

Medical University of South Carolina

Overview of Virtual Interprofessional Learning

Virtual Interprofessional Learning (VIP) is an innovative asynchronous platform utilizing Avatars to engage learners in interprofessional (IP) learning opportunities across disciplines, universities, and geographies. In 2014, the MUSC CON created VIP as an online interactive learning experience to increase students' IP engagement, knowledge of patient quality and safety, and IP communication.

With the support of a grant from the Josiah Macy Jr. Foundation, an IP faculty team from the MUSC College of Nursing, Medicine, and Pharmacy worked collaboratively with the MUSC CON technology team to develop the objectives, content, and technology for the learning platform that allows IP teams of students to work collaboratively in a real-life environment regardless of students' schedules or locations. The Interprofessional Education Collaborative Core Competencies guided the development of VIP with a focus on patient care quality and safety and IP communication competencies. Prior to completing VIP, students complete the Institute for Healthcare Improvement (IHI) root cause analysis and communication modules to build baseline knowledge before entering the virtual environment.

Then, via the VIP learning platform, the students work in IP teams and conduct a root cause analysis through a complex case in an asynchronous virtual world scenario. Utilizing Avatars, an interactive clinical scenario was developed focused on a patient sentinel event. The VIP learning platform allows IP student teams to immerse themselves in a real-life simulation of the patient's interactions with the health care system at various points (primary care, emergency department, inpatient, outpatient pharmacy) as well as key events and breakdowns in care associated with transitions of care, patient education, and follow-up that lead to an adverse patient outcome. Through questions and interactive root cause analysis tools, students are provided an opportunity for hands-on application of quality and safety to patient care. Select questions and tools throughout the VIP learning platform require IP student team agreement before moving on, which supports IP collaboration and decision making. This learning environment also provides students with hands on application of patient quality and safety that is often difficult for teams of IP students to experience in the traditional clinical rotations due to the complexity and sensitivity of quality and safety events.

Catalyst for Change

IP education and collaborative practice have been advocated for many years in healthcare to reduce medical errors and improve patient care and health outcomes. It has also been recommended that IP teamwork should begin during training, but this is particularly challenging given the current constraints of clinical education, which is bound by space, location, preceptor availability, and conflicting academic schedules. The MUSC CON identified a need for applied clinical experiences and inclusion of all health care students in the current campus-wide IP education initiatives. To meet this need, VIP is the successful development and implementation of an innovative IP educational tool that addresses the challenges of IP education as IP teams of students from all health care professions across multiple locations can learn with each other in an online asynchronous learning platform.

Outcomes

Utilizing a virtual, asynchronous platform for IP education, students' IP collaborative knowledge, attitudes, and skills increased. VIP was successfully implemented with 60 IP students from the College of Nursing, Medicine, and Pharmacy. Unlike current IP education initiatives, the students were able to participate and complete the hands-on IP learning experience while in different geographical locations and on different academic schedules. To evaluate the efficacy of the learning platform, data was collected through the VIP automated scoring, focus groups, and questionnaires.

Utilizing an IP competency scale, students' had significant pre-to-post improvement in their ability to fulfill their professional role and improve IP team cohesion. Through focus groups, students described VIP as an effective learning strategy with real-life, hands-on application that is often missing from current IP education experiences. Students found the content and focus on quality and safety and root cause analysis to be helpful as this content is often not adequately covered in traditional clinical rotations. Students also described the satisfaction of having

meaningful IP interaction with students despite different schedules and locations, and rated VIP positively on controllability, helpfulness, and usability.

Interprofessional Collaboration

The success of VIP is due to the IP collaboration among faculty and technology consultants. IP faculty developed program content and a clinical scenario for the VIP platform that was applicable to all health care professions. The IP faculty were key in integrating VIP within the current university curriculum. Also important was the inclusion of a technology expert to help in developing the technology needed for an online asynchronous avatar-based IP educational experience.

Alignment with AACN Mission and Vision

VIP meets the AACN vision and mission to transform health care and improve health through excellence and innovation in nursing education. IP collaboration in health care is a critical to reducing errors and improving health outcomes. To instill this knowledge and skill set, exposure must start as health profession students. Universities and academic health centers have made great strides to incorporate IP education; however, current IP education initiatives are often static, didactic, limit the number and professions participating, and lack meaningful hands-on application of content. As a leader in healthcare, nursing is well suited to drive innovation in IP education and collaboration. In line with the AACN strategic plan goal to lead and promote IP health care and influence academic higher education, the MUSC CON's development of VIP provides IP education, but in an innovative way that allows for participation of any health care profession student in any location at any time. This type of learning platform will allow for more widespread and meaningful IP education that students will utilize in the clinical setting upon graduation. As a first in asynchronous IP education, VIP will serve as a new strategy for educating students across disciplines, professions, and universities.

Sustainability, Replication, and Dissemination

VIP focuses on quality and safety and IP communication; therefore, the content and clinical scenario can be utilized by all health care profession students and not bound to one institution. The design of the VIP platform allows for various clinical cases to be created with a focus on quality and safety with root cause analysis. Since the VIP learning platform does not limit the number, professions, or the location of students, VIP can be utilized within and across educational institutions to include students from multiple professions. This will be especially valuable to programs not associated with an academic health center that may not have multiple health professions within their institution. VIP can also be exported to the clinical practice environment to provide IP teams of health care providers the opportunity to have hands-on application of the knowledge and skills needed to enhance IP communication and improve patient outcomes. VIP is a successful proof of concept of an innovative approach to advance IP education. The next steps are underway with continued collaboration with a technology team to enhance the function and aesthetics of the VIP learning platform. These changes will move VIP to a fully marketable educational tool to address the IP education needs in multiple settings. The development, implementation, and outcomes associated with the VIP learning platform are detailed in a manuscript that has been submitted for publication to the Journal of Interprofessional Care.

Advancement of Professional Nursing Education

VIP enhances IP education to a new level of experiential learning through an asynchronous, online, avatar-based learning model. Given that many nursing programs are hybrid or on-line and may not be co-located with other health profession colleges, VIP allows nursing and all health professions the opportunity to be equal participants in IP learning. The strategic content development of VIP considered the importance of each profession in patient care and allows each profession to demonstrate leadership of the IP team to improve patient care and outcomes. Thank you for considering Virtual Interprofessional Learning for the Innovations in Professional Nursing Award. We feel that VIP meets the criteria for programmatic innovation within nursing and health care education. VIP is transforming nursing and health care education as an innovative and cutting-edge education model that removes the barriers of current IP education and engages students in IP collaboration focused on patient quality and safety.