DEFINE PROBLEM / PROBLEM UNDERSTANDING

Social Or Business Impact

Team Id	NM2023TMID04410
Project name	Project- Drug Traceability

Drug traceability has significant business and social impacts:

- Drug traceability is the process of determining the product's authenticity and originality so that all stakeholders can track and trace transactions at every level of the supply chain.
- Blockchain is an electronic cryptographic ledger that has a decentralized network model, here the information is not stored in one database, but the information is distributed and synchronized throughout the supply chain. Since counterfeiting of drugs is increasing globally.

Business Impact:

1.Compliance and Regulatory Adherence:

- Implementing drug traceability systems is crucial for compliance with pharmaceutical regulations, which can be a legal requirement. Non-compliance can result in fines and reputational damage.
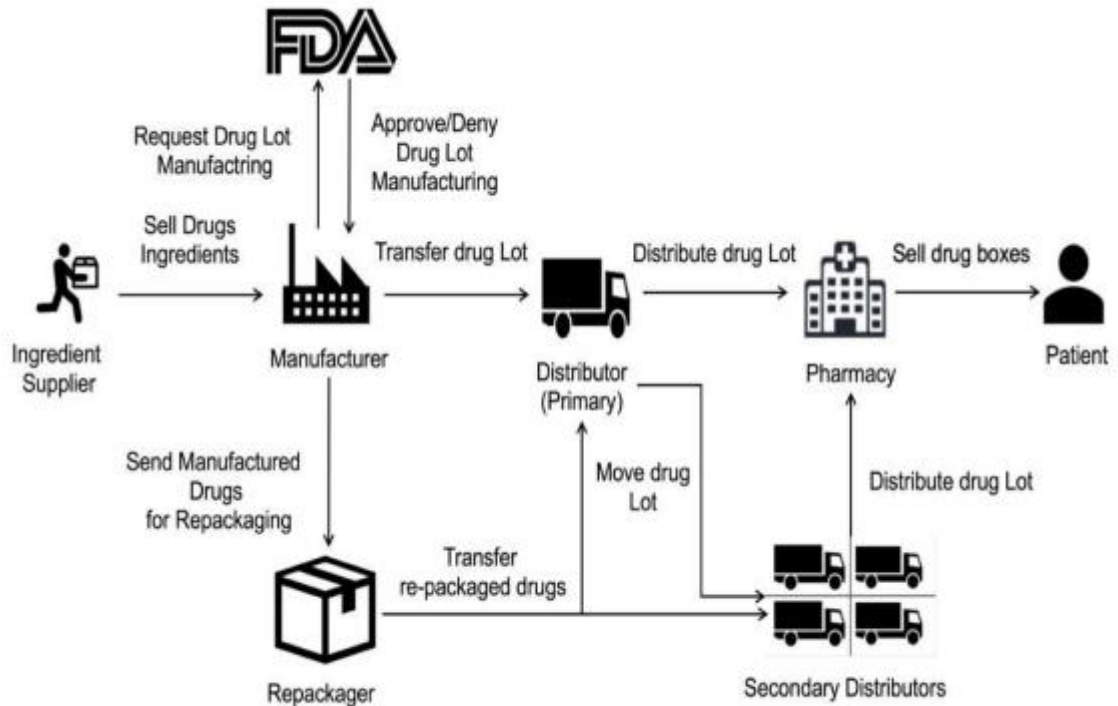
2.Product Integrity:

- Ensuring the authenticity and safety of pharmaceutical products through traceability systems helps protect a company's brand and reputation. It reduces the risk of counterfeit or substandard products entering the market under their name.

3.Efficient Recall Management:

- In the event of product recalls, traceability systems enable companies to pinpoint affected batches quickly, minimizing the scope and cost of recalls.

4.Supply Chain Efficiency:

- Improved visibility and traceability in the supply chain can lead to better inventory management, reduced wastage, and cost savings.

Drug supply chain stakeholders and their relationships

5.Data-Driven Decision Making:

- Traceability systems generate valuable data that companies can use for analytics, improving operational efficiency and decision-making.
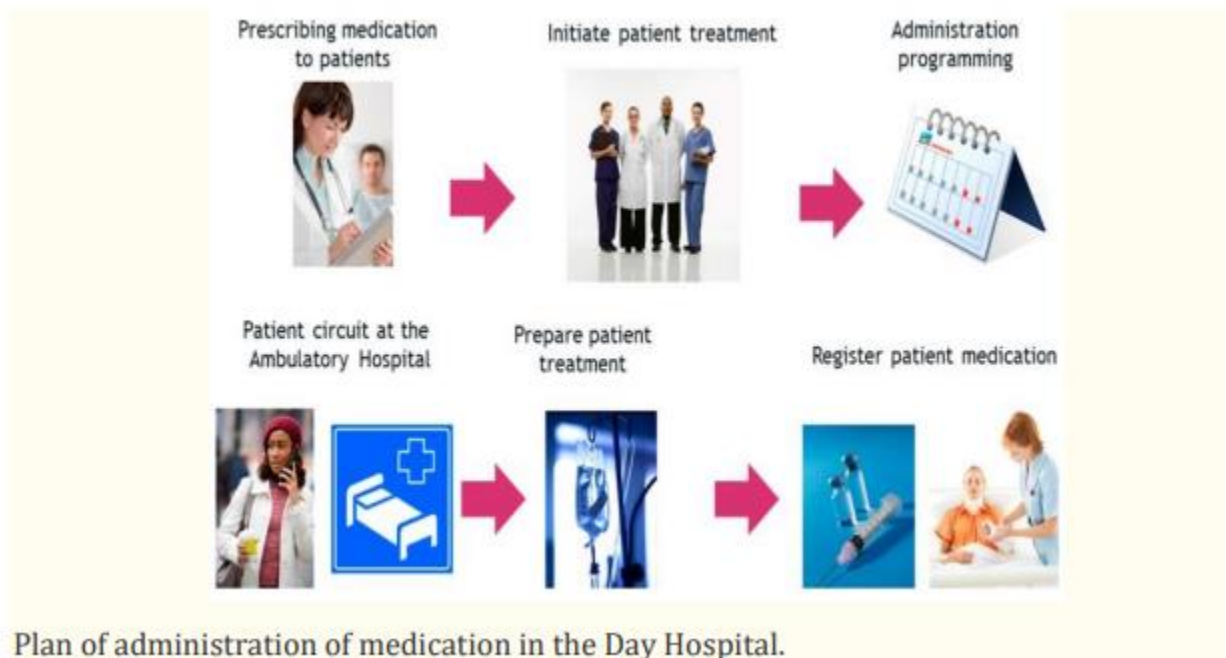
6.Competitive Advantage:

- Companies that excel in traceability and product safety can use it as a competitive differentiator, potentially gaining a stronger market position.

Social Impact:

1.Patient Safety:

- Drug traceability systems contribute to patient safety by ensuring that individuals receive genuine, high-quality pharmaceuticals, reducing the risk of harm from counterfeit or substandard drugs.

Plan of administration of medication in the Day Hospital.

2.Public Health:

- The prevention of counterfeit drugs from entering the market helps protect public health by ensuring that medications are effective and safe.
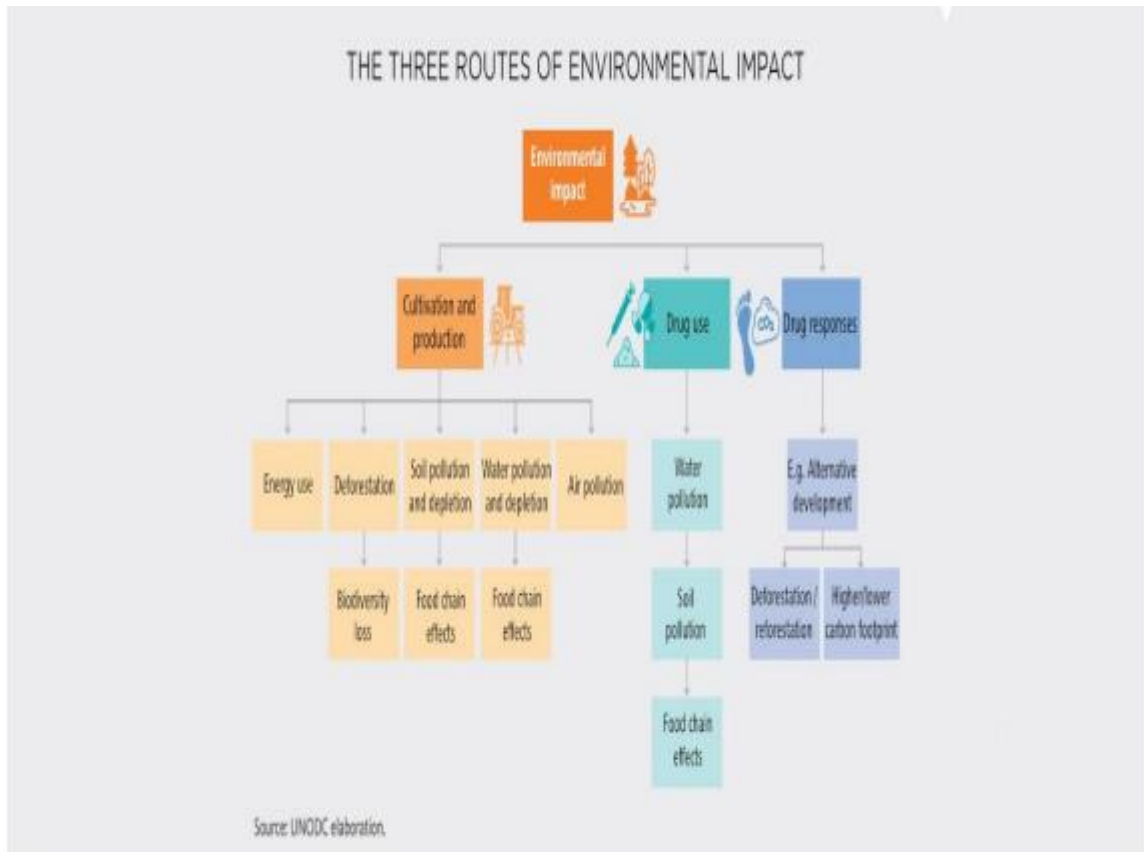
3.Reduced Drug Diversion:

- Traceability systems make it more difficult for drugs to be diverted from the legitimate supply chain to illicit markets, which can contribute to reduced substance abuse and addiction.

4.Global Health:

- Traceability systems are especially valuable in addressing health crises such as pandemics. They can help track the distribution of critical medications and vaccines, ensuring equitable access.
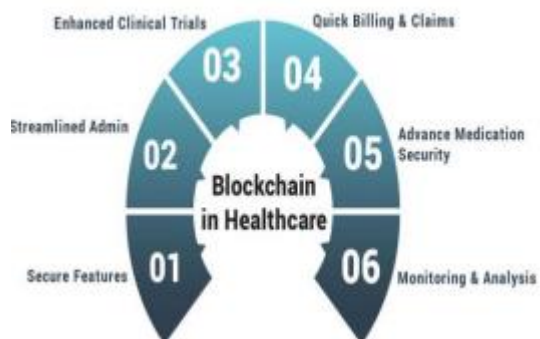
5.Environmental Impact:

- More efficient supply chains and reduced drug wastage contribute to environmental sustainability.

THE THREE ROUTES OF ENVIRONMENTAL IMPACT

Source: UNODC elaboration.

The three routes of environmental impact

6.Empowerment and Trust:

- Patients and healthcare professionals can trust that the medications they use are authentic, fostering trust in the healthcare system.

In summary, drug traceability has a substantial impact on both businesses operating in the pharmaceutical industry and the broader society, with the ultimate goal of safeguarding public health and ensuring the integrity of pharmaceutical products.