

MHA-FPX5068 Assessment 3: Vila Health: Informatics Structure

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Vila Health: Informatics Structure

Healthcare leaders in an institution are responsible for occasionally evaluating the healthcare information systems, ensuring that the systems have the necessary infrastructure and capacity to support the organization's growth and meet the strategic goals. Therefore, the leaders examine performance and any issues or concerns with the information systems using analytical tools and work closely with end-users and department heads. This paper presents an executive summary to evaluate whether two Vila health hospitals have the health information infrastructure to meet the organization's strategic goals as it develops. The executive summary will entail the analytical tools recommended to evaluate the health information systems at the hospital and an assessment of how the strategic plans and hospital goals influence health care information technology selection, design, build, and implementation. Furthermore, it evaluates the relevant ethical business principles and best practices and their impact on the use of healthcare information technology for hospitals and provides an explanation of how the analytical tools will show whether the systems align with the organization's strategic goals.

Analytical Tools Recommended to Evaluate the Health Information Systems

Various analytical tools can be recommended to evaluate the health information systems at Vila Health's rural hospitals. These tools include the system usability scale, key performance indicators, risk assessment, data accuracy and integrity checks, interoperability and functionality assessments, and workflow analysis. Each of these analytical tools and how they can be used in the two Vila health rural hospitals are described below.

Key-Performance Indicators

Key performance indicators are performance evaluation tools used to assess the performance of an organization. In this case, it will entail using various key metrics that reflect

the performance of the health information system infrastructure in the Vila health hospitals. Ideally, health information systems ought to positively impact the quality and efficiency of healthcare services in an institution. Therefore, there is a need to ensure that the system has the necessary infrastructure and ability to meet the set performance metrics in the organization. The performance metrics are set based on the current industry standards. Examples of the key performance indicators that can be set to measure the performance of the health information system include end-user satisfaction scores, data accuracy, system response time, and the number of times the system has downtime.

System Usability Scale

The system usability scale is a system design analytical tool that institutions use to measure the usability of a system from the end-users' point of view. The tool mainly uses a standardized questionnaire to measure whether the system meets the users' needs and is usable to meet the required performance. The questionnaire mainly assesses the users' perceptions and experiences with the system. According to Hägglund and Scandurra (2021), system users are essential in providing feedback on the system, which can be used to modify it for more user-friendliness. Similarly, the tool will be used in Vila Health hospitals to assess whether the current systems are usable and whether changes are needed before integrating with the larger Vila Health organization.

Risk Assessment

Healthcare technology systems are often associated with risks that can compromise care quality, patient safety, and privacy and may even lead to loss of revenue in case of data breaches and cyber security issues (Odiango et al., 2022). A risk assessment is, therefore, a vital tool that can be used to identify and evaluate potential risks. In this case, the risk assessment tool will

identify, evaluate, and prioritize the potential risks associated with the current health information systems. The assessment will also determine the likelihood of the risks and the impact the risks may have on the achievement of the institutional objectives and goals.

Data Accuracy and Integrity Checks

Based on the issues of concern raised by the staff at both rural hospitals on data accuracy and security, the data accuracy and integrity check are also recommended as a tool for assessing the health information systems. Zarour et al. (2021) note that data integrity in healthcare is a vital consideration while selecting health information system forms, and the systems should undergo regular checks for data accuracy and integrity to prevent the risks associated with data inaccuracy, such as patient misidentification. The data integrity check will assess whether the institutions' information systems meet the HIPAA regulatory requirements.

Interoperability and Functionality Assessments

The interoperability of a health information system means its ability to share information and work together with other information systems and devices in the institution. Interoperability is a vital aspect of consideration in Vila health hospitals since they are required to work together as an organization. There is also a need to assess the functionality of the current information system based on the intended functions. The health information systems at the two rural Vila health institutions will be assessed on their interoperability and functionality to determine whether changes should be made before integrating the entire Vila health system.

Workflow Analysis

According to Zheng et al. (2020), a workflow is a process map or the enactment of a series of steps followed in performing a clinical activity. A clinical workflow in a healthcare institution is developed to enhance efficiency, productivity, and overall performance by

promoting the understanding of how work should be accomplished. The workflow analysis will entail process mapping, data collection, identification of bottlenecks (places in the workflow where processes slow down), handoff analysis, task analysis, and resource utilization assessment. The current workflow in the institutions is as follows: the patient arrives at the facility, the basic information is captured at the reception, the patient queues at the waiting area, the nurses take the vitals and conduct a nursing assessment, and the patient proceeds to the physician's room for consultation, patient information is entered into the information system.

However, the above detailed analytical tools can be better understood and applied in the new Vila health institutions if they work together in the evaluation. Considering the data collection is done in the institutions individually. However, they are almost being integrated into a single system; a more defined collaboration would yield better results in the evaluation.

Influence of Hospital Goals on Healthcare Information Technology Selection, Design, Build, and Implementation

The institutional goals of a hospital play a crucial role in determining the selection, design, build, and implementation of healthcare technology systems. Khalifa and Househ (2021) note that the selected health systems have to align with the hospital's goals, and the build, design, and implementation should have the necessary capacity to contribute to achieving the goals while maintaining the institutional culture and helping it achieve its mission and vision. The selection phase of a health information system is guided by the hospital's goals, in that the selected system should assist the hospital in achieving the goals. In addition, the selected system should be interoperable with the existing systems.

Furthermore, the healthcare information system to be used in an institution should be designed based on the needs and goals of the end-users in the hospital. For instance, if the

hospital aims to improve patient satisfaction, the system should prioritize workflow efficiency to improve patient satisfaction. In the build phase, the system is usually customized for the specific hospital goals while complying with the regulatory requirements.

Hospital goals also influence the health information system implementation in ensuring the strategies are aligned with the goals. The implementation plan and execution follow the current project rollout. In addition, the hospital goals ensure that the implementation integrates the new system into the current technology without causing operational inefficiencies. The primary advantage of hospital goals in the information system lifecycle is streamlining the process and promoting the achievement of goals. However, current goals may limit decision-making in selecting, designing, and building an information system, especially if the goals are short-term.

Ethical Business Principles and Industry Best-Practices and their Impact on the Use of Healthcare Information Technology

Healthcare institutions mainly apply ethical business and industry best practices to guide their operations. Therefore, the healthcare information technology used in these institutions should also align with these selected ethical business principles and industry best practices. According to Varkey (2021), the essential ethical business principles in the healthcare industry include respecting patients' values and preferences, maintaining integrity and honesty, and complying with laws and regulations. Respecting patients' values and preferences enhances patient-centeredness and engagement, which promotes satisfaction. In addition, respecting patient values and preferences shows respect for autonomy and patient rights (Varkey, 2021). Healthcare providers should also maintain integrity and honesty in all dealings with patients and other healthcare stakeholders. The other relevant ethical business principle is adhering to all

applicable laws and regulations and maintaining current healthcare standards. These ethical business principles impact the use of healthcare technology by emphasizing the essence of healthcare technology in abiding with the principles through selection, build, and design.

Furthermore, the relevant healthcare best practices that impact healthcare technology include continuous education, training, evidence-based practice application, and active patient engagement (Gabarda & Butterworth, 2021). Continuous education and training best practices influence healthcare technology use by mandating regular training to end-users, especially during system updates. The systems should also adhere to the current evidence and guidelines. The best practice of patient engagement requires technology to incorporate patient needs and mainly apply the technology to address the needs.

The Depiction of the Analytical Tools' Alignment with the Organization's Strategic Goals

The analytical tools discussed above will show whether the healthcare information management systems align with the organization's strategic goals differently. The key performance indicators will show success in meeting the organizational goals when the performance metrics are met. For the risk assessment tool, the organization's goals will have been met, the potential risks will be identified, and solutions to address the risks will be developed. The data accuracy and integrity checks tool aligns with the organizational goal of maintaining patient privacy and promoting the confidentiality of patient information.

The interoperability and functionality assessments also align with the organizational goal of ensuring operational efficiency through the easy collective use of systems. In addition, the workflow analysis tool also aligns with the organizational goals by ensuring the organizational processes actively contribute to meeting the strategic goals. However, additional information on

the current and past institutional performance would be needed for a more complete understanding since it would help assess performance progress.

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