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Deputy Gov  
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Noof 98

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1919

17th June.

VACCINATION AND VACCINE LYMPH.

The copy report by P.S.O. on the preparation of vaccine lymph locally.

Last previous Paper:

Gov  
43076

Mr A Parkinson

42860, 42868, 43076

When taken some time to find the papers. I have put this in green in view of 42860 below.

print 43076 or 43077 for T.M.S.

One who should also be told of the arrangements for the employment of Mr. Palfu. (as on 285) + 42868

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Subsequent Paper:

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EAST AFRICA PROTECTORATE

No. 98

GOVERNMENT HOUSE,

NAMBOI,

BRITISH EAST AFRICA.

CONFIDENTIAL

17 June, 1919.



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My Lord,

With reference to Your Lordship's telegram of the 16th ultimo, and in continuation of Sir Edward Northey's Confidential despatch No. 95 of the 14th instant, I have the honour to transmit herewith copy of a report by the Principal Sanitation Officer of this Protectorate on the subject of vaccination and vaccine lymph.

2. The point raised in paragraph 3 of this report appears to merit consideration.

I have the honour to be,  
Your Lordship's  
humble, obedient servant,

*[Handwritten signature]*

GOVERNOR'S DEPUTY.

THE RIGHT HONOURABLE

VISCOUNT MILNER, P.C., G.C.B., G.C.M.G., &c. &c.

SECRETARY OF STATE FOR THE COLONIES,

DOWNING STREET,

LONDON, S.W.

*[Handwritten scribbles]*



MEDICAL DEPARTMENT.  
HEAD OFFICES.  
NAIROBI, 2nd June, 1919.

The Principal Medical Officer.

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VACCINE LYMPH.

Ref. No. H/1919/57 of 27th May 1919.

Preparation of Lymph.

Investigations during the last 4 years have been conducted in this Protectorate and in Uganda regarding the immunising power of vaccine lymph prepared in this Country and also that supplied by from Dar-es-Salaam.

2. As already reported the local strain (Nairobi 1917) used generally distributed in this Country; and in Uganda has been favourably reported upon by Medical Officers. The exception being the experience of the Medical Officer of Health, Kampala, contained in his report 393, dated 12th May 1919.

The results of these vaccinations have only been obtained in a small percentage of cases and no definite figures can be given. Speaking generally the Dar-es-Salaam lymph appeared to take more certainly and to afford better protection than that from Nairobi. There were a certain number of cases, who had been vaccinated with Nairobi lymph apparently successfully, who contracted Small-pox some months afterwards and died of the disease, but from the cases actually under my own observation in the Isolation Camps near Kampala, I am of opinion that a certain amount of protection was conferred by this lymph, although in a large number of cases it was not complete, mild attacks as a rule

following

Following infection if there were good recent vaccination marks.

The success of the Dar-es-Salaam strain in Uganda is possibly due to the lymph being prepared in a climate more nearly approaching that of Uganda than in Nairobi. On the other hand the Dar-es-Salaam strain was used in producing lymph in Nairobi, and was so badly reported upon by Medical Officers that the strain was abandoned.

If the climate in which the lymph is made renders the strain effective only under similar climatic conditions, it is probable that lymph made in Uganda or even at the Lake would be comparatively useless in the greater part of British East Africa, and the latter Protectorate will be placed at a similar disadvantage so that how experienced by Uganda when using lymph prepared here. It seems highly desirable therefore that before any further steps are taken for the establishment of a central lymph institute on any particular site, that lymph prepared in Uganda be tested in British East Africa particularly in the Highlands i.e. in all parts above 5,000 feet elevation.

Another point that is of great importance in the preparation of a suitable and effective strain is the necessity from time to time of reinforcing it by passage through monkeys or rabbits, and indeed of introducing new strains at intervals of not less than 3 to 5 years.

This is the more important as there is an increasing mass of evidence that points to different

different strains of Small-pox virus; that are not controlled by one seed and the same vaccine, the production of several vaccines seems therefore desirable, and the formation of local vaccine institutes preferable to one strain prepared at a central establishment.

There is much to be said in favour of establishing institutes at Nairobi, Uganda and Dar-es-Salaam and the lymph prepared at these centres should be used locally. It is the various strains prepared at these centres and their efficacy estimated under supervision. In my opinion it is not desirable to rely on one vaccine for the general use in Uganda, Zanzibar and East Africa until the potency and immunising power of any one strain so prepared has been proved within the various localities concerned, and this can only be determined by a series of experiments conducted under the most strict and systematic observation and control of a qualified staff.

Seed lymph from England, Bombay, Dar-es-Salaam and local strains have all been used at various times during the last 10 years and whatever general success has attended their use - and in no case is the evidence entirely negative in this respect - the experience gathered has been that no strain, whether derived from overseas or locally has been successful over a prolonged period unless it has been reinforced. Generally a new strain has been substituted for the old.

4. Storage.

Lymph is ground immediately after collection, and is removed on the fourth or fifth day according to

the instructions

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the maturation of vaccines. An adequate supply of ice should be maintained and provision made for an ice making plant.

#### 5. Production of Stock.

I favour the establishment of a properly equipped institution near the Government Farm Kabete, and the discontinuance of the present practice of using the premises in the Laboratory at Nairobi.

This institution should be equipped with all modern appliances for the production and storage of lymph and provisions made for stables and byres where the animals would be kept under hygienic conditions.

Arrangements might be made by which suitable animals could be supplied by the Agricultural Department.

#### 6. Storage and Transport.

If possible lymph should be stored on ice during transport to the distributing centres.

This would be possible in those places near the producing centre by means of transport in suitably made boxes supplied with an ice packing.

In the more distant centres the lymph should be stored in water evaporation boxes, but arrangements are in vogue by which lymph is stored in central distributing centres, such as Mombasa for use on the Coast Belt, and Kisumu for Kavirondo.

The transport at present used is the Postal system, Railway and Native Runners.

In future it is proposed to establish ice plants at the main distributing centres where lymph can be stored until it is required; and from there dispatched by mule or in ice boxes or in water evaporation boxes to the areas of distribution.

In the event of a localized epidemic it should be possible to use a small portable ice machine, capable of producing a few lbs. of ice daily in the actual centre where vaccination is being performed.

#### 7. Vaccination.

There can be no question that herein lies one grave cause of failure, this has been especially noticeable during some stages of the war among field units.

The following are the standing instructions regarding technique in vaccination:-

#### SINGULAR VACCINATION.

Vaccinations should be performed in the shade and not in the sunshine.

The strictest supervision should be exercised while the lymph is drying, it has been found that 20 - 30 minutes is required to ensure this.

Patients should remain in the shade and not in the sunshine during the period the lymph is drying.

Under no circumstances should the patient touch the scarifications during the period the lymph is drying.

Vaccination should not be performed on a part that has been sterilized by Iodine, Mercury, Carbolic or other antiseptics.

The part should be scrubbed clean with soap water and a nail brush.

The arm should not be rubbed dry but allowed to dry.

A drop of the lymph should be blown by an expeller from the capillary tube on to three places on the arm situated about one inch apart, and scarification with a four pronged lancet through the drop (drawing as little

little blood as possible) then performed.

If lymph is stored in bottles and in capillary tubes, a darning needle should be used with its sharp end stuck into a cork.

The three drops of lymph should be applied to the arm with the blunt end of the needle, using the cork as a handle.

The needle should be first sterilized by passing through the flame of a spirit lamp.

After use it should be wiped on cotton wool, dipped into spirit, then flamed, and returned to the bottle.

E. H. Needles, and lancet should always be sterilized before use by passing through the flame, - then wiped on cotton wool, - dipped in spirit - flamed, and again used.

This procedure must never be varied or neglected.

The following is the equipment supplied to each vaccinator.

Soap, spirit, brushes, basins, cotton wool, matches, lancets and needles, Stationery, pencil (indelible).

Vaccinators are trained at the Health Offices at Mombasa, Nairobi and Kisumu under the immediate supervision of the Medical Officer of Health.

Their course of instruction usually occupies 3 months.

It has however been found necessary to place some vaccinators under the tuition of Medical Missionaries and District Medical Officers; but in no case has a vaccinator been employed unless and until he has received instructions prior to being sent into districts.

8. I favour the employment of trained Native vaccinators, and feel confident that such persons could

could be found who would be capable of performing the duties of inspectors or overseers provided they receive their instruction at the hand of Europeans. Asiatic tuition cannot be relied upon to insure the meticulous care and attention to detail that is requisite, and in my experience the results to be expected from European instruction and influence are more likely to be effective and beneficial than can be expected from Asiatic sources.

*W. H. ...*  
*W. H. ...*  
PRINCIPAL SANITATION OFFICER.



Government of Uganda  
5th June, 1919.

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Sir,

I have the honour to acknowledge the receipt of Your Excellency's despatch, Confidential, No. 5649 of the 28th of April last on the subject of the manufacture and storage of vaccine lymph in East Africa.

2. I agree that it would be desirable that the central laboratory for manufacture of lymph should be in Uganda, and I consider that this Protectorate should bear a share of the expenses.

3. I note the remarks contained in paragraphs 3 and 4 of Your Excellency's despatch as regards methods to be adopted as regards distribution and packing in ice of the lymph.

4. I am in agreement with your view that, in place of appointing Indian inspectors of vaccination, it would be preferable to train Africans for the purpose.

5. With regard to paragraph 6 of Your Excellency's despatch, I enclose for your information copy of a telegram which I despatched to the Colonial Office on the 6th ultimo and a copy of the reply which has now been received, on the subject of the temporary continued use of the present strain of lymph.

I have the honour to be,  
Your Excellency's  
Obedient servant,