



Acute Encephalitis Syndrome

Why in News

The [Jal Jeevan Mission \(JJM\)](#) has provided tap water supply to more than **97 lakh households** in five **JE-AES (Japanese Encephalitis-Acute Encephalitis Syndrome)** affected states.

- The five states with priority districts are **Assam, Bihar, Tamil Nadu, Uttar Pradesh and West Bengal.**
- **JJM envisages supply of 55 litres of water per person per day to every rural household** through Functional Household Tap Connections (FHTC) **by 2024.** The **Jal Shakti Ministry is the nodal ministry** for the implementation of the scheme.

Key Points

▪ Acute Encephalitis Syndrome (AES):

- **About:** AES is a severe case of encephalitis **transmitted by mosquitoes** and is characterized by **high fever and inflammation of the brain.**
 - The [World Health Organisation \(WHO\)](#) in **2006**, coined the term AES to signify a group of diseases which seem similar to one another but are difficult to differentiate in the chaotic environment of an outbreak.
- **Vulnerable Population:** The disease most commonly **affects children and young adults** and can lead to considerable morbidity and mortality.
- **Causative Agents: Viruses are the main** causative agents in AES cases, although other sources such as **bacteria, fungi, parasites, spirochetes, chemicals, toxins, and noninfectious agents** have also been reported over the past few decades. It is **not vaccine-preventable.**
 - [Japanese Encephalitis](#) virus (JEV) is the major cause of AES in India (ranging from 5%-35%).
 - Herpes simplex virus, [Nipah virus](#), [Zika virus](#), [Influenza A virus](#), [West Nile virus](#), Chandipura virus, mumps, [measles](#), [dengue](#), scrub typhus, S.pneumoniae are also found as causative agents for AES.
- **Symptoms:** Confusion, disorientation, coma, or inability to talk, high fever, vomiting, nausea, and unconsciousness.
- **Diagnosis:** The **National Vector Borne Disease Control Programme (NVBDCP)** in India has set up countrywide surveillance for AES through sentinel sites with a focus on detecting Japanese Encephalitis (JEV).
 - In the sentinel surveillance network, AES/JE is **diagnosed by IgM [Antibody Capture ELISA](#)**, and virus isolation is done in the National Reference Laboratory.

▪ Status of AES in India:

- According to the NVBDCP, 10,485 AES cases were diagnosed in 2018 with 632 deaths across 17 states.
- India records **fatality rate at 6% in AES, but the fatality rises to 25% amongst**

children.

- Bihar, Assam, Jharkhand, Uttar Pradesh, Manipur, Meghalaya, Tamil Nadu, Karnataka, and Tripura are **worst affected**.

▪ **Government Initiatives:** To **reduce morbidity and mortality** the government of India developed a **multi-pronged strategy** with the convergence of the **concerned ministries**.

- **Ministry of Health and Family Welfare:** Strengthening and expanding JE vaccination, Strengthening of public health activities, Better clinical management of JE/AES Cases etc.
- **Ministry of Jal Shakti** for the provision of safe water supply.
- **Women and Child development** for providing high-quality nutrition to vulnerable children.
- **Ministry of Social Justice and Empowerment** for establishing District Disability Rehabilitation Centers for disability management and rehabilitation.
- **Ministry of Housing and Urban Affairs** for ensuring the supply of safe water in slums and towns.
- **Ministry of Education** to provide special facilities for disabled children for their education.

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