Fake Drugs and Block Chain technology

Why in news?

\n\n

Recently the drug regulator of Rajasthan found certain medicines to be fake which is a part of the counterfeit drugs industry in the country.

\n\n

What are the problems that arise due to Fake drugs?

\n\n

\n
- According to the World Health Organization (WHO), around 35 % of the fake drugs sold globally come from India.
\n
- In low and middle income countries like India, one in 10 medical products (pills, vaccines, injectables) in circulation are either substandard or fake.
\n
- The substandard or fake drugs promote **anti-microbial resistance** in people.
\n
- Spurious drugs make pharma companies incur **huge revenue losses**.
\n
- According to industry body Assocham, in 2015, the value of the counterfeit drug industry in India was pegged at around Rs 150 billion
\n
- It was almost 25 % of the total worth of the global pharma industry.
\n

\n\n

What are the ways to check the fake drugs?

\n\n

\n
- So far the efforts to combat the proliferation of fake drugs have been through traditional means — via tip-offs and surprise raids.
\n
- The current methods of weeding out counterfeit drugs are quite archaic.

\n
- Still the method of sampling is only used to verify the genuineness of drugs.
\n

\n\n

What is the latest development?

\n\n

\n
- Niti Aayog, in collaboration with Oracle Technologies and Apollo Hospitals, is working on a technology.
\n
- The technology will leverage blockchain technology to overcome the counterfeit drug problem.
\n
- Oracle is developing the app through which the consumer will be able to scan the bar code of a medicine
\n
- By scanning we will know about its manufacturer, the date of production, its path of transport and the date it reached the retailer.
\n
- Hence, the consumer can check if the medicine is genuine or not before buying it.
\n
- The technology will work all long the entire supply chain so as to ensure that no fake drugs enter the system.
\n

\n\n

How does it work?

\n\n

\n
- The **tracing and tracking of pharmaceutical products** is done with the help of new age technologies like blockchain and Internet of Things (IoT).
\n
- Fake drugs enter into the supply chain as Pharma sector is heavily dependent on logistics.
\n
- Consignments of drugs will be tracked remotely through the use of IoT to check the entry of fake drugs.
\n
- The data captured through IoT will be sent to the cloud server that will then be entered into the block chain ledger.

\n
- The block chain digital ledger system records the transactions and tracking of consignments.
\n
- It becomes easy for all stakeholders -drug manufacturers, controllers and hospitals to monitor the ledger.
\n
- This eliminates the possibility of mixing fake drugs with original drugs.
\n
- In addition block chain process is hack proof because it does not use a centralized system to store data.
\n
- Any revision on the chain requires retrograde action on all associated blocks.
\n
- This process allows users to see transactions in real time.
\n
- The real time monitoring of data across the pharmaceutical supply chain will act as a third eye on fake drug dealers.
\n

\n\n

What are the other initiatives in this regard?

\n\n

\n
- Gujarat has implemented an online drug **SMS alert system** for retailers for ‘unsafe’ drugs.
\n
- The state drug control authority worked with National Informatics Centre to develop the software.
\n
- Abbott has introduced an **SMS authentication** scheme for customers.
\n
- **QR codes** are also used to store product information on packs which will do away with the need to print leaflets.
\n
- These QR codes can be an effective tracking mechanism.
\n
- It allows the manufacturer to keep tabs on the drug’s circulation in the market.
\n
- Companies are also planning to print a **hologram** on the packaging and **mirco-emboss the product name** on cartons.
\n

\n\n

What is the way forward?

\n\n

\n
- As block chain technology evolves, India’s efforts to root out counterfeit drugs will definitely make headway.
\n
- It will surely lead to a much safer public health system in the country.
\n

\n\n

\n\n

\n\n

Source: Business standard

\n

