MHA-FPX5062 Assessment 3: Health Information Management System Interfacing and Interoperability

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Health Information Management System Interfacing and Interoperability

The healthcare industry aims to achieve interoperability among its systems every day. Despite a confluence of issues hindering this goal, healthcare practitioners seek better utilization of electronic health records and increased access to shared patient records. The need to achieve greater interoperability becomes more significant as EHR system usage increases and facility requirements evolve. St. Anthony's VP of Medical Support Services, Christ Hewitt, believes that the hospital does not prioritize usability enough concerning its information-providing system; it provides data but is challenging to understand, which goes against legal obligations requiring accessible information formatting standards. Additionally, note-taking notation presents challenges too in this facility. The purpose of this paper is to identify key health information systems used at St. Anthony Medical Center (SAMC), describe the pros and cons of upgrading the HIMs at SAMC, and make recommendations for this change.

Key Health Information Management Systems

The hospital relies on several IT systems, such as email, electronic medical records, formulary databases, building/environmental systems management software, patient flow management software, medical billing and accounting software, and networked medical equipment. Using Electronic Health Records helps to improve healthcare quality. Vila Health's Independence Medical Center has been using the OPUS EHR system since 2008, which includes a computerized physician order entry and other digital systems for handling medical information. While these systems work well, they could benefit from better communication with one another. The health information system at Vila Health's Independence Medical Center is expensive and untrustworthy. There are knowledge gaps from this assessment of SAMC systems. Measuring HIM system investments' financial impact and return on investments (ROI) can be hard due to

multiple factors, such as better efficiency, fewer errors, and improved patient outcomes that need further research and analysis.

System Components, Infrastructure, And Investment Needs

At St. Antony's Medical Center, health information systems such as OPUS, CPOE, pharmacy, lab, and PACS work well independently but do not interconnect. Interoperability is the ability to share information smoothly between different systems. The absence of interoperability results in difficulties for departments retrieving and exchanging patient information, leading to inefficiencies and possible errors. Independence Medical Center faces problems with the compatibility and retrieval of information. Integrating all departments could solve this issue, as it would streamline scheduling tests and communicating results to providers. However, there are ineffective EHR systems in place, which cause difficulties during emergencies. Furthermore, these shortcuts hinder other departments, such as billing.

The interoperability issue in Electronic Health Records systems is complex, with multiple factors contributing to its development. While some enterprise-level solutions, such as the Veteran's Administration and Meditech, have successfully implemented individual EHRs for all of their population, there remains a need to address issues related to integrating multiple healthcare systems (Torab-Miandoab et al., 2023). Despite these challenges, studies have demonstrated that the use of EHRs can significantly reduce medical errors and improve communication between doctors and patients while promoting continuity of care by allowing providers to manage patient inputs across several departments like the emergency department, outpatient clinics, laboratories, radiology input among others (Pavão et al., 2023).

According to Harold Liss, the Vice President of Medical Services, Leadership Executive Team, certified EHR adoption has been encouraged through programs like "meaningful use"

facilitated under the Affordable Care Act, which aims at enhancing quality healthcare delivery services through systematized electronic health records management. However, despite these efforts, it is unfortunate that most modern EHR designs do little to encourage or enable professional learning, particularly reflective practices by health professionals. Consequently, achieving increased data flow capacity required for proactive service provision seems uncertain, especially where the information exchange format fails readability tests, which, according to laws, are mandatory requirements characterizing standardized access frameworks.

Pros and Cons of a New Single System

According to the interviewed parties, efficient information systems that can interface and interoperate in healthcare organizations provides various benefits. Efficient information systems can eliminate redundant data entry, improve efficiency and reduce errors in healthcare. Interfacing between different systems streamlines data exchange leading to quick access and sharing of patient information while reducing the risk of life-threatening errors such as undocumented allergic reactions or skipped alerts from doctors. Efficient interoperability and interoperability of information systems can also improve patient safety by making patient information more accurate and complete. It enables healthcare organizations to analyze data easily, identify trends, track outcomes, quantify performances, and make informed decisions based on the data analysis results.

According to Lee et al. (2020), medical services are now focusing on precision medicine, which tailors medical treatment to an individual patient's unique characteristics. Personal Health Records play a vital role in precision medicine as they provide detailed information for clinical decision-making. With the help of interoperable electronic hospital information systems, organizations have access to abundant personal health data necessary for creating meaningful

PHRs. According to Szarfman et al. (2022), Interoperable health information systems can improve patient care by allowing clinicians to detect, troubleshoot, and prevent medical errors. They also help with reliable and up-to-date information for public health measures that are critical in preventing costly system failures.

Replacing all systems with a single, new HIM system creates various knowledge gaps and uncertainties. Healthcare regulations are constantly evolving, which may create uncertainties regarding investments related to HIM systems. Healthcare technology constantly evolves, requiring organizations to stay up-to-date and flexible for future changes in infrastructure, investment, and new components. The successful implementation of the new system will depend on user buy-in (Lehne et al., 2019). To make the most of their investment, healthcare providers must ensure that staff members are trained to use HIM systems and comfortable integrating them into existing workflows. Getting buy-in from users and managing change effectively are critical factors in achieving success. According to Li et al. (2022), it is unclear how EHR interoperability affects the quality and safety of care due to the wide variety of interventions, designs, and outcome measures used. More research is needed with common research standards for better results.

System Interface Recommendations

Multiple narrative notes from providers can lead to clinical discrepancies and errors. The acquisition is not solely about the "right" technology but how it is utilized. Although Valley City did well in stage one, its primary focus is implementing technology effectively. For this transition of systems to succeed, improved training and workflow documentation processes are necessary. Most staff will agree that exchanging health information with other providers would enhance patient care; however, they prefer information delivered promptly instead of spending

time searching for it themselves. The implementation of the meaningful use guidelines will aim to enhance healthcare by involving patients, coordinating care efficiently, and ensuring privacy. The first stage mandates health organizations to implement an electronic health record system for entering and sharing patient data within the organization. In stage two, new objectives should be introduced, including expanding the EHR system used by providers.

Conclusion

Better electronic health systems can improve medical care outcomes by diagnosing diseases more efficiently and reducing errors. By transmitting and computing patient information, an effective Electronic Health Record system stores relevant details, such as allergies or side effects that can arise when patients are prescribed new medications. This simplifies the process of preventing drug interactions because all necessary data is gathered in one convenient place. Updating Vila Health's Independence Medical Center’s EHR software would substantially benefit providers and patients.

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