(4) Number of primary successful reactions after previous unsuccessful vaccination in the U.K., 24 (8.96 per cent).

(5) Number of first successful vaccinations (never previously vaccinated or last vaccinated in infancy), 4.

(6) Number of failures after three attempts, 1 (0.4 per cent).

(7) Number of modified reactions obtained after failures in the U.K., 75 (27.98 per cent).

(8) Total number of successful reactions obtained after failures in the U.K., 99 (33.20 per cent).

COMMENTS ON RESULTS.

(1) 33·20 per cent successful reactions (immediate, accelerated or primary) were obtained after unsuccessful vaccination in the U.K. but, since the vaccinations in the U.K. were either (a) not inspected, (b) not repeated or (c) the results were not entered in the A.B. 64's, it was impossible to confirm the fact that the previous vaccinations were true failures.

(2) The percentage of successful primary reactions, viz. 8·96 per cent, after failures in the U.K. can be confirmed and specimen cases are shown in the table (page 137).

(3) The percentage of modified reactions, viz. 89·14 per cent, is high and it is interesting to note that 99·88 per cent of this small series gave a result. The number of complete failures was very small.

CONCLUSIONS.

(1) A considerable number of the B.O.R.s arriving on this draft were unprotected against smallpox, viz. 8·96 per cent.

(2) The number of B.O.R.s who had been unsuccessfully vaccinated in the U.K. appears to be unduly large, viz. 33·20 per cent, but the potential errors in this figure have already been pointed out and definite conclusions regarding the relative efficiencies of the lymphs employed cannot be drawn on this account.

(3) It is clear that a large number of these arrivals had not had their previous vaccinations inspected or the results entered in their A.B. 64's.

(4) In one case (No. 1) a successful result was recorded in the A.B. 64 and the patient gave a primary successful reaction with Indian lymph twelve months later.

(5) 11 cases gave a history of a recent failure in the U.K. and produced a primary successful result in India, e.g. Nos. 9, 12 and 16.

(6) Other cases with a history of failed results which had not been inspected gave a primary successful reaction with Indian lymph, e.g. Nos. 17 and 20.

(7) One case had a date recorded in the A.B. 64 but the patient denied having been vaccinated on that date, e.g. No. 23.

(8) The predominant conclusion appears to be that the more successful results obtained with Indian lymph are probably apparent only and mainly due to deficiencies in inspecting, repeating and recording results of previous vaccinations.

A QUICK ROUTINE FOR VACCINATION.

By Captain Q. F. Evans,

Royal Army Medical Corps.

[Received August, 25, 1944]

The following method of vaccination has been evolved for dealing with large numbers of men at once, such as occur at this station where 300-600 recruits form an intake every fortnight.

By this method at least eighty per cent take successfully at the first attempt and practically no faints occur owing to the absence of waiting about.

The speed-up is achieved by: (1) Previous organization; (2) a double ended vaccinator technique.
(1) Organization.

(a) No. 1 Orderly prepares the upper arms: (i) with soap and water; (ii) with spirit. This orderly works far enough ahead of the vaccinating M.O.s to allow plenty of time for the skin to dry—say ten men ahead in one queue for each M.O.

(b) No. 2 Orderly directs the prepared men into two queues, one to each M.O., and keeps the lines moving steadily according to the individual speed of each M.O. This is a great help. He also watches those men who are liable to wander to both M.O.s by mistake. Men stand with their hands on their hips.

(c) Vaccination is then done. The usual quarter inch single scarification being made slowly. The speed-up in technique will be described later.

(d) No. 3 Orderly applies the dressing. He stands sufficiently beyond the vaccination M.O.s for the lymph to have dried by the time they reach him—twenty to thirty men ahead.

(2) Double Ended Vaccinator Technique.

Each M.O. is armed with a spirit lamp and a double-ended vaccinator. This consists of a short stick about the size of a pen-holder, a large straight triangular needle is firmly fixed to each end.

The method is as follows:

The lymph bottle and a pad of cotton wool are held in the left hand, the double ended vaccinator in the right. Both ends are sterilized before beginning. One end is dipped into the lymph and then put flat on the arm, thus applying the lymph to the skin.

Without removing the needle, and with a tilting movement, the skin is slowly scarified a quarter inch, with the point of the needle through the lymph.

The end of the needle is then wiped with the cotton wool to remove any remaining lymph and then flamed. (Wiping is necessary otherwise the needle gets covered with charred lymph which, though probably sterile, is messy and looks bad).

The double-ended vaccinator is then reversed and the next man done with the other end. Meanwhile the first end is sterile and cooling, ready for the third man, and so on.

This method of application also results in great saving of lymph: for instance, 480 men have been done with four bottles of lymph (each of which is marked "25 men") with plenty to spare.

These 480 men were vaccinated by two M.O.s in forty-two minutes, with eighty-five per cent successful results.

This is a marked improvement on the twenty-five men per hour suggested by the relevant A.M.D. Bulletin.

WHAT IS A "BLACK-OUT"? A STUDY OF FIFTY CASES.

By Major W. Lindsay Neustater, M.D., M.R.C.P.,
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[Received June 27, 1945.]

Before the war patients never complained of black-outs, now it is almost a rarity to find one who does not! The term is used with such a variety of meanings that I thought it of interest to analyse a series of fifty consecutive cases from out-patients, anyone who complained of black-out being included. It took me just two months to collect this series of cases out of a total of approximately 450 soldiers and 100 auxiliaries seen during this period.