

Government of Madras.

HOME DEPARTMENT.

(EDUCATION)

No. 945, 7th September 1916

NOTES
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ers on Lieut.-Col. C. Donovan's report on the — of the elementary schools under
of Madras

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ORIGINAL

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GOVERNMENT OF MADRAS.

HOME DEPARTMENT

(Education).

READ—the following papers:—

I

G.O. No. 22, Educational, dated 7th January 1916.

ABSTRACT.—Approving the proposal of the Surgeon-General to entrust the work of superintending the medical inspection of the elementary schools opened by the Corporation of Madras to Lieutenant-Colonel Donovan, I.M.S., and the payment to him of an honorarium of Rs. 100 per month, requesting the Director of Public Instruction to forward a copy of the report of such inspection with his remarks on the success of the experiment and on the question of extending it to other educational institutions; and stating that the medical inspection of European schools is to be kept over pending the report and consideration of that report.

II

Report on the Medical Inspection of the elementary schools under the Corporation of Madras.

In compliance with G.O. No. 22, Educational, dated the 7th January 1916, the work of supervising the medical inspection of the elementary schools of the Corporation of Madras was entrusted to me, and to help me in this I engaged Mr. C. Ramamurti, L.M. & S., who was deputed by the Surgeon-General with the G.O. of Madras.

2. There are nine schools in the Triplicane range—

- | | |
|-------------------------|----------------------|
| (1) Vallabha Agraharam, | (6) Mandavalli, |
| (2) Purasawalkam, | (7) Koyatope, |
| (3) Chetput, | (8) Nungumbakam, |
| (4) Periamet, | (9) Thousand Lights, |
| (5) Chintadripet, | |

and the following three schools in the Georgetown range—

- | | |
|------------------------|----------------|
| (1) Sanjivirayanpet, | (3) Korukupet. |
| (2) Malayappan street, | |

After the preliminary correspondence with the Director of Public Instruction, the arrangement of the plan of the inspection and the procuring of the necessary facilities, the examination of the schools was commenced on the 9th and finished on the 29th February 1916. Eleven of these schools were inspected by me and my assistant, and the remaining four were undertaken by my assistant alone. We had not in the time limited to us, i.e., a month, to include the last of the schools, Korukupet, in our inspection.

3. The procedure adopted was to give notice to the headmaster in the school a couple of hours before our inspection, of our intention to examine the school. The first 50 or 60 boys were examined by me with the help of my assistant, and then completed the examination of the remainder. In this way seven schools were examined conjointly by us and the remaining four were undertaken by my assistant alone. The boys only were examined, the girls were left out, as we had no female examiner with us.

It was also considered expedient not to include the girls in our trial for the possible likelihood of the parents of the girls raising some objection

4. The following method was adopted in the examination of the boys:—

The name, age, caste and occupation of the parents were noted, the residence too being taken into consideration. The clothing, if clean and sufficient. Nutrition, if well-nourished or otherwise. State of the skin, if healthy or covered with rash, etc. Head and body, if clean or unhealthy, the presence of lice, baldness, etc. Teeth, if sound or decayed, the presence of pyorrhoea alveolaris. Nose and sense of smell, defects, polypi, nasal catarrh, the appreciation of the odour of onions, camphor and thymol (omom). Throat and voice, congested, enlarged tonsils, adenoids, quality of the voice, stammerer and any impediment of speech. Eye and vision, any defects, granular lids, the use of Snellen's test types in English or Tamil characters for the presence of defective eyesight. Ear and hearing, any discharge from the ear, the presence of deafness. Nervous system and mental condition, any nervous lesions, if dull or stupid, highly strung or unusually smart. Enlarged spleen or liver, for indications of malaria, kala-azar or biliary cirrhosis of the liver. Deformities, as club foot, curvature of the spine or atrophied limbs after infantile paralysis. Infectious or contagious diseases, small-pox, measles, leprosy, etc. General remarks on any conditions not included in the above category.

5. It will be noted that a very general survey was taken of the condition of the boys. A fuller examination was, however, considered desirable, but time pressed and we found that the period allotted to us was inadequate to undertake this. For instance, we made no examination of the private parts of the boys, we did not use the stethoscope for the detection of lung or heart diseases. In excluding these examinations, besides the want of time, we considered it advisable not to make too marked a show of medical examination, as the impression had got about that the inspecting doctors were to vaccinate the children and carry on other nefarious practices attributed to the medical profession in general by the ignorant public.

6. The total number of children in the eleven schools examined as shown on the books was 2,027, made up of 1,717 boys and 310 girls: of this number, 1,201 boys were inspected by me and my assistant, 410 by me and 791 by my assistant. The boys absent numbered 516. Details are given further on in the remarks on the individual schools. As roughly speaking nearly a third of the boys were absent, the result of our examination does not afford a true index of the health of the children of the Corporation schools as a whole. Several of the boys absent were said to be in poor health, constantly ill or actually ill with small-pox, colds or fever. In drawing a general conclusion on the average state of health of this school population, this disturbing factor of absenteeism must be kept in mind. The ages of the boys varied from 5 to 14 years, the average age being about 12 years. The castes represented were Sudras in the large majority, then Pariahs and Brahmans in decreasing ratio; there were not more than half a dozen Muhammadans. After the examination of the children, the inspection of the school buildings and surroundings was made.

7. Details of the inspection of the several schools are given here.

Vallabha Agraharam situated in the midst of Triplicane and was inspected on the 9th February by me and my assistant. Site and surroundings satisfactory for the neighbourhood; the drains in the lane by the school were very filthy at the time of my inspection, I should say in a most squalid and miry condition after a heavy fall of rain. There is an old and apparently disused Muhammadan burial-ground in the immediate vicinity. Size and arrangement of rooms good. Lighting and ventilation sufficient. Furniture suitable. Water-supply from a tap, unfiltered; some device may be attached to the tap to filter the drinking water. Latrine clean at time of inspection. Playground small, but a larger allotment of land could hardly be expected without the outlay of much expense in a crowded area like Triplicane.

Total strength of the school 180, made up of 156 boys and 24 girls. There were 108 boys present on the day of the inspection and 48 were absent. The castes were Brahmans and Sudras. The following abnormalities were noted: pediculi in the hair of the head 34, enlarged tonsils 55, adenoids 25, myopia 12, itch on the hands and body 18, enlargement of spleen none, suspicious marks of leprosy on the face 7, pigeon-breasted 14, bad teeth 3, squint 1, stammerer 1, granular lids 1, and leprosy 1.

On the whole the boys were a healthy lot for the castes represented. Pediculi in the head, enlarged tonsils and adenoids were common. There was one case of genuine leprosy and seven of suspicious marks on the face of this disease. This skin affection is the subject-matter for a special paragraph in my concluding remarks further on in this report. The clothing was adequate for the climate, but dirty as a rule and of a very meagre character in some cases. The schoolmasters themselves might very well set an example in the cleanliness and quantity of their own clothing. An unusual feature was the absence of enlargement of the spleen of the boys in an area where malaria is common.

8. *Nungumbakam*.—This school is situated on the outskirts of the village of the same name and was inspected by both of us on the 11th and 12th February. The site and surroundings are good, but may be considerably improved by the removal of the wet cultivation in its immediate vicinity. A burning ground near by might also with very great advantage, both to the people of the village and the people living in the Nungumbakam High Road, be shifted a quarter of a mile further south of the tank bund. The arrangement of the rooms, their lighting and ventilation, are satisfactory. Furniture suitable for the children. The drinking water from the tap might be filtered. The latrines clean on the day of inspection, at other times a disinfectant would be useful. Playground small but adequate, it requires levelling and the surface sanded. Total strength of the school 219, boys 179 and girls 40. There were 142 boys present on the days of the inspection and 37 absent. The castes represented were Sudras and Brahmins. Abnormal affections noted were: pediculi in the hair of the head 77, enlarged tonsils 102, adenoids 30, myopia 3, itch on the hands and body 23, enlargement of the spleen 15 or 10.56 per cent, deaf 2, mentally defective 3, suspicious marks of leprosy on the face 11, defective smell 1, pigeon-breasted 10, bad teeth 14, squint 3, stammerer 1, otorrhœa 1 and granular lids 1. The clothing as a rule was dirty but adequate for the wants of the boys. The spleen was enlarged in 10.56 per cent of the boys, an index of fairly common malarial infection. Nungumbakam up to a couple of years ago was comparatively free from malaria.

9. *Sanjivirayanpet*.—Inspected by my assistant on the 14th and 16th February. The site and surroundings satisfactory, nothing very unusual calling for attention. Size and arrangement of rooms satisfactory, their lighting and ventilation excellent. Furniture adequate and answering requirements. Water-supply from a tap, a filter might with advantage and without undue expense be fitted to the present source of drinking water. The latrines clean but are placed on a higher level than the playground and occasionally the washings overflow and pollute the ground around. Playground small for the number of children attending the school, it also requires levelling. Total strength of the school 191, boys 183 and girls 8. On the day of inspection 137 boys were present and 46 absent. Sudras represented the castes of the boys. The following abnormalities noted in the condition of the children: pediculi in the hair of the head 85, enlarged tonsils 96, adenoids 23, myopia 2, itch on the hands and body 30, enlargement of the spleen 19 or 13.86 per cent, suspicious marks of leprosy on the face 14, pigeon-breasted 8, bad teeth 8, stammerers 3, granular lids 1, dumb 1, and kala-azar 1. The affections of the throat were common, as also the percentage of the spleen enlargements.

10. *Chetput*.—Inspected on the 15th February by me and my assistant. Site and surroundings fair, it is placed too close to the dhobykhana and a drain carrying away the washings of the clothes is not clean or savoury; in addition, there is a public latrine almost overlooking the school compound and on the day of inspection it was very dirty and illsmelling. Size and arrangements of the rooms good but their lighting and ventilation inadequate, this is due to the low roofing and the small-sized windows. Some of the rooms were overcrowded. Furniture suitable for the purpose. Water-supply from a tap without a filter attachment, and the location of the tap near the latrines is undesirable. Latrines unsatisfactory; the dry system is adopted and is not properly used; no disinfectants in evidence. Playground small and requires levelling. The school is not built on the usual design plan, it requires the roof to be raised to afford more ventilation and light. The windows too might be of more ample proportions. Total strength of the school 214, boys 168 and girls 46. On the day of the inspection 139 boys were present and 29 absent. The following diseases and defects noted:

pediculi in the hair of the head 44, enlarged tonsils 104, adenoids 25, myopia 1, itch on the hands and body 14, enlargement of the spleen 13 or 9.35 per cent, suspicious marks of leprosy on the face 9, pigeon-breasted 5, bad teeth 22, squint 1, stammerers 3, and leprosy 2. The boys in this school were cleaner than usual, both with respect to the clothing and the pediculi in the hair of the head; I understand the headmaster strenuously inculcates the principles of cleanliness to his boys, with the satisfactory results noted. There were two cases of unmistakable leprosy in this school.

11. *Periamet*.—Inspected on the 18th February by me and my assistant. Site and surroundings unsatisfactory; the school is placed right on the Poonamalle road and gets all the dust of this much frequented thoroughfare; the space occupied by the building is too cramped. Size and arrangements of the school good; the lighting is good but the ventilation is hampered for want of space. Furniture suitable. Water-supply limited; a separate tap with filter attachment is required for drinking purposes. Latrines satisfactory and clean. Playground very circumscribed and altogether inadequate for the number of children. Total strength of the school 147, boys 95 and girls 52. On the day of inspection 57 boys were present and 38 absent. The boys were nearly all of the Pariah class; very poorly nourished and clothed in very dirty garments. The diseases noted were: pediculi in the hair of the head 17, enlarged tonsils 40, adenoids 12, myopia 3, itch on the hands and body 8, enlargement of the spleen 11 or 21.15 per cent, suspicious marks of leprosy on the face 4, bad teeth 2, and granular lids 4. Notwithstanding the squalid condition of the boys taken as a whole, the presence of lice in the hair of the head were unaccountably few. The number of cases of enlargement of the spleen was high, being 21.15 per cent.

12. *Malayappan street*.—Inspected on the 21st February by my assistant. Site and surroundings are not very satisfactory. Size and arrangement of rooms good. Lighting and ventilation good for the locality, the polluted air of which is unhealthy. Furniture adequate. Water-supply from a tap, no filter. Latrines, the flushing system employed is good, but it was not in working order on the day of inspection. Playground sufficient. Total strength of the school 115, boys 98 and girls 17. Boys present on the day of inspection 64 and absent 34. Castes made up of Sudras and Pariahs. The diseases noted were: pediculi in the hair of the head 27, enlarged tonsils 50, adenoids 18, myopia 2, itch on the hands and body 15, enlargement of the spleen 5 or 7.8 per cent, suspicious marks of leprosy on the face 2, pigeon-breasted 8, bad teeth 12 and granular lids 2.

13. *Chintadripet*.—Inspected on the 22nd February by me and my assistant. Site and surroundings fairly satisfactory, too near the river Cooum and on a much frequented and dusty road. Size and arrangement of rooms, lighting and ventilation good. Furniture adequate. Water-supply from a tap, unfiltered. Latrines clean and in a satisfactory working condition, the water-flushing system is used. Playground adequate but some fast growing trees are required to afford shade. Total strength of the school 185, boys 154 and girls 31. On day of inspection 106 of the boys were present and 48 absent. The boys belonged to the Sudra caste. The following abnormalities noted: pediculi in the hair of the head 77, enlarged tonsils 88, adenoids 51, myopia 2, itch on the hands and body 20, enlargement of the spleen 16 or 15.1 per cent, suspicious marks of leprosy on the face 4, pigeon-breasted 5, bad teeth 14 and granular lids 15.

14. *Koyatope*.—This school is situated in Komaleswaranpet and was inspected on the 23rd February, by my assistant. Site and surroundings leave much to be desired; a public latrine and a municipal conservancy cart depot are in too close a proximity and the surrounding streets are used as public latrines, at least they had been on the day of inspection. Size and arrangement of rooms, the lighting and ventilation satisfactory. Water-supply from a tap ample, but requires an attachment of a filter to the source. Latrines on the water-flushing system, a novelty not much appreciated, hence neglected; there is a certain amount of clogging and the smell is decidedly offensive. Playground ample, but a few shade trees are required. The neighbourhood of the school is in a very insanitary condition. Total strength of the school 186, boys 141 and girls 51. On day of inspection 93 were present and 58 absent. The boys were of the Sudra caste. The following abnormalities detected: pediculi in the hair of the head 50, enlarged tonsils 84, adenoids 24, itch on the hands and body 12, enlargement of the spleen 1, suspicious marks of

leprosy on the face 2, pigeon-breasted 12, bad teeth 15, squint 2, and granular lids 5. Nearly all the boys had enlarged tonsils, a very large proportion. The number of cases of enlarged spleen was inexplicably small, as the neighbourhood is malarious. Of course it is not known what the large number of absentees (58) were suffering from.

15. *Purasawalkam*.—Inspected on the 24th and 25th February by me and my assistant. The site and surroundings good. Size and arrangement of rooms, lighting and ventilation excellent. Furniture adequate for the children. Water-supply from a tap, but without a filter. Latrines clean. Playground small for the number of boys. Total strength of the school 237, boys 234 and girls 3. On days of inspection 171 boys were present and 63 absent. The boys nearly all belonged to the Pariah caste. The following abnormalities noted: pediculi in the hair of the head 97, enlarged tonsils 141, adenoids 53, myopia 5, itch on the hands and body 45, enlargement of the spleen 26 or 15.2 per cent, suspicious marks of leprosy on the face 10, pigeon-breasted 12, bad teeth 30, squint 1, stammerer 1, otorrhœa 1, and granular lids 15. As usual most of the boys suffered from enlarged tonsils, and the percentage of enlarged spleens was pronounced, amounting to 15.2.

16. *Mandavalli*.—This school is situated in Mylapore and was inspected by my assistant on the 26th and 28th February. Site and surroundings good. The size and arrangements of the rooms, the lighting and ventilation satisfactory. Furniture adequate. Water-supply from a tap, unfiltered. Latrines clean. Playground sufficient. Total strength of the school 210, boys 203 and girls 7. On the days of inspection 124 boys were present and 78 absent. The boys belonged to the Śudra caste. The following abnormalities were met with: pediculi in the hair of the head 76, enlarged tonsils 101, adenoids 26, myopia 2, itch on hands and body 20, enlargement of the spleen 17 or 13.71 per cent, suspicious marks of leprosy on the face 5, pigeon-breasted 7, bad teeth 20, stammerers 2, and granular lids 20. The boys suffering from enlargement of the spleen made up 13.71 per cent of the lot examined; this is a high percentage for the neighbourhood, which a few years ago was more or less malaria-free.

17. *Thousand Lights*.—Inspected on the 29th February by me and my assistant. Site and surroundings unsatisfactory at present, but may be considerably improved by the filling up of a very dirty tank abutting on the playground and the removal of an incinerator close to the windows of the school. Size and arrangement of rooms good; the flooring of Cuddapah slabs is not well laid and the roof is said to leak. Lighting and ventilation good. Furniture suitable. Water-supply ample, but a separate tap is required for drinking purposes and that fitted with a filter. Latrines clean. Playground not levelled at present; the prickly-pears along the fence should be removed. This school has been but recently built and occupied. Total strength of the school 143, boys 106 and girls 37. On the day of inspection 60 boys were present and 46 absent. The boys consisted mostly of the Pariah caste with a few Muhammadans. The following abnormalities were noted: pediculi in the hair of the head 30, enlarged tonsils 47, adenoids 27, myopia 1, itch on the hands and body 2, enlargement of the spleen 12 or 20 per cent, suspicious marks of leprosy on the face 3, pigeon-breasted 2, bad teeth 4, squint 1, stammerer 1, granular lids 11, and leprosy 1. The number of absentees was large. The percentage of enlargement of the spleen was marked, amounting to 20 per cent. A single case of unmistakable leprosy was detected.

18. *General remarks*—(1) *School buildings*.—The site and surroundings taken as a whole are suitable and convenient. In some instances, however, exceptions are to be taken, for instance Koyatope, a public latrine and a conservancy cart depot are too adjacent to the school to be healthy; Perimet, the site is too cramped; Chetput, the waste water from the adjoining dhobykhana runs in a drain close to the school building and a public latrine is at times too odorous to be pleasant; Nungumbakam, the burning ground of the village may with advantage be removed further away. The size and arrangement of the rooms are satisfactory and call for no adverse remarks. The lighting and ventilation are good, except in two schools, viz., Periamet, where the cramped space in which the school is located does not admit of free ventilation, and Chetput where the roof of the building is too low and the windows small. Furniture

suitable and adequate for the class of children frequenting these schools. Water-supply is from taps conveying Red Hills water, no filters are attached. What is required is the attachment of a Pasteur or Berkefeld filter to the taps, the pressure of the water in the pipes ought to be sufficient to give an ample flow of filtered water. The headmaster should see to the cleaning of the filter candles every morning before school hours. It is true that the children drink unfiltered water at their homes, but this should not be a reason for denying them a purer supply while at school. Latrines on the whole were satisfactory and clean, indeed, at times suspiciously clean; information of the inspection a few hours previously gave some of the more active headmasters ample time to have these places more than usually scrubbed and cleaned. The boys are supposed to micturate in the urinals, but I suspect when not watched they follow their usual custom of passing the urine wherever they wish, and this act being considered venial is of course condoned with. Playgrounds were small, but adequate as a rule, for the amusements of Indian children; some of the grounds would be improved by the planting of fast-growing trees to afford some shade.

(2) *Schoolmasters*.—They should dress in cleaner and tidier clothing, as an example, if nothing more, to the children; on several occasions the clothes of these men were very dirty. They could, with advantage, garbed in cleaner and tidier raiment, impart the tenets of ordinary cleanliness to their pupils.

(3) *Schoolboys*.—The girls were not examined for reasons set forth in the beginning of this report. The boys examined numbered 1,201 and were aged from 5 to 14 years, the average age being about 12 years.

The following comments are called for with reference to the unhealthy conditions noted among them during our inspection:—

(a) *Pediculi in the hair of the head or head lice*.—These parasites flourished among half of the boys; to be more exact 614 out of 1,201, or 51.15 per cent harboured these insects. Their presence apparently caused no great inconvenience, and as the conveyance of no disease of grave importance has been so far attributed to these lice, no unusual steps are advocated for their removal. However, to inculcate cleanliness, steps might be taken by the headmasters to instruct those infested with these pests to carry out the following procedure: soak a cloth, preferably a towel, with a mixture of 5 per cent solution of carbolic acid eight ounces and turpentine one ounce. Leave this wet cloth on the head, if hair is long, it should be wrapped up in the cloth for half an hour. Then wash the head with soapnuts or soap and water and anoint the hair with coconut oil. A better plan would be for the headmaster himself to see this process carried out in his presence, say once a week. No body lice were found, the reason being the children had no woollen clothing to afford a suitable habitation and abiding place for the peregrinations of the lice from the cover of the head to the nakedness of the body; and moreover, nearly all the children when they leave school discard the little they had on and revert to their usual unclothed condition.

(b) *Enlarged tonsils*.—A very large percentage, 75.60 per cent, suffered from enlargement of the tonsils; in some cases the enlargement was slight, but in fully half the number so affected the glands were very much hypertrophied. The tonsils, it is true, are as a rule, enlarged to some extent in nearly all children, but I did not expect to find the very high percentage of unusually enlarged ones in the course of our inspection. It is difficult to adduce the real cause for this abnormal condition; it is presumed that the unhealthy, ill-ventilated and evil-smelling state of the dwelling houses and surroundings of these poor children might be the reason for the undue irritation, inflammation and consequent enlargement of the tonsils. Many diseases are supposed to gain entrance into the human body by means of or through the tonsils, for instance, diphtheria, tuberculosis of the lungs, etc. The remedy for lessening the affection of these glands would be the betterment of the dwellings of the poor, an Augean task!

(c) *Adenoids*.—On the other hand adenoids were noted in 314 cases or 26.14 per cent of the boys examined. This affection is closely associated with enlargement of the tonsils and their presence gives rise to deafness, impediment of speech, dullness,

stupidity and tendency to catching colds frequently. The cause of the hypertrophy of these lymphoid tissues of the back of the nose is closely bound up with the same causal factors as those giving rise to enlarged tonsils. What causes would remedy one, would similarly affect the other; in other words the improvement in sanitation of the dwellings of the poor.

(d) *Myopia*.—I was surprised to discover so few cases of short-sight, 33 cases or 2.74 per cent. This defect is more common among the highly educated class of Indians. The vast majority of the boys examined came from the Sudra or less literate class.

(e) *Itch on the hands and body*.—This skin affection was not so widespread as I expected, 207 or 17.23 per cent, were discovered. The cause of this itch is undetermined; it resembles scabies but the cause is not the itch mite (*sarcoptes*) but possibly a bacterium of the diplococcus type. Usual cleanliness and the use of soap and water would remove and prevent the complaint, but we can hardly expect the Indian poor to undertake in an appreciative mood the routine use of soap and water. So far as at present known, no serious disease emanates from the existence of this skin eruption.

(f) *Enlargement of the spleen*.—In certain schools located in malarious places the number of cases with enlarged spleen was marked; to take the schools in a graduated series of intensity of splenic enlargement: (1) Periamet 21.15 per cent, (2) Thousand Lights 20 per cent, (3) Purasawalkam 15.2 per cent, (4) Chintadripet 15.1 per cent, (5) Sanjivirayanpet 13.86 per cent, (6) Mandavalli 13.71 per cent, (7) Nungumbakam 10.56 per cent, (8) Chetput 9.35 per cent, (9) Malayappan street 7.8 per cent, (10) Koyatope 1.07 per cent and Vallabha Agraharam 0 per cent. The total number was 135 cases or 11.24 per cent. Of course a large number of boys (over 500) was absent, some of these were probably down with the active manifestations of malaria, that is, fever, so a true index is not available of the real malarial infection of the whole school population of these elementary educational institutions. None of the boys with spleen enlargement examined were actually suffering from malarial fever at the time of our inspection, but when questioned admitted to having had fever recently. Children often have malarial fever present without showing any inconvenience and would be passed on superficial examination as being in a healthy condition: the signs of the active disease are, so to speak, masked. It is generally admitted that children are the most common reservoirs of malarial fever, and as they do not in some cases manifest any signs of being ill, they are consequently not treated for the disease and allow the malarial parasites to thrive in their bodies and supply the mosquitoes with requisite material to be spread among the surrounding population. Hence it is very essential that children should be very carefully examined and treated at once if found to harbour the parasites, otherwise they are a menace to the general population. Failing regular medical treatment by trained medical men and as a makeshift, quinine might be administered by the headmasters themselves. An agreeable mixture, as far as this bitter alkaloid can be made agreeable, would be the following: Quinetum 5 grains, dilute sulphuric acid 1 dram, syrup of limes 1 ounce, and water 2 ounces. This would make one dose for a child aged 12 years, to be given every day after the midday meal. Those children taking this draft might be given as a reward some Indian sweet. A little coaxing in this manner would render the remedy popular. The cruder form of the Cinchona bark is selected as it is less nauseating and very much more effectual in the cure of the disease. The treatment advocated should be carried out for a fortnight or more, depending on the size of the spleen and the season of the year, whether malarial or not. This is not the place nor the occasion to elaborate preventive measures for prophylaxis against malaria.

(g) *Suspicious marks of leprosy on the face*.—One of the main reasons that actuated me in accepting the supervision of the medical examination of the school children was to ascertain the prevalence of leprosy among the young population of Madras. Leprosy is very common among all classes of Indian patients attending the Royapetta hospital for treatment, not necessarily for leprosy; but the majority of these cases are adults, and I wished also to be acquainted with the number to be detected among the young. Out of the 1,201 boys examined, I found very suspicious marks of leprosy on the face in 71 cases, that is, in 5.91 per cent or roughly speaking

in 6 per cent. In addition to the boys carrying these suspicious stigmata of the disease, there were 4 cases or 0.33 per cent of unmistakable leprosy. The suspicious spots I allude to are pale patches with a smooth surface usually located on the cheeks. They resemble, in a way, the very common and harmless skin affection called technically *tinea versicolor*, but they differ in several essential points. The patches are similar to the non-pigmented areas found in anæsthetic leprosy. I would, however, still hold the opinion of the identity of the affection with leprosy *sub judice*, pending further experiments and observations I am carrying out in the Royapetta hospital. The infection of leprosy is said to enter the system through the nasal mucous membrane and thence to spread to other parts of the body. The nasal mucous membrane of several of the school children was unhealthy; the predominance of adenoids in the posterior portion of the nose and even the far more frequent involvement of the tonsils, organs closely associated with adenoids, lends some colour of support to these spots being due to infection derived from the nasal mucous membrane. The lymphatics from these above assumed areas of infection course along the cheeks where these spots are noticed, thus adding more material to the credence of the identity of this skin affection with leprosy. This disease is common among the Indians and Eurasians of Madras and some steps should be taken to bring about a diminution in its prevalence. It is not for me to suggest the necessary steps towards the consummation of this object. All the cases, both real and suspicious, I allude to as being found among the school boys was of the anæsthetic variety.

(h) *Pigeon-breast*.—The children were on the whole fairly well developed, taking the Indian standard into consideration, and bodily deformities were very few and far between. An ill-developed chest commonly called pigeon-breasted was noted in 83 cases or 6.99 per cent.

(i) *Bad teeth*.—By this is meant decayed or carious teeth of the permanent set, from a few to half a dozen in number. The boys so affected numbered 142 or 11.82 per cent. There was no pyorrhœa alveolaris to draw any attention to; this condition is on the other hand very common in the adult Indian population. Deformed teeth due to congenital syphilis were conspicuous by their absence; syphilis, I know, is very common among adult Indians, of both sexes, but their progeny, as a rule, either die in their infancy or on the other hand grow up healthy.

(j) *Granular lids*.—Only 75 or 6.20 per cent of the number of the boys examined suffered from this affection of the eyelids. The disease is more prevalent, as far as Madras city is concerned, among Brahmins. The majority of the boys being non-Brahmins, would account for the infrequency of the malady in the schools.

(k) *Infectious or contagious diseases*.—Excluding those already noted, small-pox, measles, diphtheria, typhoid, etc., were not discovered. Some boys showed marks of a very recent attack of small-pox, others were absent and said to be suffering from this disease. The absentees were away on the plea of some illness or other. There were some cases of tuberculosis of the lungs, but as no instrumental examination was carried out, no decision can be arrived at concerning the actual presence of this disease; some of the boys looked as if they were victims of this common pest of humanity.

19. *Suggestions*.—In conclusion the following suggestions are made, in addition to those already given under the several headings in my general remarks, in case the medical inspection of schools as a whole is to be placed on a permanent basis. The medical examinations should be more thorough, for instance, the height, weight and chest measurement should be taken: the chest examined by means of a stethoscope for indications of lung or heart disease: the private parts examined, for presence of hernia, hydrocele, buboes, urethral discharges, undescended testes, etc. The girls too should be examined by a lady doctor or a qualified nurse working under the Medical Inspector of Schools. The medical inspections should be carried out quarterly.

Madras, 27th March 1916.

C. DONEVAN, Lieut-Col., I.M.S.,
Surgeon, 4th District, Madras.

III

*Endorsement of the Surgeon-General with the Government of Madras,
No. 100 T./68, dated 17th May 1916.*

Forwarded.

This is an extremely interesting and valuable report.

2. The most striking fact that emerges from this investigation is the apparent common prevalence of leprosy among the boys; 6 per cent of suspicious cases and 0.33 per cent of unmistakable leprosy—a very serious state of affairs which calls for further investigation.

3. Other common diseases are the presence of lice in the hair of the head; enlarged tonsils and adenoids; itch and splenic enlargement.

4. The remarks on the advantage of cleanliness of the masters and the good influence of the example and teaching of the schoolmaster of the Chetput school should be laid to heart by those responsible.

5. It is quite evident that inspection of school children is valuable and should be carried out regularly, but it is also apparent that for a proper examination of the children a full-time medical man is required, who will have to be adequately paid.

6. Colonel Donovan points out that he had not time to make a stethoscopic examination of the chest and that in consequence the prevalence of phthisis was not ascertained. The report, without this, must be considered incomplete.

Colonel Donovan has informed me that over 2,000 children will have to be examined. This means a very long and laborious examination, but it is one that ought to be carried out by an experienced Indian Medical Service Officer.

I would suggest then that Colonel Donovan be asked to do this and be allowed an honorarium of Rs. 750 therefor.

7. A competent lady doctor or nurse should likewise be placed at his disposal as assistant, to make possible and easy the examination of the girl scholars.

8. The attendance at the schools seems bad, as nearly one-third of the boys were absent.

W. B. BANNERMAN, C.S.I., K.H.P., M.D., D.S.C.,
Surgn.-Genl., I.M.S.,
Surgeon-General with the Govt. of Madras.

To the Secretary to Government, Educational Department
(through the Director of Public Instruction, Madras).

IV

*Endorsement of the Director of Public Instruction, N.R.C. No. 6660-14,
dated 8th June 1916.*

Submitted to Government with reference to paragraph 2 of G.O. No. 22, Educational, dated the 7th January 1916.

2. While the report is very valuable it is incomplete as pointed out by the Surgeon-General and this was necessarily the case owing to the limited amount of time at Colonel Donovan's disposal. To do the work thoroughly, which is very desirable, full-time officers, including a lady doctor for Madras city alone, would be required, and it would be desirable that they should have powers to take the necessary action regarding infectious and contagious diseases. Similar inspection is equally desirable in the mufassal and also the provision for elementary schools of a system of remedial measures such as obtains in the United Kingdom.

3. The question of instituting the medical supervision of schools on a thorough scale is largely a financial one and under present circumstances little can be done. I hope, however, that as soon as normal financial conditions are restored, the work may

be put on a regular footing. For the present, what is suggested by the Surgeon-General in paragraphs 6 and 7 of his endorsement, together with the investigation referred in paragraph 2, seems all that is possible.

4. As regards the poor attendance of pupils, I shall ask the Inspector to enquire into its causes.

J. H. STONE,
Director of Public Instruction.

Order—No. 945, Home (Education), dated 7th September 1916.

The Government agree with the Surgeon-General and the Director of Public Instruction that the report of Lieutenant-Colonel C. Donovan, I.M.S., on the medical inspection of the elementary schools under the Corporation of Madras, is a very interesting and valuable one.

2. As pointed out, however, by the Surgeon-General, the report is incomplete, as no stethoscopic examination of the chests of the boys was made and the girls were altogether excluded from inspection. The Government consider it essential that the medical examination of the pupils in all the twelve schools should be completed. They accordingly accept the suggestions of the Surgeon-General in paragraphs 6 and 7 of his endorsement No. 100-T./68, dated the 17th May 1916, but consider that it will be sufficient to grant Lieutenant-Colonel Donovan an honorarium of Rs. 500 for the further work which he has to do. The Surgeon-General should select a competent European lady doctor to assist Lieutenant-Colonel Donovan in the examination of the girl pupils and report the remuneration that should, in his opinion, be paid to her.

3. The Director of Public Instruction is requested to submit a reappropriation statement to meet the extra expenditure involved.

4. The Director of Public Instruction is also requested to make arrangements to secure a full attendance of the pupils on the days selected for examination and to settle further details in direct communication with Lieutenant-Colonel Donovan.

5. Lieutenant-Colonel Donovan's further report should be submitted to Government through the Surgeon-General and the Director of Public Instruction.

6. The Government concur with the Director of Public Instruction in thinking that the question of instituting the medical supervision of schools generally on a thorough scale should be deferred till normal financial conditions are restored.

(True Extract.)

P. RAJAGOPALA ACHARIYAR,
Secretary to Government.

To the Director of Public Instruction.
„ Accountant-General.
„ Local and Municipal Department.
„ Financial Department.

NOTES CONNECTED WITH G.O. No. 945, HOME (EDUCATION), DATED
THE 7TH SEPTEMBER 1916.[SUBJECT.—*Report on the medical inspection of Corporation elementary schools.*]*Previous papers :*

G.O. 316, Educational, 26th May 1911.	G.O. 1104, Educational, 22nd September 1914.
" 70 " 29th January 1913.	" 1222 " 2nd November "
" 394 " 1st May "	" 1330 " 26th "
" 632 " 7th July "	" 123 A-24 " 9th February 1915.
" 1111 " 26th November "	" 413 " 20th April "
" 1169 " 9th December "	" 498 " 8th May "
" 238-39 " 26th February 1914.	" 1423 " 14th December "
" 672 " 6th June "	" 22 " 7th January 1916.

From the Director of Public Instruction, No. 6660-14, dated the 8th June 1916.

In their order No. 1104, Educational, dated the 22nd September 1914, the Government sanctioned the medical inspection of the elementary schools (then seven in number) opened by the Corporation of Madras and of the pupils in them, and in their order No. 22, Educational, dated the 7th January 1916, they placed Lieut.-Col. Donovan, I.M.S., on deputation for the purpose. Lieut.-Col. Donovan's report (on the inspection of 11 out of 12 schools) has been received and is submitted for perusal, as also the comments thereon of the Surgeon-General and the Director of Public Instruction. The medical inspection of the pupils was defective in that girls were not at all examined, and further the examination of boys was incomplete in that no examination of the private parts of the boys was made nor was the stethoscope used for the detection of lung or heart disease. Nevertheless Lieut.-Col. Donovan's report is most interesting and it furnishes much valuable information.

2. The Surgeon-General suggests that the stethoscopic examination of the chest should now be taken up and proceeded with in regard to the boys, also that a competent lady doctor (or nurse) should be provided to make possible the examination of the girls. And the Director of Public Instruction supports the proposals. Please see in this connection paragraph 5 of Lieut.-Col. Donovan's report, where he points out that, "besides the want of time", he "considered it advisable not to make too marked a show of medical examination, as the impression had got about that the inspecting doctors were to vaccinate the children and carry on other nefarious practices attributed to the medical profession in general by the ignorant public". Again, in regard to the girls, please see paragraph 3 (2) of the report where Lieut.-Col. Donovan mentions that, in addition to the circumstance that he had no nurse or female examiner with him, "it was also considered expedient not to include the girls in the trial inspection, for the possible likelihood of the parents of the girls raising objection". I, however, think that it would be wise to *complete* the inspection of the Madras Corporation schools. The inspection was started as an experiment, after a great deal of public discussion, and it would, I think, be an advantage to have the results of a *complete* inspection. I would therefore suggest that Lieut.-Col. Donovan should *finish* the inspection of the boys and the Surgeon-General may be asked to spare the services of a suitable lady doctor to help in inspecting the girls.

3. There can be no doubt that a periodical inspection of schools and pupils is a vital need. Please see in this connection paragraph 19 of the report, where Lieut.-Col. Donovan suggests that medical inspections, if made permanent, should be carried out

quarterly. The Director of Public Instruction, however, rightly points out (in paragraph 3 of his endorsement) that the question of instituting the medical supervision of schools on a thorough scale is largely a financial one and that under present circumstances little can be done. As soon as normal financial conditions are restored, the work may, in Mr. Stone's opinion, be put on a regular footing. This opinion may, I think, be concurred in, and the Director of Public Instruction may be asked to work out a comprehensive scheme for the medical inspection of all public schools and of the pupils in them as soon as normal financial conditions return.

4. The report discloses a number of defects in regard to which action could at once be taken, for example—

- (i) the large number of absentees, nearly a third of the total strength;
- (ii) the unsatisfactory nature of some of the sites, the existence, in the neighbourhood of some, of filthy drains, burial and burning grounds, wet cultivation, dirty and ill-smelling latrines, dhobykhana, municipal conservancy cart depot, incinerator, etc.;
- (iii) the inadequacy in several cases of play grounds and ventilation;
- (iv) the provision of unfiltered water for drinking purposes in almost all cases;
- (v) the generally dirty and meagre clothing of both teachers and taught; and
- (vi) the presence of a few lepers.

These are matters which we may leave to the Director of Public Instruction and the Corporation of Madras to deal with.

P. RAJAGOPALA ACHARIYAR—15-7-16.

I agree: and hope that, whenever possible, this experimental inspection may be completed. When the report is ready for consideration, the points in the last paragraph of the Secretary's note will also be dealt with.

P[ENTLAND]—21-7-16.

I note with diffidence on a subject which is outside the scope of Public (Medical), but I am much impressed by the value of Lieut.-Col. Donovan's report and by the importance of providing for the thorough medical examination of school children in future. It is clear that a male doctor cannot examine school-girls thoroughly, especially in this country, but a lady doctor could examine both sexes between ages of 5 and 14. Moreover, it would at present be impossible to recruit a male doctor but it might be possible to get a woman. Would it not be a practicable plan to add to the Educational Provincial cadre a post of Medical Inspector of Schools and look about at once for a suitable qualified lady doctor to fill it? It might be practicable to get quite a good class of Medical Inspector for Rs. 400—600 a month or even less. I do not see any need to employ "an experienced I.M.S. officer", as the Surgeon-General proposes; and none may be available for an indefinite period. If a lady doctor were secured, she could be required to pass the colloquial test in the vernacular, or, if she had been out here as a missionary or otherwise, might already know it, and would rapidly become experienced in this special line of work. She might be allowed private practice, might be required to give hygiene lectures, or might preach and enforce cleanliness, the lack of which is the cause of so much of the disease prevalent among the people of this country. If there were such a Medical Inspector, and she reported the schoolmasters in any school to be filthy and in filthy clothes, the Educational Department might take note of the fact in the matter of grants and it might become pecuniarily worth while to be clean. There is no inherent necessity for lice and itch. The schools might thus become a centre of sanitary teaching which might spread to the homes. In any case a lady medical inspector for school-children would be rather a valuable reinforcement, I think, to our slender medical force. The creation of such an appointment is, I believe, within the powers of the Local Government. My Honourable Colleague in charge of Finance would, I am sure, agree that, in the light of Colonel Donovan's report, it is "imperatively urgent." If budget provision is made this autumn, it might be brought into existence from 1st April 1917.

A. G. C[ARDEW]—22-7-16.

I will not object on financial grounds to the creation of the post of Medical Inspector of Schools on a pay of Rs. 400 to Rs. 600 a month, but I doubt very much whether it would be easy to get a satisfactory lady doctor to fill the appointment. We

have always had considerable difficulty in getting a suitable incumbent for the post of Superintendent of the Caste and Gosha Hospital and I anticipate that the difficulty might be still greater in the case of the appointment proposed by Sir Alexander Cardew. Moreover, I am by no means sure that inspection by a lady doctor would be acceptable in the case of all boys between the ages of 5 and 14 and I suggest inquiry on that subject before agreeing to proceed further with the proposal.

2. Meanwhile, I think we might accept the Surgeon-General's proposal that Colonel Donovan should finish his inspection of the boys by examining for phthisis those already examined and by examining completely as many as possible of the large number who were absent at the time of the examination. The Korukupet school should also be inspected.

3. A male doctor could not make a complete inspection of girls and I would entrust the inspection of the girls to one or more of the lady doctors in Madras, a suitable fee being paid.

4. If it could be managed, an inspection at their homes of the children absent on the day of the school inspection would be valuable. Moreover, since this inspection of the Madras schools has been instituted, as I understand it, to obtain information which will be of general application, is it not desirable that the inspection should be extended to a few of the schools attended by children of Brahmans and other well-to-do classes?

H. A. S[UART]—24-7-16.

I agree. I think it will be necessary to employ either a male doctor with a lady assistant or a lady doctor with a male assistant. Neither a male doctor nor a female doctor singly will be able to examine fully children of both sexes. I think Dr. Mrs. Simonsen will be available if a lady doctor is to be appointed.

P. S. S[IVASWAMI AYYAR]—28-7-16.

Please see the notes of the Honourable Members.

P. RAJAGOPALA ACHARIYAR—29-7-16.

If I may say so, the view of the Educational Department, with which I agree, is that the information at present before us does not so far provide adequate material to justify the next step—important as it is—proposed by Sir Alexander Cardew. To begin with, the scope of this experimental inspection as first proposed was regretfully but deliberately limited in view of the war stringency in regard to both money and staff. Otherwise other varieties of schools, as suggested by Sir Harold Stuart, would have been included. Next, even in this limited experiment, Lieut.-Col. Donovan, as is stated in his report, has left portions of the work still to be done. If my colleagues will be good enough to assent in the first place to the completion of this experiment, as indicated in the note of the Surgeon-General, dated 17th May 1916, this will enable us in the first place to draw up provisional instructions for such inspections which are the first condition of useful comparative statistics for different classes of schools, and one of the chief purposes in view in the institution of this experiment.

P[ENTLAND]—6-8-16.

I readily agree to Lieut.-Col. Donovan's examination being completed, as suggested by the Surgeon-General, and to a fee of Rs. 750 being sanctioned therefor.

2. This, however, leaves the case of the girls unprovided for, and I would therefore urge that the Surgeon-General should be consulted as to whether Mrs. Simonsen or some other qualified lady practitioner (not a nurse) should not be deputed to examine the girls or whether a lady medical inspector should be engaged, say on a three-year engagement, the latter appearing to me the better course if a suitable woman can be found.

A. G. C[ARDEW]—7-8-16.

I do not desire to go faster than the Educational Department wishes—though I am willing to agree to an attempt being made to secure the examination of girls.

H. A. S[UART]—8-8-16.

be sufficient to grant Lt. Col. Donovan an honorarium of Rs. 500 for the further work which he has to do. The Surgeon-General should select a competent European lady doctor to assist Lt. Col. Donovan in the examination of the girl pupils and report the remuneration that should, in his opinion, be paid to her.

3. The D.P.I. is requested to submit a reappropriation statement to meet the extra expenditure involved.

4. The D.P.I. is also requested to make arrangements to secure a full attendance of the pupils on the days selected for examination and to settle further details in direct communication with Lt. Col. Donovan.

5. Lt. Col. Donovan's further report should be submitted to Government through the Surgeon-General and the D.P.I.

6. The Government concur with the D.P.I. in thinking that the question of instituting the medical supervision of schools generally on a thorough scale should be deferred till normal financial conditions are restored.

N.Y.
19-8-16.

C.R.
30-8-16.

To
The D.P.I.
" Accountant-General.
" L. & M. Department.
" Financial Department.

NOT FOR E.T.

Read—the following papers:—

I
Report on the Medical Inspection of the elementary schools under the Corporation of Madras.

(M) In compliance with G.O. No. 22, Educational, dated the 7th January 1916, the work of supervising the medical inspection of the elementary schools under the Corporation of Madras was entrusted to me, and to help me in this work Mr. C. Ramamurti, L.M. & S., was deputed by the Surgeon-General with the Government of Madras.

2. There are nine schools in the Triplicane range—

- | | |
|-------------------------|----------------------|
| (1) Vallabha Agraharam, | (6) Mandavalli, |
| (2) Purasawalkam, | (7) Koyatope, |
| (3) Chetput, | (8) Nungumbakam, |
| (4) Periamet, | (9) Thousand Lights, |
| (5) Chintadripet, | |

and the following three schools in the Georgetown range—

- | | |
|------------------------|----------------|
| (1) Sanjivirayanpet, | (3) Korukupet. |
| (2) Malayappan street, | |

After the preliminary correspondence with the Director of Public Instruction, the arrangement of the plan of the inspection and the procuring of the necessary forms, the examination of the schools was commenced on the 9th and finished on the 29th February 1916. Eleven of these schools were inspected by me and my assistant; we had not in the time limited to us, i.e., a month, to include the last of the number, Korukupet, in our inspection.

3. The procedure adopted was, to give notice to the headmaster in the morning, a couple of hours before our inspection, of our intention to examine the institution. The first 50 or 60 boys were examined by me with the help of my assistant, and he then completed the examination of the remainder. In this way seven schools were examined conjointly by us and the remaining four were undertaken by my assistant alone. The boys only were examined, the girls were left out, as we had no nurse or female examiner with us.

It was also considered expedient not to include the girls in our trial inspection, for the possible likelihood of the parents of the girls raising some objection.

4. The following method was adopted in the examination of the boys:—

The name, age, caste and occupation of the parents were noted, the residence too being taken into consideration. The clothing, if clean and sufficient. Nutrition, if well-nourished or otherwise. State of the skin, if healthy or covered with rash, etc. Head and body, if clean or unhealthy, the presence of lice, baldness, etc. Teeth, if sound or decayed, the presence of pyorrhoea alveolaris. Nose and sense of smell, defects, polypi, nasal catarrh, the appreciation of the odour of onions, camphor and thymol (omom). Throat and voice, congested, enlarged tonsils, adenoids, quality of the voice, stammerer and any impediment of speech. Eye and vision, any defects, granular lids, the use of Snellen's test types in English or Tamil characters for the presence of defective eyesight. Ear and hearing, any discharge from the ear, the presence of deafness. Nervous system and mental condition, any nervous lesions, if dull or stupid, highly strung or unusually smart. Enlarged spleen or liver, for indications of malaria, kala-azar or biliary cirrhosis of the liver. Deformities, as club foot, curvature of the spine or atrophied limbs after infantile paralysis. Infectious or contagious diseases, small-pox, measles, leprosy, etc. General remarks on any conditions not included in the above category.

5. It will be noted that a very general survey was taken of the condition of the boys. A fuller examination was, however, considered desirable, but time pressed and we found that the period allotted to us was inadequate to undertake this. For instance, we made no examination of the private parts of the boys, we did not use the stethoscope for the detection of lung or heart diseases. In excluding these examinations, besides the want of time, we considered it advisable not to make too

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marked a show of medical examination, as the impression had got about that the inspecting doctors were to vaccinate the children and carry on other nefarious practices attributed to the medical profession in general by the ignorant public.

6. The total number of children in the eleven schools examined as shown on the books was 2,027, made up of 1,717 boys and 310 girls: of this number, 1,201 boys were inspected by me and my assistant, 410 by me and 791 by my assistant. The boys absent numbered 516. Details are given further on in the remarks on the individual schools. As roughly speaking nearly a third of the boys were absent, the result of our examination does not afford a true index of the health of the children of the Corporation schools as a whole. Several of the boys absent were said to be in poor health, constantly ill or actually ill with small-pox, colds or fever. In drawing a general conclusion on the average state of health of this school population, this disturbing factor of absenteeism must be kept in mind. The ages of the boys varied from 5 to 14 years, the average age being about 12 years. The castes represented were Sudras in the large majority, then Pariahs and Brahmins in decreasing ratio; there were not more than half a dozen Muhammadans. After the examination of the children, the inspection of the school buildings and surroundings was made.

7. Details of the inspection of the several schools are given here.

Vallabha Agraharam situated in the midst of Triplicane and was inspected on the 9th February by me and my assistant. Site and surroundings satisfactory for the neighbourhood; the drains in the lane by the school were very filthy at the time of my inspection, I should say in a most squalid and miry condition after a heavy fall of rain. There is an old and apparently disused Muhammadan burial-ground in the immediate vicinity. Size and arrangement of rooms good. Lighting and ventilation sufficient. Furniture suitable. Water-supply from a tap, unfiltered; some device may be attached to the tap to filter the drinking water. Latrine clean at time of inspection. Playground small, but a larger allotment of land could hardly be expected without the outlay of much expense in a crowded area like Triplicane.

Total strength of the school 180, made up of 156 boys and 24 girls. There were 108 boys present on the day of the inspection and 48 were absent. The castes were Brahmins and Sudras. The following abnormalities were noted: pediculi in the hair of the head 34, enlarged tonsils 55, adenoids 25, myopia 12, itch on the hands and body 18, enlargement of spleen none, suspicious marks of leprosy on the face 7, pigeon-breasted 14, bad teeth 3, squint 1, stammerer 1, granular lids 1, and leprosy 1.

On the whole the boys were a healthy lot for the castes represented. Pediculi in the head, enlarged tonsils and adenoids were common. There was one case of genuine leprosy and seven of suspicious marks on the face of this disease. This skin affection is the subject-matter for a special paragraph in my concluding remarks further on in this report. The clothing was adequate for the climate, but dirty as a rule and of a very meagre character in some cases. The schoolmasters themselves might very well set an example in the cleanliness and quantity of their own clothing. An unusual feature was the absence of enlargement of the spleen of the boys in an area where malaria is common.

8. *Nungumbakam*.—This school is situated on the outskirts of the village of the same name and was inspected by both of us on the 11th and 12th February. The site and surroundings are good, but may be considerably improved by the removal of the wet cultivation in its immediate vicinity. A burning ground near by might also with very great advantage, both to the people of the village and the people living in the Nungumbakam High Road, be shifted a quarter of a mile further south of the tank bund. The arrangement of the rooms, their lighting and ventilation, are satisfactory. Furniture suitable for the children. The drinking water from the tap might be filtered. The latrines clean on the day of inspection, at other times a disinfectant would be useful. Playground small but adequate, it requires levelling and the surface sanded. Total strength of the school 219, boys 179 and girls 40. There were 142 boys present on the days of the inspection and 37 absent. The castes represented were Sudras and Brahmins. Abnormal affections noted were: pediculi in the hair of the head 77, enlarged tonsils 102, adenoids 30, myopia 3, itch on the hands and body 23, enlargement of the spleen 15 or 10.56 per cent, deaf 2,

mentally defective 3, suspicious marks of leprosy on the face 11, defective smell 1, pigeon-breasted 10, bad teeth 14, squint 3, stammerer 1, otorrhea 1 and granular lids 1. The clothing as a rule was dirty but adequate for the wants of the boys. The spleen was enlarged in 10.56 per cent of the boys, an index of fairly common malarial infection. Nungumbakam up to a couple of years ago was comparatively free from malaria.

9. *Sanjivirayanpet.*—Inspected by my assistant on the 14th and 16th February. The site and surroundings satisfactory, nothing very unusual calling for attention. Size and arrangement of rooms satisfactory, their lighting and ventilation excellent. Furniture adequate and answering requirements. Water-supply from a tap, a filter might with advantage and without undue expense be fitted to the present source of drinking water. The latrines clean but are placed on a higher level than the playground and occasionally the washings overflow and pollute the ground around. Playground small for the number of children attending the school, it also requires levelling. Total strength of the school 191, boys 183 and girls 8. On the day of inspection 137 boys were present and 46 absent. Sudras represented the castes of the boys. The following abnormalities noted in the condition of the children: pediculi in the hair of the head 85, enlarged tonsils 96, adenoids 23, myopia 2, itch on the hands and body 30, enlargement of the spleen 19 or 13.86 per cent, suspicious marks of leprosy on the face 14, pigeon-breasted 8, bad teeth 8, stammerers 3, granular lids 1, dumb 1, and kala-azar 1. The affections of the throat were common, as also the percentage of the spleen enlargements.

10. *Chetput.*—Inspected on the 15th February by me and my assistant. Site and surroundings fair, it is placed too close to the dhobykhana and a drain carrying away the washings of the clothes is not clean or savoury; in addition, there is a public latrine almost overlooking the school compound and on the day of inspection it was very dirty and illsmelling. Size and arrangements of the rooms good but their lighting and ventilation inadequate, this is due to the low roofing and the small-sized windows. Some of the rooms were overcrowded. Furniture suitable for the purpose. Water-supply from a tap without a filter attachment, and the location of the tap near the latrines is undesirable. Latrines unsatisfactory; the dry system is adopted and is not properly used; no disinfectants in evidence. Playground small and requires levelling. The school is not built on the usual design plan, it requires the roof to be raised to afford more ventilation and light. The windows too might be of more ample proportions. Total strength of the school 214, boys 168 and girls 46. On the day of the inspection 139 boys were present and 29 absent. The following diseases and defects noted: pediculi in the hair of the head 44, enlarged tonsils 104, adenoids 25, myopia 1, itch on the hands and body 14, enlargement of the spleen 13 or 9.35 per cent, suspicious marks of leprosy on the face 9, pigeon-breasted 5, bad teeth 22, squint 1, stammerers 3, and leprosy 2. The boys in this school were cleaner than usual, both with respect to the clothing and the pediculi in the hair of the head; I understand the headmaster strenuously inculcates the principles of cleanliness to his boys, with the satisfactory results noted. There were two cases of unmistakable leprosy in this school.

11. *Periamet.*—Inspected on the 18th February by me and my assistant. Site and surroundings unsatisfactory; the school is placed right on the Poonamalle road and gets all the dust of this much frequented thoroughfare; the space occupied by the building is too cramped. Size and arrangements of the school good; the lighting is good but the ventilation is hampered for want of space. Furniture suitable. Water-supply limited; a separate tap with filter attachment is required for drinking purposes. Latrines satisfactory and clean. Playground very circumscribed and altogether inadequate for the number of children. Total strength of the school 147, boys 95 and girls 52. On the day of inspection 57 boys were present and 38 absent. The boys were nearly all of the Pariah class; very poorly nourished and clothed in very dirty garments. The diseases noted were: pediculi in the hair of the head 17, enlarged tonsils 40, adenoids 12, myopia 3, itch on the hands and body 8, enlargement of the spleen 11 or 21.15 per cent, suspicious marks of leprosy on the face 4, bad teeth 2, and granular lids 4. Notwithstanding the squalid condition of the boys taken as a whole, the presence of lice in the hair of the head were unaccountably few. The number of cases of enlargement of the spleen was high, being 21.15 per cent.

12. *Malayappan street.*—Inspected on the 21st February by my assistant. Site and surroundings are not very satisfactory. Size and arrangement of rooms good. Lighting and ventilation good for the locality, the polluted air of which is unhealthy.

Furniture adequate. Water-supply from a tap, no filter. Latrines, the flushing system employed is good, but it was not in working order on the day of inspection. Playground sufficient. Total strength of the school 115, boys 98 and girls 17. Boys present on the day of inspection 64 and absent 34. Castes made up of Sudras and Pariahs. The diseases noted were: pediculi in the hair of the head 27, enlarged tonsils 50, adenoids 18, myopia 2, itch on the hands and body 15, enlargement of the spleen 5 or 7.8 per cent, suspicious marks of leprosy on the face 2, pigeon-breasted 8, bad teeth 12 and granular lids 2.

13. *Chintadripet*.—Inspected on the 22nd February by me and my assistant. Site and surroundings fairly satisfactory, too near the river Cooum and on a much frequented and dusty road. Size and arrangement of rooms, lighting and ventilation good. Furniture adequate. Water-supply from a tap, unfiltered. Latrines clean and in a satisfactory working condition, the water-flushing system is used. Playground adequate but some fast growing trees are required to afford shade. Total strength of the school 185, boys 154 and girls 31. On day of inspection 106 of the boys were present and 48 absent. The boys belonged to the Sudra caste. The following abnormalities noted: pediculi in the hair of the head 77, enlarged tonsils 88, adenoids 51, myopia 2, itch on the hands and body 20, enlargement of the spleen 16 or 15.1 per cent, suspicious marks of leprosy on the face 4, pigeon-breasted 5, bad teeth 14 and granular lids 15.

14. *Koyatope*.—This school is situated in Komaleswaranpet and was inspected on the 23rd February, by my assistant. Site and surroundings leave much to be desired; a public latrine and a municipal conservancy cart depot are in too close a proximity and the surrounding streets are used as public latrines, at least they had been on the day of inspection. Size and arrangement of rooms, the lighting and ventilation satisfactory. Water-supply from a tap ample, but requires an attachment of a filter to the source. Latrines on the water-flushing system, a novelty not much appreciated, hence neglected; there is a certain amount of clogging and the smell is decidedly offensive. Playground ample, but a few shade trees are required. The neighbourhood of the school is in a very insanitary condition. Total strength of the school 186, boys 141 and girls 51. On day of inspection 93 were present and 58 absent. The boys were of the Sudra caste. The following abnormalities detected: pediculi in the hair of the head 50, enlarged tonsils 84, adenoids 24, itch on the hands and body 12, enlargement of the spleen 1, suspicious marks of leprosy on the face 2, pigeon-breasted 12, bad teeth 15, squint 2, and granular lids 5. Nearly all the boys had enlarged tonsils, a very large proportion. The number of cases of enlarged spleen was inexplicably small, as the neighbourhood is malarious. Of course it is not known what the large number of absentees (58) were suffering from.

15. *Purasawalkam*.—Inspected on the 24th and 25th February by me and my assistant. The site and surroundings good. Size and arrangement of rooms, lighting and ventilation excellent. Furniture adequate for the children. Water-supply from a tap, but without a filter. Latrines clean. Playground small for the number of boys. Total strength of the school 237, boys 234 and girls 3. On days of inspection 171 boys were present and 63 absent. The boys nearly all belonged to the Pariah caste. The following abnormalities noted: pediculi in the hair of the head 97, enlarged tonsils 141, adenoids 53, myopia 5, itch on the hands and body 45, enlargement of the spleen 26 or 15.2 per cent, suspicious marks of leprosy on the face 10, pigeon-breasted 12, bad teeth 30, squint 1, stammerer 1, otorrhoea 1, and granular lids 15. As usual most of the boys suffered from enlarged tonsils, and the percentage of enlarged spleens was pronounced, amounting to 15.2.

16. *Mandavalli*.—This school is situated in Mylapore and was inspected by my assistant on the 26th and 28th February. Site and surroundings good. The size and arrangements of the rooms, the lighting and ventilation satisfactory. Furniture adequate. Water-supply from a tap, unfiltered. Latrines clean. Playground sufficient. Total strength of the school 210, boys 203 and girls 7. On the days of inspection 124 boys were present and 78 absent. The boys belonged to the Sudra caste. The following abnormalities were met with: pediculi in the hair of the head 76, enlarged tonsils 101, adenoids 26, myopia 2, itch on hands and body 20, enlargement of the spleen 17 or 13.71 per cent, suspicious marks of leprosy on the face 5, pigeon-breasted 7, bad teeth 20, stammerers 2, and granular lids 20. The boys suffering from enlargement of the spleen made up 13.71 per cent of the lot examined; this is a high percentage for the neighbourhood, which a few years ago was more or less malaria-free.

17. *Thousand Lights*.—Inspected on the 29th February by me and my assistant. Site and surroundings unsatisfactory at present, but may be considerably improved by the filling up of a very dirty tank abutting on the playground and the removal of an incinerator close to the windows of the school. Size and arrangement of rooms good; the flooring of Cuddapah slabs is not well laid and the roof is said to leak. Lighting and ventilation good. Furniture suitable. Water-supply ample, but a separate tap is required for drinking purposes and that fitted with a filter. Latrines clean. Playground not levelled at present; the prickly-pears along the fence should be removed. This school has been but recently built and occupied. Total strength of the school 143, boys 106 and girls 37. On the day of inspection 60 boys were present and 46 absent. The boys consisted mostly of the Pariah caste with a few Muhammadans. The following abnormalities were noted: pediculi in the hair of the head 30, enlarged tonsils 47, adenoids 27, myopia 1, itch on the hands and body 2, enlargement of the spleen 12 or 20 per cent, suspicious marks of leprosy on the face 3, pigeon-breasted 2, bad teeth 4, squint 1, stammerer 1, granular lids 11, and leprosy 1. The number of absentees was large. The percentage of enlargement of the spleen was marked, amounting to 20 per cent. A single case of unmistakable leprosy was detected.

18. *General remarks*.—(1) *School buildings*.—The site and surroundings taken as a whole are suitable and convenient. In some instances, however, exceptions are to be taken, for instance Koyatope, a public latrine and a conservancy cart depot are too adjacent to the school to be healthy; Perimet, the site is too cramped; Chetput, the waste water from the adjoining dhobykhana runs in a drain close to the school building and a public latrine is at times too odorous to be pleasant; Nungumbakam, the burning ground of the village may with advantage be removed further away. The size and arrangement of the rooms are satisfactory and call for no adverse remarks. The lighting and ventilation are good, except in two schools, viz., Periamet, where the cramped space in which the school is located does not admit of free ventilation, and Chetput where the roof of the building is too low and the windows small. Furniture suitable and adequate for the class of children frequenting these schools. Water-supply is from taps conveying Red Hills water, no filters are attached. What is required is the attachment of a Pasteur or Berkefeld filter to the taps, the pressure of the water in the pipes ought to be sufficient to give an ample flow of filtered water. The headmaster should see to the cleaning of the filter candles every morning before school hours. It is true that the children drink unfiltered water at their homes, but this should not be a reason for denying them a purer supply while at school. Latrines on the whole were satisfactory and clean, indeed, at times suspiciously clean; information of the inspection a few hours previously gave some of the more active headmasters ample time to have these places more than usually scrubbed and cleaned. The boys are supposed to micturate in the urinals, but I suspect when not watched they follow their usual custom of passing the urine wherever they wish, and this act being considered venial is of course condoned with. Playgrounds were small, but adequate as a rule, for the amusements of Indian children; some of the grounds would be improved by the planting of fast-growing trees to afford some shade.

(2) *Schoolmasters*.—They should dress in cleaner and tidier clothing, as an example, if nothing more, to the children; on several occasions the clothes of these men were very dirty. They could, with advantage, garbed in cleaner and tidier raiment, impart the tenets of ordinary cleanliness to their pupils.

(3) *Schoolboys*.—The girls were not examined for reasons set forth in the beginning of this report. The boys examined numbered 1,201 and were aged from 5 to 14 years, the average age being about 12 years.

The following comments are called for with reference to the unhealthy conditions noted among them during our inspection:—

(a) *Pediculi in the hair of the head or head lice*.—These parasites flourished among half of the boys; to be more exact 614 out of 1,201, or 51.15 per cent harboured these insects. Their presence apparently caused no great inconvenience, and as the conveyance of no disease of grave importance has been so far attributed to these lice, no unusual steps are advocated for their removal. However, to inculcate cleanliness, steps might be taken by the headmasters to instruct those infested with these pests to carry out the following procedure: soak a cloth, preferably a towel, with a mixture of 5 per cent solution of carbolic acid eight ounces and turpentine one ounce. Leave this wet cloth on the head, if hair is long, it should be wrapped up in the cloth for half an hour. Then wash the head with soapnuts or soap and

water and anoint the hair with coconut oil. A better plan would be for the headmaster himself to see this process carried out in his presence, say once a week. No body lice were found, the reason being the children had no wollen clothing to afford a suitable habitation and abiding place for the peregrinations of the lice from the cover of the head to the nakedness of the body; and moreover, nearly all the children when they leave school discard the little they had on and revert to their usual unclothed condition.

(b) *Enlarged tonsils.*—A very large percentage, 75.60 per cent, suffered from enlargement of the tonsils; in some cases the enlargement was slight, but in fully half the number so affected the glands were very much hypertrophied. The tonsils, it is true, are as a rule, enlarged to some extent in nearly all children, but I did not expect to find the very high percentage of unusually enlarged ones in the course of our inspection. It is difficult to adduce the real cause for this abnormal condition; it is presumed that the unhealthy, ill-ventilated and evil-smelling state of the dwelling houses and surroundings of these poor children might be the reason for the undue irritation, inflammation and consequent enlargement of the tonsils. Many diseases are supposed to gain entrance into the human body by means of or through the tonsils, for instance, diphtheria, tuberculosis of the lungs, etc. The remedy for lessening the affection of these glands would be the betterment of the dwellings of the poor, an Augean task!

(c) *Adenoids.*—On the other hand adenoids were noted in 314 cases or 26.14 per cent of the boys examined. This affection is closely associated with enlargement of the tonsils and their presence gives rise to deafness, impediment of speech, dullness, stupidity and tendency to catching colds frequently. The cause of the hypertrophy of these lymphoid tissues of the back of the nose is closely bound up with the same causal factors as those giving rise to enlarged tonsils. What causes would remedy one, would similarly affect the other; in other words the improvement in sanitation of the dwellings of the poor.

(d) *Myopia.*—I was surprised to discover so few cases of short-sight, 33 cases or 2.74 per cent. This defect is more common among the highly educated class of Indians. The vast majority of the boys examined came from the Sudra or less-literate class.

(e) *Itch on the hands and body.*—This skin affection was not so widespread as I expected, 207 or 17.23 per cent, were discovered. The cause of this itch is undetermined; it resembles scabies but the cause is not the itch mite (*sarcoptes*) but possibly a bacterium of the *diplococcus* type. Usual cleanliness and the use of soap and water would remove and prevent the complaint, but we can hardly expect the Indian poor to undertake in an appreciative mood the routine use of soap and water. So far as at present known, no serious disease emanates from the existence of this skin eruption.

(f) *Enlargement of the spleen.*—In certain schools located in malarious places the number of cases with enlarged spleen was marked; to take the schools in a graduated series of intensity of splenic enlargement: (1) Periamet 21.15 per cent, (2) Thousand Lights 20 per cent, (3) Purasawalkam 15.2 per cent, (4) Chintadripet 15.1 per cent, (5) Sanjivirayanpet 13.86 per cent, (6) Mandavalli 13.71 per cent, (7) Nungumbakam 10.56 per cent, (8) Chetput 9.35 per cent, (9) Malayappan street 7.8 per cent, (10) Koyatope 1.07 per cent and Vallabha Agraharam 0 per cent. The total number was 135 cases or 11.24 per cent. Of course a large number of boys (over 500) was absent, some of these were probably down with the active manifestations of malaria, that is, fever, so a true index is not available of the real malarial infection of the whole school population of these elementary educational institutions. None of the boys with spleen enlargement examined were actually suffering from malarial fever at the time of our inspection, but when questioned admitted to having had fever recently. Children often have malarial fever present without showing any inconvenience and would be passed on superficial examination as being in a healthy condition: the signs of the active disease are, so to speak, masked. It is generally admitted that children are the most common reservoirs of malarial fever, and as they do not in some cases manifest any signs of being ill, they are consequently not treated for the disease and allow the malarial parasites to thrive in their bodies and supply the mosquitoes with requisite material to be spread among the surrounding population. Hence it is very essential that children should be very carefully examined and treated at once if found to harbour the parasites, otherwise they are a menace to the general population. Failing regular medical treatment by trained medical men and as a makeshift, quinine

might be administered by the headmasters themselves. An agreeable mixture, as far as this bitter alkaloid can be made agreeable, would be the following: Quinetum 5 grains, dilute sulphuric acid 1 dram, syrup of limes 1 ounce, and water 2 ounces. This would make one dose for a child aged 12 years, to be given every day after the midday meal. Those children taking this draft might be given as a reward some Indian sweet. A little coaxing in this manner would render the remedy popular. The cruder form of the Cinchona bark is selected as it is less nauseating and very much more effectual in the cure of the disease. The treatment advocated should be carried out for a fortnight or more, depending on the size of the spleen and the season of the year, whether malarial or not. This is not the place nor the occasion to elaborate preventive measures for prophylaxis against malaria.

(g) *Suspicious marks of leprosy on the face.*—One of the main reasons that actuated me in accepting the supervision of the medical examination of the school children was to ascertain the prevalence of leprosy among the young population of Madras. Leprosy is very common among all classes of Indian patients attending the Royapetta hospital for treatment; not necessarily for leprosy; but the majority of these cases are adults, and I wished also to be acquainted with the number to be detected among the young. Out of the 1,201 boys examined, I found very suspicious marks of leprosy on the face in 71 cases, that is, in 5.91 per cent or roughly speaking in 6 per cent. In addition to the boys carrying these suspicious stigmata of the disease, there were 4 cases or 0.33 per cent of unmistakable leprosy. The suspicious spots I allude to are pale patches with a smooth surface usually located on the cheeks. They resemble, in a way, the very common and harmless skin affection called technically *tinea versicolor*, but they differ in several essential points. The patches are similar to the non-pigmented areas found in anæsthetic leprosy. I would, however, still hold the opinion of the identity of the affection with leprosy *sub judice*, pending further experiments and observations I am carrying out in the Royapetta hospital. The infection of leprosy is said to enter the system through the nasal mucous membrane and thence to spread to other parts of the body. The nasal mucous membrane of several of the school children was unhealthy; the predominance of adenoids in the posterior portion of the nose and even the far more frequent involvement of the tonsils, organs closely associated with adenoids, lends some colour of support to these spots being due to infection derived from the nasal mucous membrane. The lymphatics from these above assumed areas of infection course along the cheeks where these spots are noticed, thus adding more material to the credence of the identity of this skin affection with leprosy. This disease is common among the Indians and Eurasians of Madras and some steps should be taken to bring about a diminution in its prevalence. It is not for me to suggest the necessary steps towards the consummation of this object. All the cases, both real and suspicious, I allude to as being found among the school boys was of the anæsthetic variety.

(h) *Pigeon-breast.*—The children were on the whole fairly well developed, taking the Indian standard into consideration, and bodily deformities were very few and far between. An ill-developed chest commonly called 'pigeon-breasted' was noted in 83 cases or 6.99 per cent.

(i) *Bad teeth.*—By this is meant decayed or carious teeth of the permanent set, from a few to half a dozen in number. The boys so affected numbered 142 or 11.82 per cent. There was no pyorrhœa alveolaris to draw any attention to; this condition is on the other hand very common in the adult Indian population. Deformed teeth due to congenital syphilis were conspicuous by their absence; syphilis, I know, is very common among adult Indians, of both sexes, but their progeny, as a rule, either die in their infancy or on the other hand grow up healthy.

(j) *Granular lids.*—Only 75 or 6.20 per cent of the number of the boys examined suffered from this affection of the eyelids. The disease is more prevalent, as far as Madras city is concerned, among Brahmins. The majority of the boys being non-Brahmins, would account for the infrequency of the malady in the schools.

(k) *Infectious or contagious diseases.*—Excluding those already noted, small-pox, measles, diphtheria, typhoid, etc., were not discovered. Some boys showed marks of a very recent attack of small-pox; others were absent and said to be suffering from this disease. The absentees were away on the plea of some illness or other. There were some cases of tuberculosis of the lungs, but as no instrumental examination was carried out, no decision can be arrived at concerning the actual presence of this disease; some of the boys looked as if they were victims of this common pest of humanity.

19. *Suggestions.*—In conclusion the following suggestions are made, in addition to those already given under the several headings in my general remarks, in case the medical inspection of schools as a whole is to be placed on a permanent basis. The medical examinations should be more thorough, for instance, the height, weight and chest measurement should be taken: the chest examined by means of a stethoscope for indications of lung or heart disease: the private parts examined, for presence of hernia, hydrocele, buboes, urethral discharges, undescended testes, etc. The girls too should be examined by a lady doctor or a qualified nurse working under the Medical Inspector of Schools. The medical inspections should be carried out quarterly.

C. DONOVAN, Lieut.-Col., I.M.S.,
Surgeon, 4th District, Madras.

Madras, 27th March 1916.

II

Endorsement of the Surgeon-General with the Government of Madras,
No. 100 T./68, dated 17th May 1916.

Forwarded.

This is an extremely interesting and valuable report.

2. The most striking fact that emerges from this investigation is the apparent common prevalence of leprosy among the boys; 6 per cent of suspicious cases and 0.33 per cent of unmistakable leprosy—a very serious state of affairs which calls for further investigation.

3. Other common diseases are the presence of lice in the hair of the head; enlarged tonsils and adenoids; itch and splenic enlargement.

4. The remarks on the advantage of cleanliness of the masters and the good influence of the example and teaching of the schoolmaster of the Chetput school should be laid to heart by those responsible.

5. It is quite evident that inspection of school children is valuable and should be carried out regularly, but it is also apparent that for a proper examination of the children a full-time medical man is required, who will have to be adequately paid.

6. Colonel Donovan points out that he had not time to make a stethoscopic examination of the chest and that in consequence the prevalence of phthisis was not ascertained. The report, without this, must be considered incomplete.

Colonel Donovan has informed me that over 2,000 children will have to be examined. This means a very long and laborious examination, but it is one that ought to be carried out by an experienced Indian Medical Service Officer.

I would suggest then that Colonel Donovan be asked to do this and be allowed an honorarium of Rs. 750 therefor.

7. A competent lady doctor or nurse should likewise be placed at his disposal as assistant, to make possible and easy the examination of the girl scholars.

8. The attendance at the schools seems bad, as nearly one-third of the boys were absent.

W. B. BANNERMAN, C.S.I., K.H.P., M.D. D.S.O., Surgn.-Genl., I.M.S.,
Surgeon-General with the Government of Madras.

To the Secretary to Government, Educational Department
(through the Director of Public Instruction, Madras).

III

Endorsement of the Director of Public Instruction, N.R.C. No. 6660-14, dated 8th June 1916.

Submitted to Government with reference to paragraph 2 of G.O. No. 22, Educational, dated the 7th January 1916.

2. While the report is very valuable it is incomplete as pointed out by the Surgeon-General and this was necessarily the case owing to the limited amount of time at Colonel Donovan's disposal. To do the work thoroughly, which is very desirable, full-time officers, including a lady doctor for Madras city alone, would be required, and it would be desirable that they should have powers to take the necessary action regarding infections and contagious diseases. Similar inspection is equally desirable in the mufassal and also the provision for elementary schools of a system of remedial measures such as obtains in the United Kingdom.

3. The question of instituting the medical supervision of schools on a thorough scale is largely a financial one and under present circumstances little can be done. I hope, however, that as soon as normal financial conditions are restored, the work may be put on a regular footing. For the present, what is suggested by the Surgeon-General in paragraphs 6 and 7 of his endorsement, together with the investigation referred in paragraph 2, seems all that is possible.

4. As regards the poor attendance of pupils, I shall ask the Inspector to enquire into its causes.

J. H. STONE,
Director of Public Instruction.

Anthony

8101 JUL
 No. 10
 The question of instituting the medical inspection of schools on a regular basis is a matter of some importance. It is suggested that a committee be appointed to inquire into the matter and report thereon. The committee should consider the feasibility of such an inspection, the personnel required, and the manner in which it should be conducted. It is also suggested that the committee should consider the possibility of having the medical inspection conducted by the local health authorities, or by the local police, or by the local education authorities. The committee should also consider the possibility of having the medical inspection conducted by the local medical profession, or by the local nursing profession, or by the local public health department. The committee should also consider the possibility of having the medical inspection conducted by the local government, or by the local private enterprise, or by the local voluntary organization. The committee should also consider the possibility of having the medical inspection conducted by the local community, or by the local religious organization, or by the local social organization. The committee should also consider the possibility of having the medical inspection conducted by the local government, or by the local private enterprise, or by the local voluntary organization, or by the local community, or by the local religious organization, or by the local social organization.

J. H. Stone,
 Director of Public Instruction

Done
 Please submit
 13
 20/11

For approval,
 21/11/16

HOME DEPARTMENT (EDUCATION).
 NOTES CONNECTED WITH G.O. No. 945, HOME (EDUCATION), DATED
 THE 7TH SEPTEMBER 1916.

[SUBJECT.—Report on the medical inspection of Corporation Elementary schools.]

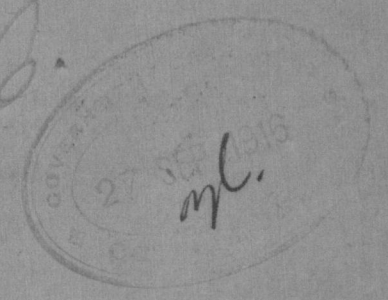
Previous papers:			
G.O.	316, Educational, 26th May 1911.	G.O.	1104, Educational, 22nd September 1914.
"	70 " 29th January 1913.	"	1222 " 2nd November "
"	394 " 1st May "	"	1330 " 26th "
"	632 " 7th July "	"	123 A-24 " 9th February 1915.
"	1111 " 26th November "	"	413 " 20th April "
"	1169 " 9th December "	"	498 " 8th May "
"	238-39 " 26th February 1914.	"	1423 " 14th December "
"	672 " 6th June "	"	22 " 7th January 1916.

From the Director of Public Instruction, No. 6660-14, dated the 8th June 1916.

In their order No. 1104, Educational, dated the 22nd September 1914, the Government sanctioned the medical inspection of the elementary schools (then seven in number) opened by the Corporation of Madras and of the pupils in them, and in their order No. 22, Educational, dated the 7th January 1916, they placed Lieut.-Col. Donovan, I.M.S., on deputation for the purpose. Lieut.-Col. Donovan's report (on the inspection of 11 out of 12 schools) has been received and is submitted for perusal, as also the comments thereon of the Surgeon-General and the Director of Public Instruction. The medical inspection of the pupils was defective in that girls were not at all examined, and further the examination of boys was incomplete in that no examination of the private parts of the boys was made nor was the stethoscope used for the detection of lung or heart disease. Nevertheless Lieut.-Col. Donovan's report is most interesting and it furnishes much valuable information.

2. The Surgeon-General suggests that the stethoscopic examination of the chest should now be taken up and proceeded with in regard to the boys, also that a competent lady doctor (or nurse) should be provided to make possible the examination of the girls. And the Director of Public Instruction supports the proposals. Please see in this connection paragraph 5 of Lieut.-Col. Donovan's report, where he points out that, "besides the want of time", he "considered it advisable not to make too marked a show of medical examination, as the impression had got about that the inspecting doctors were to vaccinate the children and carry on other nefarious practices attributed to the medical profession in general by the ignorant public". Again, in regard to the girls, please see paragraph 3 (2) of the report where Lieut.-Col. Donovan mentions that, in addition to the circumstance that he had no nurse or female examiner with him, "it was also considered expedient not to include the girls in the trial inspection, for the possible likelihood of the parents of the girls raising objection". I, however, think that it would be wise to complete the inspection of the Madras Corporation schools. The inspection was started as an experiment, after a great deal of public discussion, and it would, I think, be an advantage to have the results of a complete inspection. I would therefore suggest that Lieut.-Col. Donovan should finish the inspection of the boys and the Surgeon-General may be asked to spare the services of a suitable lady doctor to help in inspecting the girls.

20 with G.O.
 1 Pages.



3. There can be no doubt that a periodical inspection of schools and pupils is a vital need. Please see in this connection paragraph 19 of the report, where Lieut.-Col. Donovan suggests that medical inspections, if made permanent, should be carried out quarterly. The Director of Public Instruction, however, rightly points out (in paragraph 3 of his endorsement) that the question of instituting the medical supervision of schools on a thorough scale is largely a financial one and that under present circumstances little can be done. As soon as normal financial conditions are restored, the work may, in Mr. Stone's opinion, be put on a regular footing. This opinion may, I think, be concurred in, and the Director of Public Instruction may be asked to work out a comprehensive scheme for the medical inspection of all public schools and of the pupils in them as soon as normal financial conditions return.

4. The report discloses a number of defects in regard to which action could at once be taken, for example—

- (i) the large number of absentees, nearly a third of the total strength;
- (ii) the unsatisfactory nature of some of the sites, the existence, in the neighbourhood of some, of filthy drains, burial and burning grounds, wet cultivation, dirty and ill-smelling latrines, dhobykhana, municipal conservancy cart depot, incinerator, etc.;
- (iii) the inadequacy in several cases of play grounds and ventilation;
- (iv) the provision of unfiltered water for drinking purposes in almost all cases;
- (v) the generally dirty and meagre clothing of both teachers and taught; and
- (vi) the presence of a few lepers.

These are matters which we may leave to the Director of Public Instruction and the Corporation of Madras to deal with.

P. RAJAGOPALA ACHARIYAR—15-7-16.

I agree: and hope that, whenever possible, this experimental inspection may be completed. When the report is ready for consideration, the points in the last paragraph of the Secretary's note will also be dealt with.

P[ENTLAND]—21-7-16.

I note with diffidence on a subject which is outside the scope of Public (Medical), but I am much impressed by the value of Lieut.-Col. Donovan's report and by the importance of providing for the thorough medical examination of school children in future. It is clear that a male doctor cannot examine school-girls thoroughly, especially in this country, but a lady doctor could examine both sexes between ages of 5 and 14. Moreover, it would at present be impossible to recruit a male doctor but it might be possible to get a woman. Would it not be a practicable plan to add to the Educational Provincial cadre a post of Medical Inspector of Schools and look about at once for a suitable qualified lady doctor to fill it? It might be practicable to get quite a good class of Medical Inspector for Rs. 400—600 a month or even less. I do not see any need to employ "an experienced I.M.S. officer", as the Surgeon-General proposes; and none may be available for an indefinite period. If a lady doctor were secured, she could be required to pass the colloquial test in the vernacular, or if she had been out here as a missionary or otherwise, might already know it, and would rapidly become experienced in this special line of work. She might be allowed private practice, might be required to give hygiene lectures, or might preach and enforce cleanliness, the lack of which is the cause of so much of the disease prevalent among the people of this country. If there were such a Medical Inspector, and she reported the schoolmasters in any school to be filthy and in filthy clothes, the Educational Department might take note of the fact in the matter of grants and it might become pecuniarily worth while to be clean. There is no inherent necessity for lice and itch. The schools might thus become a centre of sanitary teaching which might spread to the homes. In any case a lady medical inspector for school-children would be rather a valuable reinforcement, I think, to our slender medical force. The creation of such an appointment is, I believe, within the powers of the Local Government. My Honourable Colleague in charge of Finance would, I am sure, agree that, in the light of Colonel Donovan's report, it is "imperatively urgent." If budget provision is made this autumn, it might be brought into existence from 1st April 1917.

A. G. C[ARDEW]—22-7-16.

I will not object on financial grounds to the creation of the post of Medical Inspector of Schools on a pay of Rs. 400 to Rs. 600 a month, but I doubt very much whether it would be easy to get a satisfactory lady doctor to fill the appointment. We have always had considerable difficulty in getting a suitable incumbent for the post of Superintendent of the Caste and Gosha Hospital and I anticipate that the difficulty might be still greater in the case of the appointment proposed by Sir Alexander Cardew. Moreover, I am by no means sure that inspection by a lady doctor would be acceptable in the case of all boys between the ages of 5 and 14 and I suggest inquiry on that subject before agreeing to proceed further with the proposal.

2. Meanwhile, I think we might accept the Surgeon-General's proposal that Colonel Donovan should finish his inspection of the boys by examining for phthisis those already examined and by examining completely as many as possible of the large number who were absent at the time of the examination. The Korukupet school should also be inspected.

3. A male doctor could not make a complete inspection of girls and I would entrust the inspection of the girls to one or more of the lady doctors in Madras, a suitable fee being paid.

4. If it could be managed, an inspection at their homes of the children absent on the day of the school inspection would be valuable. Moreover, since this inspection of the Madras schools has been instituted, as I understand it, to obtain information which will be of general application, is it not desirable that the inspection should be extended to a few of the schools attended by children of Brahmans and other well-to-do classes?

H. A. S[UART]—24-7-16.

I agree. I think it will be necessary to employ either a male doctor with a lady assistant or a lady doctor with a male assistant. Neither a male doctor nor a female doctor singly will be able to examine fully children of both sexes. I think Dr. Mrs. Simonsen will be available if a lady doctor is to be appointed.

P. S. S[IVASWAMI AYYAR]—28-7-16.

Please see the notes of the Honourable Members.

P. RAJAGOPALA ACHARIYAR—29-7-16.

If I may say so, the view of the Educational Department, with which I agree, is that the information at present before us does not so far provide adequate material to justify the next step—important as it is—proposed by Sir Alexander Cardew. To begin with, the scope of this experimental inspection as first proposed was regretfully but deliberately limited in view of the war stringency in regard to both money and staff. Otherwise other varieties of schools, as suggested by Sir Harold Stuart, would have been included. Next, even in this limited experiment, Lieut.-Col. Donovan, as is stated in his report, has left portions of the work still to be done. If my colleagues will be good enough to assent in the first place to the completion of this experiment, as indicated in the note of the Surgeon-General, dated 17th May 1916, ~~upon page 8 of the current file~~, this will enable us in the first place to draw up provisional instructions for such inspections which are the first condition of useful comparative statistics for different classes of schools, and one of the chief purposes in view in the institution of this experiment.

P[ENTLAND]—6-8-16.

P.R. 7-8-16

I readily agree to Lieut.-Col. Donovan's examination being completed, as suggested by the Surgeon-General, and to a fee of Rs. 750 being sanctioned therefor.

2. This, however, leaves the case of the girls unprovided for, and I would therefore urge that the Surgeon-General should be consulted as to whether Mrs. Simonsen or some other qualified lady practitioner (not a nurse) should not be deputed to examine the girls or whether a lady medical inspector should be engaged, say on a three-years engagement, the latter appearing to me the better course if a suitable woman can be found.

A. G. C[ARDEW]—7-8-16.

I do not desire to go faster than the Educational Department wishes—though I am willing to agree to an attempt being made to secure the examination of girls.

H. A. S[UART]—8-8-16.

4 NOTES TO G.O. No. 945, HOME (EDUCATION), 7TH SEPTEMBER 1916

I agree with my colleagues.

P. S. S[IVASWAMI AYYAR]—9-8-16.

P. RAJAGOPALA ACHARIYAR—10-8-16.

I agree—the girls may be included; that was the intention of the reference in my notes above to the “completion of this experiment as indicated in the note of the Surgeon-General”: and the selection of the lady doctor to be associated with Lieut.-Col. Donovan for this purpose, who will be a European of course, may be made accordingly.

P[ENTLAND]—11-8-16.

EDUCATIONAL DEPARTMENT.

A draft order is submitted below for approval. If approved, it may be forwarded to the Local and Municipal and Financial Departments also for acceptance.

2. As regards the amount of the honorarium proposed to be paid to Lieut.-Col. Donovan, namely, Rs. 750, attention is solicited to article 72 (b) of the Civil Service Regulations which limits the powers of this Government to Rs. 500. The payment of an honorarium of Rs. 750 would require the sanction of the Government of India. It is for consideration whether an application should be made to the Government of India or whether the amount may be limited to Rs. 500. Subject to orders Rs. 500 has been provisionally entered in the draft order. The Hon'ble Sir Alexander Cardew has alone definitely expressed approval of the grant of Rs. 750 to Lieut.-Col. Donovan.

P.R.—19-8-16.

N.K.—18-7-16.

C. RAMANUJA ACHARIYAR—20-8-16.

Shall I put Rs. 500 in the draft order as remuneration to Lieut.-Col. Donovan or Rs. 750? the latter would need a reference to India.

P. RAJAGOPALA ACHARIYAR—22-8-16.

Yes. I have explained the reason for the reduced fee to the Surgeon-General.

A. G. C[ARDEW]—23-8-16.

Draft for acceptance.

P.R.—25-8-16.

LOCAL AND MUNICIPAL DEPARTMENT.

Accepted in Local and Municipal.

C. G. TODHUNTER—27-8-16.

FINANCIAL DEPARTMENT.

Accepted in Financial.

L. E. KERSHAW—2-9-16.

L. DAVIDSON—4-9-16.

HOME DEPARTMENT (EDUCATION).

For orders whether the draft order may issue.

P.R.—5-9-16.

N.K.—5-9-16.

C.R.—6-9-16.

Issue.

P.R.—7-9-16.

[G.O. No. 945, Home (Education), dated the 7th September 1916.]

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