Inclusion of Nurses in the System Development Life Cycle

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The system development life cycle (SDLC) is applicable to the creation of information systems in health care facilities. It is a conceptual model used to ensure the provision of effective and efficient information systems that align with the strategic plan of an organization (McGonigle & Mastrian, 2017). The SDLC provides a framework for effective planning, development, and evaluation of new information systems. Healthcare facilities should promote the involvement of nurses in the SDLC process to ensure the effective application of new technologies to enhance the delivery of care and patient outcomes.

The failure of healthcare organizations to involve nurses in the planning phase of the SDLC contributes to the inefficient information system projects. Verma and Gupta (2017) demonstrate that lack of nurses' participation in the SDLC process is associated with the development of information systems that are not user friendly or interoperable. Nurses are likely to resist organizational changes that involve the adoption of information systems that do not meet their needs.

In the analysis phase of the SDLC, there is a potential problems related to the identification of the functional requirements of proposed information systems. The participation of nurses in the analysis phase allows them to act as professional experts responsible for defining system inputs, technology-driven clinical processes, and the desired system outputs. McGonigle and Mastrian (2017) demonstrate that the analysis of new information systems should involve the assessment of all options available for transforming business operations. The inclusion of nurses in the analysis stage allows for the consideration of all software options useful for supporting changes in clinical processes and outputs such as patient outcomes.

In order to prevent potential problems related to the failure of system developers to understand the clinical implications of proposed software, nurses should be involved in the planning, design, and implementation stages of the SDLC. Verma and Gupta (2017) explain that the guidance of health care professionals prevents system designers from having a false picture of the clinical applications of new information systems. The lack of involvement in the SDLC process limits the ability of nurses to communicate their concerns and fears related to the design and implementation of new

patient care systems. Consequently, system developers may fail to address the concerns of nurses in the design and implementation of new health information systems.

In the testing stage of SDLC, nurses should be involved in ensuring that the applications of the new system align with standardized nursing language and terminologies. Verma and Gupta (2017) explain that health information systems should enable nurses to communicate information on patient care in an accurate manner. Nurses should participate in testing new health information systems and inform about any inconsistency with standardized clinical terminologies. The inclusion of nurses and effective communication of proposed technologies is necessary for preventing the resistance to the process of organizational change related to the adoption of new health information systems.

I had the opportunity of participating in the selection, planning, and implementation of an integrated health information system in my organization. I was engaged in making decisions related to the choice of health information software from the available options. Being included in the SDLC process allowed me to support the adoption of software and applications with configurations that aligned with the needs such as improved teamwork and integration of clinical operations. I learned that healthcare organizations should strive to select and implement clinical software options that meet the expectations of staff members.

Portfolio Assessment

As a nurse manager, I have the professional obligation of participating actively in supporting organizational change such as the development and implementation of a new nursing documentation system. I would participate in the SDLC process by collaborating with system analysts to develop a system that is useful for supporting and facilitating the documentation of clinical processes and nursing interventions. Graduate level-nurses have the professional mandate of participating in all phases of the SDLC in order to ensure the development and implementation of health information systems that are congruent with the needs medical staff.

In the planning stage of the SDLC, graduate-level nurses should address communication problems that could limit the understanding of user requirements among members of the project team. McGonigle and Mastrian (2017) emphasize that organizations should determine the operational feasibility of new information systems, including the efficacy of new software in solving business problems and meeting the expectations of users. Therefore, graduate-level nurses should engage members of project teams in planning stage to ensure the adoption of technologies that is useful for solving operational problems such as documentation errors, heavy workloads, and delays in the delivery of care to patients.

The application of new health information systems in supporting the integration of clinical practices depends on the input of graduate-level nurses in the analysis, design, and implementation phases of the SDLC. McGonigle and Mastrian (2017) elucidate that the design phase of the SDLC involves the determination of the needed programs and interactions between system applications. In the case of new nursing documentation systems, graduate-level nurses should play key roles in analyzing the challenges of nurses in documenting care interventions and designing technological applications that are useful for integrating record management systems. McGonigle and Mastrian (2017) assert that system developers play the role of providing nurses with clear explanations of software configurations using prototypes of proposed health information systems. This way nurses can be effective in influencing the design and implementation of health information systems that are useful for optimizing the efficiency of clinical services.

Graduate-level nurses should participate in the design and implementation phases of the SDLC process to provide staff members with clear explanations of how the proposed systems would

support standard models of care such as evidence-based practice (EBP) and patient-centered care. For new nursing documentation systems, graduate-level nurses should ensure that subordinates understand the SDLC process in the context of nursing practice models. Louis (2011) explains that practitioners should be aware of the SDLC in line with how the users explain the process of developing and implementing new software. Graduate-level nurses should understand that the design and implementation of health information systems that are devoid of the input of nurses would result in the development of software that is not applicable to the implementation of evidence-based nursing interventions.

Graduate-level nurses should take part in the post-implementation support processes to ensure the maintenance of the functioning of new health information systems and the mitigation of their functional limitations. Verma and Gupta (2017) elaborate that the participation of nurses in the testing stage of the SDLC allows for the identification of potential challenges that would limit the functioning of new patient care systems. Graduate-level nurses should also determine the implications of post-implementation support for the time the clinical staff spends in the delivery of care. Agency for Healthcare Research and Quality (n. d.) indicates that health information systems should be useful in reducing administrative tasks and increasing the time clinicians spend in the delivery of care. So, graduate-level nurses should ensure that this goal is reached.