List of Priority Pathogens

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Topic- Science and Technology [GS Paper-3]

Context- Recently, The World Health Organisation released the first-ever list of fungal infections (Priority Pathogens) that can be a threat to public health

Key Highlights

- The World Health Organisation fungal priority pathogens list (WHO FPPL) is the first ever global effort to systematically prioritize fungal pathogens, considering their unmet research and development (R & D) needs and perceived public health importance.
- The effort aims to focus and drive further research and policy interventions to strengthen the global response to fungal infections and antifungal resistance.
- The WHO FPPL list is divided into three categories i.e. critical, high and medium priority.
    - The classification is based on the public health impact or emerging antifungal resistance risk of the pathogens.
        - **Critical Priority Group**– It includes highly drug-resistant fungi i.e. Candida auris categories of fungi such as Cryptococcus neoformans, Aspergillus fumigatus, and Candida albicans.
        - **High Priority Group-** It includes several other fungi from the Candida family as well as others such as Mucorales, a group containing “black fungus”, an infection which rose rapidly in seriously ill people, particularly in India,

during Covid-19.
    - **Medium Priority Group**– It includes other fungi, such as Coccidioides spp and Cryptococcus gattii.

- The report presents these categories and proposes actions and strategies for policymakers, public health professionals and other stakeholders and targets at improving the overall response to these priority fungal pathogens including preventing the development of antimicrobial resistance.
- Three primary areas for action are proposed under the list that focuses on
- strengthening laboratory capacity and surveillance;
- sustainable investments in research, development, and innovation;
- public health interventions

Concerns

- Fungal pathogens are a major threat to public health and are becoming increasingly common and resistant to treatment as there are only four classes of antifungal medicines currently available, and few candidates in the clinical pipeline.
- Most of the fungal pathogens lack rapid and sensitive diagnostics and those that exist are not widely available or affordable globally.
- The current evidence shows that the incidence and geographic range of fungal diseases are both expanding worldwide due to global warming and the increase of international travel and trade.
- During the COVID-19 pandemic, it reported a significant rise in the incidence of invasive fungal infections among hospitalized patients.
- As the fungi that cause common infections (such as candida oral and vaginal thrush) become increasingly resistant to treatment, risks for the development of more invasive forms of infections in the general population are also increasing.
- These fungal infections mostly affect severely ill patients and those with significant underlying immune system related conditions.
- Populations at greatest risk of invasive fungal infections include those with diseases such as cancer, HIV AIDS, organ transplants, chronic respiratory disease, and post-primary tuberculosis infection.