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**Introduction**

For improved health care and management, Nurse informaticists play a vital role in the development and implementation of new technologies. Their active participation in new workflows within the health care organization guides nurses towards using new technologies. As nurse managers, nurse informaticists can play an important role in the implementation of a new nursing documentation system. Nurse informaticists will make sure that the new system is accepted by the nurses and usable by the users. They have the knowledge on how to fully partner with technical staff to design and develop a new information system that meets the needs of the nurses, they look at the overall system sticking to the stages of SDLC. This paper describes the role of graduate-level nurses to guide his/her participation in the implementation based on the SDLC stages, a project management model that defines a project stage from beginning to completion. (Singletary & Baker, 2019)

**Planning**

Nurse informaticists along with the team will first explore whether the organization can support the new system, overall costs, and timelines, once there is a green signal by the team Nurse informatics as a nurse manager will identify the need of her nurses in adapting to the new technology and communicate with the system developers in explaining nurse’s needs. Nurse informaticists can help in this process by assessing and collecting information via documentation done by nurses, doing so they can identify areas of improvement such as how to avoid medication errors, how evidence-based practice can be utilized for best practice, avoiding too much documentation that takes most of the nurse’s time away from patient care. Nurse managers can collaborate with team members and help develop a system accepted and usable for nurses and other healthcare workers.

**Analysis**

Workflow analysis is an integral part of every nursing informatics function; therefore, they need to understand the workflow and should appreciate how inefficient workflow affects patients' care negatively. (McGonigle & Mastrian, 2022). According to digital healthcare research, delays in various areas such as communication, patient care, and billing occurs if the workflow is not taken into consideration. In order to be successful in the process analysis role, the Nurse manager should work as a bridge between developers and nurses. Once the need is identified in the planning phase, nurse informaticists will help prioritize the needs, and provide alternatives and recommendations for the management. For instance, why nurses are unable to update patient information in a timely manner, why vital information is not flowing from one device to another such as why blood sugar result is not flowing in the patient chart, and why ECG result is not saved. Their ability to give attention to detail, organize and generate solutions will analyze the technical need and demands like staffing, hardware, and software needs so that they can communicate with the system developer.

**Design**

Workflow analysis should be a part of any kind of technology implementation and when comes to Nursing informatics their role in this phase is to direct other team members in the execution of the task or perform the task themselves. Nurse informatics as a leader should issue the authority to the team to make decisions or if the manager is working directly then they should have the authority to make decisions. It might not be easy to blend decision-makers and owners and that will be the managers and the employees in this case but this type of blend is essential to make the program successful. People at the managerial level position want to participate entirely in the design process and this might be beneficial as it gives the benefit of decision makers and management level the to come to an agreement, also managers can see how the process is occurring vs their wrong assumptions. In this phase, nurse informatics can fit a perfect managerial role. Nurse informaticists will make sure that the overall software arrangement is explained properly, Nurse informatics can help nurses customize the system to accommodate practice to improve health care quality. Nurses’ involvement is essential in the initial design of systems. For example, Barcode medication administration (BCMA), was created to reduce errors and increase patient safety but Poorly designed BCMA (malfunctioning scanners, unreadable barcodes) will lead to interruption in workflow, and nurses have to spend more time in a workaround, (Dykes & Chu, 2021) In order to improve health care quality and change the culture, Nurses involvement is essential in the initial design of systems, therefore Nurse informaticist and nurse involvement in the design phase of SDLC phase will prevent this from happening because they are already known about this kind of issue which they can communicate with the developers and come out with another option.

**Implementation**

All the stakeholders should be aware of the implementation process and Nurse informaticists as nurse managers will be the best person to notify them as they are the person who is knowledgeable on both sides. This is the phase where nurse informatics will work with the entire team to install the system. The nurse manager will explain the new system to nurses and train them on how to use and maintain the system. Doing so will decrease the anxiety among nurses that comes with the introduction of new technology in an organization. Nurse managers can also select nurses with high technical knowledge and make them super users who can help in the training process by assisting nurses with less technical experience. The nurse manager will also take feedback on the system and communicate with the technology side which might be beneficial in redesigning for better outcomes.

**Post-implementation**

According to McGonigle and Mastrian, SDLC is an ongoing process, even after implementation we have a post-implementation phase, where ongoing support and training are provided by the managers to remain up to date with the system. This increases staff satisfaction and remains with the best practice that decreases anxiety and failure that might arise from technical failures. Nurse managers can compare the new system implemented to its actual usage and identify if there are any errors or gaps that have to be removed. The nurse manager will also identify the valuable features and support from the new system that can be included in future projects because it is an ongoing cycle.

**Conclusion**

Nurse Informatics has a valuable contribution to the implementation new system. Nurse informatics as a nurse leader will support nurses in decision-making via the use of information structure, process, and technology (Wang et al., 2019) and SDLC.

Nurse Informatics has the power to bridge the gap between health care and technology. Their contribution is valuable in each stage of the SDLC process whenever a new technology is introduced in an organization.

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