Anti-biotic resistance in E-Coli

April 16, 2020
Why in news?

E Coli has been seeming to have developed antibiotic resistance.

What is E coli?

- Escherichia coli is a bacterium that is an important aspect of **human intestinal tract**
- **Most E. coli are harmless bacteria** and assist in everyday health but the ones that cause a problem are generally pathogenic, which cause illnesses such as diarrhoea, or even things outside the intestinal functions.
- Usually, the E. coli that causes diarrhoea is transferred through food, water, or contact with animals/people who already have E. coli.
- It enters the body through human or animal feces.

What is antibiotic resistance?

- Antibiotics are **medicines used to treat infections caused by bacteria.**
- Antibiotic Resistance refers to **resistance developed by bacteria against antibiotics or the ability of bacteria to mutate or change** so as to resist the effects of antibiotics.
- Antibiotic resistance occurs naturally, but misuse of antibiotics in humans and animals is accelerating the process.
- It is also accelerated by poor infection prevention and control.
- A growing number of infections – such as

pneumonia,tuberculosis, gonorrhoea, and salmonellosis – are becoming harder to treat as the antibiotics used to treat them become less effective.

- Antibiotic resistance leads to longer hospital stays, higher medical costs and increased mortality.
- WHO has formulated a "**Global action plan on antimicrobial resistance"** in May 2015.
- It has **5 strategic objectives:**
    - To improve awareness and understanding of antimicrobial resistance.
    - To strengthen surveillance and research.
    - To reduce the incidence of infection.
    - To optimize the use of antimicrobial medicines.
    - To ensure sustainable investment in countering antimicrobial resistance.