

4 Preparedness and Response- India not affected

Till such time as India remains unaffected, there is a window of opportunity to prepare. It also gives an opportunity to test the plans.

The strategy appropriate to this scenario would be surveillance at the Points of Entry and in the community including laboratory and entomological surveillance and integrated vector control measures. Capacity building shall be initiated for nationwide surveillance and response to manage outbreak of Zika virus disease.

4.1. Components of Action Plan

4.1.1 National Level

4.1.1.1 Surveillance

4.1.1.1.1 Surveillance at Points of Entry

There shall be passive surveillance at the identified Points of Entry (Ports, Airports and Border Crossings). Passengers travelling from affected countries and suffering from fever would be informed to report to the Health Unit at the Point of Entry (POE). Passengers would be informed through display boards / Help Desks at prominent places at arrival hall and through announcements in the flight/ ship. Information through displays shall also be provided to the arriving passengers to report to the nearest health facility if they suffer from fever within three weeks of departure from an affected country.

[Action: DDG (IH)]

4.1.1.1.2. Surveillance in the Community

Integrated Disease Surveillance Programme (IDSP) shall prepare its personnel including the Rapid Response teams for community based surveillance and for outbreak investigation. The case definition is at **Annexure-II**.

[Action : National Programme Officer, IDSP]

4.1.1.1.3. Laboratory Based Surveillance

The ICMR through its identified laboratory network would test predetermined clinical samples from fever cases that's found negative for Dengue and Chikungunya. If any sample tests positive for Zika virus, Director (EMR) shall be informed immediately. Director (EMR) shall inform the concerned stakeholders for necessary action

[Action : ICMR; Director, EMR]

4.1.1.1.4. Entomological Surveillance and Xeno diagnosis

National Vector Borne Disease Control Programme (NVBDCP) and NCDC with the support of ICMR would jointly scale up the entomological surveillance for *Aedes*. The vector surveillance should be round the year to detect the seasonal fluctuation in vector density and pin-point high risk areas. The larval survey shall be done on weekly basis to determine the major breeding places in domestic areas so as to initiate the source reduction measures. Common protocol should be finalized and shared among the three institutions for the *Aedes* surveillance.

Laboratories identified by ICMR would continue testing pre determined samples of *Aedes* mosquitoes for the presence of Zika virus. If any sample tests positive for Zika virus, Director (EMR) shall be informed immediately.

[Action : Director, NVBDCP; Director, NCDC; ICMR]

4.1.1.1.5. Surveillance for Microcephaly

The Rashtriya Bal Swasthya Karyakram (RBSK), an initiative under National Health Mission, has a surveillance system for monitoring birth defects. These identified sentinel sites would be utilized to get weekly data on microcephaly. RBSK will increase the number of sentinel sites in due course.

Any location specific increase in number of microcephaly will be investigated By NCDC for epidemiological linkage to Zika virus disease.

[Action : DDG (CH); National Monitoring Team; RBSK, NHM; Director, NCDC]

4.1.1.1.6. Surveillance for Neurological Syndromes among febrile clustering.

IDSP in co-ordination with National Polio Surveillance Programme (NPSP) shall monitor reporting of cases of neurological disorders (Guillain Barre Syndrome) among reported clusters of febrile illness. Any location specific increase in number of Guillain Barre Syndrome will be investigated By NCDC for epidemiological linkage to Zika virus disease.

[Action: Director, NCDC; DC, Immunization]

4.1.1.2. Laboratory Support

National Institute of Virology, Pune along with NCDC would be the apex laboratories for testing Zika virus disease. Twenty two other laboratories under the ICMR network have been strengthened for testing Zika virus in humans and three laboratories for vector

surveillance [**Annexure-III**]. Additional laboratories would also be identified by NCDC and ICMR and laboratory personnel trained, if required. IDSP network of laboratories would also be strengthened for testing Zika virus disease by NCDC. Protocols drawn up by NIV, Pune for sample collection, transportation and testing are at **Annexure-IV**.

NCDC and NIV, Pune would ensure availability of diagnostic kits. For such purpose NIV, Pune will explore sources from which large quantity of diagnostic kits can be acquired at short notice. The fund requirement will be met by MOHFW.

[Action: Director, NCDC; Director, NIV; ICMR]

4.1.1.3. Hospital facilities.

Zika virus disease is a mild disease. Only a small percentage of those affected will require hospitalization. However, small clusters to widespread disease can be anticipated. All health facilities in the community (PHC, CHC), district and sub-district hospitals, medical colleges, private nursing homes and hospitals need to be prepared.

For clinical management, isolation facilities would be set up in identified hospitals. Such wards will have either mosquito proofing or provision for providing mosquito nets for individual patients.

Sustained and widespread outbreak may result in increase in incidence of cases of GBS that need to be treated in well staffed and equipped critical care units. The State Government will ensure availability of critical care beds for the management of such cases.

Under RBSK, the State Government will also prepare one or more hospitals to manage children born with congenital Zika syndrome.

[Action : Medical superintendent's of Central Government hospitals; State Health Departments]

4.1.1.4. Pharmaceutical Interventions

There is no specific drug or vaccine available for clinical management of Zika virus disease. High fever cases may require hospitalization and symptomatic treatment. A large number of cases could be managed in domestic settings with oral Paracetamol. The State Government/ District Administration/ concerned hospitals will ensure availability of adequate quantity of Paracetamol.

[Action: State Health Departments]

4.1.1.5. Non-pharmaceutical interventions

4.1.1.5.1 Airport/ Port Isolation

A symptomatic passenger arriving from an affected country shall be isolated at the Airport/ Port quarantine facility till such time the laboratory reports are available. If the case is found positive for Zika virus disease, passenger shall be counseled and isolation continued further. International Airports /Ports not having quarantine/ isolation facility will identify nearest hospital best suited for quarantine / isolation in consultation with the concerned State Government. The contact numbers of the identified Nodal Officers of such hospitals shall be available with the Airport/ Port Health Officers.

[Action: Airport/ Port Health Officers; DDG(IH); State Health Department]

4.1.1.5.2. Travel advisory

Ministry of Health and Family Welfare advocates citizens of this country to defer non-essential travel to an affected country. In particular, pregnant women or women who are planning pregnancy should defer/ cancel their travel to the affected areas. The travel advisory shall be amended from time to time depending on the scientific evidence that emerges over a period of time.

The travel advisory shall include safe sex practices for a period of six months for all those who are returning from affected areas.

The detailed travel advisory is at **Annexure-V**.

[Action-Director (EMR)]

4.1.1.5.3. Vector control

Aedes aegypti is the main vector species for transmission of Zika virus disease. For the vector control, the State/ UTs shall follow the guidelines on integrated vector management for *Aedes* mosquito. This would include environmental management, personal protection, biological control and chemical control. The guidelines issued by NVBDCP is at **Annexure-VI**. Actions are to be instituted at household level, community level and institutional level. Details of such actions are at **Annexure- VII**. These actions are largely achieved by local self Governments, institutions (hospitals, schools, colleges, work places etc) civil society and professional organizations.

The international Airport/ Port Organizations shall ensure zero *Aedes aegypti* index in the airport complex including an area of 400 meters around the perimeter . To attain this, co-

ordination will be ensured between Airport/ Port Authority and the Surveillance Team. The agency hired by Port/ Airport authorities for vector control shall be properly trained.

[Action: State units of NVBDCP; Airport / Port Health Organizations; Director, NVBDCP; Director, NCDC and relevant ICMR units]

4.1.1.6 Blood Safety

National Blood Transfusion Council has released revised guidelines for prevention and control of Zika virus infection through blood transfusion on 5th October 2016 [**Annexure VIII**]. Blood Banks are to ensure implementation of blood donor selection criteria as per these guidelines for those returning from Zika affected countries or show symptoms of Zika virus disease.

[Action-Director, NBTC; State Blood Transfusion council]

4.1.1.7. Logistic support

The required quantity of larvicide [Temephos], adulticide [Pyrethrum spray and Malathion for fogging], long lasting insecticide treated bednets, spray and fogging machines will be procured by the State units of the NVBDCP.

[Action: State Unit, NVBDCP]

4.1.1.8. Risk communication

The risk and actions required for risk reduction need to be conveyed to the community in clear and consistent terms. Central Health Education Bureau (CHEB) will be the nodal agency for risk communication. It shall develop risk communication strategy framework, risk communication plan including media plan. It will develop communication materials for a variety of settings and target groups including Points of Entry, hospitals, schools, colleges, work place, those planning pregnancy, pregnant mothers etc and keep this material ready to be rolled out at appropriate time. NVBDCP already has a risk communication strategy for community mobilization for Dengue. This strategy will be extended to cover Zika virus disease.

[Action: Director, CHEB; Director, NVBDCP]

4.1.1.9. Training

Capacity in human resources needs to be enhanced for surveillance, investigating the outbreak, laboratory support and instituting public health measures. The Rapid Response Teams (RRTs) up to District level will be trained on surveillance, outbreak investigation, vector control and containment of outbreak.

NVBDCP through advisory to the State units/ PHO/ APHO will ensure capacity building of staff engaged in vector control operations so that proper techniques are followed.

More laboratory personnel will be trained for the diagnosis of Zika virus disease.

[Action : NPO, IDSP; Director, NVBDCP; Director, NIV, Pune and Director, NCDC, Delhi]

4.1.1.10 Information Management

There should be quick and effective flow of information during outbreak of Zika virus disease. There would be multiple channels for first information report. These are (i) District Magistrate / District Collector of the District where the event has taken place (ii) IDSP field formations of the district, reporting to its State/ Central Unit.

The field formations of IDSP and the District Magistrate are to inform outbreak of Zika virus disease to (i) the Control Room of the State, and (ii) Control Room of MOHFW / Dte. GHS who in turn would inform Central Control Room in Ministry of Home Affairs[MHA] and the NDMA.

If in the opinion of the Nodal Officer, MOHFW the event constitutes/ has the potential to constitute a public health event of national concern, Secretary (H) would be informed, the Control Room of the MOHFW would be activated and would get in touch with the State Nodal Officer, State Control Room/ District Control Room. The Control Room of the MOHFW will regularly provide information/ Updates to the MHA/ NDMA Central Control Room. If deemed appropriate, Secretary (H) shall also inform Prime Minister's Office and the Cabinet Secretary. The information flow Chart is at **Annexure IX**.

[Director, NCDC; Director, EMR]

4.1.1.11. Media Sensitization

Media workshops would be arranged to sensitize media personnel including editors on Zika virus disease and associated complications.

[Director, EMR; Director, CHEB]

4.1.1.12. Psycho social issues

If there is wide spread infection, then a large cohort of microcephaly is a possibility. Special programmes need to be planned to ensure that such pregnant mothers and microcephalic children and their families are counseled and provided necessary psycho-social support. National Institute of Mental Health and Neuro Sciences [NIMHANS],

Bangalore would be the nodal agency to plan and implement such community/ hospital based interventions.

[Action : Director, NIMHANS]

4.1.1.13. Research

Department of Health Research (DHR) would be the nodal agency for basic, applied and epidemiological research. From this action plan point of view, focus areas would be surveillance, rapid detection, virus typing, Zika vaccine etc. DHR would collaborate with research institutions for answering key research questions that is expected due to the unknown behavior of the virus in Indian population.

[Action : DHR; ICMR]

4.1.1.14. Non-Governmental Organizations

The community level actions such as risk communication and social mobilization for vector control could be implemented with support from non governmental organizations. Among professional bodies Indian Medical Association, Indian Academy of Paediatrics, Federation of Obstetrics and Gynaecological Societies of India (FOGSI) etc will be approached for creating awareness among the private health sector for managing potential epidemic of Zika virus disease.

[Action: Director, EMR]

4.1.1.15. International agencies

MOHFW would continue to pursue the WHO advisories and seek information on situational updates. UNICEF and WHO have been contributing to the Risk Communication and continue to do so. Under the Indo-US agreement, our laboratories would continue to collaborate with CDC, India.

[Action : DDG(IH)]

4.1.1.16. Monitoring and Documentation

The situation would be monitored and preparedness reviewed on regular basis by the Joint Monitoring Group. Depending upon the situation, the Inter-ministerial Task Force will also meet. Secretary (H) or his representative shall hold regular video conferencing with the State Governments to review preparedness. EMR Division would record and circulate the proceedings of the meetings.

[Action : EMR Division; Dte GHS]

4.1.1.17 Control Room

A Control Room is functioning from Directorate General of Health Services on 24x7 basis. The Control Room number is 23061469. The Control Room shall also provide information to the public.

[Action : EMR Division; Dte GHS]

4.1.1.17 Co-ordination

Co-ordination with States, different Ministries/ Departments of the Central Government , departments, divisions/ sections of the Ministry and Directorate and institutions under Directorate will be done by the EMR Division.

[Action: Director, EMR]

4.1.2. Preparedness at State Level.

The Chief Secretary convenes a meeting of Secretaries of Health, Finance, Panchayati Raj/ Local Self Governments, Public Works, Education Departments and other relevant departments where the Health Secretary, Department of Health will apprise everybody about the Government of India Action plan for Zika virus disease. The concerned State Governments/ UT Administrations will develop the State/ UT Action Plan. The State level preparedness and response would thereafter be reviewed on regular basis.

All States / UTs shall identify a Nodal Officer and communicate his details including contact number to Ministry of Health, Government of India. The surveillance for detecting clusters of febrile illness would be done through the State IDSP. The health departments of the States would issue directions to all health facilities including private practitioners, nursing homes, and private hospitals to report clusters of febrile illness. The services of professional bodies in the State such as Indian Medical Association, Indian Academy of Paediatrics etc would be ensured. The State Health Department will identify laboratories that can be strengthened for testing of Zika virus. They will approach NCDC/ICMR for getting their laboratory personnel trained. State Government would review the hospital preparedness especially in the context of mosquito proofing of isolation facility. The integrated vector management and risk communication shall be managed through the State unit of NVBDCP. The States will also evolve mechanism for information management including daily reporting to EMR division, Dte.GHS and NVBDCP.

[Action: Health Department, all States/ UTs]

4.1.3. The District Level

Every District will have an action plan. District Collector/ District Magistrate will assume responsibility of overall coordination of the operations at the District level. Inherent to the success of the containment / mitigation operations are the activity planning and its execution at the grass root level. Familiarization of the key aspects and the preparedness measures would enable the district machinery to respond promptly and effectively to the emerging situation. This requires that the important functionaries in the district, particularly the Chief Medical Officer, Chief Executive of the Panchayati Raj and Urban Local bodies and the Rapid Response teams are aware of their roles and responsibilities. District Level Officers of Department of Health will ensure familiarization of their ground level staff in all aspects of preparedness, control and containment in accordance with the Action Plan and Guidelines. The Chief Medical Officer (CMO) of the District would be responsible for the health sector actions.

[Action: All State Health Departments]

