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Combating Epidemics

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This article is based on "**Gearing up to fight the next big viral outbreak**" which was published in The Hindu on 21/02/2020. It talks about a preventative approach in dealing with epidemics.

Recently, the outbreak of coronavirus (COVID-19) in China has taken not only a toll on human life but, it also impacted the global economy. These types of epidemics emerge quite frequently (SARS, MERS) and the global community seems to be taking curative measures every time, rather being adequately prepared beforehand.

The World Health Organization (WHO)'s **Global Health Security Index** held that no country is adequately prepared against global epidemics. The index assesses 195 countries across six categories namely prevention, early detection, rapid response, health system quality, standards, and the risk environment.

India too scored 46.5 (ranked at 57th position) in this index. Though the score is above global average (40.2), India remains vulnerable to these global epidemics **due to high density of the country's population and the high incidence of poverty.**

As more outbreaks are likely in the future, the best response is better preparedness.

Strategy to deal with Epidemics

The prospect of new outbreaks puts four items on the health agenda.

- Early detection and prevention.
- Better collaboration across health service providers.
- More investment in health systems, outcomes, and education.
- Better care of the environment and biodiversity, which directly affects people's health safety.

Associated Challenges for India

- One of the many dimensions of new pathogens that is getting increased attention is the link with environmental degradation.
 - The interaction between particulate matter from pollution and viral respiratory tract infections, especially in the young, elderly and the malnourished, has been increasingly noted in many recent studies.
 - This is more problematic for India, as many of the highest air pollution readings are being recorded in Indian cities.
- **India's health status is being worsened by climate shocks.**

A HSBC study of 67 countries ranks India as the most climate-vulnerable one because of the impact of severe temperature increases and declines in rainfalls.
- India's healthcare system suffers from physical infrastructure and human resource constraints.
 - Health expenditure by the government in India is **less than 1.5% of Gross Domestic Product**, which is low for a middle-income country.
 - According to WHO, India has only **80 doctors per 1,00,000 people**.
- Nearly two-thirds of known pathogens and three-quarters of newly emerging pathogens spread from animals to humans.
 - This dangerous trend for disease spillovers from animals to humans can be traced to increased human encroachment on wildlife territory, land-use changes that increase the rate of human-wildlife and wildlife-livestock interactions and climate change.
 - These issues are deeply entrenched in India's urban expansion.
- These challenges make India ill-prepared to deal with the new outbreak of new pathogens.

Way Forward

- **Better Detection, Awareness and Quarantining**
 - **Thailand's track record** in disease prevention, early detection, and rapid response linked to investments in its public health system is worth emulating for countries like India.
 - When the deadly Middle East Respiratory Syndrome (MERS) broke out in 2015, Thailand quickly notified the WHO of its first confirmed case and acted transparently to arrest the spread, in stark contrast to delayed notification by China's officials of the recent outbreak.

- **Kerala Model**

- Kerala's experience in 2018 with the deadly Nipah virus showed the value of investing in education and health over the long term.
- The availability of equipment for quick diagnosis, measures to prevent diseases from spreading, and public information campaigns all helped to keep the mortality rate from the **Nipah virus** relatively low.
- Having capable public health professionals helped in the information exchange with WHO and other international bodies.
- **Clearer protocols are needed in all States**, and these protocols need to be communicated to health professionals at all levels and the public in local languages.
- Each State in India should do this to expose crucial gaps in areas such as adequacy and supply of diagnostic equipment, health facilities, hygienic practices, and prevention and treatment protocols.

- **Need for an Emergency Plan**

There is a need to establish an emergency loan facility, as the World Bank uses for disasters, natural or health, that can help augment own resources in times of a public health catastrophe.

- **Partnerships between private and public sectors**, and between countries can sustain supply chains and bolster the medical capacity of countries struggling to cope against epidemics.
- The best defence of all is to invest more, and more efficiently, in health and education to prepare populations and strengthen health services. Also, protecting the precious biodiversity should be a priority.

Drishti Mains Question

Prevention is better than cure. Discuss the statement in light of the recent outbreak of coronavirus in China.