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Letter to Editor

Integrating and Educating Pharmaceutical Supply Chain Partners

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Nimkulrat et al[1] provide details regarding the increased focus of pharmaceutical product traceability from precursor chemicals to finished products in the pharmaceutical manufacturing industry in Thailand. The authors specifically identify the complexities and traceability challenges in supply chain management throughout the distribution of products. As Nimkulrat et al describe, Thailand has established a process of creating a universal product code among pharmaceutical industries. However, despite the importance of traceability there is no internationally standardised pharmaceutical traceability system—primarily because of the challenges in integrating supply chain partners into a comprehensive system. This work by Nimkulrat et al informs the essential foundation for the next step of this global traceability system which is to implement an international standard using a common platform backed by commercial partners.

The ~$75 billion USD market for counterfeit drugs is growing[2] and globally end users are challenged to differentiate between counterfeit and authentic drugs.[3,2] Identifying counterfeit drugs is critical as the presence of counterfeit drugs risks patient safety[4] and drives health disparities, particularly in developing countries.[5] The lack of a standard traceability technology across the supply chain partners is the primary reason that counterfeit drugs are dispersed throughout the healthcare system[3] and establishing a globally unified pharmaceutical traceability system is essential to improve patient outcomes and safety worldwide.

There are two predominant systems used for tracing pharmaceuticals: Enterprise Resource Planning (ERP) or blockchain.[6] Both are effective and many European organisations have started testing the blockchain technology in an effort to decentralize the tracing process while improving privacy and data security.[6] Because of this decentralised and open approach, blockchain technology more seamlessly integrates the supply chain partners, organisations and healthcare care system[7,8] thus, facilitating objective traceability from raw materials to finished products. The obvious advantage of blockchain technology is that the data collected and shared, but not adulterated.[9,10]

Despite these advantages, a globally unified system for traceability has yet to be established. The challenge is believed to be motivating the supply chain partners to implement this technology (as a cost) without any direct perceived value creation. Unfortunately, these commercial partners are exactly the necessary individuals for implementation of the system. The impetuous for implementing this system not only requires their participation, but requires commercial motivation.

Supply chain partners resistant to the implementation of traceability systems should reflect on the 1980s video format war between the VHS and Beta-Max technology. The wining technology had nothing to do with the performance of the underlying technology, rather the winner was decided by the commercial partners the technology was able to bring together in the marketplace.

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