Usability of big data analytics within clinical decision support systems

The adoption of electronic health record systems and other digital technologies such as Magnetic Resonance Imaging (MRI) techniques, automated laboratory tests, and body sensors have brought the era of big data technology into the healthcare industry. The use of big data technologies has the potential to provide medical organizations with powerful tools to gather and analyze large data volumes and to use this information to their advantage. However, special skills, systems, and capabilities are required to be able to analyze and extract useful information from big data. The objective of this paper was to explore the literature regarding the usability of big data analytics in supporting medical decision making. This information will guide healthcare organizations in understanding how they can adopt the utilization of big data to enhance decision making. A systematic review of evidence-based research articles from within the past five years was used to gather information in regards to this topic. The articles were derived from scientific databases. Some of the keywords that were used to search the databases include; big data, big data and medical decision making, and usability of big data in healthcare. The results reveal that there is a high potential for organizations to benefit from big data analytics in areas such as remote monitoring of patients, health economic and research among other fields. One of the areas where medical institutions are likely to benefit from the use of big data significantly is clinical decision making. Big data analytics has a considerable potential to add value to healthcare delivery and decision making. It is therefore crucial for organizations to put in place measures for the adoption of big data analytics as a health and decision-making improvement approach.