Global Trends in Antimicrobial Use in Animals

For Prelims: Global Trends in Antimicrobial Use in Animals, **World Organisation for Animal Health**, World Trade Organization (WTO), **Antimicrobial Resistance (AMR)**

For Mains: Global Trends in Antimicrobial Use in Animals.

Source: DTE

Why in News?

Recently, the **World Organisation for Animal Health (WOAH)** has released its 7th report on Antimicrobial use in animals, covering the period from 2017 to 2019.

- 157 participants submitted **data to WOAH** for the analysis, but only 121 provided quantitative data for at least one year. 74 participants reported **specific amounts of antimicrobial products** categorize by type of use and administration route.
- The analysis is based on the **data provided by the 80 countries** that consistently updated on antimicrobial use in animals.

What is the World Organisation for Animal Health (WOAH)?

- **WOAH (founded as OIE)** is one of the **standard-setting bodies recognized by the Agreement** on the Application of Sanitary and Phytosanitary Measures.
- It is an intergovernmental organization responsible for improving animal health worldwide.
    - In 2018, it had a total of 182 Member Countries. India is one of the member countries.
- WOAH develops **normative documents relating to rules that Member Countries** can use to protect themselves from the introduction of diseases and pathogens. One of them is the Terrestrial Animal Health Code.
- WOAH standards are recognised by the **World Trade Organization (WTO)** as reference international sanitary rules.
- It is **headquartered in Paris, France.**

What are the Findings of the Report?

- **Dip in AntiMicrobial Use:**
    - There is a **13% decrease in global antimicrobial usage in animals** three years from 2017 to 2019.
    - Out of 80 countries, 49 in Asia, Far East, Oceania, and Europe reported an **overall reduction in antimicrobial use.**
        - Conversely, 31 countries in African and American regions reported an **overall increase in antimicrobial usage** during the same period.

- **Antimicrobial Growth Promoters:**
  - 68% of the participants have **discontinued using antimicrobials** as growth promoters.
  - 26% of participants continue **to use growth promoters**, often due to a lack of proper legislation or regulations.
    - Common **antimicrobial growth promoters included flavomycin, bacitracin, avilamycin, and tylosin.**
    - While **flavomycin and avilamycin are currently excluded** from human use, bacitracin is not classified among **WHO's critically important antimicrobials (CIAs)**.
    - Some of these are classified as **CIAs** or highest priority CIAs (HP-CIAs).
- **Recommendations:**
  - Despite progress and shifts in usage, continued efforts are **deemed crucial to preserve the efficacy** of antimicrobials.
  - Safeguarding existing antibiotic effectiveness is highlighted as a shared responsibility given the challenges in developing new antibiotics.
  - It is important to monitor how, when and which antimicrobials are used becomes critical to identify patterns and trends.
  - This can facilitate decision-making and **support the implementation of measures to ensure an optimal and sustainable use** of these key medicines.

What are Antimicrobial Drugs?

- **About:**
  - Antimicrobial drugs, commonly known as Antibiotics, are **substances that either kill or inhibit** the growth of microorganisms such as **bacteria, fungi, viruses,** and parasites.
  - They are used to **treat or prevent infections in humans**, animals, and sometimes plants.
  - These drugs are a crucial tool in modern medicine for controlling and eradicating various microbial diseases.
- **Concerns:**
  - Prior to the discovery of penicillin by Alexander Fleming in 1928, infections due to minor cuts could lead to bloodstream infections or death. Yet, today, **these life-saving drugs are losing their efficacy due to their misuse** and overuse in different sectors.
  - The phenomenon is known as **'Antimicrobial Resistance (AMR)'**. It can **originate in animal, human or plant populations, and then pose a threat** to all the other species.

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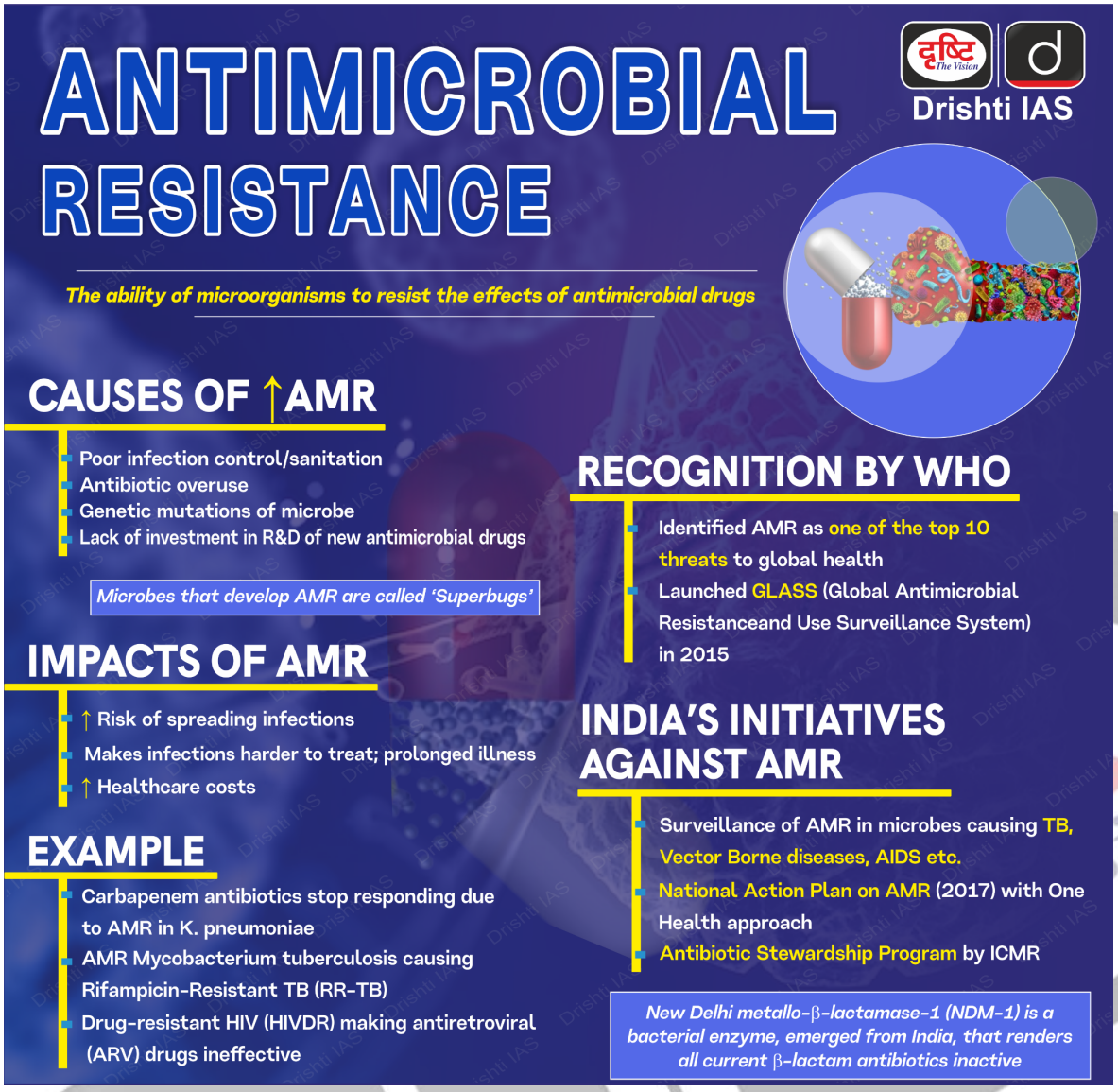

What are the Initiatives to Tackle Antimicrobial Resistance?

- **India:**
  - **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.
  - **AMR Research & International Collaboration:** Indian Council of Medical Research (ICMR) has taken initiatives to develop new drugs /medicines through international collaborations in order to strengthen medical research in AMR.
  - **Antibiotic Stewardship Program:** 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.
- **Global:**
  - **World Antimicrobial Awareness Week (WAAW):**
    - Held annually since 2015, WAAW is a global campaign that aims to raise awareness of antimicrobial resistance worldwide and encourage best practices among the general public, health workers and policy makers to slow the development and

spread of drug-resistant infections.

- **The Global Antimicrobial Resistance and Use Surveillance System (GLASS):**
  - WHO launched the GLASS in 2015 to continue filling knowledge gaps and to inform strategies at all levels.
  - GLASS has been conceived to progressively incorporate data from surveillance of AMR in humans, surveillance of the use of antimicrobial medicines, AMR in the food chain and in the environment.
- **Global Database for ANImalantiMicrobial USE (ANIMUSE):**
  - It is an online platform facilitating data **accessibility to support evidence-based decision-making.**
- **Global High-Level Ministerial Conference:**
  - The Third Global High-Level Ministerial Conference on Antimicrobial Resistance in 2022 saw commitments from 47 countries to reduce antimicrobial use in animals and agriculture by 30-50% by 2030.

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)**