Social History of Medicine in Colonial India

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Lecture 02

Sanitary Education ; Statistics ; Epidemics

Hello and welcome to yet another lecture - Lecture number 12. In the past couple of lectures, we have been talking about the increasing move towards public health as opposed to concern with enclaves and in that context we have been talking considerably about sanitary measures. Even as sanitary measures were introduced, Sanitary Commission, Commissioners were introduced, it was also felt that there should be some measure of sanitary education. Today we will talk about that and also other related aspects like the vital role of vital statistics in dealing with public health and epidemics which provided a huge propelling force for public health to really take off and to get really serious. Let us start with sanitary education. The colonial government as it ventured into public health, recognized the importance of educating that very public about basic sanitary practices - to prevent, to mitigate the spread of infectious diseases.

How this could be done was through a variety of means which included issuing of pamphlets, posters, conducting public lectures and including a bit of sanitary education in the general school curriculum. But the effectiveness of all this was limited by various factors including wide-spread illiteracy - general illiteracy, and cultural practices which was seen to be incompatible with the Western notions of hygiene. For instance, it would be difficult for people to come to terms with the idea of avoiding the use of the local pond or the river for bathing and using the same river for washing - and washing of cattle - and other such things which would be very unhygienic from Western point of view, but would be very difficult to negotiate culturally at the local level with the local population. Also false views about inoculation and whatever other beneficial sanitary measures that were introduced - as there were always people to spread rumours for whatever vested interests. These rumors would find fertile ground in a situation where there is large-scale illiteracy or ignorance. Illiteracy had its own difficulties and presented quite a lot of difficulties and problems in these health measures. Again as we see, like medicine is related to a whole variety of other factors as we have been repeatedly saying. So, the level of education, literacy also matters apart from broader cultural and political and

economic matters. Also, there was not really dedicated government maintained school in India to provide systematic instruction in hygiene itself.

Of course, catechism of hygiene was introduced and that was also as late as 1908. This catechism was to be used in elementary schools and the provision for teaching of sanitary science at all levels was introduced even much later in 1914. And also the same year there was also provision to do medical inspection of school children and this was done on experimental basis - these days we are very familiar with this - at least once a year there is a medical camp or medical inspection day or week in schools and all the children are examined and each school child has a medical record, it is periodically updated. Something of this kind was started in 1914 in Bombay and that was placed on a permanent footing in 1917, but as in many other cases, with inadequate staffing - with just two Inspectors. Along with sanitary education, there was another important movement which is also an important arm of public health - evolving public health system. That was the dispensary movement which was crucial, as I said, to the public health infrastructure. It was initiated in the mid- 19th century basically by establishing dispensaries in cities like Bombay, Calcutta and Madras. The idea was to provide medical care to the poor and the underprivileged - the kinds of people who could not afford private medical treatment like the rich babus or other wealthy people who could have the attention and treatment of either western or Indian practitioners of either kind - either trained in western medicine or high class Indian traditional medicine. These dispensaries were (and it is quite fitting because we are talking about public health) places where the public could go. This could happen through the collective work of government officials, philanthropists and medical practitioners. The role of philanthropists is something which we will keep bringing up from time to time. In fact, there will be an exclusive lecture on the role of philanthropy and philanthropists. But it is important to bear in mind that the British were quite used to - back home - with this system of benefactors playing a big role in promoting medicine and making provisions for asylums and dispensaries like these and the important point to be noted is that they did expect the same kind of benevolence, philanthropy from locals here - and you can understand that in the context of what we have been saying very often - that reluctance to spend. One of the ways they thought the compensation could come was through the involvement of private players, the local wealthy who would show particular philanthropy towards medicine. It was not entirely absent as you can see like in cases like this and in certain other even bigger cases we will see the role of philanthropy. The medical practitioners who were employed in the dispensaries had a variety of functions. They were not just doling out tablets and other forms of cures. , they were expected to promote basic sanitary practices like cleanliness, proper ventilation, the safe disposal of waste and other such things. We have to bear in mind this is all in the context of the broader sanitary movement, which in turn is connected to the broader environmental paradigm under which diseases were understood. You should constantly keep all those

things in the background. These practitioners were also responsible for the early detection and treatment of diseases as well as - that is a curative function. But also they had a role in the preventive function as well. They had to implement preventive measures such as quarantine and vaccination. As I said, all this was linked to the broader goal of sanitary reform and public education. In this way, they played a very important role in controlling, mitigating the spread of infectious diseases such as cholera, smallpox, plague and other such. They also - the dispensaries - played a very key role in developing the Indian medical profession by providing opportunities for Indian medical graduates to gain practical experience and establish themselves in the field by a period of service in these kinds of dispensaries, which provided (patients/cases) - As you know, like more serious medical colleges also have a hospital - it is not only to dole medical care to the people, but there are also enough and diverse cases for them available to study - to educate themselves on the all possible kinds of cases, which would come later on when they go out into private or other practice. These dispensaries provided those kinds of cases - where many from the public would come with many different kinds of afflictions. Put together, the dispensary movement and the sanitary education apart from all the other sanitary measures, played a very important role in laying the foundations for public health in India and providing a framework for medical care and provision of basic sanitary practices, which have left a legacy many of which continue or at least some of the shadows are there.

That framework has been enduring with necessary modifications from time to time. One other dimension of the emerging public health is the role of numbers. As we will be discussing in a tutorial – enumeration, statistics or broadly knowledge, organized knowledge was very crucial not only in the field of medicine, but in the general colonial order - the importance and power of knowledge - we will be discussing at length about that in that tutorial. It is enough to say here that that same concern about knowing as much as possible, understanding as much as possible was evident here in the field of medicine as well. The system of vital statistics was started to provide annual aggregates of various aspects of the Indian civil population or the general population as opposed to in places like the army or asylums. The data, expectedly, was used to analyze and identify patterns and trends in mortality and morbidity, and accordingly workout strategies for prevention of diseases and control of rates of mortality and morbidity. It was also used to evaluate the efficacy of measures like vaccination by comparing the death rates before the vaccination given at a place, and the death rate after vaccination some year or over a period of time. That would give more scientific, reliable knowledge confidence about the efficacy of the vaccines or any other such thing that was being tried. The first such large-scale vital statistical report was released in 1864 which covered the data of the previous ten years. Some of the signs, messages from the statistics like this was that India showed a very high death rate compared to Europe. Among the major reasons for high mortality were diseases such as cholera and smallpox.

One of the other things which was introduced as part of this enumeration and collection of statistics was the practice of registration. As far as cantonments were concerned the Military Cantonment Acts of 1864 sanctioned the registration of the deaths in cantonments. The provincial Sanitary Commissions - as you know each province had its own Sanitary Commission - apart from their other works - they had this a new work now related to public health - which was to record register the deaths in the civilian sphere from 1860s. Considerable investments were made to improve the system of registration by establishing new offices for registration and standardizing the reporting procedures. Also, since this was something very new and something for which people can not be brought from back home in Britain, local personnel or even medical personnel who were already there had to be specially trained for this kind of work. Some officers especially appointed by the Municipality or Cantonment Committee to register deaths in towns. Death registration in the countryside was to be done at the police level with the chief police officer or the circle registration officer. Village headmen also had a very important role here. They were responsible for reporting deaths to the registration officer. And in doing so, they had to classify the entries according to the race, religion. They had to give the cause of death and age - roughly approximating five and ten years and of course, the name of the village. But as in any system there will be difficulties here and especially when something totally new is introduced. There was difficulty in coordinating the registration office - people operating at different levels – from Civil Surgeons (would have a particular kind of attitude, particular kind of interest and seriousness towards this kind of work), to Indian Subordinate Police whose attitude and priorities are different. The clash of attitudes - apart from the long chain of officers - could explain the difficulties of coordination.

Jails and lunatic asylums as enclosed spaces - as I said in other lectures - they are a special kind of enclaves - they had their own separate returns. Here you see the army Sanitary Commission urging all large cities in India to produce weekly returns of deaths because the high rates of deaths among the European troops in 1817 was a cause for concern. Here we are not talking about the army areas, but the army Sanitary Commission is asking for reports - weekly reports - from non-army areas because as we know, cholera from the wider civilian sphere was becoming a challenge and caused huge mortality - even higher mortality rate among the Europeans. The army Sanitary Commission asked for this kind of weekly returns from the civilian spaces. Some provincial governments like Punjab and the Central Provinces accepted. But certain others murmured - they were talking about the impossibility of publishing reports more frequently than on a monthly basis - because here as you see, they are asking on a weekly basis. The minimum they could do is on a monthly basis. And again, one of the reasons given was: there was not enough finance to do it at that kind of a frequency -particularly financial support from the central government to hire adequate number of staff with this kind of work. Therefore, overall, though there was some clear utility in

these measures, new systems, they were far from satisfactory even within the cantonments. There was a call for compulsory registration of births and deaths. But little progress could be made according to Sanitary Commission despite the clause added in the cantonment regulations in 1869 mandating that the head of every family should report deaths in the household within 24 hours. Also in the civilian sphere the compulsion was made only in a small number of municipalities and there too, the results were not uniformly positive. Other reasons for the unsatisfactory nature of this enterprise were the insufficient availability of medical practitioners, the ignorance and apathy of the public who would not care too much to be interested in these, and also the village officials who were not always all that serious and responsible. Also, it was very difficult for the medical men, given their own training - these were not men who were trained in demography and statistics - so it was also very difficult for them to ascertain those kinds of demographic trends though they did attempt some kind of rough estimates from time to time. The health officers also complained about the Indian police who were in charge of registration of deaths about their consistent failure to report deaths properly or even to fill the forms properly. As usual when something new is introduced there will be some kind of issues, shortcomings and then again there will be some kinds of efforts at fixing. One such in this case was by removing the responsibility of registration from the police and putting it under the control of Civil Surgeons - because as I said - Civil Surgeons would have some more involvement and different kind of understanding. Therefore, they would demand a higher standard of medical accuracy from their subordinates. But medical men, as we had seen in other lectures of medicine, as such were involved in the public health scenario which was as it is very bureaucratic, and these kinds of works were only extra, more of bureaucratic burden in addition to the other administrative work. One other method tried was to relieve the Sanitary Commissioners of some statistical work so that they could do more of registration work. And all said and done, the Government of India was reluctant to press registration as compulsory and it directed the cantonments and municipalities not to enforce them in ways that antagonized indigenous population - you see this point coming again and again – (the question of), apart from a medical point of view, how would any of these things impact on the public - their sensibilities. The state could expect to have their full cooperation or is there a possibility that the these kinds of activities/measures would rub on the wrong side - that is always there. You will be seeing this issue arising in several issues - that will always be there on the background - 1857 will always be remembered - 1857 was not caused only because of this, but they suspected that this kind of cultural intrusions across the board - not only through medicine - was one of the reasons for the uprising - though it involved other kinds of issues like the interest of feudal elements and all that - but certainly one of the reasons for 1857 was felt to be the kind of reaction against several forms of intrusion. It was best left to the local officials who are there on the

ground, to judge the pulse and based on the kinds of discontent or satisfaction or cooperation they could take a decision.

Further challenges in implementing the vital statistic system was that the provincial governments except Bombay, resisted appeals by the Indian Famine Commission. One of the recurring things in the colonial period was the periodic famines. And as I was saying in other lecture - for everything there is a Commission. Famine also had its Commissions and one of the reports the Famine Commission insisted that there should be compulsory registration but only the government of Bombay warmed up to it and it continued to be the only provincial government to permit the introduction of compulsory registration even in rural areas though it acknowledged slowness of its progress in the 1890s. Another important reason was the lack of infrastructure and trained personnel, lack of registration offices in several areas and also differential forms - variation in quality of data collection even if they were collected. And the system's reliance on subordinate police who as I said, had other kinds of mentality and other kinds of things which interested them more. And on top of that, they did not even have rudimentary medical knowledge. All of these were problematic in the long run.

Finally we will close this lecture by giving just an introduction to the question of diseases at large - because as I said this whole question of public health, going to the public - beyond enclaves was to a great extent propelled by the very challenging incidence of some really difficult diseases like smallpox and others. Diseases, for good or bad, had an important role in shaping up all the sanitary measures and the evolving of the public health infrastructures. Diseases based on their spread, as most of us know,can be classified as ones that are

endemic - which are confined to a particular region;

epidemic - which spread over a large population. Particularly to be noted is the speed at which it spreads and the time - in a very short time spreading to a considerable geographical area;

and pandemic - we have gone through one recently - the COVID pandemic - it spreads across several regions of the world if not the entire world.

One of the earliest and which we will be discussing in detail is cholera. The cholera disease and its mortality remained very high in spite of several measures. Apart from cholera, there was a plague and malaria and these are not all one time affairs. The successive bouts of these diseases - resulted by the time the century 19th century came to an end - in an awful number of people dying. The statistics revealed who had died by one or the other kind of these diseases. These were caused by several reasons. One was poverty, and as I said, famine - famine particularly induced by the colonial mode of rule and exploitation; unorganized and unplanned urban growth which had problems of

hygiene; the spread of slums; and certain activities which were particularly related to the colonial mode of rule, colonial ambitions colonial expansionist policies - both in terms of territories and in terms of infrastructures - like railways and canals or introduction of new plantation crops. These for instance created conditions - special conditions - for greater proliferation or incidence of diseases. For instance, during the construction work related to railways and canals, there were large stagnant pools of water which remained for long periods of time which, for instance, was very conducive to be origin and spread of malaria. Similarly if you take the case of tea plantations - tea would need considerable water from time to time. But unlike rice, it does not like water standing in the field. Many of us when we think of tea we think of tea grown in the hills of say Darjeeling or Munnar or Ooty and we would wonder how would water stagnate in such a topology. But in places like Assam, like where you would be surprised to find tea on almost plain, horizontal ground - in fact in its vicinity you will find even rice within a few kilometers. There, there was the danger of water stagnating, and to avoid that, to drain that, there had to be ditches which had to be dug on the edges. These ditches again were a source of stagnant water and malaria. Like that, in several ways, some of these are so-called development projects, themselves, were very conducive to the disease. Also these infrastructures and new modes of transport like steamship or railways or other kinds of motorized transport enhanced the greater movement of not only troops but also the people - general travel or commerce or pilgrimage. This again increased the rate at which diseases could be spread through which they could be endemic, endemic could become epidemic. Considering the totality of these factors - the poor conditions, the kind of development, the kind of investments made, the kind of resources spent for sanitary and other measures, the kind of local challenges faced - considering all of these, India was left far behind Europe and North America in tackling public health problems - especially these diseases and in a set of next lectures we will dealing with each of these diseases separately - one on smallpox, one on malaria and so on. But today we will close this lecture here. Thank you