

**Information Systems in Nursing**

**[Name of Student]**

**[Title of Assignment]**

**[Date of Submission]**

## **Introduction**

This essay is focused on discovering the importance of information systems in nursing practices. Implementation of EMR system in the Rochester General Hospital is discussed. EMR systems have found to be effective in the successful management of data, protect patient privacy and achieve enhanced patient outcomes. This essay attempts to explore different aspects of the EMR system in the healthcare sector and its influence on the healthcare processes.

## **The Contribution of Electronic Medical Record (EMR) in Nursing Practice**

Häyrinen, Saranto & Nykänen (2008) described that Electronic Medical Record (EMR) or Electronic Health Record (EHR) refers to a categorized collection of population and patient electronically-stored information related to health in a digital format. This information system is implemented in the Rochester General Hospital, New York which consists of 530 beds and is a tertiary care hospital. An EMR Nurse utilizes innovative technology for organizing and managing health information of the patient. They are guided to categorize medical records of the patient and making them accurate and accessible for insurance purpose, medical personnel, different databases and physicians. An integrated EMR significantly assists in sharing information and data from all healthcare providers who are involved in the care of the patient. In the Rochester General Hospital, the utilization of EHR or EMR helps to improve patient safety by enabling real-time accessibility of information to various stakeholders. Another crucial impact of EMR on the nursing practice of the hospital includes that it attempts to improve scheduling processes. Furthermore, EMR aims to improve sharing of patient information, thereby reducing discomfort, risks and medical expenses. One of the evident benefits of the EMR involves that it enables to share medical records across various healthcare settings. Nursing practices can be significantly improved by implementation of the EMR system. In the Rochester General

Hospital, better care coordination has been observed. The nursing practice is positively influenced by the EMR. The doctors are able to access the health record of the patient from a different location. It is one of the key benefits of the software system as it allows a healthcare practitioner to give professional recommendations regarding the medical condition of a distant place. Reduced hospital stay is another significant aspect of the EMR, its implementation aims to reduce the time period required for accessing health records. It is crucial to consider the importance of information systems in reducing patient stay at the hospital, improving quality of care and improving patient outcomes.

### **Patient safety and patient outcomes**

Patient safety is one of the important concerns of a healthcare facility. In the Rochester General Hospital, the healthcare practitioners attempt to protect the safety of the patients' data. Koulayev & Simeonova (2010) described that EMR aims to enhance access to the laboratory data or information, which eventually results in a reduction of cost and duplication. In the Rochester Hospital, EMR is implemented in an effective manner, which automatically detects issues, whenever a healthcare practitioner prescribes a new medication. It attempts to give alert the clinician regarding various conflicts which can arise. Nurse researchers who possess health information regarding all the patients can serve efficiently the requirements of patients who are currently prescribed medication and suffer from the different medical condition. BoryckIab et al., (2014) in their study highlighted that nurse practitioners utilize reminders, care plans, tasks and clinic notes in the EMRs in order to support disease management and wellness activities in patients, eventually assisting in improving the patient outcomes. In the Rochester General Hospital, nurse practitioners are focused on making effective use of EMR. It has been observed that the decision-making support tools or instruments which are built into EMR systems (web-

based) of the Rochester Hospital, assists in preventing adverse outcomes linked with negative interactions with drug and drug allergies caused by different medications and food. It has been observed that the number of certified vendors of EMR systems in the region of United States increased from 6,066 to greater than 10,010 since 2008 (Adler-Milstein & Bates, 2010). Recent studies have suggested that unexpected and substantial risks (unexpected) can be prevented through effective utilization of EMR systems. Development and enhancement of the EMR system are necessary to enhance the safety of the patients, thereby improving the overall quality care of the hospital. It must be noted that inappropriate use of EMR systems can result in total failure regarding protection of the patients' data. Electronic data should be utilized efficiently for managing, learning and detecting events of safety in real-time.

### **Utilization of EMR to enhance patient outcomes**

In the Rochester General Hospital, nurse practitioners make sufficient use of EMR which involve using reminders, care plans and tasks for managing health requirements of patients. The reports of EMR are being utilized in the hospital for identifying certain vulnerabilities and risks associated with patients' health. Implementation of EMR in the hospital attempts to enhance the care quality, provider efficiency and patient care. The nurse practitioners use EMR for improving the quality of care, which includes legible notes, prescriptions and accurate medication lists. However, one of the constraints in the implementation of EMR which has been observed is related to the cost of this information system (IS). It is critical for the management of the hospital to further modify the use of the IS to provide exceptional quality of care to the patients. The healthcare practitioners of the hospital document and perform a critical review of the EMR on monthly basis. The management monitors the effectiveness of the systems and advises the Information Technology professionals to upgrade the system according to the requirements in

order to enhance patient outcomes. Further, nurse practitioners strongly emphasize on the safety of the patients' reports and data. In order to deliver quality care to the patients, the healthcare professionals of the Rochester General Hospital continuously monitor the system to ensure the safety of the data records and reports. One of the studies conducted by Boonstra, Versluis & Vos (2014) highlighted that healthcare facility which makes effective use of EMR systems get successful in achieving improved patient outcomes as compared to the organizations which do not use this information system. In the Rochester General Hospital, there is an efficient utilization of EMR system in various departments which eventually helps in reducing the length of stay of the patients at the hospital.

## **Conclusion**

The importance of information systems, particularly in the healthcare sector cannot be neglected. The analysis of the EMR systems in the Rochester General Hospital revealed that nurse practitioners make sufficient use of this system for achieving the desired patient outcomes, reducing the length of stay at the hospital, determining vulnerabilities and various risks associated with the data management. Further, the practitioners utilize care plans, reminders and tasks in order to manage patients' health needs. It is recommended that it is necessary to explore further benefits and constraints related to the EMR system.

## References

- Adler-Milstein, J., & Bates, D. W. (2010). Paperless healthcare: Progress and challenges of an IT-enabled healthcare system. *Business Horizons*, 53(2), 119-130.
- Boonstra, A., Versluis, A., & Vos, J. F. (2014). Implementing electronic health records in hospitals: a systematic literature review. *BMC health services research*, 14(1), 370.
- BoryckIab, E. M., SANGSTER-GORMY, E., Schreiber, R., Thompson, J., Griffith, J., b ab MAb, A. F., & KUOa, A. (2014). How are electronic medical records used by nurse practitioners?. *EHealth-For Continuity of Care: Proceedings of MIE2014*, 205, 196.
- Häyrynen, K., Saranto, K., & Nykänen, P. (2008). Definition, structure, content, use and impacts of electronic health records: a review of the research literature. *International journal of medical informatics*, 77(5), 291-304.
- Koulayev, S., & Simeonova, E. (2010). Do Electronic Medical Records Improve Quality of Care?. Tufts University, Vol.1, 21-38.