

THE CANADA HEALTH JOURNAL.

(PUBLIC HYGIENE AND STATISTICS.)

Vol. V.

TORONTO, NOVEMBER, 1880.

No. 2.

HOW DISEASES ARE SPREAD.

Many people do not know how very simply and easily contagious diseases may be and frequently are spread from one person to another. I purpose in this brief paper to give some examples to show how diseases of a most serious character are transmitted; in the hope that it may put some on their guard, and also that it may lead to measures being taken to prevent like transmissions.

Dr. Arthur Downes writing in the *Sanitary Record* on a practical point in diphtheria diffusion says, notwithstanding a certain *a priori* probability of the occasional dissemination of diphtheria by water, and with due regard to what has hitherto appeared in print on the subject, there is not yet, so far as I am aware, a single indisputable piece of confirmatory evidence upon record. There is, however, a general but misleading and unscientific tendency, by no means confined to the popular mind, to accept the mere existence of drainage defects or polluted water-supply in connection with a diphtheria-invaded house as a final explanation of the outbreak. He believes that the *diffusion* of diphtheria is mainly dependent upon personal infection distributed by mild unrecognised cases, and independent, at any rate, as a general rule, both of water-supply and ordinary sanitary defects.

Diphtheria of marked type had occurred on a wet clay upland situated at one end of a long, well-cul-

tivated vale, up which an irregular prevalence of 'colds' and 'sore throats' forthwith slowly crept from hamlet to hamlet. These ailments, generally speaking, presented no specific features by which they could be diagnosed *per se*, but their true nature was revealed by their history and by occasional cases of more pronounced character.

At length illness appeared among the school-children at a village some eight miles up the valley. It was of rather anomalous type—it is my experience that, especially in the milder epidemics, diphtheria by no means confines itself to the lines laid down in the text-books—some of the cases were called 'gastric fever', one or two 'scarlatina', one, on account of a curious rash, was thought to be 'measles' by an experienced old nurse, but others were sufficiently characteristic to indicate their real nature. The only condition common to those attacked was their attendance at the village school. Their homes were widely scattered. Now, at one side of the playground was a small dip-well, liable to occasional road-washings, but not to serious contamination, much used by the children and by several houses in the village. To this well popular opinion attributed the spread of the disease, and with popular opinion, though in a different way, I came to agree.

A frequent, perhaps the most frequent, mode of transference of the diphtheritic *contagium* from person to person is the use in common