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MADRAS RECORD OFFICE

GOVERNMENT OF MADRAS

Revenue DEPARTMENT

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Sanitary.

No. 5. Read the following despatch from the Most Honorable the Secretary of
State for India:—

Statistics and Commerce.
No. 62.

INDIA OFFICE, LONDON,
6th July 1876.

My Lord,—In forwarding the Memorandum of the Army Sanitary Commission on the Report of the Sanitary Commissioner for the Central Provinces for 1874, I desire specially to call your attention to the suggestions made in paragraphs 4 and 5 respecting investigations into the causes of malarial fever. This important subject is, no doubt, receiving due consideration under the direction of your Government.

2. The very high rate of mortality in some of the jails appears to call for serious attention and inquiry.

I have, &c.,
SALISBURY.

His Excellency the Right Honorable
The Governor-General of India in Council.

MEMORANDUM of the ARMY SANITARY COMMISSION on the Report of the Sanitary Commissioner for the Central Provinces for 1874.

The greater part of Dr. Townsend's Report for 1874 is devoted to statistical details, and as these have been discussed at length by the Chief Commissioner of the Central Provinces in a prolix letter, the Army Sanitary Commission considers it unnecessary to do more than give the general results to show what is the present condition of public health in these Provinces before entering on the sanitary details in the report.

1. On account of rectification of administrative boundaries, the total population under registration during the year did not exceed 7,427,608 (taken on the Census of 1872), spread over an area of 65,548 square miles. The registered death-rate on this population was in the ratio of 23.49 per 1,000. The average registered death-rate in twenty-one towns with an aggregate population of 989,761 was 24.82 per 1,000, and in country districts the rate was 22.71 per 1,000.

The lowest district death-rate was 16.78 per 1,000, the highest was 32.33 per 1,000. The lowest town death-rate was 16.23 per 1,000, and the highest 41.76 per 1,000. The facts appear to show that, although the registration of deaths in the Central Provinces is far from complete, it has advanced towards accuracy with more speed than has been the case in other parts of India.

2. The following abstract shows the chief registered death causes in 1874:—

Disease.	Number of Deaths.	Ratio per 1,000 of Population.
Cholera	14	...
Small-pox	17,696	2.38
Fever	118,043	15.94
Dysentery	14,535	1.95
Other Causes	21,129	2.84
Starvation	521	...
Wounding and accident	1,535	0.41
Wild beasts and snake bites	972	...
Total	174,446	23.49

This table reveals the startling fact that of every twenty-three deaths fifteen were caused by Fevers.

*Proceedings of the Madras Government, Public Department,
4th October 1876. No. 1103.*

No doubt the diagnosis is open to grave question in the Central Provinces as in other parts of India, but, making every allowance for inaccuracy in this matter, it is evident that fever is the chief death cause in these Provinces.

The exact nature of these fevers is still unknown. They appear to be mainly of malarial origin, but the present report shows that in 1874, as in the preceding year, "continued fever" prevailed to some extent, seeing that in the different institutions at Jabalpur 370 cases of "continued fever" were treated, of which 80 proved fatal. The numbers for 1874 were 211 cases and 25 deaths.

3. One element in the causation of these fevers appears to have been brought to notice, and that is the relation of mortality to rainfall, especially if taken over the Provinces.

Thus, during the second half of the years 1872, 1873, and 1874, the relation of rainfall to fever mortality stood as follows:—

	Rainfall of Monsoon	Rate of mortality from fever
1872	47.05	19.82
1873	87.91	12.57
1874	50.48	12.01

General climatic causes appear also to influence fever mortality, as stated by the Sanitary Commissioner, who says:—"If the south-westerly winds prevail through the early part of September, the rain and moisture will continue to the beginning of October, and the prevalence of fever will be great and long continued; and again, if in a season when fever has been greatly prevalent the temperature fall unusually low in November and December, as it did in 1874, the mortality will be greatly increased; and when it is remembered that half the number of deaths registered are of children under six years of age, that the population is badly housed, and the children of the lower classes especially are almost altogether without clothing, it is more than probable that much of the mortality attributed to malaria is the result of exposure to the wet of the rainy season and variations of temperature during the colder months."

No doubt these personal causes, which are connected with the state of civilization of the people, operate injuriously in increasing the fever death-rates; but something more appears to be necessary to account for the great prevalence of malarial fever in India. It would be well to make this point one for special local inquiry. A full account of the drainage, agriculture, sanitary condition of houses, state of water supply, &c. of the most severely and least severely affected villages should be obtained for the Provinces, and steps taken to remedy the evils brought to light. For instance, there are two consecutive lines in one of the tables which give the following points of comparison between rainfall and fever mortality:—

Districts.	1872.		1873.		1874.	
	Rainfall of Monsoon.	Fever Death-rate.	Rainfall of Monsoon.	Fever Death-rate.	Rainfall of Monsoon.	Fever Death-rate.
Bilaspur	45.92	20.67	80.41	12.14	48.27	23.23
Sambulpore	65.51	7.74	49.01	7.29	61.87	9.59

It would apparently be an instructive branch of inquiry to follow up the reasons why Sambulpore, with about a third more rainfall than Bilaspur, should have so much lower a fever death-rate. But this whole subject, especially as regards the hygienic condition of soils and suburbs during and after rains in relation to malarial fever, still requires investigation.

4. Further, the tables accompanying the report appear to show that average fever death-rates are made up of local maxima and minima which differ widely from each other.

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In some localities the rates are as low as 3, 4, 5 per 1,000, while in others the rates are as high as 2 to 2½ per cent. of the population.

These differences, if other than temporary or accidental, appear to suggest the necessity for special investigation, as it is possible that most good in the way of expenditure might be done by selecting the most unwholesome localities for improvement, or by expending the local outlay in a specific direction. This, indeed, is one of the special duties of the Sanitary Commissioner.

5. The next most fatal disease was small-pox, from which 17,696 persons died in 1874, a death-rate of 2.38 per 1,000. The mortality from small-pox, like the mortality from fever, varied greatly in different districts, and presented no constant relation to the number of successful vaccinations performed. The Sanitary Commissioner explains the discrepancy from climatic causes, the influence of locality, &c. But, nevertheless, the tables afford several striking illustrations of the apparent efficacy of vaccination in some of the districts. Thus, in Batal, Chindwara, Seonee, and Sambulpore the proportions of successful vaccinations amounted to 159, 180, 160, and 157 per 1,000 of the population, and the small-pox death-rates were respectively 1.08, 0.82, 0.47, and 0.24 per 1,000. In other districts, where the numbers successfully vaccinated were between twenty and forty-five per 1,000 of the population, the death-rates lay between three and ten per 1,000, without, however, exhibiting anything like a constant relation to the successful operations.

Practically the lesson which appears to be taught by the experience is that vaccination should be extended, but that at the same time local sanitary work should be pressed forwards both in towns and villages.

6. At this point a question, formerly raised by the Commission in regard to the employment of the vaccination officers on general sanitary work, presents itself.

Last year this service in the Central Provinces was performed by the following officers:—

One Deputy Superintendent,
Fifteen Native Superintendents,
One hundred and twenty-eight Vaccinators.

together, 144 officers engaged in vaccination duties.

The Sanitary Commissioner for the Central Provinces thinks that to place any sanitary duties on these officers would be to constitute them inspectors of nuisances and infermers, and so to damage their influence. He himself states that what is wanted is the power of making the people themselves co-operate in effecting the improvements required, "and this can only be done by the Deputy Commissioners exercising their influence on the Magazars, either directly or through the Tahsildars, and other executive officials." Again, "the Medical officer, when on tour in the district inspecting vaccination, can do a great amount of good by pointing out to the Magazars and the people generally the connexion of filth and impure water with disease, and by bringing glaring neglect in these matters to the notice of the District Officer. The most that can be expected from the Superintendents of Vaccination and vaccinators is that they shall do their best to gather information regarding the health of the people, and bring to the notice of the Medical officer any exceptional outbreak of disease, and the circumstances attending it, so far as they can ascertain them, and they should on all occasions urge on the people the necessity of cleanliness in their villages, and preserving the water supply from pollution."

These extracts from Dr. Townsend's report concede nearly the whole principles which the Army Sanitary Commission has contended for. The method of making use of the vaccination service, and the extent to which it can safely be used for general sanitary work, must necessarily be left to the Local Governments in India. It is, however, satisfactory to know that, within due limits, it may render service of great importance in collecting information in reference to the public health in the Central Provinces for the practical use of the Civil Surgeons and in giving sanitary instruction to the people.

7. Cholera prevailed in the districts of Bengal adjoining the Central Provinces on the north and north-east during the year of 1874. But in the Central Provinces there was an almost entire absence of the disease except at one point, near the north-east boundary, in Sambulpore district.

where there were twelve deaths in December. The only other deaths were in Mandla district, one in June and the other in July of the same year.

There was a local fair, at which some 2,000 or 3,000 people were present, but there was no cholera in the country and none at the fair. On 29th November, four days after the fair had ended, a villager was attacked while cutting rice. Other attacks followed in the same family. If the statements made by the people could be wholly relied on, the disease appeared in other places to which villagers had fled, but there is no apparent connexion between the attacks and subsequent attacks. The chief sufferers were Ghonds, and the most probable origin of the outbreak was filth from the fair people and polluted water. The locality has besides an unhealthy reputation, the villagers suffer from fevers, and they have a cholera outbreak among them every four or five years. They were moreover on the borders of a region in Bengal where there was cholera in 1874.

8. Bowel-complaints occasioned 14,535 deaths, but the report contains no information as to localities. The table shows deaths from these diseases all over the Provinces, with the exception of three or four places. With so large a mortality, chiefly from diarrhoea and dysentery, the question suggests itself whether something might not be done to diminish this loss of life in the direction of cleanliness, and especially in protecting and improving the water supply.

9. The jail mortality in 1874 was 35.6 per 1,000, of which 14.3 per 1,000 was due to diarrhoea and dysentery, and about 2 per 1,000 to fevers. There was no deaths from cholera. The death-rates varied from zero in Beaul Jail to 78.1 per 1,000 at Bangalore. Both jails had small numbers of prisoners—the former 109, the latter 13. In the larger class of jails the death-rate varied between twenty-one per 1,000 at Nagpur with 850 prisoners, and 57.3 per 1,000 at Raipur with 443 prisoners. In the latter jail the deaths from diarrhoea and dysentery were no less than 14.3 per 1,000 of the prisoners. So much has been done in other parts of India in reducing jail mortality that attention may very well be called to this subject in the Central Provinces.

10. Under the head of "Sanitary Progress" the Commissioner states as follows: "Sanitary improvement in the towns of these Provinces continues to occupy the attention of District Officers, and absorbs a large proportion of the means at the disposal of the Municipalities. With few exceptions in the towns that I have inspected, streets have been opened out, surface drains constructed, and conservancy arrangements fairly carried out. The existing sources of water supply are improved and preserved from pollution, but, with the exception of Raipur, no Municipality has now on hand any comprehensive scheme for providing its population with a pure and safe water supply."

Inspection notes on sixteen towns show that much good work is being done, while defects are pointed out for remedy. Particular attention might be called to those defects, especially to the statements made regarding Bhandara and the water supply of Raipur. Generally it may be stated that the amounts spent by Municipalities can scarcely be taken as representing the necessities of the case, inasmuch as a list of nineteen "sanitary" towns is given which spent only 8,230 on conservancy work.

11. The following account is given of the villages: "With regard to the smaller towns and villages, they are no doubt generally in a better state than in former years. Conservancy rules are recognised, and the water supply is not perhaps polluted in so many ways as it used to be, but sanitary improvement is necessarily very slow, and scarcely noticeable from year to year."

The great obstacle to bringing the villages into a better state of cleanliness is the practice of keeping the cattle at night within the village precincts, but reform in this respect will be most difficult to bring about. There is apathy also in the subject of pure water, still it is satisfactory to learn that people are beginning to recognise that cholera has some connexion with foul water. But these are the very points in regard to which the vaccine service could do much good in gradually educating the people to co-operate in the protection of their own health.

12. The Army Sanitary Commission formerly proposed the construction of model villages in India as one means of improving the sanitary condition of the people by way of example.

In the present report this proposal is objected to on the score of expense, and another proposition is made which appears to be well worthy of consideration.

"There are in every district a number of villages the property of minors in the Court of Wards, in which the District Officers would have little difficulty in carrying out any improvement they might think requisite, and in all such villages the water supply may be made as good as the position and circumstances of the village admit of;" and already instructions have been issued on the subject of the water supply.

13. What appears to be wanted in these Central Provinces is continued and personal oversight of all sanitary proceedings, for which purpose the Sanitary Commissioner should be relieved of as much work as possible not of a strictly practical sanitary kind. The Municipalities require more looking after, and the villages must be enlisted in the execution of all village improvements required for protecting their own health.

But, nevertheless, it must be acknowledged that the present and preceding reports show that much good work has already been done. The chief practical points requiring notice in the present report are those already mentioned.

6th May 1876.

No. 11—298.

Copy forwarded to all Local Governments and Administrations (except the Central Provinces), and to the Military Department for information.

By Order of the Governor-General of India in Council,

HOME DEPARTMENT (SANITARY).

(Signed) J. C. BLOWDEN,

Simla, 21st September 1876.

Offg. Under Secy. to the Govt. of India.

No. 6. ORDER NUMBER, 4th October 1876, No. 1103.

Communicated to the Revenue Department, to the Surgeon-General, Indian Medical Department, and to the Sanitary Commissioner.

(True Extract.)

[Handwritten signature]
Chief Secretary.

To the Revenue Department
Surgeon-General, Indian Medical Department
Sanitary Commissioner
Military Department.

Esd. J. Wright.

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