



ABSTRACT

Establishment of combating Mosquito menace by strengthening the web based communicable disease surveillance system with vector indices, water quality indices and climatic information in Tamil Nadu under Tamil Nadu Innovation Initiative(TANII) 2018-2019 – Administrative and Financial sanction accorded – Orders – Issued.

HEALTH AND FAMILY WELFARE (P1) DEPARTMENT

G.O.(D).No.1062

Dated: 25.06.2019
Vihari, Aani-10
Thiruvalluvar Aandu – 2050.

Read :

From the Director of Public Health and Preventive Medicine,
Letter No.51098/EPI/S1/2018, dated 24.01.2019.

ORDER :

The Director of Public Health and Preventive Medicine in his letter read above has sent a proposal recommended by State Planning Commission under TANII (Second Round) 2018-2019 as follows:-

a) Introduction:

The communicable diseases like Dengue, Malaria, Chikungunya, Scrub typhus, Swine Flu, Typhoid, Leptospirosis, Japanese Encephalitis and certain other infections like anthrax are causing both morbidity and mortality and remains to be a major challenge to public health. Fever is the common presentation of all these epidemic prone diseases and World Health Organization (WHO) estimates that at any given point of time about one percent of the population is likely to have fever. During rainy and winter seasons, it may rise to 1.5% to 2%. Most of these fevers are ordinary viral fevers like common cold, seasonal flu etc. At the same time fever due to Dengue, Leptospirosis, Typhoid fever, Scrub typhus, may lead to complications and mortality if neglected. In addition, Acute Diarrheal Diseases and Food borne infections contribute significantly to morbidity and mortality.

Mortality from epidemic prone diseases can be reduced to zero by appropriate timely clinical management, which involves early clinical and laboratory diagnosis, oral and intravenous rehydration, staff training and hospital process reorganization and training health personnel, along with appropriate referrals. Morbidity from epidemic prone diseases can also be reduced by implementing improved outbreak prediction and detection through coordinated epidemiological and entomological surveillance, promoting the principles of integrated vector management and deploying locally adapted vector control measures including effective urban and household water hygiene and storage practices.

Effective communication can achieve behavioural outcomes that augment prevention and control activities.

b) Rationale

Mosquito transmits the communicable disease like Dengue, Malaria, and Chikungunya etc. The climatic factors such as rainfall, humidity, temperature influences the growth and viability of mosquito. The available information related to climate and weather need to be integrated with disease surveillance for the proper vector management and outbreak prediction. The Indian Meteorological Department gives the daily forecast of weather conditions like temperature, rainfall and humidity that could be integrated with the existing disease surveillance system.

The District Entomologist or District Malaria Officer present at the district headquarters are monitoring the vector indices on daily basis within the district by doing house-to-house survey in the villages. The Zonal Entomological Team in the department of public health and preventive medicine is monitoring the vector indices all over the state on daily basis through field visit. These information need to be integrated with disease surveillance portal for an effective monitoring of mosquito indices and to correlate the vector trend and disease.

The standard of water quality also influences the cause and spread of the communicable disease and that need to be monitored on day-to-day basis. The health inspectors at the Primary Health Centre level, all over the state collect the information on day to basis on water quality that need to be integrated with the disease surveillance portal.

Through this project, the web based communicable disease notification system of communicable diseases will be strengthened by addition of information related to mosquito menace by including the vector indices, water quality surveillance information and climatic information.

c) Challenges and Gaps in the Existing System:-

1. Vector Surveillance:

Health Inspectors collect the surveillance related to vector indices under the Public Health Department under supervision of District Entomologist and by the Zonal Entomological Team at village level. This information are paper based and consolidated at district level and correlated with disease pattern. The vector indices also need to be seen in the background of climatic information where electronic based data collection will aid the information collection, consolidation, and analytics.

2. Climate Information

The climate information at present is not included in the analysis of disease trend at present. The climate information services on temperature, rainfall and humidity are issued by Indian Meteorological Department on daily basis. This information needs to be disseminated to field level health workers and need to be used for analytics of outbreak prediction and analysis.

d) Water Quality Surveillance

Both Public Health department and Local bodies through field level workers monitor the water quality at the household level on daily basis. The Regional water

labs across Tamilnadu under Directorate of Public Health and Preventive Medicine lifts water sample randomly and tests the quality of water and send the report periodically to the concerned district collectors, District Health Officers and Director of Public Health and Preventive Medicine. These information need to be analysed with the communicable disease incidence and could be used for outbreak prediction. This information at present are paper based and need to be integrated with disease surveillance portal.

e) Status of vector surveillance, climate information and water quality surveillance:

All the information related to vector surveillance, climate information and water quality surveillance at present are available in paper-based system and sent to the various level of health and relevant authorities through letters and email. This causes considerable time delay in reach of information to the relevant authorities. The time delay can be shortened or avoided by web based or application based data collection system. The centralised data collection system will help in overall trend analysis of various factors related to mosquito menace and communicable disease incidence that will help to plan for targeted approach in disease prevention.

f) Objective of the proposed project:

- To create a module on Mosquito and flies to be used by field level health workers for data collection on daily basis.
- To create a module on climate information that facilitates and integrate the information from Indian Meteorological Services daily forecast.
- To create a module on water quality surveillance to be used by field level health workers for data collection on daily basis.
- To integrate the data collection modules with the existing web based communicable disease notification system using Geographical Integrating System and creation of dashboards for decision making for various level of users.

g) Expected benefits:

1. A real time information about the vector indices, climate information and water quality surveillance information at village level reaching the public health authorities without time delay.
2. A decision support system for public health authorities for improved outbreak prediction capabilities.

h) Sustainability:-

This proposal involves a one-time expenditure on software development and that will be integrated with existing web based notification system for disease surveillance. The recurrent costs related to training and hardware will be met out from Integrated Disease Surveillance Programme(IDSP) component of National Health Mission funds.

2) He has requested the Government to sanction of sum of Rs.54.4 Lakhs for combating Mosquito menace by strengthening the web based communicable disease surveillance system with vector indices, water quality indices and climatic information in Tamil Nadu.

3) After detailed examination, the Government have decided to accept the proposal of the Director of Public Health and Preventive Medicine recommended

under Tamil Nadu Innovation Initiative(TANII) 2018-2019 (Second Round) and sanction a sum of Rs.54.4 Lakhs (Rupees fifty four lakh and fourty thousands only) for combating Mosquito menace by strengthening the web based communicable disease surveillance system with vector indices, water quality indices and climatic information in Tamil Nadu as follows:-

S.No	Component	Total Cost (Lakhs)
1	Software Development	
1.1	Vector and fly Surveillance Module	2.5
1.2	Water Quality Surveillance Module	2.5
1.3	Climate information Module	2.5
1.4	Integration of all modules with existing Web-based Disease Notification System.	7.5
2	Procurement of Tablet device	
2.1	Tablet device	30
3	Training and Workshop	
3.1	State level workshop and training on module development and use	2
3.2	Training to district level Health personnel	6.4
4	Assessment Survey and other contingencies	1.0
	Total	54.4

Sl. No.	Description	Amount (Rs. in lakh)
1.	2210-06-101-KM-05 office expenses 02 other contingencies (DPC 2210 06 101KM 30502)	1.00
2.	376 Computers and Accessories 01 Purchase (DPC 2210 06 101 KM 37601)	45.00
3.	72 Training 01 Training	8.40
	Total	54.40

4) The amount sanctioned in para 3 above shall be met from the State innovation fund and debited to the following head of account:

"2210-Medical and Public Health-06 Public Health – 101 prevention and Control of diseases – State's Expenditure- **KM** combating Mosquito menace by strengthening the web based communicable disease surveillance system with vector indices, water quality indices and climate information in Tamil Nadu under State Innovation Fund – 305 Office expenses – 02 other contingencies" – Rs.1.00 lakhs (DPC 2210 06 101 KM 05 26 Old) 2210 06 101 KM 30502 (IFHRMS)

"376 Computers and Accessories – 01 Purchase – Rs.45.00 lakhs (DPC 2210 06 101 KM 76 18)" (Old) 2210 06 101 KM 37601 (IFHRMS)

72-00 Training 01-Training – Rs.8.40 Lakhs (DPC 2210 06 101 KM 37201)

The above expenditure shall be adjusted by deducting under the following head of account:

"2210-Medical and Public Health-06 Public Health – 902. Deduct Amount met from State Innovation Fund – State's Expenditure- JA. Deduct-Amount met from State Innovation Fund-330. Inter-Account Transfers"
01 – Inter-Account – Transfers (DPC 2210-06-902-JA-33001)

By contra debiting from

"J. Reserve Fund – (b) Reserve Funds not bearing Interest – 8229-00. Development and Welfare Funds – 200. Other Development and Welfare Funds – BE. State Innovation Fund. (DPC 8229-00-200 BE-0006) (Outgo)"

5) Necessary additional funds will be provided in Revised Estimate/Final Modified Appropriation 2019-2020. However, this expenditure shall be brought to the notice of the legislature by Specific Inclusion in the Supplementary Estimates 2019-2020. Pending provision of funds in the Revised Estimate 2019-2020. Pending provision of funds in the Revised Estimate 2019-2020, the Director, Public Health and Preventive Medicine, is authorized to incur the amount sanctioned in par 3 above. The Director, Public Health and Preventive Medicine, is requested to send draft explanatory notes for Supplementary Estimates 2019-2020 to Government in Finance (BG-I) Department and also to include the expenditure while sending the budget proposals for Revised Estimate/Final Modified Appropriation 2019-2020 to Government in Finance (Health-I) Department without fail.

6) This order issues with the concurrence of the Finance Department its U.O.No.17005/Health-I/2019, dated 20.06.2019 and ASL No. 484 (Four hundred and eighty four).

(BY ORDER OF THE GOVERNOR)

Dr. BEELA RAJESH
SECRETARY TO GOVERNMENT

To

The Director of Public Health and Preventive Medicine, Chennai-600 006.
The Principal Account General, Chennai-600 035.
The Pay and Accounts Officer, (South), Chennai-600 015.

Copy to:-

The Planning Development and Special Initiatives Department, Chennai-600 009.
The State Planning Commission, Chepauk, Chennai-600 005.
The Finance(Health-I/BG- II/BG-I) Department, Chennai-600 009.
The Health and Family Welfare (Data cell), Chennai-600 009.
Stock File/Spare Copy.

//FORWARDED BY ORDER//

SECTION OFFICER

V.S
2.7.19

SA
02.07.2019