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Design, Presentation, and Evaluation of an Interprofessional Case Conference on Fibromyalgia

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Abstract

This paper describes a case study presented to students and faculty in the health professions at an interprofessional case conference. The case described a fictional patient diagnosed with fibromyalgia syndrome as she progressed through six appointments with different healthcare providers, each of which was described as a case vignette and progressively presented to the audience. During each case vignette, students engaged in peer-level instruction regarding discipline-specific content. Faculty facilitators provided a brief discussion about key elements within each vignette. In a post-attendance survey, 92-96% of respondents agreed that they had productive interactions with students and faculty from other health professions and learned how these disciplines approached a patient with fibromyalgia. While 92% of the student respondents agreed that contributions from different healthcare providers was an effective therapeutic strategy for the case patient, 100% agreed that an interdisciplinary approach has advantages to solving a healthcare problem over a mono-professional approach. Our progressive case study model may be used or modified by other schools with multiple health professional programs to provide early experience learning collaboration within an interprofessional framework. Our preliminary results suggest that this approach can increase student appreciation for, and understanding of, the skills and scopes of practice of professional colleagues from other fields through interprofessional exchange. Future investigations should determine whether professional collaboration among healthcare providers improves when they participate in such activities during their professional education.

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Introduction

Effective patient care within our current healthcare delivery system requires communication between providers in various professions to initiate referrals, communicate patient progress, and produce the best possible patient outcomes. In order to achieve this, healthcare professionals need to understand the specific language, skills, and scopes of practice of professional colleagues from other fields. The ability to work with colleagues within interprofessional teams and to “cooperate, collaborate, communicate, and integrate care” has been defined as a core competency for healthcare professionals by the Institute of Medicine (Committee on the Health Professions Education Summit, Board on Healthcare Services, & Institute of Medicine of the National Academies, 2003). Despite this expectation, health professional educational programs do not consistently teach the skills necessary to operate interprofessionally (Garr, Evans, & Cashman, 2008; Barnsteiner, Disch, Hall, Mayer, & Moore, 2007). Further, it may still be common for students from different programs to rarely interact with each other until they begin practicing in clinical settings (Coster et al., 2008).

Interprofessional education (IPE) improves interprofessional cooperation and communication, improves organizational practices, and benefits patients (Freeth et al., 2002; Barnsteiner et al., 2007). IPE generally takes the following forms: 1) shared learning, 2) simulation/case-based activities, or 3) post-graduate specialty courses and programs. Though disagreements exist regarding which of these forms is most useful, each offers some utility. The shared learning approach (also referred to as multiprofessional education) involves creation of an introductory curriculum in which core topics are taught using common lectures, seminar work, or group discussions within a multiprofessional school of health professions (Mazhindu, 2001). Difficulties implementing IPE using this model include: differences in prerequisites for admission, programmatic structure or organization, scheduling, and resource sharing across programs (Liaskos, 2009; Committee on the Health Professions Education Summit et al., 2003). While some educators and students describe these experiences as valuable (Cullen, Fraser, & Symonds, 2003), others suggest that simply learning common content without emphasis on collaborative practice skills does not facilitate

interprofessionalism (Mazhindu, 2001) and may “detract from the differential application of knowledge and comparative curricula about respective roles and responsibilities” (Barr & Ross, 2006). Another approach to IPE includes simulation or case-based learning, which has been thoroughly described elsewhere (Committee on the Health Professions Education Summit et al., 2003; Freeth et al., 2002). Overall, approaches using small teams and group case work are consistently described as effective educational techniques (Coster et al., 2008; Barnsteiner et al., 2007; Fraser, Symonds, Cullen, & Symonds, 2000). Post-graduate and post-professional specialty programs include a plethora of short-course/seminar type experiences (Freeth et al., 2002; Barnsteiner et al., 2007), but few examples of pre-licensure experiences have been published.

In 2009, the College of Health Professions (CHP) at Pacific University had seven schools and programs: Dental Health Science (DHS), Healthcare Administration, Occupational Therapy (OT), Physician Assistant Studies (PA), Pharmacy, Physical Therapy (PT), and Professional Psychology. In 2013, the CHP added four programs: Athletic Training, Audiology, Gerontology, and Healthcare Compliance. In a report to the Northwest Commission on Colleges and Universities, administrators within the CHP stated that one of its primary goals was to foster interprofessional practice (Pacific University, 2007). One measure to achieve this goal was the establishment of an Interprofessional Case Conference (IPCC) series. Initiated in 2005, the IPCC series brings students and faculty from each of the schools/programs together monthly throughout the academic year. Each conference is designed as an interactive forum to learn about selected health topics or to discuss regional interprofessional care programs. Common features of the IPCCs include collaborative preparation and presentation by faculty and clinicians in a style requiring student interactions, active learning strategies, and critical thinking skills. Conferences focus on teaching students how to understand and relate to their colleagues in the health professions by using small teams comprised of students in different health professions programs.

In this manuscript, we describe an IPCC presented on September 11th, 2009 titled “Fibromyalgia: A Visit to the Interdisciplinary Clinic” Our IPE design followed the small-team and collaborative approach for optimal

interprofessional programs previously reviewed and modeled by Mazhindu, in that it emphasized inquiry-based learning with a focus on a practical patient/client-based scenario (Mazhindu, 2001). We presented a progressive case study format and outlined the path of a fictional patient experiencing ongoing symptoms of fibromyalgia. Students attending the conference followed the case patient as she progressed through a series of six healthcare appointments. Each of the case vignettes (i.e., a visit to one specific healthcare professional) was written and presented by a faculty member representing his/her respective program. The fictional patient initially visits the physician assistant and is referred to physical therapy, pharmacy, psychology, occupational therapy, and dental hygiene appointments. Each appointment was presented sequentially in a separate written case vignette. Small student groups representing more than one health profession were asked to discuss the vignette. Students from each health profession were asked to teach students and faculty within their groups how to understand and interpret the case material specific to their discipline.

The main goals for this case study were for students to: 1) increase awareness of the roles that other health professionals play within a multidisciplinary treatment context; 2) learn about other professions' terminology and goals related to patient care, and 3) gain appreciation for the value of interprofessional referral and treatment related to evidence-based patient outcomes. The purpose of this manuscript is to present an interprofessional progressive case study including participatory questions that may be used or adapted by other programs wishing to include IPE within their curricula. Student post-attendance survey data are included to assess our main goals for this progressive case study approach.

Preparation of the Fibromyalgia Progressive Case

Preparation of the case began with identifying faculty participants from the respective programs who had an interest or specialty practice related to fibromyalgia. Six faculty members (one from DHS, one from PA, two from Pharmacy, one from PT, one from Professional Psychology) and one community clinician (from OT) volunteered. The seven-member team collaboratively designed a fictional case patient with fibromyalgia and educated each other on discipline-specific concepts. Characteristics of the fictional patient,

such as demographics and medical background, were collectively established and a basic structure for the progressive case was agreed upon. Each team member described evaluation and treatment services that clinicians in their profession would typically provide individuals with fibromyalgia. Following the initial meeting, each team member submitted via email a vignette with accompanying group discussion questions. These materials were peer-reviewed and team members were given opportunities to modify their respective sections to optimize the flow and continuity of the entire case. Profession-specific jargon and abbreviations were consciously included to help achieve the goal of learning other professions' terminology. To ensure a coherent and comprehensive case, a second meeting was held to finalize the vignettes. Each faculty member dedicated approximately four hours to preparation of the fibromyalgia progressive case: one hour for writing the profession-specific vignette and three hours for team discussion and collaboration (over two meetings).

Presentation of the Fibromyalgia Progressive Case

The progressive case study was presented at a two-hour IPCC to approximately 100 students enrolled in the seven health professions schools/programs within Pacific University's College of Health Professions. Students in attendance represented those enrolled in didactic coursework (first and second year students within each school/program). Attendees—both students and faculty—were instructed to disperse among 12 roundtables and form groups of no more than eight participants per table. Participants were instructed to “break apart” from members of their own disciplines to ensure that each table contained at least one member from each of the health professions programs. Due to variations in the size of each school/program, not all tables had complete representation from each of the seven health professions programs.

Student and faculty participants at each roundtable were given written vignettes with accompanying discussion questions (“Fibromyalgia ICC,” 2009). Attendees at each table were allotted approximately 13 minutes to read and discuss each vignette (i.e., interaction between the individual with fibromyalgia and a specific allied healthcare professional). Next, seven minutes were allotted for a large-group (entire room) discussion. This process was repeated for each subsequent case vignette. Using a hand-held microphone, faculty team members

moved around the room to facilitate questions and comments across tables. Good participation was observed, with the entire seven minutes utilized in the large-group discussions. Student participants answered most questions. The faculty team members' role became that of moderating discussion and confirming peer responses.

Throughout each vignette, roundtable groups engaged in discussions regarding the patient, medical terminology, and various discipline-specific treatment options and goals. Students from each discipline assumed a peer-educator role regarding discipline-specific content (e.g., medical abbreviations, purpose of tests/assessments conducted, significance of test results, and reasons for particular interventions). Attendees were observed actively listening to each other and asking questions aimed at clarifying confusion and better understanding each other. Thirteen minutes appeared to be a reasonable time for communication about each case vignette, as

most groups were able to complete their discussions and answer the questions that followed before the next case vignette was presented. At the end of the last vignette, approximately ten minutes remained for addressing any remaining questions or controversies in the large group setting.

Student Evaluation of the Fibromyalgia Progressive Case

E-mails were sent to conference attendees (determined by a sign-in sheet) directing them to a third party, anonymous survey site (SurveyMonkey.com). Table 1 contains a partial listing of the questions asked on the post-attendance survey. The Pacific University Institutional Review Board granted exemption for this study. Due to the voluntary nature of the survey, we received responses from only 26 student attendees, which was estimated to be about 25% of the total present. The composition of the student cohort was

Table 1

Questions from Post-attendance Survey and Participant Responses

Question	Strongly Agree or Agree	Neutral	Disagree or Strongly Disagree
This IPCC was an effective learning experience.	90%	9%	1%
I had productive interactions with students and/or faculty from other schools/programs at my roundtable.	92%	8%	0%
I learned how other disciplines approach a patient with fibromyalgia.	96%	4%	0%
The contribution from different healthcare providers was an effective approach to manage the treatment of this patient.	92%	8%	0%
An interdisciplinary approach to solving a healthcare problem has advantages over an approach informed by only one medical discipline.	100%	0%	0%
This IPCC helped me understand when and how to refer patients to providers in other fields in the future.	84%	8%	8%
If all the members of your roundtable were from your discipline, do you think you would still be able to provide an effective solution to the presented case?	12%	27%	61%

likely affected by differences in class size (the School of Pharmacy has the largest class sizes), physical proximity to the conference venue (at the time, part of the School of Professional Psychology was located on a separate campus), and conflicts with class scheduling within some programs. Despite these limitations, all respondents reported representation from at least three different health professions at their table; in addition, 30%, 19%, and 8% reported there were at least four, five, and six health professions represented within their roundtable groups, respectively. Although all students were invited to complete the survey, the responders were from the School of Pharmacy (23/26) and the School of Professional Psychology (3/26). 58% of student responders were enrolled in the first year of their program and 42% were enrolled in the second year.

Ninety percent of respondents reported that this IPCC was an effective learning experience. In regards to the specific presentation of this conference, a large majority of respondents (92-96%) agreed that they had productive interactions with students and faculty from other health professions and learned how these disciplines approached a patient with fibromyalgia. 84% of respondents agreed that this activity helped them to understand when and how to refer patients to providers in other disciplines. While 92% of the student responders agreed that contributions from different healthcare providers was an effective therapeutic strategy for the case patient, there was 100% agreement (65% strongly agreed and 35% agreed) that an interdisciplinary approach has advantages to solving a healthcare problem over a mono-professional approach. Only 12% of students reported that they would still have been able to provide an effective healthcare solution for the case patient if their roundtable group contained only students within their profession.

Faculty/Author Evaluation of the IPCC Format

The team members leading this conference included six faculty members and one community clinician. While faculty members within the CHP have opportunities to interact across schools/programs, the interactions usually occur in the context of academic meetings and committee service. The IPCCs allow faculty members to engage each other in discussions related to clinical paradigms, creating a culture that fosters the desire to teach students to engage in collaborative work

during their educational development. The faculty team members found the experience of developing and presenting this case enjoyable and enlightening. This experience increased the faculty members' appreciation for other health professions and provided an interactive and collaborative format to educate and engage students.

Discussion & Conclusions

Based on our observations of student interactions during a two-hour IPCC and post-attendance survey responses, a progressive case scenario of a fictional patient with fibromyalgia appeared to satisfactorily accomplish our main goals of increasing awareness of the roles of other health professions, learning discipline-specific terminology and patient-oriented goals, and understanding the value of interprofessional referral and treatment for patient outcomes. Indeed, 100% of students responded that the interprofessional approach to solving a healthcare problem has advantages over an approach informed by only one medical discipline. Strong institutional support was a key component to the approximate 100-person attendance and the measured effectiveness of this exercise. Conference time and location are scheduled by the Office of the Executive Dean of the College of Health Professions to facilitate maximal attendance among faculty and students with differing schedules.

Pre-licensure exposure to IPE has been suggested to be more effective than post-licensure exposure (Barnsteiner et al., 2007). Even within the training period, earlier exposure to IPE has been suggested to be more effective than later exposure (Coster et al., 2008), although the literature provides conflicting results (Pirrie, Wilson, Harden, & Elsegood, 1998). Previous reports have described challenges to the implementation of IPE programs, including faculty member buy-in, institutional support, conflicting course scheduling, numerical imbalance of students by program, and differing prior course content (Barnsteiner et al., 2007; Pirrie et al., 1998). Aside from our faculty team members embracing IPE concepts, our experiences and challenges were similar to previous reports. Adequate representation of each program was (and continues to be) a challenge. First, class size within each school/program varies dramatically—from approximately 30 and 40 students in the OT and PT schools, respectively, to 100 in the Pharmacy school. Second, students training

at clinical rotation sites are geographically scattered and generally are not able to attend on-campus events. Third, the level of required student attendance varies for each school/program. For example, while students in the School of Pharmacy were required to attend at least two IPCCs per year, students in other programs were strongly encouraged, though not required to attend. Last, time constraints prevented us from presenting case visits related to health professions represented by each of our schools/programs. For example, students within the Masters of Healthcare Administration program were not represented in this progressive case study. This limitation may result in faculty members and students from an omitted program feeling “left out” at a particular conference. This further emphasizes the importance of having regular interprofessional contact to establish and maintain equity.

There are several limitations regarding the data obtained from our post-attendance survey. Since the survey was voluntary, respondents may represent a biased sample of students’ attitudes toward this conference. In addition, our lack of baseline data does not permit us to state that participation in this conference directly increased student appreciation of an interprofessional approach in healthcare. To achieve this goal, in the future we could administer a pre-test of our main objectives followed by the post-attendance survey. Finally, although considerable interprofessional interactions were observed and reported among students, the post-attendance survey focused entirely on attitudes and perceptions. Thus, it is impossible to conclude whether participation in this exercise will increase interprofessional knowledge or behavior in the clinical setting. Ongoing evaluation of students as they enter their respective professions needs to be conducted to determine the success of integrating interprofessional conferences into entry-level health profession education. This manuscript is provided in order to enable other faculty members to use the materials compiled herein and to highlight a viable mechanism for enhancing interprofessional training in the clinical health professions.

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