

THE following is a summary of an investigation carried out during an epidemic of diphtheria in Buenos Ayres, by James T. R. Davidson, M. D. Edin., late house physician to the Edinburgh Royal Infirmary;—from the *British Medical Journal* of October 25th, ult.

During the last few years diphtheria has taken a firm hold on the population of Buenos Ayres. It is the custom in this city to publish in the daily papers mortality tables showing the diseases which have proved fatal, and the houses where the deaths have taken place. With the object of finding out, if possible, the causes of this epidemic, I undertook an investigation, taking as a basis the deaths occurring during the first half year of 1899. I examined the mortality tables, and by their means I was enabled to find 260 houses where patients had died from diphtheria during those six months. I visited each of these houses, and obtained personal information as to the special conditions in which each house was placed.

The facts gathered enabled me to affirm that the great cause of the present epidemic of diphtheria in Buenos Ayres is the presence of animals, especially hens and horses, in yards, without any pavement, or hardly paved. Most of the houses in Buenos Ayres have what are known as "patios." There are open spaces within the houses. Some houses have three or four "patios," and frequently, especially amongst the poorer classes, the back "patio" is not paved, it is damp and hens are kept on it. Hens which live on these damp soils become a prey to diphtheria, and children who play in these back yards contract the disease from these hens.

Of the 260 houses which I examined I found that hens were kept in 145, and of the remaining houses hens were kept in houses immediately adjoining in 35 instances, the separation of the yard in some cases being so insignificant as to make the two houses a single one.

I found that 35 per cent. of those who died from diphtheria lived in houses

where horses were kept, or in houses immediately adjoining stables. Mention may here be made of the statistics of some of the European armies with relation to diphtheria mortality. In the French army there are three times as many deaths from this disease amongst cavalry as amongst infantry troops. The same holds good for Germany. Diphtheria is three times as fatal in the cavalry as in the infantry regiments, while in Hungary the disease prevails very little in the army, but where it does prevail it selects its victims chiefly from the cavalry regiments. I found that of the houses where diphtherial patients died, and where some of the following animals existed—horses, hens, pigeons—85 per cent. had back yards without any pavement, or with very imperfect ones.

Of the 260 houses examined, I found that in 205, horses, hens, or pigeons were kept either in the house itself, or in the house immediately adjoining.

I found out the following practical cases pointing to the direct infection of children from hens affected with diphtheria. 1. In Corrientes Street, a child, 2 years of age, died in the month of January. The house had a single storey, and had a back yard without pavement. A few days before the child took ill two of the hens which were kept in the house had ulcers in the throat. 2. In California Street, two children, one 2 years old the other 4, died in the month of March. The house was a lodging-house, and had a back yard without pavement. A few days before the children died two of the hens which were kept in the house died, having "made a strange noise with their throats" during their illness. 3. In Europe Street, a child, 3 years of age, died in the month of April. Lodging-house, with back yard without pavement. A month before the child died the hens sickened with an "affection of the mouth." 4. In Salta Street, a child, 9 years old, died in the month of April. House had a back yard, without pavement. There