

RESEARCH ARTICLE

# Implementation of a remote interprofessional education module on role understanding of community health workforce

Louricha A. Opina-Tan<sup>1</sup>, Frances Lois U. Ngo<sup>\*1,2</sup>, Rose Anne Q. Rosanes<sup>1,3</sup>

\*Corresponding author's email address: fungo@up.edu.ph

<sup>1</sup>Community Health and Development Program, University of the Philippines Manila, Manila, Philippines

<sup>2</sup>College of Pharmacy, University of the Philippines Manila, Manila, Philippines

<sup>3</sup>College of Dentistry, University of the Philippines Manila, Manila, Philippines

## ABSTRACT

**Background and Objectives:** Interprofessional education (IPE) is considered by the World Health Organization “a necessary step in producing collaborative practice-ready health professionals.” In the Philippines, the ability to “work collaboratively within interprofessional and multiprofessional teams”, was identified by the Commission on Higher Education as one of the outcomes common to all health-related professions programs. Although steps were taken to integrate IPE in health professions education, majority of academic institutions in the country are yet to implement this. This study aimed to present the implementation of an online IPE module about the community health workforce among dental, medical and pharmacy students in a national health sciences university.

**Methodology:** The IPE module was developed and facilitated jointly by an interprofessional team of faculty engaged with the Community Health and Development Program of the University of the Philippines Manila. A total of 48 students from the Colleges of Dentistry, Medicine and Pharmacy participated. Teaching-learning activities used in the sessions included lectures, small group discussions, interviews, case study, large group discussions, and reflections.

**Results:** Insights gained by the participants included the complementary roles of health care workforce in the community, importance of communication and role understanding for better provision of care, the challenges that the workforce experience and their roles as future health workers in promoting collaborative practice by demonstrating respect and professional equality.

**Conclusion:** The module has shown that IPE activities may be successfully implemented through remote learning if done with proper planning and execution with the commitment of faculty facilitators.

**Keywords:** *interprofessional education, interprofessional collaboration, health professions curriculum*

## Introduction

Interprofessional education (IPE) is considered a necessary step in producing collaborative practice-ready health professionals. Being able to work effectively as a collaborative team allows for a stronger health system that prioritizes improved patient care and health outcomes through optimizing each healthcare member's unique skills, providing better case management, and delivering better healthcare [1]. Defined as opportunities for members or students of two or more professions to learn with, from, and about each other, IPE improves collaboration in the team resulting to better quality of care and services [2]. IPE was described to work by breaking

down silos, stereotypes and turf protectionism by building awareness, mutual trust and respect and understanding a health member's own and others' roles in healthcare [3].

Table 1 presents the Canadian Interprofessional Competency Framework and the Interprofessional Collaboration Competency Domain, which are some of the widely disseminated competency frameworks on interprofessional collaboration. Described are the set of knowledge, skills, attitudes and values to be developed in order to facilitate collaboration. They were created to guide the design, implementation and evaluation of IPE activities [4,5].

**Table 1. Competency Frameworks for Interprofessional Collaboration**

Core Competencies for Interprofessional Collaborative Practice, IPEC 2010		Interprofessional Competency Domains, Canadian Interprofessional Competency Framework 2016	
Competency	Description	Domain	Description
Values/Ethics for Interprofessional Practice	Work with individuals of other professions to maintain a climate of mutual respect and shared values	Role Clarification	Learners/practitioners understand their own role and the roles of those in other professions, and use this knowledge appropriately to establish and meet patient/client/family and community goals
Roles/Responsibilities	Use the knowledge of one's own role and those of other professions to appropriately assess and address the health care needs of patients and to promote and advance the health of populations	Patient/Client/Family/Community-centered	Learners/practitioners seek out, integrate and value, as a partner, the input, and the engagement of a patient/client/family/Community in designing and implementing care/services
Interprofessional Communication	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.	Team functioning	Learners/practitioners understand the principles of team dynamics and group processes to enable effective interprofessional team collaboration
Teams and Teamwork	Apply relationship-building values and the principles of team dynamics to perform effectively in different team roles to plan, deliver and evaluate patient/population-centered care and population health programs and policies that are safe, timely, efficient, effective, and equitable.	Collaborative Leadership	Learners/practitioners understand and can apply leadership principles that support a collaborative practice model.
		Interprofessional communication	Learners/practitioners from varying professions communicate with each other in a collaborative, responsive and responsible manner.
		Dealing with interprofessional conflict	Learners/practitioners actively engage self and others, including the client/patient/family, in positively and constructively addressing interprofessional conflict as it arises

In the Philippines, the ability to “work collaboratively within interprofessional and multiprofessional teams” was identified by the Commission on Higher Education as one of the outcomes common to all health-related professions programs. [6-8]. A pilot IPE initiative in the country gained positive feedback from the students. They reported to have learned about collaboration, appreciated the roles of other healthcare workers and provided holistic care and service to the community [9]. Although steps were taken to integrate

IPE in health professions education, majority of academic institutions in the country are yet to implement this [10,11].

## Objectives

This study aimed to present the implementation of an online IPE module in a national health sciences university. It also described the insights and lessons learned by the dental, medical and pharmacy interns who participated in the module.

## Methodology

### *Educational Context*

The Community Health and Development Program (CHDP) is a unit of the University of the Philippines Manila that implements IPE collaborations among constituent colleges in the university. Since 2009, IPE activities were implemented as part of the students' community immersion programs when they rotate in CHDP. Because of the COVID-19 pandemic, deployment of students to the community was put on hold. This led to the creation of the IPE module entitled Understanding Deeper Our Community Health Workforce, implemented through remote learning. The module was integrated in separate courses from each college and conducted in the 2nd semester of Academic Year 2021-2022.

### *Participants*

A total of 48 students participated in the module. Six were interns from the College of Dentistry, 15 were interns from the College of Medicine, and 27 were third year students from the College of Pharmacy.

### *Materials*

A team of faculty members from the participating colleges was responsible for the final instructional design, learning materials, delivery and evaluation of the module. They are all members of the CHDP IPE team who were involved in the face-to-face IPE modules before the pandemic. The learning outcomes of the IPE module are enumerated in Table 2.

Materials for the module included study guides for the sessions, recorded lectures about UP CHDP and the basic concepts on interprofessional collaboration, semi-structured healthcare worker interview guide, a sample community case scenario and survey form for student feedback. Reading assignments consisted of published papers on the status of health workforce in the Philippines, issues and challenges of

public health workers in low and middle-income countries and the determinants of successful collaboration. All these materials were accessed through a Learning Management System where all participants were enrolled.

### *Procedure*

The module has three parts with sessions spread out to two weeks with a combination of synchronous and asynchronous meetings. The first session was a two-hour synchronous meeting that introduced the basic concepts on collaborative practice discussed separately for every college.

The second session was an asynchronous assignment done per college. Students were divided into small groups and instructed to conduct a case study on a healthcare worker (HCW) with a background or profession different from their own, works in the public sector and whose area of practice is at the community setting. Arrangements for the schedule, length and frequency of interviews were done by the students. The students were provided with guide questions for a semi-structured interview. These questions were designed to help them develop a clear understanding about the HCW's roles and functions as members of the health workforce in the community. At the last part of the interview, a community case scenario was presented to the HCW. The purpose was to discuss with the HCW and generate insights about his/her specific contributions to address the given community issue. Table 3 shows the pre-determined discussion points that need to be asked during the interview. Each group was tasked to document the interviews conducted and prepare a five-minute presentation of the information they have gathered which were presented during the third session.

The third session was a two-hour synchronous meeting with all the students from the three colleges. Students were divided into small groups that met through breakout rooms. Each small group was composed of one dental intern, two to three medical interns and three to four pharmacy students. This session required each group to assign a facilitator, a recorder and reporter, and a timer within their group to

**Table 2.** IPE Module Learning Outcomes

- Discuss the importance of collaborative practice in community health and development.
- Discuss the roles and functions of members of the health workforce in the community.
- Analyze the practice of collaboration in the local health system thru its interactional, organizational and systemic determinants.
- Create a plan of action for a given community situation applying the concept of collaborative practice.

**Table 3.** Discussion points during the Health Care Worker interview

<ul style="list-style-type: none"> <li>• Circumstances surrounding his/her employment/recruitment as a health worker in the community</li> <li>• Challenges or difficulties that he/she experiences as a community health worker</li> <li>• Motivating factors that make him/her continue the work</li> <li>• Future plans as a community health worker</li> <li>• Specific contributions in addressing a given community scenario as member of the health workforce</li> </ul>
---

ensure that the flow of the discussion is in order. In the breakout room, participants from the three colleges took turns in presenting the case study they conducted. After all have presented, each member discussed with the group his/her insights using the following questions as guide:

1. What are your insights or realizations about collaborative practice in the community setting?
2. What can be the challenges for the team?
3. How can you contribute to promoting collaborative practice in your future role as a healthcare worker?

All breakout room groups were instructed to prepare a short report based on the results of their discussion. These were then presented by the assigned reporter of the group during the plenary part of the session.

#### Assessment and Evaluation

The qualitative results of the group discussions presented by the students were used to assess the insights they gained. Students were also requested to submit a survey form which consists of open-ended questions to gather feedback on the IPE experience.

#### Ethical Considerations

Data gathered from the students who participated in the IPE module are confidential and are presented with strict

anonymity. Data presented in this research was only based on the course requirements to fulfill the outcomes of the IPE module.

## Results

There were 15 male and 33 female participants in the IPE module with a total of 48 students. Table 4 shows the distribution of students aggregated by sex for every college. Majority of them were females (69%), more than half were from the College of Pharmacy (57%), and with only female interns from the College of Dentistry who participated in this cohort.

The interns were allowed to choose the community health worker to interview. The following HCWs were engaged and presented by the students for the case studies: barangay nutrition scholar, barangay health worker, community pharmacist, public health nurse, rural health midwife, municipal health officer, barangay councilor for health, and municipal mayor.

The module feedback was a survey form accessible to the interns at the end of the module. Forty-five (45) out of 48 participants (94%) answered the form. Feedback came from five dentistry interns, 15 medical interns, and 25 pharmacy students.

**Table 4.** Distribution of IPE Module Participants According to Year level and Sex per College (N = 48)

Participating college and specific course	Year level	Male	Female	Total
Dentistry (Community Dentistry)	Internship	0	6	6 (12%)
Medicine (Community Medicine)	Internship	6	9	15 (31%)
Pharmacy (Public Health Pharmacy)	3rd Year	9	18	27 (57%)
<b>Total</b>		15 (31%)	33 (69%)	48 (100%)

## INSIGHTS AND LESSONS LEARNED

The insights of interns from the IPE module are divided into the following themes: roles and functions of healthcare workforce in the community, challenges encountered by community health workers, promoting collaborative practice, determinants of collaboration, and opportunities for module development.

### *Roles and functions of healthcare workforce in the community*

Based on the students' presentation and feedback, it became evident to them that the HCWs have clear and complementary roles in the community setting. Communicating and understanding these roles are necessary to deliver better patient care. In addition, they realized that these roles are best defined and described by the professional themselves. The module was also reported to have provided insights on the roles of health professionals and barangay health workers in the rural areas.

### *Challenges encountered by community health workers*

The students also recognized that the challenges experienced by the community health workers were related to limited health care resources and administrative support. Lack of professional recognition was raised by the students and they pointed out the doctor-centric health environment in the country.

### *Promoting collaborative practice*

Students realized their responsibility in promoting collaborative practice by showing respect and valuing professional equality. They learned also that being more approachable and being open to communicate with everyone are important for interprofessional collaboration. The described themes and statements are listed in Table 5.

### *Determinants of Collaboration*

The participants were able to analyze the various determinants of collaboration in the community based on the case studies they conducted. Interactional determinants reported were the HCW's attitude, communication skills, trust and respect between team members and understanding of their own and others' roles. Organizational determinants presented included leadership support which affects allocation and provision of resources, presence of coordination and conflict management systems.

On the other hand, systemic determinants mentioned were cultures embedded in the professions such as hierarchies or stereotypes, task shifting practiced in the community, differences in compensation among HCWs, and health-seeking behavior of the community.

### *Opportunities for Module Improvement*

It was a common suggestion among the students to increase the time allotment in the implementation of the module, due to the richness of the discussion and opportunity for interns to share their experiences. It was also suggested to provide better and clearer instructions for the activities to ensure that all groups can accomplish the tasks in the same manner. Furthermore, interviews can also be conducted with an interprofessional team instead of implementing this with students from the same college to enable them to have time to get to know their group mates from other colleges and provide diverse perspectives on the case and questions raised to their interviewee. Face-to-face implementation of the IPE module was also suggested when possible and allowed by the university administration.

## Discussion

Implementation of IPE was challenged by the COVID-19 pandemic because remote learning became the primary instruction in the university as experienced by other academic institutions [12,13]. Remote learning has its strengths and weaknesses. It can enhance an education experience, support development, ease time constraints, overcome geographic limitations and offer greater flexibility. This was observed in the IPE module when students were allowed to choose a community health worker in their own provinces, or whichever is convenient for them. This diversified the views of their case studies as they were able to observe the difference of roles and experiences across various community settings in the country. However, remote learning can also contribute to the isolation of participants, while technical issues may be more apparent causing for less-than-optimal participation in the module [14].

The module maximized the use of interactive strategies to 'learn from, with and about each other'. Cooperative and experiential learning, which are proven to be key approaches in IPE, were integrated in the design [3,15,16]. In the presented module, these were highlighted with the use of practice-based cases with results that were further discussed in small interprofessional groups which enriched the discussion and insights [17].



**Table 5. Themes and statements on Insights and Lessons Learned from the IPE Module**

Theme 1: Roles and functions of healthcare workforce in the community	
Subtheme: Clear and complementary roles	<p>“Each HCW (healthcare worker) has clear and complimentary roles in the community setting. It is essential that they learn how to collaborate with each other to deliver better patient outcomes.”</p> <p>“[There are] overlapping roles, so its good that they talk about specific roles so that they ensure that each one is doing their job.”</p> <p>“I have realized that the roles of every healthcare worker should be clearly defined and introduced to everyone in the healthcare team. By doing so, we can minimize overlaps in responsibilities and better appreciate the strengths a specific profession can offer. “</p>
Subtheme: Roles are best defined by the professional	<p>“The role of a health care professional can be best defined, described or enumerated by themselves. To be honest, I had limited idea about their roles.”</p>
Subtheme: Roles in the rural areas	<p>“This activity made me aware of the roles of barangay health workers in the community. I was also able to strengthen my understanding about the roles of nurses and doctors in a rural health setting. “</p> <p>“While we already had a general idea of the responsibilities of different health care workers, I only have recently discovered that other than the roles of each healthcare worker that we know of, there are also other roles that they play within the rural context... Other than advocating for education and awareness, the rural healthcare workers also directly respond to the local government officials, such as their Mayor or Vice Mayor. “</p>
Theme 2: Challenges experienced by community health workers	
Subtheme: Limited resources and administrative support	<p>“I was surprised that all have the same experiences of how difficult it is to work in the healthcare field considering the lack of adequate resources and proper compensation. I always hear the struggles of HCW in media but I never thought it is that severe ACROSS the country.”</p> <p>“The success of IPE is not limited to the team itself, as external factors also drive the conduct of plans and programs...realistically speaking, intangible things such as motivation and respect are not enough to make people stay long-term. Resources and administration and management support are also some of the things that HCWs look for in a job.”</p>
Subtheme: Lack of professional recognition	<p><i>“I realized that the issues pharmacists are facing in the past (lack of recognition from other HCWs) are still experienced in the present.”</i></p> <p><i>“Furthermore, I learned that the healthcare system of the Philippines is still doctor-centric meaning majority of the decision making only comes from medical doctors.”</i></p>
Theme 3: Promoting collaborative practice	
Subtheme: Respect and professional equality	<p>“I realized that respect is a main tool towards effective collaboration.</p> <p>“I learned that the healthcare system of the Philippines is still doctor-centric meaning majority of the decision making only comes from medical doctors. This shall be addressed by interprofessional collaboration, treating each team member equally, recognizing each other’s expertise, and considering the input from all team members in decision making.”</p>
Subtheme: Open communication	<p>“One thing that I discovered was that doctors are fully aware that they are put on a pedestal. I appreciated what our groupmate said that because they are put on a pedestal by the communities, they have the responsibility to be more approachable so that other healthcare workers can share their inputs.”</p> <p>“I have learned that most of the interviewed healthcare providers/workers, have willingness to collaborate with other professionals. Hence, in my future role as a HCW, I would keep in mind to have an open communication with everyone, including professionals who are not in the field of health care.”</p>

Students with IPE training are provided with a clearer understanding of the roles of healthcare workers. The IPE was important for the development and promotion of interprofessional thinking and promotion of mutual understanding [18]. This was an inherent finding of the study which showed that the participants were able to understand how healthcare professionals have distinct but complementing roles and may sometimes overlap depending on the healthcare setting. Further, communication and respect among each other would help to have a shared goal for improved health outcomes. This can only be practiced when the team is able to collaborate with mutual understanding of each other's roles and contributions. Moreover, students who become involved in IPE activities consistently regard their experience positively as these types of modules provide spaces to practice collaboration, understanding overlaps and bridging professional roles among each other.

Stereotyping roles of healthcare professionals is a common trait of interprofessional education-naïve students as they try to oversimplify roles of other fields. This stereotyping may become a barrier in an inter-collaborative team and may impact communication and teamwork among its members [19].

The implementation of the module was able to acknowledge that the effectiveness of IPE requires different levels of interactions and engagement among the participants. The need to hone the collaborative competencies of future HCWs also increases the demand to design effective IPE activities. Promotion of IPE in universities is an important measure to reflect future practice and redesign of healthcare systems that promote collaboration and shared decision-making to improve the quality of care and better health outcomes [20].

### *Limitations*

The limitations of the implementation of the module include the short duration of execution as students were only given two weeks to complete the IPE module. The lack of time may have affected the interviews conducted with their selected HCW and preparations before the final activity. The final synchronous session also had time constraints which reduced the ability of the students to provide more in-depth realizations about the practice-based discussions during the session. As the university has a partner community that could have been the site for implementation of the IPE module, the remote learning setup has proven to be a limitation as students were not able to visit the community partner and immerse in the actual

practice of community HCWs to further observe their roles and interactions in the community setting. Further, the remote learning setup also reduced the interaction among participants as those with slow internet connection had limited activity to communicate and share their perspectives during the group discussions.

Assessment methods used for the IPE module was also limited to students' perspectives of collaboration and their experiences when conducting the contents of the module. There are comprehensive assessment tools that may be used which enable the evaluation of individual and team behavioral change to further understand how the activity is able to optimize collaboration competencies among its participants.

### **Conclusion**

Interprofessional education is an important tool that contributes to the development of collaborative competencies among students. To start collaboration, it is vital for those who are part of the inter-collaborative team to understand with clarity the uniqueness and interrelatedness of the roles of each individual in the collaborative team to later establish appropriate communication and teamwork structures. The positive experience of interns participating in IPE activities is evidence that formal IPE training integrated in the curricula of different healthcare professions is an advantage that should further be supported and duplicated in the future. Furthermore, the IPE module has shown that these activities may be successfully implemented through a remote learning setup through proper planning and execution with the commitment of the faculty to facilitate the module.

Recommendations for future implementation include increasing the time allotment to perform the activities of the module and optimizing assessment methods to measure changes in behavior related to the objectives of the activity. In addition, interprofessional teams may be formed earlier for the interns to have longer practical experience of collaboration where initial activities may be provided for them to develop teamwork and establish a line of communication. As pandemic restrictions are eased, a face-to-face module may also be conducted for interns to visit and observe actual community practice settings.

## References

1. WHO. (2010) Framework for action on interprofessional education and collaborative practice (No. WHO/HRH/HPN/10.3).
2. CAIPE. (2016) Statement of Purpose. Accessed at <https://www.caipe.org/><https://www.caipe.org/>
3. Oandasan I, Reeves S. (2009) Key elements for interprofessional education. Part II: Factors, processes and outcomes. *J Interprofessional Care* 2005;19 Suppl 1:39-48.
4. Canadian Interprofessional Health Collaborative. (2010) A National Interprofessional Competency Framework. Vancouver BC, Canada. [www.cihc.ca](http://www.cihc.ca)
5. Interprofessional Education Collaborative. (2016) Core Competencies for Interprofessional Collaborative Practice: 2016 Update. Washington, DC. Interprofessional Education Collaborative.
6. Commission on Higher Education. (2016) Policies, Standards and Guidelines for the Doctor of Medicine (M.D.) Program. Author.
7. Commission on Higher Education. (2018) Policies, Standards and Guidelines for the Doctor of Dental Medicine (DMD) Program. Author.
8. Commission on Higher Education. (2021) Policies, Standards and Guidelines for the Doctor of Medicine (M.D.) Program. Author.
9. Opina-Tan LA. (2013) A Pilot Implementation of Interprofessional Education in A Community-Academe Partnership in the Philippines. *Education for Health* 26(3):164-171. doi:10.4103/1357-6283.125992
10. Sy M, Pineda RC, Sumulong RA, *et al.* (2020) Establishing a pilot interprofessional education (IPE) program in a higher education institution (HEI) in the Philippines. *Journal of Health and Caring Sciences* 2(2):180-191.
11. Cervantes-Sudio MG, Ganotice FA, Navarro AT. (2020) Are Filipino students ready to collaborate? Comparing the readiness of healthcare students for interprofessional education in the Philippines. *Journal of Interprofessional Care* 35(5):718-725.
12. Alrasheed A, *et al.* (2021) Interprofessional Education Competition During the COVID-19 Pandemic at King Saud University: Benefits and Challenges. *Journal of Multidisciplinary Healthcare* 14:673-679.
13. McKinlay E, *et al.* (2021) Keeping it going: the importance of delivering interprofessional education during the COVID-19 pandemic. *Journal of Primary Health Care* 13(4):359-369.
14. Reeves S, Fletcher S, McLoughlin C, *et al.* (2017) Interprofessional online learning for primary healthcare: findings from a scoping review. *BMJ Open* 7(8): e016872
15. D'eon M. (2004) A blueprint for interprofessional learning. *Clinical Teacher* 26(7): 604-609.
16. Barr H. (2013) Toward a theoretical framework for interprofessional education. *Journal of Interprofessional Care* 27(1):4-9.
17. Olson R, Bialocerkowski A. (2014) Interprofessional education in allied health: a systematic review. *Medical Education* 48(3):236-246.
18. Homeyer S, Hoffmann W, Hingst P, *et al.* (2018) Effects of interprofessional education for medical and nursing students: enablers, barriers and expectations for optimizing future interprofessional collaboration - a qualitative study. *BMC Nursing* 17:13.
19. Thurston M, Chesson M, Harris E, *et al.* (2017) Professional Stereotypes of Interprofessional Education Naive Pharmacy and Nursing Students. *American Journal of Pharmaceutical Education* 81(5):84. doi: 10.5688/ajpe81584.
20. van Diggele C, Roberts C, Burgess A, *et al.* (2020) Interprofessional education: tips for design and implementation. *BMC Medical Education* 20(2):1-6.