

Practicing Collaborative Skills through an Interprofessional Interview with Individuals Diagnosed with Parkinson's Disease

Tina P. Gunaldo

LSU Health-New Orleans, tgunal@lsuhsc.edu

Todd M. Tartavouille

LSU Health-New Orleans, ttarta@lsuhsc.edu

Samantha Karlin

LSU Health-New Orleans, skarli@lsuhsc.edu

Aaron J. Lin

LSU Health-New Orleans, alin1@lsuhsc.edu

Oanh Truong

LSU Health-New Orleans, otruong@lsuhsc.edu

See next page for additional authors

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Authors

Tina P. Gualdo, Todd M. Tartavouille, Samantha Karlin, Aaron J. Lin, Oanh Truong, Elizabeth Levitzky, and Don Mercante

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Tina P. Gunaldo PhD, DPT, MHS *LSU Health-New Orleans*

Todd M. Tartavouille DNS, APRN, CNS-BC *LSU Health-New Orleans*

Samantha Karlin Degree *LSU Health-New Orleans*

Aaron J. Lin BS *LSU Health-New Orleans*

Oanh Truong BA *LSU Health-New Orleans*

Elizabeth Levitzky MBA, PhD *LSU Health-New Orleans*

Don Mercante PhD *LSU Health-New Orleans*

Abstract

Objective: To enhance student appreciation for collaboration/team-based care through participation in an interprofessional (IP) history-taking opportunity with individuals diagnosed with Parkinson's disease (PD).

Methods: Eighty-eight self-selected students from Louisiana State University Health-New Orleans and Xavier University College of Pharmacy participated in an IP elective course which included conducting an IP interview with a PD patient. To assess student perspectives regarding the IP interview, the students completed a thirteen item survey and reflection assignment.

Results: Eighty-six students completed the survey and twenty-four completed the reflection assignment. 95% of students agreed the team-based interview and the development of an IP plan of care increased their awareness of the multiple perspectives to consider in designing a care plan. The Kruskal-Wallis test indicated a statistically significant difference among programs for survey question numbers two and four. All four IP education competencies (value and ethics, roles/responsibilities, interprofessional communication, teams and teamwork) were highlighted in the reflection assignment.

Conclusions: The IP interview allowed students to gain knowledge of PD, better understand the role of other disciplines, and create a holistic plan of care.

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Introduction

For many years, the health care industry in the United States has recognized the need to prepare for an increase in the number of older adults. The complex care required by older adults can be challenging to clinicians as it is multifaceted. Older adults usually have multiple issues including syndromes, impairments, and chronic conditions such as Parkinson's Disease (PD). Approximately four percent of individuals diagnosed with PD are younger than fifty years of age, but the overwhelming majority are older adults (Parkinson's Disease Foundation, 2016).

In 2008, the Institute of Medicine outlined three recommendations to improve the healthcare delivery system for older adults: 1) address the needs of older adults in a comprehensive manner, 2) provide efficient healthcare services, and 3) increase active participation of older adults in their healthcare (Institute of Medicine, 2008). These three recommendations require an interprofessional collaborative approach among healthcare team members.

The World Health Organization (WHO) defines interprofessional collaborative practice as "when multiple health workers from different professional backgrounds work together with patients, families, carers [sic], and communities to deliver the highest quality of care" (WHO, 2010). Team-based care or practice is not a new concept in health care; however, there is a gap that exists in our health care system. Despite the fact that teamwork is needed to meet the complex needs of the communities we serve, healthcare providers in the U.S. lack the teamwork training that is needed to be members of effective teams (Interprofessional Education Collaborative, 2011).

The Interprofessional Education Collaborative (IPEC), a national panel representing multiple educational professional accrediting bodies, has highlighted the need to train health professional students in teamwork with the goal of preparing students to be ready to practice in teams upon graduation (IPEC, 2011). IPEC developed four interprofessional core competencies that educational institutions can utilize to guide the development of interprofessional education (IPE) learning activities.

An increasing number of academic health centers are integrating IPE into healthcare curricula in order

to meet accreditation standards. IPE is defined as "when students from two or more professions learn about, from and with each other" (WHO, 2010). Health care professional students who are trained in an interprofessional manner are more likely to form collaborative practice patterns post-graduation (Pecukonis, Doyle, & Bliss, 2008). Therefore, it has become increasingly important to prepare healthcare professional students to collaborate and work in teams.

The overall management of PD often requires a team of multiple health care professionals in order to ensure optimal patient care (Pretzer-Aboff & Prettyman, 2015). Health care team members can include a dentist, nurse, family medicine physician, neurologist, occupational therapist, pharmacist, physical therapist, and speech language pathologist. Despite the fact that these individual providers oversee care for the same patient, there are multiple discipline-specific plans of care. The lack of knowledge of team member roles, communication and collaboration among providers can lead to suboptimal care for individuals diagnosed with PD (Van der Eijk, Faber, Shamma, Munneke, & Bloem, 2011).

Effective collaboration among team members is not an inherent skill; it must be learned and practiced (Baker, Day, & Salas, 2006). Over the past several years, Louisiana State University Health-New Orleans (LSUHNO) has implemented several IPE initiatives from a grassroots level. There are six schools within LSUHNO: Allied Health Professions, Dentistry, Graduate Studies, Medicine, Nursing, and Public Health. In 2015, LSUHNO administration demonstrated their support of team-based collaborative education and established a Center for Interprofessional Education and Collaborative Practice (CIPECP). The goal of the center is to coordinate student education by utilizing a team-based, patient-centered approach that delivers the highest quality of care resulting in improved health outcomes.

Methods

IPE elective course and learning experience

One of the IPE opportunities offered at LSUHNO was an elective course. The IPE course was offered during the fall semester and was open to any LSUHNO student and Xavier University College of

Pharmacy student. The objective of the course was to increase awareness, knowledge, and application of interprofessional collaborative practice. For the first three years of the course, faculty members recruited individuals diagnosed with PD and their caregivers to speak with students regarding their health and health care. Faculty members recruited participants by attending a local PD support group. During a support group session, faculty educated support group members about IPE and requested involvement in a student learning experience. In 2015, faculty enhanced the student educational experience by providing an opportunity for an IP interview with a member of the community who had been diagnosed with PD and his/her caregiver. Eight individuals and their caregivers from the PD support group volunteered to participate in the IPE interprofessional interview.

Within the course, students were arranged into eight multidisciplinary groups. Each group consisted of nine to twelve members. The members of the groups remained the same throughout the course. The assignment of conducting an IP interview was scheduled towards the latter half of the course. Students were tasked to develop a cohesive strategy to obtain necessary information from the individual and caregiver in order to develop an IP plan of care.

One week prior to the IP interview, students were provided a two-hour class session to develop a list of guiding interview questions in preparation for interviewing an individual who had been previously diagnosed with PD and a caregiver. Each student was asked to bring a list of patient history questions their profession would typically ask an individual diagnosed with PD. As a group, students were provided instructions to review the entire list of questions, remove duplicative questions, create a logical order for questions, and select a team leader who would provide an introduction to the community member and initially lead the interview questioning.

A faculty member was not physically present during this class session. Some student groups met during the designated day and time; some groups decided to meet off-campus or met on a different day and time. Students were instructed to email their faculty facilitators with any questions.

Students prepared questions for a one-hour interview. Up to forty-five minutes of additional time was provided if the individual and caregiver continued to provide information to the student group or if the individual needed additional time because of speech impairment symptoms, such as slurred speech, soft voice, or difficulty finding words.

One week following the interview, the students were provided a two-hour class session to prepare for the culminating course project. The course project was a ten minute presentation, which included a brief overview of the individual's health and goals, a proposed plan of care, and how the student group utilized the IPEC competencies of value/ethics, teamwork, communication, and role/responsibilities during the three dedicated class sessions related to the IP interview.

Study design

In this retrospective, exploratory study, student perspectives of the impact of an IP interview as an IPE learning activity were analyzed through a survey and reflection assignment. The Institutional Review Board at LSUHNO approved the study protocol. Participant informed consent was not needed for the retrospective study.

Participants

Eighty-eight self-selected students participated in the elective course. Student participants were enrolled in LSUHNO or Xavier University and represented the following disciplines: audiology (5), cardiopulmonary science (4), clinical laboratory science (4), dentistry (21), medicine (25), nursing (1), occupational therapy (10), pharmacy (10), public health (2), rehabilitation counseling (1), and speech-language pathology (5). The students were from various levels in their professional educational careers, ranging from first year to fourth year.

Measures

In order to assess student perspectives after conducting the IP interview, a survey was administered (Table 1). The survey included thirteen questions using a Likert scale from 1 (low) to 5 (high). In addition, a written reflection was a required

assignment embedded in the elective course. The reflection assignment asked students to discuss their learning based upon one of the four foundational IPEC competencies for interprofessional collaboration (Table 2): values and ethics, roles/responsibilities, interprofessional communication, and teams and teamwork (IPEC, 2011). Assignments that reflected upon the PD interprofessional interview were analyzed.

Data Analysis

Prior to the analysis of quantitative data, the data set was cleaned for blank responses. All analyses were performed using the Statistical Analysis System (version 9.4). The statistical analysis of the student responses by program excluded three programs due to low participation in undergraduate nursing (1 student), rehabilitation counseling (1 student), and

Table 1. *Thirteen item survey*

The team-based interview and the development of an interprofessional plan of care

- Q1. increased my awareness of the multiple perspectives to consider in designing a care plan.
- Q2. provided a chance to see how my discipline can contribute to an interprofessional team.
- Q3. allowed me to understand how a care plan can be informed by multiple disciplines.
- Q4. showed how my discipline was part of designing a care plan.
- Q5. increased my confidence in participating in the interprofessional team approach.

During the team-based interview and the development of an interprofessional plan of care, I

- Q6. respected the culture and values of other health professions.
- Q7. communicated my professional role and responsibility clearly to patients, families and other professionals.
- Q8. expressed my knowledge and opinions to team members with confidence, clarity and respect.
- Q9. engaged or requested engagement of other health professionals, as appropriate.

During the team-based interview and the development of an interprofessional plan of care, my team members

- Q10. respected the culture and values of other health professions.
- Q11. communicated my professional role and responsibility clearly to patients, families and other professionals.
- Q12. expressed my knowledge and opinions to team members with confidence, clarity and respect.
- Q13. engaged or requested engagement of other health professionals, as appropriate.

Table 2. *Core competencies for interprofessional collaborative practice*

| | |
|--|--|
| Values/Ethics for Interprofessional Practice | Work with individuals of other professions to maintain a climate of mutual respect and shared values. |
| 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. |
| 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. |
| 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 |

public health (2 students). The Kruskal-Wallis test was utilized to evaluate the student responses as the student response variable did not meet the normal assumption needed for a one-way ANOVA test. The exact option was used to request exact p-values.

Results

Eighty-six students completed the survey. The majority of students reported favorable engagement in the interprofessional interview from the perspective of self and team. Greater than 93% of the students agreed the team-based interview and the development of an interprofessional plan of care increased their awareness of the multiple perspectives to consider in designing a care plan and allowed them to understand how a plan of care can be informed by multiple disciplines. More than 89% of the students agreed the team-based interview and the development of an interprofessional plan of care helped them see how their discipline contributed to an interprofessional team, how their discipline was a part of creating a care plan, and increased their confidence in the interprofessional team approach.

For the student reflection of the survey, over 93% of the students believe the activity allowed them to respect the cultures of other health professionals, express with confidence their knowledge and opinions, and increase communication regarding their professional role and responsibility to the patient and family.

The final portion of the survey focused on the student's reflection of the team. More than 94% of the students believed the members of the team respected the culture and values of other health professions. The students also believed they were able to communicate their professional role and responsibility clearly, express their knowledge and opinions to other team members with confidence, and engage or request engagement of other healthcare professionals.

To evaluate how students may have differed by academic program, the Kruskal-Wallis test was conducted on the student responses in the eight programs for each of the thirteen questions presented in Table 1. The test results indicated the mean rank scores were statistically different by program for

Question 2, "The team-based interview and the development of an interprofessional plan of care provided a chance to see how my discipline can contribute to an interprofessional team (H=14.06, df=7, p=0.05)." The Wilcoxon scores for Question 4, "The team-based interview and the development of an interprofessional plan of care showed how my discipline was part of designing a care plan" (H=19.70, df=7, p=0.006) were also statistically significant, as shown in Table 3. Statistically significant differences were not found for the remaining eleven questions (results not shown).

The box plots in Figures 1 and 2 illustrate the distribution of the original data for Questions 2 and 4. Figure 1 shows the Clinical Laboratory Sciences (CLS) scores are lower than those of the other programs while Figure 2 shows the Audiology (AuD) and CLS responses are lower than the student scores from the other programs.

Twenty-four students reflected upon the PD interview in the course reflection assignment. All four IPEC competencies were highlighted within the reflection assignments.

Value and Ethics

Several students were unaware of the multiple medical and social issues individuals with PD expressed during the interview. Students identified the importance of placing the interests of the patient and caregiver at the center of interprofessional care with the goal of promoting health. Students discussed developing a comprehensive treatment plan to address the needs of the individual and caregiver.

Roles/Responsibilities

Many students discussed learning about common impairments in PD from various discipline perspectives. After the interview experience, students reported an appreciation of the different training backgrounds and approaches to PD care, which is needed in order to meet the needs of the patient and caregiver. Students also recognized the overlap in the focus of interview questions proposed by multiple disciplines and the need to avoid duplication of questions.

Table 3. Wilcoxon scores (rank sums) for questions 2 and 4 by program

| Program | Question 2 | | | Question 4 | | |
|-----------------------------|---------------|----|------------|---------------|----|------------|
| | Sum of Scores | N | Mean Score | Sum of Scores | N | Mean Score |
| Audiology | 81.5 | 5 | 25.3 | 81.5 | 5 | 16.3 |
| Cardiopulmonary Science | 192.5 | 4 | 48.1 | 180.0 | 4 | 45.0 |
| Speech-Language Pathology | 175.0 | 5 | 35.0 | 169.5 | 5 | 33.9 |
| Dentistry | 887.5 | 20 | 44.4 | 863.0 | 20 | 43.2 |
| Clinical Laboratory Science | 46.5 | 4 | 11.6 | 60.0 | 4 | 15.0 |
| Medicine | 1122.5 | 25 | 44.9 | 1233.5 | 25 | 49.3 |
| Occupational Therapy | 447.5 | 10 | 44.8 | 355.0 | 10 | 35.5 |
| Pharmacy | 405.0 | 9 | 45.0 | 460.5 | 9 | 51.2 |
| Kruskal Wallis Test | | | | | | |
| Chi-Square | | | 14.060 | | | 19.703 |
| df | | | 7 | | | 7 |
| Exact p-value | | | 0.050 | | | 0.006 |

Figure 1. Distribution of Wilcoxon scores, question 2

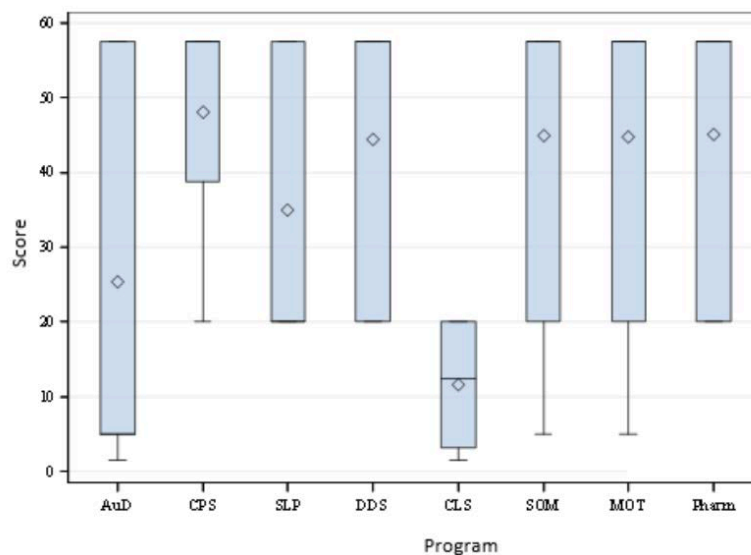
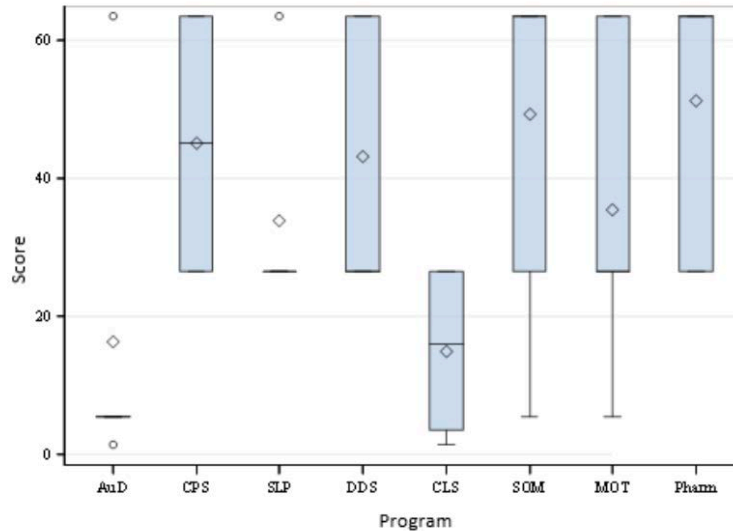


Figure 2. *Distribution of Wilcoxon scores, question 4*

Interprofessional Communication

Listening to the discipline-specific questions posed and answers provided by the individual and his/her caregiver during the interprofessional interview increased student awareness about the various challenges individuals with PD face by listening to the discipline-specific questions posed and answers provided by the individual and his/her caregiver.

Teams and Teamwork

Many students reported that working together as a team can help patients receive the best care. There was an appreciation for a team effort to develop a cohesive, comprehensive list of interview questions that reflected multiple disciplines. A couple of students also reflected on the team interview process and noted suggestions for process improvement in the future.

Discussion

The engagement of multiple disciplines is essential in meeting the health needs of individuals diagnosed with PD or other complex chronic conditions. Van der Eijk, Faber, Al Shamma, Munneke, and Bloem (2011) interviewed individuals diagnosed with PD and caregivers to explore the unmet needs of this group. One unmet need expressed by study participants included a perceived lack of collaboration

among health care providers. The development of IPE activities in healthcare professional schools is an important component of a pipeline program to prepare healthcare providers to collaborate and work in teams.

Effective teams require respect, comfort, and trust among members (Boult, Boult, Morishita, Dowd, & Urdangarin, 2001; Sommers, Marton, Barbaccia, & Randolph, 2000). It was important to include the IP interview assignment towards the end of the semester so students would have time to build respect, comfort and trust among the team. One of the students reflected on this opportunity as:

All semester, by working through smaller cases, our team was to build a firm interprofessional foundation. First, we learned how to best communicate with each other. We also respectfully listened to each other, and seized every opportunity to learn about each other's professions. I believe that these small exercises allowed us to be successful as we interviewed our client.

Even though the placement of the team-based interview was perceived to be appropriate, the activity itself may have not been beneficial for CLS and AuD students based upon the lower mean rank scores when compared to other professions. CLS is often referred to

as the “hidden profession” (Forsman, 2002). Clinical laboratory scientists conduct their work outside of common patient care areas and do not interact directly with patients for evaluation and treatment purposes. Therefore, it can be difficult for CLS students to determine how they can contribute to the team through the development of a patient care plan. AuD students may have had a difficult time contributing the development of a care plan if individuals with PD did not express any problems with hearing or dizziness.

It is important to note a recent study demonstrated positive effects of interprofessional education. Cohen, Hagestuen, Gonzalez-Ramos, Cohen, Bassich, Book, and Morgan, (2011) utilized a National Parkinson Foundation IPE training program to improve PD knowledge, team building, and practice with a diverse group of providers and students. Incorporating IPE in continuing professional development initiatives can be a critical component in improving patient outcomes. Health care providers are optimal learners for interprofessional collaboration as they have the opportunity to immediately implement interprofessional competencies, which can demonstrate the impact of IPE (Cahn, 2016). The development and implementation of an interprofessional interview provides an opportunity for students to increase their competence in collaborative skills with the goal of improving patient outcomes.

Conclusion

Using an interprofessional interview as an educational modality is an effective way to improve health care students’ perceptions of interprofessional collaborative practice. Educating health professional students on the skills needed to be effective members of teams and creating active learning team experiences can assist in developing a workforce that is collaborative-practice ready.

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Corresponding Author

Tina P. Gunaldo PhD, DPT, MHS

School of Nursing
Augustus Storrs Hall
231 Glenbrook Road
Storrs, CT 06269-4026

tgunal@lsuhsc.edu