

Legal Implementation of the Blockchain Technology in Pharmacy

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Introduction. The study of legal aspects of preventing the spread of falsified medicines is highly relevant from both theoretical and practical point of view. Negative consequences caused by the spread of falsified medicines are so obvious that there is a need for modern technologies for their detection. The use of blockchain technology in pharmacy can provide a reliable legal protection of the supply of pharmaceutical products and its tracking. Such system could provide significant simplification of audit and control of pharmaceutical products, including by the specially authorised bodies. Healthcare and pharmacy industry, specifically, could employ blockchain to streamline efficiencies, improve privacy and confidentiality, enhance patient safety, and provide a higher level of clinical care to consumers. The main advantages of the blockchain technology are the maximum transparency, speed and accuracy of transactions. Although, the amount invested in blockchain technology is comparatively small but aggressively growing. Examples include IBM and Microsoft incorporating blockchain platforms in their customer support systems. Additionally, major companies are actively exploring the value of integrating blockchain technology into their operations. Examples include Walmart – vendor payment and digital shopping; Starbucks – tracing beans from various countries; American Express – collaborating with Boxed to customise rewards for cardholders; JD.com – use of blockchain technology to accelerate AI development.

Aim. The aim of this study is to explore the potential of blockchain technology in ensuring patients' rights to quality pharmaceuticals.

Material and Methods. This study is based on EU, US and Ukrainian regulation acts, scientific researches and opinions of progressively-minded people in this sphere. The article is based on dialectical, comparative, analytic, synthetic and comprehensive methods.

Results. Although, there has been reliance on policy to combat the counterfeit / fake medicine market, sale of fake medicines is rising rapidly and is considered a global epidemic. It has been estimated by the WHO that 10–30% of medicine market is counterfeit, with the upper end of that range predominantly in emerging regions. Blockchain enables that data sharing capability without sacrificing privacy while offering pharmacists the ability to verify the source of the medicine. Blockchain could provide pharmacists with the opportunity to patient safety by verifying the source of supplies of medicines.

Conclusions. One must admit that the existing legal basis for the use of blockchain technology is imperfect, although it is de facto used in the field of pharmaceutical activity. The use of blockchain technology not only minimises the risks of supplying counterfeit medicines to patients, but also ensures transparency of delivery and reduction of logistics costs. Consequently, there is a reduction in price of the final product for patients. However, full engagement of blockchain technology in pharmacy requires adequate legal support.



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