Development of Vaccination in Princely Mysore State

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ABSTRACT

Princely Mysore State during the reigns of the British imperial India played a very prominent and laudable role in bringing welfare to its subjects with regard to the public health. The contributions to the public health by Princely Mysore State are plentiful and noteworthy. The current paper focuses on the development of vaccination in Princely Mysore State. The launching of vaccination institute, efforts to counter the disease bound areas and plans to counter diseases resulting in epidemic outbreak are the other major issues highlighted in this paper. An incentive to the public servants to further the cause of public health is interesting and is a sign of competent administration. Health survey and documentation of the same by the government servants represent the professional approach towards public health protection. The paper also examines the legal measures adopted to contain public health.

Introduction:

The 17th and 18th centuries were full of exciting discoveries by some Pioneers and their contribution to modern medicine. Edward Jenner-Small pox vaccine (1796), Louis Pasteur-Demonstration of bacteria in air and anti-rabies treatment (1822), John Snow-Investigation of epidemic of cholera in London it is a model for others even today (1848), Hansen-Discovery of leper bacilli (1873), Ronald Ross– Mechanism of transmission of malaria (1898), Edwin Chadwick's (1800-1890) report focused the attention of the people and government on the urgent need to improve public health. The great sanitary awakening which led to the enactment of the Public Health act of 1848 in England.. It's a landmark in the history of public health and a new thinking began to take shape in the State has a direct responsibility for the health of the people. Cholera which is often called the "father of public health" An English epidemiologist, John Snow, studied the epidemiology of cholera in 1848 to 1854 and established the role of polluted drinking water in the spread of cholera. In 1856,

William Budd, observations of outbreak of typhoid fever by drinking water a comprehensive piece of legislation was brought into force in England, the Public Health Act of 1875 for the control of man's physical environment, Sir John Simon (1816-1904), the first medical officer of health of London. He built up a system of public health in England, which became the admiration of the rest of the world. This early phase of public health (1880-1920) is often called the "disease control phase".[1]

Modern Medicine:

After 1850, medicine moved faster towards specialization and a rational scientific approach to disease. The pattern of disease began to change with the control of acute infectious diseases, diseases such as Cholera, Plague, Smallpox, Influenza, Tuberculosis and mental illnesses came into prominence and have become the leading causes of high mortality. These diseases could not be treated with "magic bullets". The realization began to dawn that there are other factors in the etiology of diseases, namely social, economic, genetic, environmental and psychological factors which are equally important. Most of these factors are linked to man's life style and behavior that led to the era of disease prevention by specific measures.[2]

Intervention of the Princess to popularize vaccination:

For the 1st time in Mysore and Probably in India Vaccination was introduced in 1806. There had been no remedy against the terrible scourges of small-pox prior to that period. Rani Lakshmi Ammanni wished to celebrate the Marriage of the young Raja, but the bride having had small-pox the ceremony had been deferred. Rani communicated with Major Wilks, the British resident being apprised of the cause, they had given vaccination to young bride, then which was disappeared and she recovered as a result of this, Madras Government published a notification in 1806, communicating it to the general public.[3]

Development of vaccination in Princely Mysore State: The Vaccination department was working under the department of public health with the supervision of the Senior Surgeon to the Mysore Government in 1881. It consists of 3 classes of subordinates, viz. first class vaccinators on pay of Rs.15, second class on Rs.12 and third class on Rs.10 per head. The vaccinators were paid in proportion to the number vaccinated by them, 100 in a month

[1] Hobson, w. (1965) World Health and History, Oxford University press,London
[2] WHO (1984). World Health, July 1984 p.6.
[3] Shama Rao, M.Gezetteer.p.500

being the minimum number required of each to entitle them to the full pay of their rank. The whole cost of the establishment was borne by the State except in the Municipalities of Bangalore town and Mysore which had their own vaccinators. There were 7 first class vaccinators on Rs.15, 34 second classes on Rs.12, and 45 third classes on Rs.10 per head. Supervising agencies were the District Medical officer, Deputy Commissioner of District and hospital assistance of camps, Amildars in town and villages. 8 Deputy Inspectors were appointed to each district to watch and check the work of the vaccinations. Arm to arm method was practiced before the establishment of the Vaccine Institute in1881-82.

A separate department was placed under the **Deputy Commissioner in 1890**. The Government sanctioned the establishment of a Vaccine Institute to prepare vaccines **manufacture good lymph** from the calf is made into a paste by mixing it with anhyseous **Lanoline.** (Surgeon Major King's process) Vaccinators were appointed to one for each Taluk. It is usual however to add more vaccinators temporarily to the establishment when smallpox appears in an epidemic form. [4] In the year 1890, 86 vaccinators were employed. Municipalities of Bangalore, Mysore and Srirangapatna had own vaccinators. Bangalore-2, 1 Male &1 Female,Mysore- 2 and in Srirangapatna-1. In 1890, 68,732 primary vaccinations 687 re-vaccination and total 58,171 vaccinations had completed. Total cost for Vaccination in 1890 was Rs 17,929.[5]

The Government Vaccine Institute:

Princely Mysore Government sanctioned the establishment of a Vaccine Institute in the year 1881 and was established in 1890, started manufacturing small-pox vaccination. It was located in the compound of the Lunatic Asylum Bangalore and was transferred to the Lal-Bagh Lodge in the year 1914. The institute started to manufacture good lymph from the calf which was made into a paste by mixing it with anhydrous Lanoline according to surgeon major king's process. This was followed with the new stables for calves being built and other changes effected to meet the special requirements of the institute. The most noticeable feature of the record of work is the increase in the quality of vaccine prepared and issued from the institute. And it was the first largest vaccine manufacturing of smallpox unit in the State. [6] The Bureau of laboratories started production of Anti-cholera, Anti- typhoid vaccines in the

[4] Mysore Administrative Report, 1881-86,p.121
[5] Ibid
[6] Mysore Administrative Report, 1914, p.76

ear 1920, in addition to plague vaccine.[7] The experimental production of plague vaccine was started in collaboration with great medical personality Dr. Haffkine, the Director of Public Health Institute and also called Superintendent of the Bureau in the year 1912. In the year 1932-33, 376 cow calves and 31 buffalo calves were vaccinated. The quantity of pulp collected was 41.617 grains, and the grains were used in the manufacture of glycerin lymph for seed experiments etc. The average yield per calf vaccinated was 105 grains of pulp.[8] Vaccine Institute was preparing Glycerin Lymph and Lanoline Lymph to issue throughout the State. The Institute also started giving training in the technique of vaccination to vaccinators.[9] In the Public Health Institute a chemical laboratory was started to examine blood, water and prepare vaccine to supply to the hospitals.

Special Laws: In 1907, the special health scheme was sanctioned, that was a reserve vaccinator for each district for emergent work when necessary and to relieve vaccinators proceeding on leave. A law was passed in the year 1898 that made vaccination compulsory and **Compulsory Vaccination Regulation** to make provision for compulsory vaccination in the State, the Vaccination Regulation was passed on the 16' March 1906.[10] A small money reward was started to give at the end of the year to the most active vaccinator of each Division.[11] The compulsory vaccination was introduced in the cities of Banglore Mysore and Kolar Gold Field and five municipal towns in the districts of Banglore, kolar, Shimoga and Chitradrug with a view to secure satisfactory vaccination work Government replaced the staff of vaccinators by a better class of men, hospital assistance as public vaccinators.[12]

Compulsory vaccination was extended in 18 municipalities, and Vaccination Regulation was in force to 90 villages. A scheme for constituting, a self contained school Inspection Service proposed by the health department. The number of children examined by the Chief Sanitary Inspectors during the year 1923 was 36,570.[13] Compulsory vaccination was introduced to all the selected villages in Bangalore district & survey of unprotected children was carried out by the rural health unit at Mandya and vaccination was conducted in all villages in the state.[14]

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[7] Suryanath kamath U, Karnataka Gazetteer, p.722
[8] Mysore Administrative Report, 1912, p.69
[9] Mysore Administrative Report, 1935, p. 121
[10] Hayavadhan roa C Mysore Gazetteer, p.451
[11] Medical Department file no 19 of 1902 p. 1&2
[12] Mysore Administrative Report, 1910,p.61

[13] Mysore Administrative Report, 1923, p. 63
[14] Mysore Information Bulletin, July 1939

Inspection:

District sanitary officers, district sanitary assistants and deputy inspectors were deputed to examine the persons which bore marks of successful vaccination. Compulsory vaccination was newly introduced into five municipal towns. A preliminary survey of unprotected children was also carried out in the state.[15] Government sanctioned a whole time sanitary commissioner for the state who was also director of public health institute, and the appointment of whole- time district sanitary officers was sanctioned. Routine inspections were conducted by the sanitary staff and action was taken wherever sanitary defects were noticed.[16]

The Government Industrial and Testing Laboratory:

was established at Bangalore during the year 1932. Vaccine Institute started training the vaccinators. The Superintendent Vaccine Institute was entrusted to supervise the vaccinations in the model range to test several strains of lymph produced in the institute. The income and expenditure of the institute was Rs.24, 828, 90 and Rs.24, 795.90 respectively.[17] Mysore Government permitted the Superintendent of the Vaccine Institute to go to Erode for arranging the supply of calves for the vaccine institute. [18] Princely State was purchasing Febrifuge and Cinchona from Madras government to Public Health Institution. [19]

It also started to manufacture large quantity of drugs and Medicine required for the use in the hospitals, which was being imported earlier by the State from places both in and out of India. This Laboratory also initiated investigating the possibilities of using indigenous drugs for medicinal purposes. During the year 1937 more than 70,000 Ibs of medicines were manufactured by the laboratory and its products were put on the market both in and outside the Mysore.[20] Dr. M. Srinivasa Rao, Chemical Examiner and Bacteriologist were sent to England to acquire the diploma in Public Health and to study special methods in vaccination and was placed in charge of the Institute of Public Health.

Pasture Institute at Kasauli:

It was established to prepare medicine for treatment of bites from rabies infected by the animals which the Government was purchasing it every month from outside.[21] Princely Government started purchasing medicine from Coonoor Pasteur Institute and annual

[15] Mysore Administrative Report, 1914, p. 70
[16] Mysore Administrative Report, 1947, p. 145
[17] Mysore Administrative Report, 1932-33, p. 143
[18] Medical File no 214 of 1902, p. 1-4
[19] Quinine & Febrifuge no 216 of 1902,p.1-4
[20] Special issue, SALAR –E-HIND, SAIF AJAD Bombay, September, 1938.
[21] Medical File no 84 of 1905, p. 1-4

contribution was also given to the Institute to purchase Anti- rabies treatment in the Coonoor.[22] Mysore Government permitted the Superintendent of the Vaccine Institute to go to Coonoor for arranging for supply of calves for the Vaccine Institute.[23]

The Health Training Centre:

Vaccine institute was started giving training for vaccination in the year 1938 and training center was established at Close pet, for proper checking and verification of vital statistics and to train the candidates for qualifying in vaccination, besides these compounders, midwives and final year MBBS and LMP students' examinations of the Mysore University were also underwent training after completing the courses and they were granted certificates.[24]

Kurnool System:

The vaccination work was carried on by vaccinators in accordance with the "Krunool System." According to this system, a programme was prepared by the Deputy Inspector of vaccination indicating the villages in which the vaccinator had to carry on the work during the following month. Takids or noticers of the arrival of vaccinator were sent to Patels who were expected to have all the unprotected children in their villages ready for vaccination on the date on which the vaccinator is expected to visit the village. After the visit of the vaccinator, the Patel sends a report on the progress of the work to the Deputy Inspector of vaccination, through the Amildar at the same time, the vaccinator also required to submit his report directly to the Deputy Inspector. At the close of the month, the vaccinator compiles a monthly return and submits it to the Deputy Inspector.

A medical officer maintained a "Vaccination State" with a register of the "unprotected children" to vaccinate, he was required to set apart one morning of every week to go round the town in search of cases and vaccinate children in their houses.

Survey of Unprotected children:

Endeavour was being made to have preliminary survey of "unprotected" children made out, to constitute a basis for an efficient programme of vaccination work. Every inspecting officer of the department was instructed to make personal enquiry, the total number of "unprotected" children in the place he inspects. In Bangalore, Mysore and on the Kolar Gold Fields, census was taken in the year 1914-15. In Bangalore, a detailed register was maintained in each division in which all unprotected subjects between 6 months and 12 years of age were shown as regards other Municipal officer.

[22] Medical File no 33 of 1917, p. 1-6. archives, Bangalore
[23] Medical File no 214 of 1902, p. 1-4. archives, Bangalore
[24] Ibid

Medical Stores Bangalore:

The Medical Stores at Bangalore was manufacturing and supplied the requirements of the Hospitals and Dispensaries maintained under the direct control of the Medical Department. The arrangement was under the Senior Surgeon in charge of the Institute. The Institution was placed in direct charge of a Superintendent. [25] In the year 1929, 4 medical graduates of the state were deputed for training in sanitation to America by the Princely govearnment.[26]

Conclusion:

The public health measures laid by the Princely Mysore State are indeed significant and noteworthy. Princely Mysore was pioneer in developing vaccination unit in the state. A law was passed in the year 1898 that made vaccination compulsory in the State; the Vaccination Regulation was passed on the 16th March 1906.

During the year 1937 more than 70,000 Ibs of medicines were manufactured by the laboratory and its products were put on the market both in and outside the Mysore shows the sensitivity and forethought of Princely Mysore State in containing the epidemic diseases. The above measures resulted in eradicating the epidemic diseases of cholera, smallpox and plague considerably and rapidly. Ever since, except few insignificant cases of malaria being reported, Mysore district never witnessed any of the epidemic disease outbreaks till this date.

[25] Hayavadhan roa C Mysore Gezeteer p.451
[26] Shamarao M. modern Mysore. p. 418