There were 81 contact illnesses in our 40 households. The intervals between successive illnesses (including positive cases) in the same household ranged from 1 to 110 days and fell into two practically equal groups :—

Thirty-seven with a short interval, from 1 to 10 days.

Thirty-six with a long interval, from 12 to 110 days.

Ignoring for the moment 16 cases in which the interval was 4 weeks or more, let us consider the 57 cases with an interval of 1 to 23 days. These are plotted in Fig. IX.
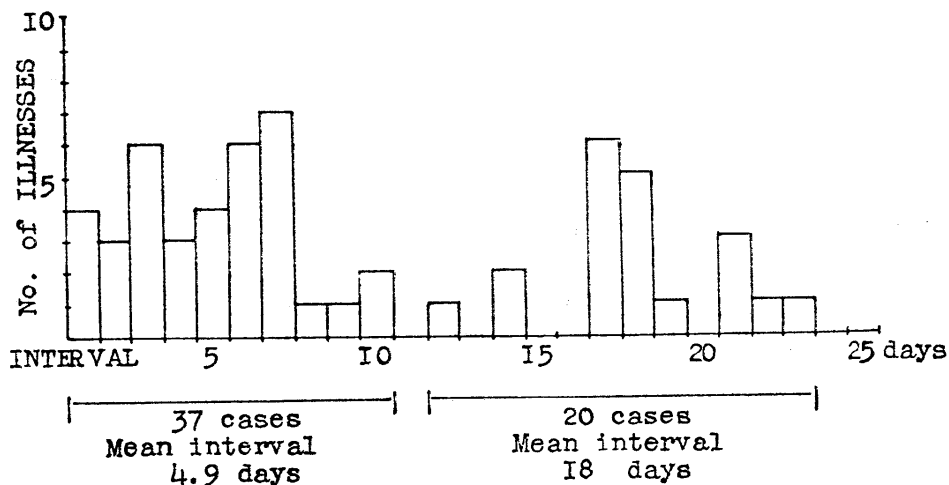

Fig. IX.—Forty Affected Households : Interval, in Days, Between Successive Illnesses in Same Household

It will be seen that they fall into two groups, 37 with a short interval (1–10 days) and 20 with a long interval (12–23 days). The mean interval for the first group was just under 5 days, with a standard deviation of 2·51. The 20 cases falling between 12 and 23 days gave a mean interval of about 18 days, standard deviation 1·34. An obvious hypothesis is that these may represent the effects of different modes of transmission. May not the short interval imply droplet infection, and the long interval infection by faecal organisms ? In the latter case one would expect considerable variation in the interval, which might well be very long indeed, depending upon the function in the household of the source case and the standard of personal hygiene. When an attempt was made to " correct " Fig. V by excluding the 16 cases in which the interval seemed excessively long (28 to 110 days), it was found that the neat correlation already noted between positive cases and suspect illnesses was upset, suggesting that even these cases were genuine instances of aberrant polio ; but not, of course, excluding the possibility that they might have acquired their infection outside the home, so that the incubation period may not have been so long as it appeared to be.