



## Antimicrobial-Resistant Gonorrhea

**For Prelims:** Gonorrhea, Antimicrobial resistance

**For Mains:** Causes and Impacts of Anti-Microbial Resistance (AMR)

### Why in News?

Recently, a strand of [antimicrobial-resistant gonorrhea](#) outbreak has hit Kenya.

- Researchers have raised alarm, warning this **infection is asymptomatic in some cases** and can cause significant health challenges, including **permanent damage to their reproductive systems**.

### What is Gonorrhea?

- **Gonorrhea** is a [sexually transmitted infection \(STI\)](#) caused by the bacterium **Neisseria gonorrhoeae**.
  - It can infect both men and women and can occur in the **genitals, rectum, and throat**.
  - If left untreated, gonorrhea can cause serious health problems, including infertility and an **increased risk of [Human Immunodeficiency Virus \(HIV\) infection](#)**.
- According to the [World Health Organization \(WHO\)](#), it is the **second-most common disease to be sexually transmitted** across the world after **chlamydia**.
- Gonorrhea is typically treated with [antibiotics](#), but the bacteria have become **increasingly resistant** to many of the drugs that were once effective.

### What is Anti-Microbial Resistance (AMR)?

- **About:**
  - **Antimicrobial resistance (AMR)** is the ability of microorganisms (such as bacteria, viruses, fungi, and parasites) to resist the **effects of antimicrobial drugs** (such as antibiotics, antivirals, antifungals, and antiparasitics).
    - Also, Microorganisms that develop antimicrobial resistance are sometimes referred to as **“superbugs”**.
- **Causes:**
  - Poor infection control and **inadequate sanitation and hygiene**.
  - **Overuse of antibiotics** and repeated use of poor-quality drugs.
  - Genetic mutations of the bacteria.
  - Lack of investment in research and development of new antimicrobial drugs.
- **Impacts:**
  - AMR **increases the risk of infections** spreading and becoming harder to treat, leading to **prolonged illness, disability and death**.

- It also **increases healthcare costs** and threatens the sustainability of healthcare systems.
- **Recognition in India:**
  - The [National Health Policy 2017](#) highlights the problem of **antimicrobial resistance and calls** for effective action to address it.
  - The **Ministry of Health & Family Welfare (MoHFW)** identified AMR as one of the top 10 priorities for the ministry's collaborative work with the **World Health Organization (WHO)**.
  - India has instituted **surveillance of the emergence of drug resistance** in disease causing microbes in programmes on [Tuberculosis](#), **Vector Borne diseases**, [Acquired immunodeficiency syndrome \(AIDS\)](#), etc.
  - **Government Initiatives :**
    - **National Programme on AMR containment:** Launched in 2012. Under this programme, **AMR Surveillance Network** has been strengthened by establishing labs in State Medical College.
    - **National Action Plan on AMR:** It focuses on [One Health approach](#) and was launched in April 2017 with the aim of involving various stakeholder ministries/departments.
    - **AMR Surveillance and Research Network (AMRSN):** It was launched in 2013, to generate evidence and capture trends and patterns of drug resistant infections in the country.
    - **Antibiotic Stewardship Program:** [Indian Council of Medical Research \(ICMR\)](#) Has initiated Antibiotic Stewardship Program (AMSP) on a pilot project across India to control misuse and overuse of antibiotics in hospital wards and ICUs.

## Conclusion

- **Controlling antimicrobial resistance is crucial for maintaining public health** and preventing the spread of drug-resistant infections. To achieve this, it is important to implement measures such as **limiting the use of antimicrobial drugs** to only reasonable cases, improving infection control, investing in research and development, and promoting international cooperation.

## UPSC Civil Services Examination, Previous Year Question (PYQ)

### Prelims

**Q. Which of the following are the reasons for the occurrence of multi-drug resistance in microbial pathogens in India? (2019)**

1. Genetic predisposition of some people
2. Taking incorrect doses of antibiotics to cure diseases
3. Using antibiotics in livestock farming
4. Multiple chronic diseases in some people

**Select the correct answer using the code given below.**

- (a) 1 and 2
- (b) 2 and 3 only
- (c) 1, 3 and 4
- (d) 2, 3 and 4

**Ans: (b)**

### Mains

**Q. Can overuse and free availability of antibiotics without Doctor's prescription, be contributors to the emergence of drug-resistant diseases in India? What are the available mechanisms for monitoring and control? Critically discuss the various issues involved. (2014)**

Source: DTE

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