

UNIVERSITY OF LOUISIANA
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STEP Committee

Technology Fee Application

Using Simulation Software to Meet Curricula
Competencies for the Health Information
Management Program

Title

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Name of Submitters

(Faculty or Staff Only)

Department of Allied Health
College of Nursing and Allied
Health Professions

Organization

Title: Using Simulation Software to Meet Curricula Competencies for the Health Information Management Program Date:7/15/2021

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ABSTRACT (250 words or less): The purpose of this grant proposal is to incorporate simulation software that can be used to meet the curricula competency standards of the CAHIIM accrediting agency for HIM programs especially in the current technology-based healthcare setting. The curricula competencies are mandated to be taught at certain Bloom’s levels and higher levels are difficult to achieve though didactic instruction alone. Simulation software is a much-used technology in the HIM programs. The EHR Go software includes basic EHR competencies as well as more complex data mining and analytics simulations. Go is an educational Electronic Health Record (EHR) and learning platform designed to encourage students to see the holistic nature of healthcare while becoming proficient in its technology. The Go EHR includes over 600 customizable patient cases and activities built around the diverse and realistic human stories healthcare professionals see every day. The Navigate 2 Scenario Series of simulation software is offered by Jones and Bartlett and are designed to prepare students for success in the real world of health care management and administration. In these virtual simulations, students will take on the role of CEO, Marketing Consultant, Quality Improvement Director, Health Policy intern, and many others. Immersed in a photo-realistic world with a full cast of characters, they will be faced with challenging situations and tough decision making. This software will allow students to experience actual functions of the health information management department without having to physically be present in the facility.

Background:

The faculty of the Health Information Management program are committed to the use of technology to advance the quality and effectiveness of the teaching/learning process. The Health Information Management (HIM) program is accredited by the Commission on Health Information and Informatics Management Education (CAHIIM); a critical component of accreditation is compliance with the 2018 Curricula Competencies of the American Health Information Management Association's Council for Excellence in Education (See Appendix A). These curricula competencies must be in effect in the HIM program by September 1, 2021. Each of the competencies must be met at a mandated Bloom's Taxonomy level; Simulation software is an excellent tool to use in meeting the Bloom's 4 and above taxonomic levels. There are a variety of stimulation software available; two of the more prominent are part of this grant request.

In reviewing the Step Plan 2021-2026, I believe that this request definitely would help fulfil SLO-3 "Create, deploy, and maintain effective learning environments that facilitate multiple instructional and learning styles". This software will most certainly do that.

One of the leading simulation software applications in the health information management educational area is EHRgo or Go. Go is an educational Electronic Health Record (EHR) and learning platform designed to encourage students to see the holistic nature of healthcare while becoming proficient in its technology. The Go EHR includes over 600 customizable patient cases and activities built around the diverse and realistic human stories healthcare professionals see every day.

Go is fully interprofessional and can be used both within and between programs, in simulation, classroom, lab, or for Professional Practice Experience (PPE). It includes basic EHR competencies as well as more complex data mining and analytics simulations. Very importantly, the Go EHR closely resembles the most widely-used EHRs in healthcare such as Epic and Cerner. Students are able to review realistic content in a simulated format. As mentioned, activities range from basics such as creating a master patient index to more complex SQL-based data querying activities. Students use large datasets to identify quality and performance issues in healthcare, assess population health, and analyze patient costs.

Go's simulated database includes tens of thousands of records, so students can run basic to advanced queries and analyze their findings through graphs and critical thinking questions. Students can run queries to analyze data on scenarios as varied as pneumonia outcomes, hospital-acquired conditions, childhood immunizations, and more – generating SQL statements and answering questions about their findings.

The Navigate 2 Scenario Series of simulation software is offered by Jones and Bartlett and are designed to prepare students for success in the real world of health care management and administration. In these virtual simulations, students will take on the role of CEO, Marketing Consultant, Quality Improvement Director, Health Policy intern, and many others. Immersed in a photo-realistic world with a full cast of characters, they will be faced with challenging situations and tough decision making.

While there are several different modules available, four have been identified as preparing students for the more challenging aspects of the HIM curriculum. These are:

1. Health Care Delivery

The student assumes the role of a Health Care Operations consultant at a large Health Care system. In each episode, the student will progress through a series of different settings and character interactions that will teach them about key concepts in Health Care Delivery. The student will analyze information, make decisions, and see the impact of their participation in real time.

- Episode 1: The New System
- Episode 2: Financial Issues
- Episode 3: Customer Satisfaction
- Episode 4: Expansion

2. Health Care Finance

The student assumes roles such as Chief Executive Officer, Chief Financial Officer, and Board Member, and applies their knowledge of health care finance to make decisions that directly impact hospitals and patients, such as whether to relocate a hospital facility and whether to propose a bond to finance a major hospital renovation.

- Episode 1: Critical Case for Billing & Code
- Episode 2: Rates Negotiation Crisis
- Episode 3: Firm Financial Position or Not?
- Episode 4: To Move or Not to Move

3. Health Care Law

The student assumes the role of a new Health Care Administrator within the Bright Road Health Care System, where they will review legal cases and assess the Health Care System's legal risks and liabilities. Bright Road's General Counsel will act as the student's mentor, helping them navigate difficult legal concepts.

- Episode 1: Hospital Nightmare
- Episode 2: Medication Errors
- Episode 3: The Wrong Body Part
- Episode 4: Failure to Obtain Consent

4. Health Care Ethics

The student assumes various roles within the Health Care System, where they will be presented with ethical dilemmas and various opposing viewpoints. In some cases, the "right" decision can

be subjective, and the student will need to use ethical decision-making skills to defend their choice.

- Episode 1: Equipment Purchase
- Episode 2: Stockpiling
- Episode 3: Labor and Delivery Services
- Episode 4: Confidentiality

Purpose of grant and impact to Students:

The investigators will advance the implementation of this software into the junior and senior level Health Information Management courses to supplement the classroom instruction offered to our students during the fall 2021 semester. This software will simulate many of the functions within the HIM department and will provide adjunct “hands-on” experiences not currently available in the area healthcare facilities due to continuing COVID-19 challenges.

The *objectives* of the study will be to:

1. Implement innovative technology applications in the HIM/LCHI courses
2. Mimic functions of a basic health information management department for the upper level HIM majors
3. Development new teaching practices among the HIM instructors
4. Evaluate the quality and educational effectiveness of the simulation software for use in PPE courses, the Management Internship course, and all HIM and LCHI lab courses

The Navigate software also offers several opportunities for students including:

1. Easily accessible content around the clock, 24x7x365, and around the globe. Students can access sessions on their schedule, practice at their own speed, and reuse as many times as they need.
2. Exposure to real-world challenges in the high demand healthcare field. Practice critical thinking and communication skills and apply classroom knowledge to industry specific situations.
3. Experience with a first-of-its-kind learning environment that lets students play the role of decision-maker.

Statement of Need:

As stated in the background material, the new curricula competencies required by the CAHIIM accrediting agency must be implemented into the HIM curriculum by September 1, 2021. Each of these curricula competencies has a mandated Bloom’s taxonomy level. Meeting competencies at the higher Bloom’s levels can be problematic as it is often difficult to create appropriate projects and assignments without the use of an EHR or healthcare databases. Anecdotal evidence from other health care educators suggests that the Go EHR is an important tool in assessing competencies at the appropriate level. It is widely used in the over 300 health

information management programs in the country. Critical thinking and soft skills have been identified by leading educators as problem areas in many university curricula. The Navigate stimulation software is designed to address these deficiencies and prepare students for roles in middle and upper healthcare management.

The remaining challenges of the COVID-19 pandemic will persist throughout the fall semester; we are still not able to place all of our students into face-to-face facilities. This software will allow students to experience actual functions of the health information management department without having to physically be present in the facility.

Projected Lifetime of Enhancement:

The software is updated by EHR Go as changes are made for the lifetime of the license. The same is true of the Navigate Stimulation Software.

Person Responsible for Implementation, Installation, Maintenance, Operation and Training:

The HIM computer laboratory is maintained by Mrs. Kristy Courville, an HIM senior instructor, with the assistance of Mr. Kelly Saltzman, IT Manager for the College of Nursing and Allied Health Professions. The software has been designed to be user-friendly and intuitive.

Budget:

The budget for this project is as detailed in Appendix B.

Previously Funded STEP Projects:

The SGA has graciously funded eight previous STEP proposals. The step grant awarded in July 1999 provided funding for a notebook computer, a boxlight projector, and a SMART board. The second proposal was funded in January 2001 and funded four computers in the lab, MS Office 2000, and SmartDraw software and supplies. The third STEP grant funded optical imaging equipment for the HIM classes. In the summer of 2002, a STEP grant assisted in the renovations of the HIM computer lab. With the grant awarded in January of 2004, we were able to purchase computers, a printer, and software. The STEP grant that was funded in January 2006 allowed us to purchase additional computers for the HIM lab as well as a new file server needed to support the new 3M equipment. In January, 2008 we were awarded a STEP grant to purchase some Virtual Lab applications from the American Health Information Management Association. In August, 2008 we were also awarded a STEP grant to create an instructional multimedia library for HIM students and it also included funds to convert V.L. Wharton, Room 504 to a media classroom. In Spring of 2013, a STEP grant for approximately \$15,000 was awarded for the addition of 9 new computers in the HIM computer lab. The last grant awarded was in 2017 and awarded the program \$42,000 for creation of a STEP classroom in room 504 of Wharton Hall.

The continuous upgrade of computer hardware and software is crucial to the success of the HIM program and ultimately the success of its students. We are grateful for the funds received from these STEP proposals. Without them, the needed learning resources would not be available.

APPENDIX A



Council for Excellence in Education

2018 Health Information Management Baccalaureate Degree Curriculum Competencies

Supporting Body of Knowledge (Prerequisite or Evidence of Knowledge)
Pathophysiology and Pharmacology
Anatomy and Physiology
Medical Terminology
Computer Concepts and Applications
Math Statistics

Domain I. Data Structure, Content, and Information Governance	
Competency	Bloom's Level
I.1. Compare diverse stakeholder perspectives through the delivery of health care services.	5
I.2. Analyze strategies for the management of information.	4
I.3. Evaluate policies and strategies to achieve data integrity.	5
I.4. Recommend compliance of health record content across the health system.	5
I.5. Utilize classification systems, clinical vocabularies, and nomenclatures.	3
I.6. Evaluate data dictionaries and data sets for compliance with governance standards.	5

Domain II. Information Protection: Access, Use, Disclosure, Privacy, and Security	
Competency	Bloom's Level
II.1. Recommend privacy strategies for health information.	5
II.2. Recommend security strategies for health information.	5
II.3. Analyze compliance requirements throughout the health information life cycle.	4

Domain III. Informatics, Analytics, and Data Use	
Competency	Bloom's Level
III.1 Examine health informatics concepts for the management of health information.	4
III.2. Analyze technologies for health information management.	4
III.3. Interpret statistics for health services.	5
III.4 Examine health care findings with data visualizations.	4
III.5. Compare research methodologies pertaining to health care.	5
III.6. Manage data within a database management system.	5
III.7 Identify standards for exchange of health information.	3

Domain IV. Revenue Cycle Management	
Competency	Bloom's Level
IV.1. Evaluate assignment of diagnostic and procedural codes and groupings in accordance with official guidelines.	5
IV.2. Manage components of the revenue cycle.	5
IV.3. Evaluate compliance with regulatory requirements and reimbursement methodologies.	5

Domain V. Health Law & Compliance	
Competency	Bloom's Level
V.1. Comply with legal processes impacting health information.	5
V.2. Evaluate compliance with external forces.	5
V.3. Analyze components of risk management as related to a health organization.	4
V.4. Analyze the impact of policy on health care.	4

Domain VI. Organizational Management & Leadership	
Competency	Bloom's Level
VI.1. Facilitate fundamental leadership skills.	4
VI.2. Assess the impact of organizational change.	5
VI.3. Analyze human resource strategies for organizational best practices.	4
VI.4. Leverage data-driven performance improvement techniques for decision making.	5
VI.5. Verify financial management processes.	4
VI.6. Examine behaviors that embrace cultural diversity.	4
VI.7. Assess ethical standards of practice.	5
VI.8. Facilitate consumer engagement activities.	4
VI.9. Facilitate training needs for a healthcare organization.	4
VI.10. Compare project management methodologies to meet intended outcomes.	5

Revisions 3.20.2019:

Corrected IV.10 competency.

APPENDIX B

Budget Proposal

1. Equipment	\$
2. Software	
a. EHR Go	\$ 6825.00 – see quote below
b. Navigate	\$ 3196.80 – See software quote in additional file
3. Supplies	\$
4. Maintenance	\$
5. Personnel	\$
6. Other	\$

TOTAL: **\$ 10,021.80**

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Quote

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