

Re-vaccination, once properly and successfully performed, *does not appear ever to require repetition.* The nurses and other servants of the Small-Pox Hospital when they enter the service (unless it be certain that they have already had small-pox) are invariably submitted to vaccination, which in their case generally is re-vaccination, and is never afterwards repeated; and so perfect is the protection, that though the nurses live in the closest and most constant attendance on small-pox patients, and though also the other servants are in various ways exposed to special chances of infection, the Resident Surgeon of the Hospital, during his thirty-four years of office there, has never known small-pox affect any one of these nurses or servants.

Legal provisions for re-vaccination are made in the 8th section of "The Vaccination Act, 1867," and in Section IV. of the Regulations which the Lords of the Council, under authority of the Act, issued in their Order of February 18th, 1868. Under these provisions, *re-vaccination is now performed by all Public Vaccinators at their respective vaccinating stations*; and, so far as is not inconsistent with the more imperative claims for primary vaccination, *any person who ought to be re-vaccinated may, on applying to the public station of the district in which he resides, obtain re-vaccination at the public expense.*

II.—Lymph Supply for Re-Vaccination.

At any time when exceptional claims for re-vaccination are arising, it becomes essential clearly to understand how the lymph for such re-vaccination is to be supplied.

In regard of lymph supply, re-vaccination unfortunately differs from primary vaccination, in that it contributes nothing to its own support, but that each case of re-vaccination, while requiring to draw lymph from a case of primary vaccination, will itself furnish no available lymph in return; for, even when good vesicles result from re-vaccination, their lymph cannot properly be used for other vaccinations or re-vaccinations. Thus, no wholesale re-vaccination is possible which does not have for its basis a large system of primary vaccination; and as, in England, such a system exists in the hands of the Public Vaccinators, but, with very rare individual exceptions, not in any other hands, so our essential security for means of re-vaccination (as well as for means of primary vaccination) is in the system of public vaccinating stations established by law.

At these stations a large majority of all the infantine vaccinations of the country are performed in successive weekly groups; the cases of each vaccinating day returning a week afterwards to furnish lymph for the arm-to-arm vaccination of a new group. Each well-frequented station is thus a continuous source of primary lymph supply, and is able, not only to maintain its own weekly performances of vaccination and re-vaccination, but also to contribute more or less towards the requirements of places where the public stations are too ill-frequented for the maintenance of a continuous supply, and towards the similar requirements of private practitioners. From certain of such stations, carefully selected and superintended, the Medical Department of the Privy Council Office receives regular contributions of lymph preserved dry on ivory points, or liquid in capillary tubes; and out of the stock thus contributed, the Department answers day by day the demands which are made on it for lymph; demands, emanating not only from among the many thousand vaccinators, public and private, of the civil population of England and the other divisions of the United Kingdom, but also from Her Majesty's Army and Navy in all parts of the world, and from the Diplomatic and other Foreign Services, and from the Colonies.

It is essential for the objects which have to be accomplished, that this National Vaccine Establishment should be maintained in a solvent condition as regards all such demands as its constitution is intended to meet; and it is satisfactory to know, as an effect of large improvements which of late years have been made in the system of supply, that the resources of the establishment are now many times greater and more elastic than they have been during any previous epidemic of small-pox, and are fully adequate to meet all such demands as the establishment professes to provide for. It must be remembered, however, that there are certain claims which the establishment is neither meant nor would be able to meet. No central dépôt of lymph can pretend to give such separate supplies as will enable each individual practitioner to vaccinate at once large numbers of persons. The principle on which the National Vaccine Establishment proceeds (and has always proceeded) in its distribution of lymph, whether to Public or to Private Vaccinators, is as follows:—*It furnishes each applicant with a sufficiency for the performance of a few first vaccinations, and it expects that the recipient, so far as the circumstances of his practice render necessary, will exert himself to vaccinate in series from the beginning which he is thus enabled to make.* This principle is acted on in relation to Public Vaccinators (as especially in country districts) whenever, from local circumstances, the weekly succession of groups of cases has been interrupted; and no other principle can be worked on a large scale in relation to Private Vaccinators. If re-vaccinations are in question, they, to any considerable extent, cannot be *immediately* dealt with at the expense of the central dépôt; and if the Vaccinator, on receiving his packet of preserved lymph, does not use it for starting primary vaccinations from which afterwards his re-vaccinations could be performed, but, instead of so doing, expends the preserved lymph on some of his claimants for re-vaccination, he must not rely on being able to satisfy other claimants with new supplies from the central dépôt.

Where Medical Practitioners, not being Public Vaccinators, and not having otherwise in their practice cases for primary vaccination, are called upon to re-vaccinate on considerable scale (as in hospitals, commercial establishments, schools, and even large households), they would generally find it best to make direct application for assistance to the Public Vaccinator of the District in which they have to act; with whose assistance they may commonly find it in their power to arrange with the parents of children recently vaccinated at the Public Station, that some of such children shall at the proper time be taken to places where private re-vaccinations have to be performed, so as to furnish from arm to arm any required quantity of lymph. Generally, too, any private Medical Practitioner who, from any cause, desires to obtain extraordinary supplies of lymph, will most easily attain his object by applying to the Public Vaccinator of the District in which he resides; and as Public Vaccinators, appointed under "The Vaccination Act, 1867," are of course free to accept payment for