

## Introduction

Nursing informatics is a relatively young concentration that integrates nursing science with information and analytical sciences to identify, define, manage, and communicate data, information, knowledge, and wisdom in nursing practice. Tangential to these overarching functions, nursing informatics helps inform nursing leaders decisions and create healthcare shifting frameworks to ultimately improve patient care. The utilization and implementation of nursing informatics can be directly observed through HCOs transitioning to EHRs or transitioning between EHRs. Nursing leadership directly influences the development of competencies with informatics related machinery and modalities.

## Objectives

1. By the end of this presentations, students will be able to understand the impact of nursing informatics on patient care quality,
2. By the end of this presentation, students will be able to explain the significance of nurse leaders in the selection, implementation, use, and evaluation of healthcare technologies.
3. By the end of this presentation, students will be able to discuss the critical need for standardized nurse leader informatics competencies.
4. By the end of this presentation, students will be able to verbalize the current competencies used to guide nurse leaders.

Nursing Management	
	Core competency area
1	Nursing documentation (including terminologies)
2	Principles of management
3	Strategic management and leadership
4	Quality management
5	Human resource management
6	Change management and stakeholder management
7	Information and knowledge management
8	Principles of nursing informatics
9	Process management
10	Ethics and IT

# Nursing Informatics for Leaders in Clinical Nursing

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## Literature Review

### Impact of Nursing Informatics on the Quality of Patient Care

- Nursing informatics can be defined as the application of information technology in nursing responsibilities encompassing management, practice and education. It combines and integrates computer science, nursing science and information to supplement nursing care.
- The usage of nursing informatics is directly correlated with improved patient outcomes. Electronic health record tools (EHRs) allow healthcare providers to access information quickly while allowing them to address patients' needs on time.
- EHRs play a crucial role in creating a more reliable healthcare system by detecting and preventing errors, while eliminating these factors.
- By enhancing efficiency, reducing medical errors, promoting time management, and enhancing communication, nurses can focus on providing quality care to patients. Implementation according to constantly changing and improving technology will continue to shape the healthcare and nursing environment.

### A Systems-Level Method for Developing Nursing Informatics Solutions: The Role of Executive Leadership

- Nursing leadership plays a critical role in the development of nursing informatics solutions. Nursing leaders can identify more efficient and effective ways to gather and subsequently utilize health information.
- This article describes two successful applications of nursing informatics solutions with clearly defined structure and leadership from nursing executives. The framework for both projects was based on: clear lines of responsibility and authority, respect for each type of expertise necessary to the project, and clear commitment to the aim of the project.
- The framework developed the Evidence-Based Clinical Documentation (EBCD) and Nursing Data Portal (NDP) solutions. The overall vision for the clinically focused EBCD system was to create a patient-centric record that guides and informs the provision of safe, effective, and efficient care by the interdisciplinary team and produces data to evaluate care of individual and population care. The leadership-focused NDP system sought to establish a single platform for sharing nursing performance data.
- These two nursing informatics solutions have different focuses but were developed from the same systems-level framework. This system-level method demonstrates the role of specific leadership in guiding the ideation, design, development, data mapping and visualization, and application of the products. The framework gives executive nursing leadership a systems-level method on which to base future projects.

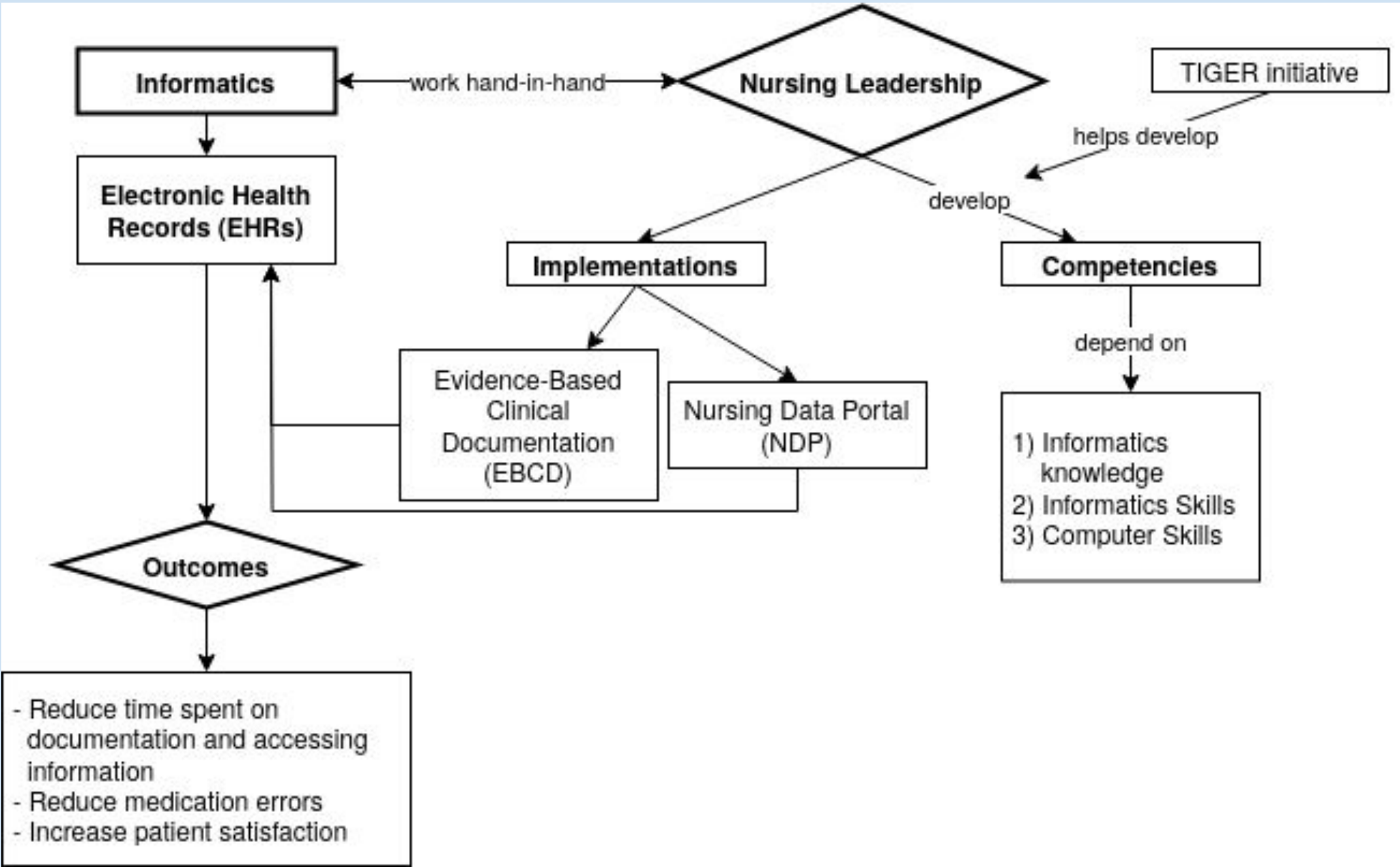
### Informatics Competencies for Nurse Leaders: A Scoping Review

- Nurse leaders are uniquely positioned to influence the selection, implementation, use, and evaluation of technologies within healthcare settings. Standardized informatics competencies can guide nurse leaders to meaningfully participate in decision making.
- Information Management Framework identified 92 competencies related to computer skills, 40 competencies related to informatics knowledge, and 28 competencies related to informatics skills for nurse leaders.
- Nursing Informatics Competency Assessment for the Nurse Leader is an instrument that can be used to measure success with the expected competencies.

### Technology Informatics Guiding Education Reform – TIGER

- The TIGER Initiative is focused on helping the nursing profession to adopt informatics tools, principles, theories, and practices that make healthcare safer and more effective, efficient, patient-centered, and equitable for all stakeholders. TIGER recommended hospital administrators and leadership teams construct a vision that allows nurses and interprofessional colleagues to use informatics and emerging technologies in practice.
- Nursing management top 10 competencies
- This framework acknowledges that it does not give specific recommendations for higher leadership such as chief nursing information officer, but affirms that the framework can be applied to give a rough orientation.

## Concept Map



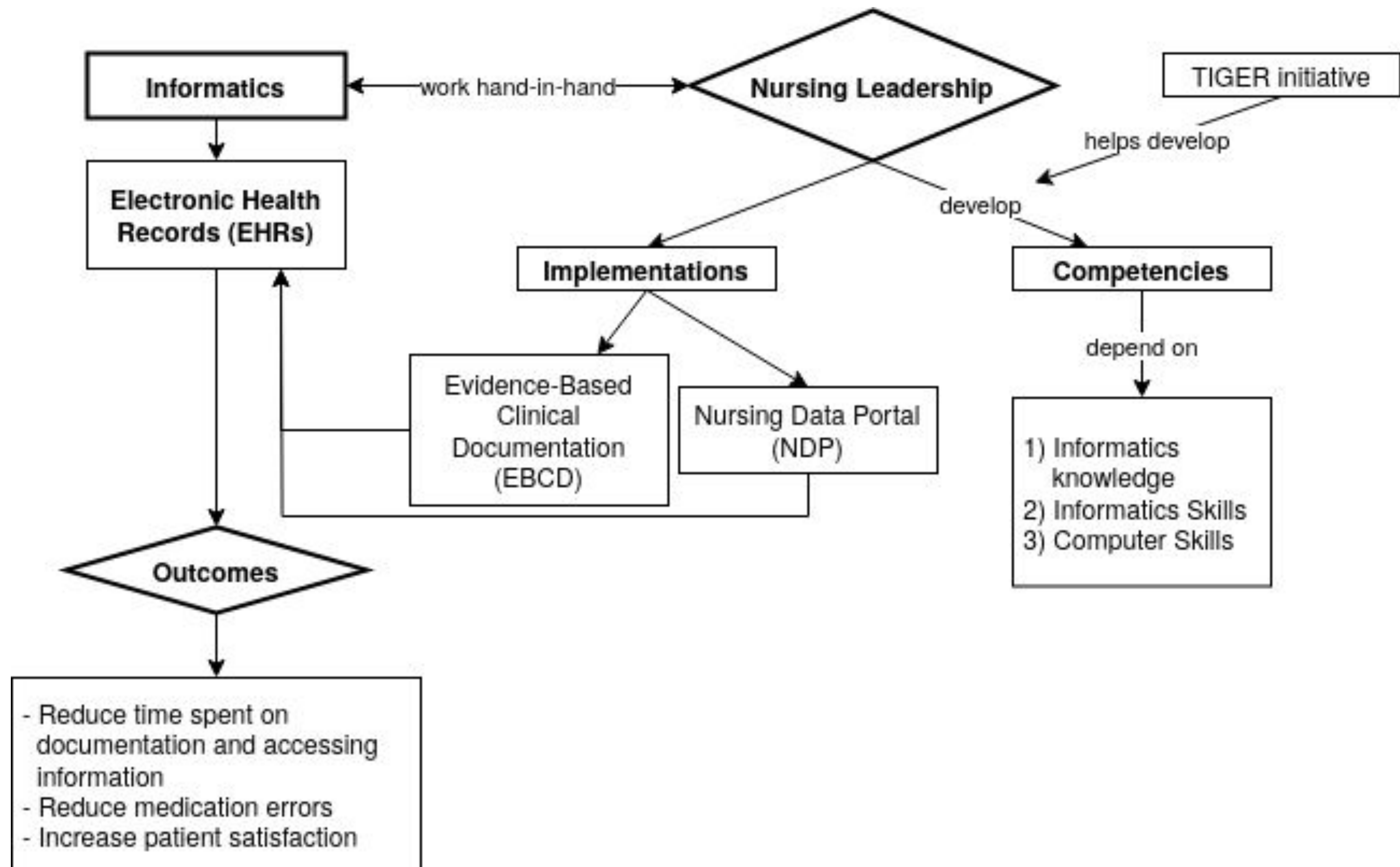
## Conclusion

- It is imperative that nurse leaders play a role in all aspects of decision making surrounding the strategic direction, procurement, selection, implementation, use, and evaluation of information technologies.
- Understanding EHR systems and making informed decisions as executive leadership greatly impacts patient outcomes and nurse satisfaction.
- Standardized informatics competencies and competency assessment tools can ensure that nurse leaders are proficient in the needed skills.

## References

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# Discussion Questions

UH recently switched their EHR over to Epic, what were your observations and what was the experience like (from both a student perspective and UAP perspective)?

What are your thoughts on the current informatics competencies (at your workplace or clinical sites)? What could be done to improve them?