From these examples, the conclusion can be drawn that the incidence of carriers increases in almost direct relation to the association and the age of the individual, and the introduction of fresh strains of the diphtheria bacillus.

In the Hospital for Sick Children all these favorable circumstances are frequently combined, for here there is the close association of 150 or more children of the susceptible age, with an average stay of about 37 days, and hence the likelihood of the frequent introduction of fresh strains of the diphtheria bacillus. while the persistent carriers are a constant source of danger to the newcomers. The fact that we are here dealing with ailing children seems to be of no importance other than that the prevalence of erving and coughing aids in the distribution of the infection.

Providing that the prophylactic use of the serum has no effect in clearing up carriers, and I have known carriers to remain unclean for five months, in spite of the free use of the serum, then we would expect the percentage of carriers found in the hospital to take the place in the above list where it appears, that is, as great as that of gener. ¹ contacts and greater than that of school children duing an epidemic.

In the latter case the individuals are at the same susceptible age, but the association is not as great, and the individual population remains constant, hence the introduction of fresh strains of the bacillus is not as frequent, nor the transference as common; but once introduce virulent forms with the coryza symptoms, the percentage of carriers rises rapidly, even above that of a hospital where all are being immunized. In the case of a school the children can be separated in their homes, and only the carriers and their families given antitoxic serum, but in the hospital such separation is impossible, and owing to the quarantine many urgent cases would have to be refused admittance.

Previous to the use of the antitoxic serum as a prophylactic, clinical diphtheria was enidemic among the children alone; 32 to 48 cases would occur in the course of the year among a yearly population of about 780.

Such a high rate of incidence of clinical cases throughout the year, with the crippling of the hospital work, led to the use of the serum as a prophylactic, and at first it was used in 500 unit doses every three weeks, but this was soon changed to 1,000 units every three weeks. Immediately the clinical cases fell to an average of 7 or 8 cases a year, in all of which the development of clinical signs and symptoms were explainable as occurring near the end of the three weeks' period, or within twenty hours