

STUDENT PERCEPTIONS OF AN UNDERGRADUATE INTERPROFESSIONAL CAPSTONE COURSE INCLUDING HEALTH INFORMATION MANAGEMENT

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Abstract

As the healthcare industry continues to push for better patient care at a lower cost, it is essential that healthcare professionals develop skills in collaboration and teamwork. These skills should be practiced by students in post-secondary institutions, as they also learn to master content and technical skills. Participation of health information management (HIM) students in such activities helps to promote the value of HIM on the healthcare team. This study provides an example of integrating undergraduate HIM students into an interprofessional capstone course with other healthcare majors, summarizing student perceptions of learning activities in applying interprofessional education competencies. The results indicate a positive student perception of activities supporting application of at least three of the four competencies. Comments also highlight the struggles students have with group work, particularly in virtual teams. Sharing these activities and perceptions may contribute to further integration of undergraduate HIM students in interprofessional learning opportunities.

Keywords: education, undergraduate, interprofessional, baccalaureate

Introduction

Healthcare reform and the complexities of the healthcare system and chronic disease conditions call for collaborative interdisciplinary team-based care.¹ To enhance these collaborative efforts, universities are promoting the need for interprofessional education (IPE) and the opportunity for students in healthcare connected programs to learn with and about a variety of healthcare disciplines.² This includes health information management (HIM), aligning with the growing scope of practice and providing a reminder of the importance of HIM on the healthcare team to ensure quality data and information is used to make decisions.³ This initiative requires intentional effort to bring students from health programs together in a meaningful way, to enhance communication and teamwork skills, and to promote interprofessional learning, interaction, and relationships.

The World Health Organization defines IPE as, "when students from two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes."⁴ The Interprofessional Education Collaborative (IPEC) expert panel identified four practice competency domains: values/ethics for interprofessional practice, roles/responsibilities, interprofessional communication, and teams and teamwork.⁵ These competencies are essential in establishing population health programs focused on collaborative partnerships and interprofessional teams that address the needs of the community. These efforts should be driven by the data, establishing the key role of HIM professionals.⁶ The need for such collaboration is identified in

AHIMA's Code of Ethics, stating that HIM professionals shall "facilitate interdisciplinary collaboration in situations supporting ethical health information principles."⁷ The intent of IPE is to assist healthcare students in fostering the skills necessary to participate in such teams. This study describes the integration of IPE concepts into an online course shared between HIM students and students from various other health programs, summarizing student perceptions of the learning activities in the course in helping them practice the IPE competencies and general comments related to the barriers and benefits of the learning experience.

Background

According to the Institute of Medicine, "all health professionals should be educated to deliver patient-centered care as members of an interdisciplinary team, emphasizing evidence-based practice, quality improvement approaches, patient safety and informatics."⁸ Traditional methods in which health professional students have minimal contact with each other and few collaborative learning experiences result in graduates that are poorly prepared for a collaborative team environment, lacking knowledge of different roles and teamwork skills.⁹ It is important that HIM students are involved in IPE efforts, as quality patient care relies on effective sharing of health information to support clinical decisions and improve patient outcomes.¹⁰ Inclusion in the education setting highlights the skill set of HIM students, helping to demonstrate the benefits of including HIM on the healthcare team and encouraging those students to look beyond the traditional walls of HIM.^{11,12}

The first competency domain identified by the IPEC expert panel centers around values/ethics for interprofessional practice, indicating that health professionals should be able to "work with individuals of other professions to maintain a climate of mutual respect and shared values."¹³ To achieve this, students and professionals need to learn about patient/population-centered care, respecting the dignity, privacy, and confidentiality of the patient and embracing cultural diversity and individual differences in not only patients, but fellow health professionals and the community. The next domain identified focuses on roles and responsibilities, with the ability to "use the knowledge of one's own role and those of other professions to appropriately assess and address the healthcare needs of patients and to promote and advance the health of populations."¹⁴ To do this, students and professionals must understand their roles and responsibilities within their chosen profession and be able to communicate those to other professionals, patients, and community members. Healthcare professionals must be able to "communicate with patients, families, communities, and professionals in health and other fields in a responsive and responsible manner that supports a team approach to the promotion and maintenance of health and the prevention and treatment of disease."¹⁵ This domain is primarily focused on effective communication skills,

encouraging students and professionals to practice organizing and communicating information, expressing one's knowledge and opinions, listening actively, providing constructive feedback, and using respectful language. Finally, healthcare professionals need to "apply relationship-building values and the principles of team dynamics to perform effectively in different team roles to plan, deliver, and evaluation patient-/population-centered care and population health programs and policies that are safe, timely, efficient, effective, and equitable."¹⁶ Students and professionals need to learn and practice how to work in a team, integrating the knowledge and experience of the team members while constructively managing disagreements and eventually developing consensus.

Interprofessional education is a strategy to break down the silo approach to healthcare education and instead promote a team-based mentality. Best practices in IPE draw upon a variety of learning theories to ensure a safe space for collaboration and active learning that offers opportunities for students to draw upon previous experiences and make connections to the real world.¹⁷ Creating and facilitating interprofessional experiences requires an understanding of group learning and group dynamics.¹⁸ Instructors must consider the group balance through knowledge of the different disciplines and current issues in the industry and have the ability to facilitate collaboration. Students must learn good communication skills, respect, and an understanding of each team member's role. Student groups need time to learn about each other and the respective disciplines, to identify commonalities, to overcome disagreements, and to address obstacles along the way. Providing sufficient time allows each group member to learn more about other disciplines and to respect, value, and appreciate those disciplines. Activities such as case-based learning and problem-based learning are essential methods in interprofessional education, allowing students to discuss clinical problems together.¹⁹

The focus of this study is to describe an implemented online interprofessional course that meets the needs of undergraduate students from a variety of clinical and nonclinical health programs. Including IPE at the undergraduate level fosters an early understanding of the value and significance of other professions and several studies have shown improvement in knowledge, skills, and attitudes when introduced early.²⁰ Utilizing IPE competencies and best practices in online learning, the course provides an opportunity for students from various disciplines to both reflect upon their own discipline and learn about, with, and from others. Beyond describing the activities in the course as they relate to the IPE competencies, the course evaluations were used to answer the following questions: What are the students' perceptions of the ability of this course to help them practice IPE competencies? What barriers and benefits to learning did students experience?

Methods

This study describes a one-credit interprofessional capstone course that serves as a mandatory requirement for undergraduate students in a variety of disciplines, including environmental and

occupational health, HIM, health studies, nursing, public health, radiologic sciences, and respiratory care. It is a large enrollment course, set up to meet the diverse needs of over 300 students each year that are enrolled part time and full time, in both on-campus and online programs. The course is intended to address the IPE competencies, as well as university learning outcomes related to communication, critical inquiry, and problem-solving. It is structured around the set of core competencies for interprofessional collaborative practice developed by the IPEC expert panel.²¹ Student course evaluations were used to investigate student perception of the course's ability to address the IPE competency domains and identified benefits and barriers to learning.

The first general competency statement indicates that health professionals should be able to “work with individuals of other professions to maintain a climate of mutual respect and shared values.”²² To encourage personal reflection on bias and the impact on patient care, students participated in a discussion activity after completing an Implicit Association Test (IAT). To practice working with other disciplines in a climate of mutual respect, students participated in a variety of team activities. The second IPE competency domain centers on roles and responsibilities, both of one's own discipline and those of others. Students recorded elevator speeches related to their chosen discipline to educate their classmates on their qualifications and future roles and responsibilities. In addition, students created one for a discipline not represented in their group. This encouraged them to research the qualifications, roles, and responsibilities of another discipline they may work with in the future. Students also participated in a variety of journal prompts to encourage self-awareness and reflection. The next IPE competency domain highlights skills and abilities related to interprofessional communication. Students had the opportunity to practice these skills through a variety of course activities, including group assignments, discussion boards, and reflection on communication skills such as conflict resolution. Finally, these competencies all rely on competent and productive teams. Students had to practice teamwork throughout the course, participating in team discussions and meetings, agreeing on a team norms document, and creating patient education materials for their culminating project. They had opportunities to lead their team, with many teams rotating leaders throughout the course. Students also did an individual assessment of their leadership style with a reflection prompt. Finally, this class utilized the peerassessment.com program to solicit and collect feedback from each student on their performance, the performance of their peers, and their team overall. This assessment was done multiple times throughout the course to encourage regular feedback and time for self-improvement. Students were instructed on providing constructive feedback to peers and encouraged to consider this feedback as they prepare for their future career.

The instrument used in this study was the student course evaluations, distributed and collected anonymously by the university. In order to assess student response to the above IPE competencies, instructor questions were added to these evaluations for the class over three years. These questions asked the student to assess the usefulness of the course in helping them practice their communication and leadership skills, learn more about their own and other disciplinary roles and

responsibilities, and participate in an interprofessional team. The use of these evaluations for research purposes was approved by the university's Institutional Review Board, exempt protocol #186-SB20-071. Anonymous student responses to the instructor-added questions were used to summarize student reactions to nine sections of the course offered over three years, calculating results on a Likert scale. In addition, qualitative comments relevant to the instructor-added questions were analyzed as a supplement to the quantitative data. These were in response to questions concerning the benefits and barriers of the learning experience. NVivo was used to create a coding scheme based on these comments, grouping words and sentences within subcategories of benefits and barriers. The subcodes for barriers included the following: course organization, group work, instructor, online modality, workload, and no barriers. Many comments related to group work and the online modality overlapped. The subcodes for benefits were similar, including the following: course content, course organization, group work, instructor, learning activities, and no benefits.

Results

Course evaluations were reviewed for nine sections of the course. Of the 276 students enrolled, 146 completed the evaluation for a 53 percent response rate. All evaluations were complete in answering the quantitative questions, but not all students provided qualitative responses. This research focused on the instructor-added questions related to the IPE competencies and relevant qualitative responses. It is estimated that approximately 72 percent of all respondents provided a written comment.

As seen in [Table 1](#), students were asked to rate their agreement with each statement on a Likert scale. Responses from all sections were combined to calculate the mean and standard deviation. The mean for each statement indicates the majority of students agreed or strongly agreed, varying between 4.27 and 4.38.

Students also answered standard open-ended questions included in all university course evaluations related to barriers to learning and valuable aspects of the course. These prompts were not directly related to the interprofessional education competencies, but many student comments addressed opportunities and challenges of working in interdisciplinary teams. Although many of the comments related to course benefits highlighted the ability to practice communication and teamwork skills, students expressed challenges with this process. The majority of the identified barriers to learning in the course highlighted the challenges of working in groups (38), particularly in an online class (29). Comments indicated that the varying schedules and technology created challenges early in the course (10), but many were able to overcome these challenges. This class was the first experience for many students of working in virtual groups, an essential skill in today's work environment. Many students also felt that the workload was extensive for a one-credit course or that it contained too much "busy work" (23), although the course was developed with the recommended time commitments for online learning. A few struggled with the instructor (6), but the second highest subcode for barriers was an indication of no barriers (33).

Student comments related to the aspects of the course that were most valuable to their overall learning experience often contradicted the barriers identified. Many comments were made to the value of team-based learning, the opportunity to work in groups, and learning to work with individuals from other disciplines (27). Students also appreciated the opportunity to reflect on their experiences, roles and responsibilities, and impact in their future careers (39). Several commented on the value of discussion boards around communication and conflict resolution topics, as well as the course reading material related to IPE and collaboration (21). A few comments indicated there were no benefits (2), and another highlighted the instructor as valuable to the learning experience (1). Finally, there were a few positive comments on the overall course structure and organization, chance for self-directed study, and variety of assignments (21).

Discussion

The responses to the instructor-added questions and standard university open-ended questions related to the course indicate that the majority of students felt it provided the opportunity to practice at least three of the interprofessional competency domains. The Likert scale responses and qualitative comments highlighted the value in the roles and responsibilities, communication, and teamwork competency areas. However, many of the comments also indicated challenges in establishing a productive team, particularly in an online class.

The first evaluation statement asked students if the course helped them better communicate the roles and responsibilities of their chosen profession, referencing the second IPE competency domain.²³ While the majority of students agreed or strongly agreed (83.56 percent), this was the lowest among the five statements with a mean of 4.27. One comment stated, "I think this class really helped me to understand my own roles and responsibilities and my communication." Some students felt the course was redundant with previous classes, not seeing the value in doing additional activities to share this knowledge. One student indicated, "It seemed like a bunch of repetitive information from other courses." As these activities are created, it is important to emphasize the value in sharing one's roles and responsibilities with students from other majors to improve their understanding of each person's contribution to the team. Such assignments provide an opportunity for HIM students to create awareness about the critical role HIM plays on the healthcare team, introducing their knowledge of the record, quality improvement, information governance, and data analytics.²⁴

In addition to understanding one's own roles and responsibilities, interprofessional education calls for the understanding of other professions to more effectively engage those healthcare professionals who complement one's own professional expertise and embrace interdisciplinary relationships to optimize team performance.²⁵ The next statement asked students if the course helped them learn more about other disciplines, with most selecting agree or strongly agree (90.41 percent). This was the highest scored of all questions with a mean of 4.38, and commonly

referenced in the qualitative responses. Other studies have found similar improvements in student knowledge of other disciplines.²⁶ One student commented, "I think learning about other professions was really valuable to incorporate in the course and helped bring to life the concept of collaborative practice by learning more about those we will work with." To achieve this competency, it is necessary that students and professionals from different disciplines are purposefully integrated into learning opportunities that encourage them to learn from, with, and about each other. HIM students are able to learn more about the other members of the healthcare team and their contributions to patient care.²⁷

To build these relationships, it is necessary for healthcare professionals to engage in interprofessional communication.²⁸ The third evaluation statement addresses this IPE competency domain, asking students if the course helped them with communication and interpersonal skills. The majority of students agreed or strongly agreed (89.04 percent) with a mean of 4.37. One commented, "I think the most beneficial aspects of this course were the lessons that made us think about how vital communication is in the healthcare industry and lessons that made us think and reflect about how we are as communicators." Several favorable qualitative comments related to the conflict management activity, where students responded to a variety of work-related conflict scenarios, indicating an appreciation for a safe space to discuss conflict and the opportunity to hear how different people respond in such situations. Some comments also indicated challenges with communication within groups, highlighting "a few communication hurdles to get over initially" or a "learning curve to find best way to communicate with team." Others indicated some miscommunications or an overall lack of communication within the group. Establishing communication boundaries and expectations is a necessary part of group development. Providing tools and recommendations for students may help them establish this sooner and more clearly. As documentation and medical records specialists, the key patient communication tool in healthcare, HIM students may take a lead in this role for their team and help them establish best practices in their future careers.

To truly embrace interprofessional collaborative practice, healthcare professionals need to be competent in teams and teamwork.²⁹ Integral to a team is a leader; students and professionals also need opportunities to apply leadership practices and process improvement strategies.³⁰ This last IPE competency domain was addressed with the final two statements, asking students if the course helped them apply leadership skills and practice teamwork and teambuilding. The majority of students agreed or strongly agreed (88.36 percent and 89.72 percent, respectively) with means of 4.34 and 4.36. As one stated, "I feel that I really stepped up and became a leader in my group during this class. I felt that it was important for myself to take on more responsibility in order to keep everyone motivated and on task, which was something I hadn't really done in past courses." Practicing leadership in the classroom helps build confidence for HIM graduates to take on

leadership roles in their future workplace. Another student reflected, "Working in groups allowed me to be a good team member and work on effective communication with other group members." Despite the overall positive response, the majority of the comments related to barriers mentioned working in groups, most notably challenges with the online format. One commented, "Group assignments can be challenging in an online setting with no personal interaction on group work." Most mentioned the difficulty in aligning schedules of all group members, and others indicated unequal contributions from all group members or challenges with individuals each working at a different pace. One recommendation to reduce these hurdles is to pay close attention to group size, as a group too large can be particularly challenging to both schedule and equally distribute the work. Although establishing and working in groups may be challenging online, this form of interaction is more prevalent in the workplace than ever before. Virtual teams and communication can actually provide more equal opportunity for contribution and allows students or employees to process and articulate their ideas before sharing.³¹ Interprofessional group work, virtual or in-person, provides opportunities for HIM students to practice being proactive in representing the HIM discipline on the healthcare team.³²

Group assignments and team-based development activities help students and professionals share accountability and practice working in an effective team characterized by trust, respect, and collaboration.³³ Practicing this in a class affords the opportunity for feedback and reflection.³⁴ This reflection opportunity was mentioned in several qualitative comments, with one student indicating, "The reflection pieces forced me to look at my weaknesses as a future healthcare provider" and another, "This class showed me what areas I struggle with in a group setting and different ways to improve on them." Students are often afforded these opportunities in a variety of classes, but integrating interprofessional groups adds a different dynamic for students to experience and reflects a more realistic professional situation.

Qualitative comments highlighted a few other barriers and benefits that did not directly relate to the IPE competencies. Several comments related to barriers mentioned the workload of the course as a one-credit class and some felt it included "busy work." As one student stated, "It also had far too many assignments for a one-credit course (20) and took time away from courses that mattered more." These comments prompted revisions in the course to ensure only learning activities directly related to the objectives were included. To enhance the perceived value of a course focused on interprofessional collaboration to students from multiple disciplines, it is recommended that it be worth more credits and be letter-graded. However, finding room in the curriculum of multiple programs for a shared course can be a challenge. It is also important to clearly indicate the value both within the introduction to the course and in the context of the disciplinary curriculum. In contrast, many students also commented that the course was "easy to work on" with "not too many huge assignments" and that "We should take more classes like this one throughout our degree track. This stuff is important." A few indicated some challenges with the course schedule and having

multiple due dates throughout the week, but many more commented on the straightforward course structure and appreciated the flexibility of the online format. It is essential in online courses that clear expectations are provided with straightforward assignments and deadlines.³⁵ The contrasting views may relate to the student's previous courses related to structure and expectations, familiarity with learning online, competing obligations such as work and other courses, and their overall experience within their group.

This assessment is limited to one online course taught at a university utilizing the structure developed by an individual instructor. The sample is limited to undergraduate students in environmental and occupational health, HIM, health studies, nursing, public health, radiologic sciences, and respiratory care. Responses and comments were not differentiated by discipline, and each is not represented equally within every section of the course. Findings are reported in an aggregate format, and the data was not collected with the intention of research. Furthermore, the analysis was conducted of anonymous course evaluations, which are limited to those students who completed them and their perception of the course at the time taken. Despite these limitations, these findings can provide insight into providing interprofessional learning opportunities in undergraduate programs, both clinical and nonclinical, particularly in an online format.

Conclusion

This study provides an example of how to integrate undergraduate HIM students into an interprofessional capstone with a variety of other majors. Student evaluations suggest an overall agreement that the variety of activities and assessments, including team activities, discussions, personal reflections, and peer evaluations, helped them to apply at least three of the four IPE competency domains. Comments also highlight the need for careful group assignment and facilitation considerations in a clearly organized course format that communicates the importance of interprofessional collaboration and competencies to all disciplines. Although qualitative evaluation statements were categorized by the researcher based on competencies and associated learning activities, future research may conduct interviews or an independent audit to determine which activities the students found most valuable to their practice of the IPE competencies. Such activities and undergraduate course structures facilitating the inclusion of HIM students with other health disciplines is important to showcase the value of HIM on the healthcare team, exposing other disciplines to the HIM skill set and support of improved patient outcomes.

Author Biography

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Notes

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There are no comments yet.