Poultry Driven Anti-Microbial Resistance

What is the issue?

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- Last-hope antibiotics like “colistin” are being used indiscriminately by the Indian poultry industry to enhance chicken weight.
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- This is leading to increased drug resistance and is presently completely legal as regulations are very lax in this domain.
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What is Colistin?

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- Medicines and antibiotics are given to the birds to protect them from diseases or to make them gain weight faster, to enhance productivity.
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- One drug typically given this way is “Colistin”, which is used to treat patients critically ill with infections that have become resistant to multiple drugs.
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- As such drugs are critical to humans, WHO has called restricting their use for animal treatment and demanded a ban on using them as growth promoters.
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- Their continued use in farming as growth enhancers increases the chances of development of bacterial resistance and will render them useless to patients.
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- **The Market -** Yet, about 2800 tonnes of veterinary colistin were shipped to countries, including - Vietnam, India, South Korea and Russia, in 2016.
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- The total is likely to be higher as the product may be shipped under its brand name rather than being labelled outright as colistin.
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- Notably, India imports more than 150 tonnes of colistin along with some local production, but U.K. uses less than a tonne a year of colistin in

agriculture.
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- **Lax Regulations -** In India, at least five animal pharmaceutical companies are openly advertising products containing colistin as growth promoters.
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- Companies selling them argue that their products are therapeutic in nature although mild doses can be used at a preventive level (which increases weight).
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- While most sellers claim that they don’t encourage indiscriminate use, branded colistin is easily procurable in India, without even a prescription.
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- This is completely legal as there is no regulation like in Europe, where colistin can be accessed only on a prescribed by a vet for the treatment of sick animals.
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What is the science behind?

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- A colistin-resistant gene was discovered in Chinese pigs in 2015.
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- This gene (mcr-1) was found to be transferable within and between bacterial species, which implies that microbes could just acquire from elsewhere.
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- This is a lot easier and faster way to develop resistance than developing resistance individually, which will complicate disease combat efforts.
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- **The spread -** Colistin-resistance is contaminating the meat, spreading on the chicken farms, in the surrounding air, to the farm workers and flies etc…
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- Significantly, mcr variants have already been detected in bacteria from animals and humans in more than 30 countries, spanning four continents.
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- These revelations have created worldwide panic in the medical community as many multi-drug resistant strands have become very prominent lately.
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- **The consequence -** Drug resistence is a big threat to global health, food security, and development and makes multiple drugs ineffective.
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- It renders medical practitioners with no treatment options.
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- Currently, the problem is thought to kill 0.7 million people annually worldwide, which is expected to rise to 10 million by 2050 if no action is taken.
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- Also, common procedures like joint replacements, Caesarean sections, organ transplants and chemotherapy could also become too risky to carry out.
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- **The Solution -** Calistin should be thought of and treated as an environmental toxin and its export world over as chicken feed, needs to be curtailed.
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- Notably, some have even vouched for a worldwide ban on not just colistin but all antibiotics as growth promoters.
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How does the Indian scenario fare?

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- **Drug Resistance -** India is the epicentre of the global drug resistance crisis, due to a combination of factors conducive for superbug development.
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- Unregulated sale of drugs for both human and animal use, unsanitary practices, burgeoning population, and improper drains are a few to name.
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- Significantly, some of the pharmaceutical companies have also been found to be following substandard sewage treatment practices for their drug excretes.
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- **Poultrty Sector -** As it is religiously neutral, chicken meat is the favoured non-veg dish in India and the local poultry industry is booming.
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- Produced has doubled between 2003 and 2013 and majority of poultry is now produced by commercial farms, that are contracted to major companies.
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- Meat from supermarkets in the country has been found to contained residues of six antibiotics, suggesting they were being used liberally on farms.
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- Experts predict the rising demand for protein will enhance demand for chicken, which will consequently also see enhanced antibiotics in the food.
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- Notably, the main problem is with the mass medicating of livestock with antibiotics as preventives, which the WHO has already sought to ban.
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What is the way forward?

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- Using antibiotics as growth promoters has already been banned in the EU and U.S. in 2017 and India too needs to follow suit immediately.
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- “National Action Plan on Anti-Microbial Resistance” in 2017, did ban the using antibiotics as growth promoters, but no follow up regulatiory action has come.
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- Notably, it has been observed that Indian farmers use antibiotics as a substitute for maintaining nutritious and hygienic growth environments.
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- While the reason for such attitudes is the perception that such an approach is chaper than the cost of maintainance, which is actually not correct.
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- Apart from mere regulations, as consumer pressure and awareness holds key to drive in a large scale change in, the masses need to be made aware.
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Source: The Hindu

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