AWaRe

The World Health Organization (WHO) in its global campaign against antibiotics has launched a new online tool called AWaRe.

> The campaign aims to achieve a 60% increase in the use of antibiotics under the Access group — cheap, 'narrow-spectrum' drugs (that target a specific microorganism rather than several) and also **lower the risk of resistance.**

- The AWaRe tool was developed by the **WHO Essential Medicines List** to contain **rising resistance** and make antibiotic use **safer** and more effective by providing guidelines (over the effective use of antibiotics) to the **policy-makers** and **health workers**.
- It classifies antibiotics into three groups:
  - **Access**— antibiotics used to treat the most common and serious infections.
  - **Watch—** antibiotics available at all times in the healthcare system.
  - **Reserve—** antibiotics to be used sparingly or preserved and used only as a last resort.

Significance

> By classifying antibiotics into three distinct groups, and advising on when to use them, AWaRe makes it easier for **policy-makers, prescribers and health workers** to select the right antibiotic at the right time, and to protect endangered antibiotics.

Antimicrobial Resistance

- With the emergence of infections that are untreatable by all classes of antibiotics, antimicrobial resistance is turning into an **invisible pandemic** and is estimated to kill **50 million** worldwide and 10 million in India (by **2050**).

- According to a report by the International Coordination Group on Antimicrobial Resistance, Antimicrobial resistance is a **global health** and **development threat** that continues to escalate globally and threatens to undo a century of medical progress.
- It is estimated that more than 50% of antibiotics in many countries are used inappropriately, such as for **treatment of viruses** (when they only treat bacterial infections) or **use of the wrong** (broader spectrum) antibiotic, thus contributing to the spread of antimicrobial resistance.

Concern

- One of the most pressing concerns is the spread of resistant **gram-negative bacteria,** including **Acinetobacter, Escherichia coli and Klebsiella pneumoniae.**
    - As these bacteria, which are commonly seen in hospitalized patients, cause infections like **pneumonia, bloodstream infections, wound** or surgical site infections and **meningitis.**
- Although over 100 countries have put in place national plans to tackle antimicrobial resistance, only about **one-fifth** of those plans are funded and implemented.
- Antibiotic resistance (when antibiotics stop working effectively) increases health expenditure and makes **accessibility and affordability** of medicines an expensive affair.

Gram-Negative Bacteria

- Bacteria are classified into two groups—Gram-positive or Gram-negative—depending on whether they retain a specific stain color.
- Gram-positive bacteria retain a purple-colored stain, while Gram-negative bacteria appear pinkish or red.
- Several species of gram negative bacteria including Escherichia coli, are common causes of foodborne disease and Vibrio cholerae—the bacteria responsible for cholera—is a waterborne pathogen.
- Gram-negative bacteria can also cause respiratory infections, such as certain types of pneumonia, and sexually transmitted diseases, including gonorrhea.