**ABSTRACT**

The shortage of people, institutions, and pharmaceuticals in public health systems is one of the key problems affecting the healthcare industry in many developing nations. Information and communication technology has demonstrated its capacity to raise data security, lower costs, and improve medical quality during the past decade. These technologies can be used by developing nations to enhance healthcare services and upkeep. Patient's medical information is frequently provided using the Internet of Things. Yet, there are more security and privacy vulnerabilities with this technology. We describe a Blockchain-based Health Information Exchange (HIE) in our system. We suggest using Blockchain technology to improve security and privacy in healthcare systems in addition to data encryption. In comparison to existing methods, data are stored in an Inter Planetary File System (IPFS) in off-chain database. To ensure blockchain scalability, re-encryption proxies with the aid of Ethereum blockchain technology are employed based on Proof of Authority (PoA) to speed up the data storage. Unfortunately, Inter Planetary File System (IPFS) lacks strong economic incentives and is untrustworthy with regard to private data. However, security concerns are solved by combining the Advanced Encryption Standard (AES) and Secure Hash Algorithm 256-bit (SHA-256) algorithms with Blockchain to encrypt data and restrict access to it.