GBBC Global Blockchain Business Council

Use Case Library

Digital Health Records

Executive Summary written by GBBC

According the World Bank, global health expenditure as a percentage of GDP has steadily increased in the last decade – from 8.5% in 2000 to 10% in 2016. Data from the Organisation for Economic Co-operation and Development indicates that the U.S. has the highest health care spending per capita of any country; in 2018 it was USD$10,586 while the figure for second place Switzerland was USD$7,313. While health care spending is a complex issue with a plethora of factors, it is clear that legacy health record systems could be substantially improved, generating savings and efficiencies for both patients and providers.

Estonia has embraced and implemented a revolutionary new approach to patient records: e-Health Records. All patients in Estonia have an online e-Health Record that can be accessed using an electronic ID-card. This system uses the KSI Blockchain, a blockchain designed in Estonia that has been widely deployed by the Estonian government. In this instance, KSI ensures that e-Health Records cannot be tampered with and can only be accessed by approved parties. The e-Patient portal allows doctors to access a patient's records and test results, no matter which hospital conducted the test. Estonia has also implemented an e-Prescription system, in which doctors submit prescriptions online and patients can pick them up with an ID-card; about 99% of prescriptions are digital.

Estonia has effectively leveraged blockchain technology to dramatically overhaul its entire health care system. Instead of fragmented providers using fax machines to relay information, patients and doctors have secure access to their entire medical history at the touch of a button. Given the program's success it appears likely that other countries will follow Estonia's lead and begin to implement blockchain healthcare systems of their own.