Vision 2035: Public Health Surveillance in India

Why in News

Recently, the **NITI Aayog** has released a white paper, **"Vision 2035: Public Health Surveillance in India"** which is envisaged to serve as a vision document t**o propel Public Health Surveillance** (PHS) in India and establish India as a global leader in the area.

> A **white paper** is an **informational document,** usually issued by a company or not-for-profit organization, **to promote or highlight the features of a solution, product, or service.**

Key Points

- **Background:**
  - **NITI Aayog's mandate is to provide strategic directions** to the various sectors of the Indian economy. In line with this mandate, the Health Vertical released a set of four working-papers compiled in a volume entitled **'Health Systems for New India: Building Blocks-Potential Pathways to Reforms'** during November 2019.
  - This white paper is a **continuation of the work on strengthening the health systems.**
- **About the White Paper:**
  - This paper is a **joint effort** of **Health Vertical, NITI Aayog,** and **Institute for Global Public Health,** University of Manitoba, Canada with **contributions from technical experts** from the Government of India, States, and International agencies.
  - It **lays out India's vision 2035 for PHS** through the integration of the **three-tiered (primary, secondary and tertiary) public health system into Ayushman Bharat.**
  - It contributes by **suggesting mainstreaming of surveillance** by making individual electronic health records the basis for surveillance.

- **Main Features:**
    - Strengthen non-communicable disease prevention, detection, control and to reduce out of pocket expenses of individuals and families.
    - It **builds on initiatives such as the Integrated Health Information Platform** of the **Integrated Disease Surveillance Program.**
    - **Aligns with the citizen-centricity** highlighted in the **National Health Policy 2017** and the **National Digital Health Blueprint.**
        It encourages the use of mobile and digital platforms and point of care devices and diagnostics for amalgamation of data capture and analyses.
    - It **highlights the importance of capitalizing on initiatives** such as the **Clinical Establishments (Registration and Regulation) Act 2010** to enhance private sector involvement in surveillance.
    - It **points out the importance of a cohesive and coordinated effort of apex institutions** including the **National Centre for Disease Control**, the **Indian Council of Medical Research** (ICMR), and others.
- **Vision:**
    - To make India's PHS system **more responsive and predictive to enhance preparedness** for action at all levels.
    - To make it **more citizen-friendly to ensure individual privacy and confidentiality,** enabled with a client feedback mechanism.
    - To **improve data-sharing mechanisms** between Centre and states for better disease detection, prevention, and control.
    - To **provide regional and global leadership** in managing events that constitute a public health emergency of international concern.

Public Health Surveillance

- PHS is an important public health function that **cuts across the three-tiered public health system and care provided.** Surveillance is **'Information for Action'** and is an **essential action for disease detection, prevention, and control.**

- **Challenges:**
    - **Data Collection and Sharing:** Various **verticals to collect data work differently and in separation** with no mechanism for data sharing.
        There is **no single system** where surveillance data generated by target specific populations like the **National AIDS Control Programme**, **National TB Elimination Programme**, etc. **could be understood in its entirety.**
    - **Poor Quality Data:** The data generated is of **low quality** and the **research or use of data** to answer critical health policy questions of the country **has been very limited.**
    - **Limited Synchronisation:** There is the limited ability of programme implementation structures to work in synchrony with research organisations and vice versa.
    - **Missing Linkages:** India invests significant resources in the registration of deaths. However, various **reviews have not been able to link the causes of mortality with morbidities.** There was still **no proper linking to find common ground** between the causes of diseases and deaths.
    - **Lack of Human Resources:** Human resources also form a formidable challenge. As many as **42% vacancies existed** at state and district level surveillance systems.
        Most of the positions of the Central Surveillance Unit at the Centre are **filled either by deputation or on contract** and the individuals are **loaded with multiple other responsibilities**.
    - **Lack of Epidemic Intelligence:** India **does not have an adequate number** of public health **professionals having expertise** in the field.
        'Epidemic intelligence' can be defined as all the activities related to early identification of potential health threats, their verification, assessment and investigation in order to recommend public health measures to control them.
    - **Under-developed Systems:** A **non-communicable diseases** (NCDs) **surveillance system hardly exists** in India and other factors like integration of surveillance for NCD risk factors, surveillance of injury and accidents, air pollution and its effects, etc, are **yet to be included in surveillance.**
    - **Lack of Occupational Health Surveillance:** This type of surveillance **addresses issues like lead toxicity, silicosis, etc.** Whatever data has been generated hardly became part of India's PHS system.
    - **Emerging Challenges:** Growing **antimicrobial resistance** (AMR), new infectious diseases or new strains of existing diseases and increased rate of NCDs.

- **Suggestions:**
    - **Creation of a skilled and strong health workforce** dedicated to surveillance activities.
    - **Integration** of NCDs, reproductive and child health, occupational and environmental health and injury into PHS.
    - **Merger of morbidity data** from health information systems.
    - **Amalgamation** of plant, animal, and environmental **surveillance in a One-Health approach** that also includes surveillance for antimicrobial resistance and predictive capability for pandemics.
    - **Strengthening of laboratory capacity** with new diagnostic technologies including molecular diagnostics, genotyping, and phenotyping.
    - **Establishment of a governance framework** that is inclusive of political, policy, technical, and managerial leadership at the national and state level.
    - **Enhancement of surveillance** of NCDs, citizen-centric and community-based surveillance and use of point of care devices and self-care diagnostics.
    - **Prioritization of diseases** that can be targeted for elimination as a public health problem, regularly.
    - **Improvement of core support functions** and system attributes for surveillance at all levels.
    - **Establishment of mechanisms to streamline data sharing,** capture, analysis, and dissemination for action.
        - These could **include the use of situation-aware real-time signals** from social media, mobile sensor networks, and participatory surveillance systems for event-based epidemic intelligence.
    - **Encouragement of innovations** at every step-in surveillance activity.

Way Forward

- Despite all of the challenges, India has made good progress in improving the surveillance system and implementation of this vision can thrust India to be a global/regional leader in PHS.
- The building blocks for this vision are an interdependent federated system of governance between the Centre and states, a new data-sharing mechanism that involves the use of new analytics, health informatics, and data science including innovative ways of disseminating **'information for action'.**

Source: PIB