defeating diphtheria.

Increase in Diphtheria on the Continent.

The decline in diphtheria in this country throughout the war is in striking contrast to the position in other European countries, where the disease followed the march of the German armies and figures of incidence rose alarmingly. The main centre of the disease in Germany was in the North and from there it spread to the occupied countries. In the Netherlands, for example, there were 219,772 cases in the six years 1941-46, compared with 8,649 in the previous six years.

Members Immunised in England and Wales.

During the two years 1946 and 1947, 969,000 children under 5 years of age were immunised, and it is estimated that 882,000 immunised children must have passed their 5th birthday or died, so that by the end of 1947 the number of immunised children in the population had increased by some 87,000. But the total population at ages under 5 had risen in the two years by about 435,000 owing to the high birth rate. The proportion of all children under 5 who had been immunised was not quite so great, therefore, at the end of 1947, as it was two years before.

In the two years, 272,000 children aged 5-15 were immunised, and it is estimated that 875,000 immunised children attained their 5th birthday, whilst about 720,000 passed out of the group by reaching age 15 or by dying. The number of immunised children in the population at these ages increased, therefore, by more than 400,000, whilst the total population increased by about 50,000, so the proportion of all children aged 5-15 who had ever been immunised improved considerably.

Plan of Campaign.

Since the campaign began, the Government has provided local authorities with free prophylactic material and with help towards publicity campaigns. National publicity, including Press advertising, posters, films and broadcasts have been carried out in support of local publicity. The authorities have been urged to provide adequate facilities for immunisation at schools and clinics and the campaign has been helped by the persuasive efforts of doctors, health visitors, teachers and others in close contact with parents.

The chief initial success was among school children because they are more accessible than infants. By the end of 1941 about 36 per cent. of children of school age had been immunised, but only about 19 per cent. of the younger children.

Now, under the National Health Service Act, the respon-

sibilities for immunisation are placed on the County and County Borough Councils as Local Health Authorities, and they give to general practitioners the opportunity to take part in their immunisation (and in their vaccination) services. This should lead to an increase of individual immunisations by the family doctor.

Now that a fairly high level of immunisation has been achieved among the child population as a whole, there is reason to believe that diphtheria would be virtually eliminated as an epidemic disease if, in each year, 75 per cent. of children in the one-year-of-age group were immunised. Because of the high birth rate during 1947, this would mean for 1948 a target in England and Wales of 640,000 babies, compared with 590,000, in 1947. To achieve this increase means therefore not only sustained but *increased effort*.

The object is to have the baby's immunisation finished by its first birthday. Advice should be sought when it is 8 months old.

As immunity takes two or three months to develop fully, and as the epidemic seasons for diphtheria are autumn and winter, special efforts are made each year to get as many children immunised as possible during the spring and summer.

Precautions are all the more urgent now that there is increasing contact with Continental countries, where diphtheria of the most malignant variety is known to be still prevalent.

A Deadly Danger to Children.

Diphtheria is caused by a germ which grows in the throat and there produces a poison or toxin. This poison is absorbed into the body and, if the process is not stopped by early treatment, attacks the heart muscle and the nervous system. This may cause a long illness, accompanied by paralysis or heart weakness and it may cause death through heart failure or paralysis either early or late in the illness. Sometimes if the windpipe is affected the patient is choked by the accumulation of so-called membrane and may die from sheer asphyxiation.

In spite of the decline in diphtheria figures since the immunisation campaign began, nearly 9,000 children died from this disease during the war years—about 1,000 more than were killed by bombs; and most of these diphtheria deaths were among children under 10.

Most city dwellers become naturally immune in adult life.

An immune person, whether an adult or a child, can be a diphtheria "carrier."

Cases of Death among Immunised Children.

Immunisation affords a good degree of protection, though not complete protection, against an attack of diphtheria. It affords a very high degree of protection indeed against the risk of death from diphtheria. Immunised people, if they get diphtheria, nearly always get it very lightly.

A child who has been immunised is about four times less likely to catch diphtheria, and about 25 times less likely to die from it than one who has not.

Some Facts about Diphtheria Immunisation.

Diphtheria is one of the diseases of which doctors have had a good deal of knowledge for quite a long time.

Immunisation against diphtheria was known nearly a generation ago. Its value was recognised after the 1914-18 war. The Maternity and Child Welfare Act, 1918, including provisions under which Local Authorities could make schemes for immunisation, and a number of Local Authorities approved its use in Welfare Centres for children under five. The Ministry of Health issued its first memorandum on the Production of Artificial Immunity against Diphtheria in 1932.

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