

Project Name

Information Resources for Evidence-Based Interprofessional Health Care Decisions: Developing, Testing and Evaluating Library-Based Innovative Technology Enhanced Team Instruction Methods

Principal Investigator Amy Lyons

Campus Buffalo, University at

Year of Project 2014

Tier Tier Two

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Overview Summary

A partnership to study information resources for evidence-based interprofessional health care decisions (IPE) - developing, testing and evaluating library based innovative technology enhanced team instruction methods.

Outcomes Summary

Outcomes TBD

Project Abstract

Project Objectives and Methods:

Objective 1: Demonstrate the unique knowledge of evidence-based information resources as well as the teaching skills that librarians bring to interprofessional education (IPE) and collaborative practice.

The project planning team, led by the Principle Investigator (a librarian), will design innovative methods of technology enhanced team instruction that will both reinforce the core competency areas identified by the national Interprofessional Education Collaborative (values and ethics, interprofessional roles and responsibilities, communication, and teamwork), and also specifically address the following additional skill sets which are core to the UB IPE curriculum and professional librarianship: 1) Collaborative information management and informatics skills; 2) The effective use of information technologies; and 3) Collaborative research & scholarship skills. Based on our review of the current literature, this project will be unique among interprofessional education (IPE) programs nationally for its leadership involvement of librarians and its focus on evidence-based information management skills education.

The core knowledge and skills this instruction will be designed to provide for these interprofessional student teams includes: 1) The principles of evidence-based practice and how to recognize and evaluate evidence based information resources; 2) The structures, features, concepts, and strategies needed to locate these resources on the Internet or from core health-related information databases; and 3) The information management tools and technologies that will facilitate locating and sharing the best current evidence with other members of the health care team.

Objective 2: Design, pilot, test, and evaluate innovative, technology enhanced instruction methods that model and reinforce core IPE competency areas integrated with core evidence-based information management principles and skills.

The target populations for these instruction methods will be the UB health profession schools and education programs (Medicine and Biomedical Sciences, Dental Medicine, Nursing, Pharmacy and Pharmaceutical Sciences, Public Health & Health Professions, Social Work, Management, Communicative Disorders and Sciences, and resident training programs at Kaleida Health, Erie County Medical Center, and Roswell Park hospitals) and the Buffalo State programs in Dietetics & Nutrition and Speech-Language Pathology. We recognize that although interprofessional instruction in these professions is part of a national mandate from the education program accreditation agencies, IPE instruction will be competing with other core curriculum components in these schools and degree programs. Thus, this instruction will ideally be offered in compact modules that complement, rather than compete with the existing curricula. Since the requirement for core evidence-based information management skills is similar for all health professions, providing this education in interprofessional teams, as opposed to the current uniprofessional model, provides an opportunity for

value-added education by bringing the different health profession students together to learn not only with each other, but also about and from each other, without adding additional curricular requirements. It is our hypothesis that relatively short, intense instruction sessions led by interprofessional faculty and librarian teams will reinforce the other gcore IPE competency areas along with information management principles and skills. To make this instruction engaging and relevant for students, we will incorporate active learning classroom technologies along with online learning, flipped classrooms, and other Open SUNY innovative team-learning strategies.

Thus, the project planning team will explore a variety of online resources to complement and reinforce the in-person classroom team-based instruction. This will include short video tutorials and other web-based collaborative team learning resources and tools, as well as more traditional print resources that students can be assigned to review in preparation for, or as a follow up to, the in-person team learning classroom activities. In addition, the planning team will outline potential alternative instructional designs using cases in which a patient would benefit from the involvement of many different healthcare professionals. Interprofessional student teams could be assigned to work together to locate, evaluate, and discuss the relevance and usefulness of the best available evidence and come up with a care plan for the patient. This planning will culminate with pilot testing of several of the most promising instruction designs with interprofessional groups of students during the final project workshop in the Buffalo State Butler Library.

Objective 3: Determine how to make the most effective use of classroom configurations and technologies in order to facilitate team teaching and learning during the student in-person classroom teamwork sessions.

The Buffalo State active learning classrooms are equipped with innovative group learning furniture/technologies (see photos). UB has also started building these kinds of technology-enhanced classroom spaces and plans to include similar technology-enhanced teaching spaces in its new School of Medicine building on the Buffalo-Niagara Medical Campus. A few classrooms in the UB University Libraries and the School of Management are equipped with these technologies and the Health Science Library on the South Campus (which will continue to support the other health-related schools and programs), is seeking other grant funds to renovate a 1,082 sq. ft. space with comparable group learning technologies to support the UB IPE Initiative.

This project's outcomes will help leverage these technology-enhanced facilities and chart future directions in these IPE programs and initiatives. A recent study at Grand Valley State University found that an intentionally designed classroom solution had significant positive impacts on 12 different measures of student engagement. (1) Professional staff from the UB Behling Simulation Center (which focuses on interprofessional healthcare education activities) will also be invited to help evaluate these instruction programs and activities, since this center will relocate to the new Medical School downtown and will continue to play a key role in IPE. The Simulation Center may also want to simulate hospital or clinic team decision-making spaces where comparable technologies could facilitate effective access to and collaborative use of evidence-based information resources for patient care decisions.

Objective 4: Bring together the broader community of librarians, teaching faculty, instructional design professionals, and other stakeholders to pilot test and observe, discuss, and help to evaluate the potential for ongoing application of these innovative, team-based strategies and technologies to meet the mandate for interprofessional student instruction in these health-related profession training programs on both campuses.

Hosted in the Buffalo State Butler Library's active learning classrooms, the culminating two-day workshop will be structured as a pilot research experiment to observe and measure the teaching and learning impacts of these promising methods of team-based interprofessional instruction. The program will start with a presentation by an outside national expert in interprofessional education methods. This person and another IPE expert will serve as external professional observers of the piloted instruction sessions, providing an additional level of review to complement the assessments by the UB and Buffalo State participants. More detail about the structure of the workshop sessions is provided in the project timeline.

In the weeks leading up to this conference, the participating students and faculty will be given a variety of online preparatory resources and exercises to review and complete so they will be prepared for the actual face-to-face activities during the workshop. Since these students and the librarians and faculty instructors will all be evaluated in terms of the effectiveness of the instruction strategies used and the learning outcomes achieved, this component of the project will be presented to the UB and Buffalo State social sciences IRBs for approval. All of the faculty instructors and student participants will be recruited to participate in the pilot tests of these instruction methodologies based on their informed willingness to be the human subjects of this research.

(1) Scott-Webber L, Strickland A, Kapitula LR. Built environments impact behaviors: results of an active learning post-occupancy evaluation. *Planning for Higher Education* 2013, 42(1):1-12.

Assessment, Understanding, Monitoring Student Progress

- Outcomes Assessment

Connected Learning Models

- Active Learning

Discipline Specific Pedagogy

- Professional Education