**CIS: DISCUSSION- 7**

A

I agree with the given statement. Health information exchange (HIE) plays a vital role in improving the health outcomes. However, it is a common practice to record the observations in the electronic health records (EHRs) according to the local understandable representations. But this results in a failure to understand and share the information across various systems. So, the fundamental concept behind the HIE is threatened. So, to avoid such challenges and facilitate interoperability, standardization of the medical or clinical terminologies is recommended. According to Han et al. (2020) there are multiple factors like available level of technology, economic feasibility, and many more to be considered when transforming the entire clinical data to standard terminologies. Most of the economically backward countries suffer from enjoying the benefits of advancements in healthcare such as the implementation of electronic health records. The initial set up and maintenance of the EHR software is quite expensive which hampers the usage by these countries. So, to combat this drawback, open-source electronic health record systems turned out to be a good solution for these unprivileged countries (Syzdykova et al., 2017). These systems map to the code which can be utilized to convert the local terms to standardized terminologies. The added advantage of open-source mapping is the ability of the user to contribute to the code repository ensuring proper documentation of the term to be utilized by others (Benson., 2016). This facilitates other organizations or users to use the documented codes thus facilitating syntactic interoperability. Incorporating informatics principles in the development of medical devices had shown improvements in interoperability (Weininger et al., 2017). According to Weininger et al. (2017) five examples have been demonstrated to imply the need to standardize the medical devices to improve interoperability. However not always the technology is reliable and accurate in diagnosing the clinical decisions. In the paper written by Fraccaro et al. (2015) it was concluded that clinical decision support system (CDSS) under-investigated the multimorbidity associated with the given condition. This further adds that uniform mapping is implicated to enhance the functionality of CDSS.

B

Seamless exchange of health information is facilitated by standard terminologies and ontologies. Advancements like applying machine learning algorithms to predict inferences from data function on healthcare data stored in the EHRs. These can detect patterns with improved accuracy when there is uniform representation of medical conditions. Also, the concept of manual error in recording the clinical observations can be minimized to a great extent with the use of these standards. Open mapping repositories serve an excellent tool for research and educational purposes. Now-a-days, mappings can be done from one terminology to other with the help of these open code repositories. The ease of communication regarding the patient condition across the connected systems improved resulting in enhancement of patient outcomes. However, any advancement is coupled with the overlying cons. One such drawback is the requirement of documentation for all the mappings in the system which might reduce the physician’s time with the patient (Jaffe et al., 2021, p. 167). In a nutshell, medical terms standardization has opened gates for interoperability contributing to improved patient outcomes.

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