

THE ANTIMICROBIAL RESISTANCE SITUATION IN INDIA

GS 2, MAINS: Government policies and interventions for development in various sectors and issues arising out of their design and implementation, Issues relating to development and management of Social Sector/Services relating to Health.

IN NEWS: An investigation finds a veterinary drug producer encouraging their misuse to fatten poultry. The world's biggest animal drugs company has been accused of double standards and of exposing consumers in India to "higher levels of risk" by selling antibiotics for purposes now banned in Europe and the U.S.

FACTORS DRIVING ANTIBIOTIC RESISTANCE IN INDIA:



- Irrational use of drugs, overdosing or under-dosing, self-medication, misuse of drugs, and the inappropriate use of antimicrobials in hospitals.

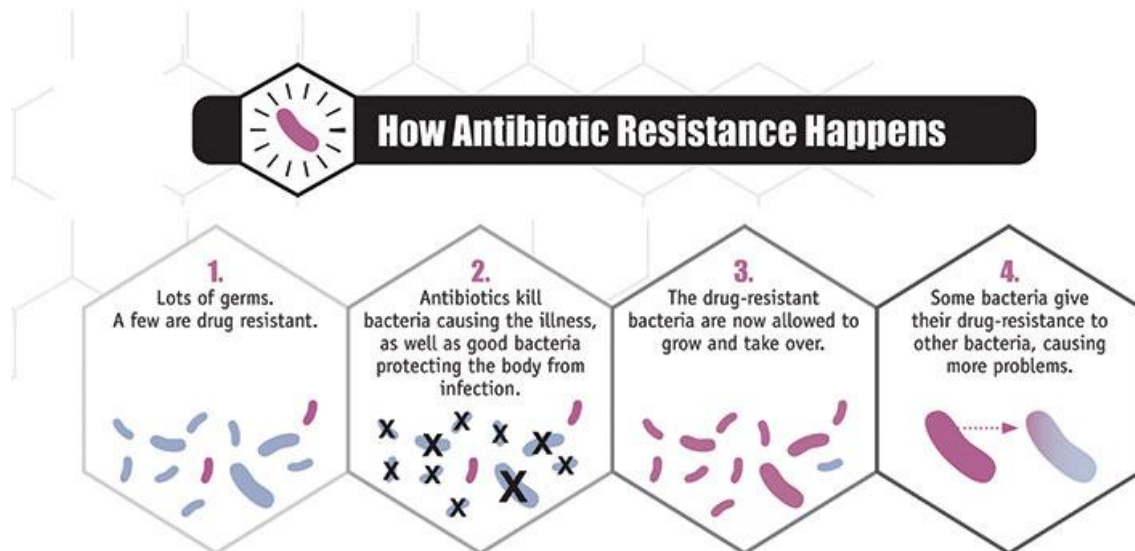
- High consumption of broad-spectrum antibiotics: Broad-spectrum antibiotics are those that are effective against a wide range of disease causing bacteria, in contrast to narrow-spectrum antibiotics, which are effective against specific families of bacteria. Unnecessary use of broad-spectrum antibiotics leads to increased prevalence of MDR bacteria.

- Poor public health infrastructure, rising incomes, a

high burden of disease, and cheap, unregulated sales of antibiotics has created ideal conditions for a rapid rise in resistant infections in India.

- Health system factors are also at fault. Doctors routinely receive compensation from pharmaceutical companies and pharmacists in exchange for antibiotic prescriptions. Infection control in hospitals is poorly monitored and could be improved.

- The problem of resistance is exacerbated by a wide range of fixed-dose combinations in the market, often without scientific or medical merit or evaluation.



- Loose antimicrobials come without packaging and do not mention the name of the drug, its manufacturer, the date of manufacture, or the date of expiry. There is poor clinician awareness of the rationality and dosing of fixed-dose combinations.
- Environmental antibiotic pollution encourages the transfer of resistance genes to human commensal and pathogenic bacteria. In particular, waste water treatment plants serving antibiotic manufacturing facilities have been implicated in the transfer of resistance genes into human microbiota and pose a serious threat to antibiotic effectiveness given the size of India's pharmaceutical sector.

STEPS TAKEN TO TACKLE:

- India's Red Line campaign – which demands that prescription-only antibiotics be marked with a red line, to discourage the over-the-counter sale of antibiotics– is a step forward.
- National Policy for containment of Antimicrobial Resistance (AMR) in the country formulated in the year 2011 envisages enforcement and enhancement of regulatory provisions for use of antibiotics for humans as also for veterinary use.
- National Action Plan to combat Antimicrobial Resistance was developed as part of India's commitment to the WHO's Global Action Plan.
- The Chennai Declaration is a document, prepared by representatives of various stakeholders and eminent experts in India, to tackle the challenge of anti-microbial resistance from an Indian perspective.

- ICMR has set up National Anti-Microbial Surveillance Network for understanding of mechanisms of resistance.

WAY FORWARD:

- Improved capacity of drug regulatory bodies is essential to safeguard against powerful antibiotics being sold over the counter and to phase out the use of antimicrobial growth promoters in livestock. These capabilities are also needed to ensure the safety and reliability of India's pharmaceutical manufacturing sector, which now supplies a significant proportion of the world's pharmaceutical needs.
- Behaviour change is needed among physicians and patients. Campaigns could work to educate the public and physicians about the dangers of uncontrolled antibiotic use, as has been the case in high-income countries, but more research is needed to see how well this could work in India.
- Changes in rules under which physicians can accept compensation are already in place under the rules of the Medical Council of India, and should be extended to cover prescriptions for antibiotic sales.
- India should phase out antimicrobial growth promoters from livestock when these drugs are medically important and when these are premixed with feed. Such a move would have regional consequences and would send a strong signal of the country's commitment to tackle this issue.
- Improved management of the health care delivery systems, both public and private, will minimize conditions favourable for the development of drug resistance.

(Q) Are the government efforts to counter antimicrobial resistance in par with the WHO guidelines? Analyze.

PREVIOUS YEARS UPSC MAINS QUESTIONS:

- Public health system has limitation in providing universal health coverage. Do you think that private sector can help in bridging the gap? What other viable alternatives do you suggest?
(2015)