INTERPROFESSIONAL COLLABORATION: A HEALTHCARE PROFESSIONAL'S DUTY

by

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Abstract

Today's patients have complex healthcare needs and require more than one discipline to address issues regarding health status. As care needs become more complex, delivery processes involve numerous interfaces and patient handoffs among multiple healthcare professionals with varying levels of educational and occupational training. The evidence-based project assessed the use of interprofessional collaboration in the community mental health center and its effect on patient access to care. Results suggested that healthcare professionals have a responsibility for patient outcomes and meeting the patient's healthcare needs with interprofessional collaboration being a key factor.

Keywords: interprofessional collaboration, communication, community mental health

Interprofessional Collaboration: A Healthcare Professional's Duty

Healthcare in the United States is delivered through complex systems that involve patients interacting with a variety of healthcare professionals. Comprehensive patient care often involves problems that are beyond the scope of expertise and training of any one professional. A hospital patient today is thought to interact with over 50 different hospital employees during a four-day stay (O'Daniel & Rosenstein, 2008). The patient's care involves various healthcare professionals, each with separate and important knowledge, technical skills, and perspectives. For example, care for a seriously mentally ill patient typically includes the physician, nurses, case managers, a psychiatrist, and pharmacists, as the core team members, but might also involve occupational therapists, dieticians, lab technicians, and chaplains. Currently, there is also an emphasis on optimizing patient outcomes and increasing communication and collaboration among healthcare professionals.

Healthcare professionals must work together to provide quality care to patients and their families. The term interprofessional collaboration is cited often in the healthcare literature. Despite the frequent appearance in the literature, the concept of interprofessional collaboration is ill defined in the mental health practice (Jones & Delany, 2014). Boyle and Kochinda (2004) defined interprofessional collaboration as the process of joint-decision-making among independent parties, involving joint ownership of decisions and collective responsibility for outcomes. Orchard, King, Khalili, and Bezzina (2012) defined interprofessional collaboration as "a partnership between a team of health professionals and a client in a participatory, collaborative and coordinated approach to shared decision-making around health and social issues" (p. 58). While definitions vary, characteristics of interprofessional collaboration include communication, partnership, shared decision-making, cooperation, and coordination (Orchard et

al., 2012). Review of evidence demonstrates the need for all team members to have the same understanding about the definition of IPC for it to be more than mere words (O'Daniel & Rosenstein, 2008). Therefore, for the purpose of this Doctor of Nursing (DNP) project, interprofessional collaboration was defined as a joint decision-making and communication process among and between healthcare professionals that is patient focused.

Background and Clinical Relevance

Interprofessional collaboration in the mental health setting has been recognized as necessary to provide quality healthcare services to people with mental health disorders (Fredheim, Danbolt, Haavet, Kjønsberg, & Lein, 2011). Healthcare professionals such as psychologists, nurses, pharmacists, case managers, psychiatrists, and general practitioners play important roles in the delivery of mental health services (Fredheim et al., 2011). In a study performed by Chong, Aslani, and Chen (2013), it was reported that when IPC was used, the patients had a reduced rate of readmissions and improved quality of care. In mental healthcare services, the value of IPC is also associated with its capacity to provide and coordinate a variety of responses to patients with complex health and social needs. Studies indicate that productive IPC and communication between members of the healthcare team are associated with improved patient outcomes, fewer medical errors, and improved job satisfaction (Manojlovich & Antonakos, 2008). In addition, mental health patients are at increased risk for a high utilization of costly mental health services, such as in-patient hospitalizations and emergency department visits.

Vazirani, Hays, Sharpiro, and Cowan (2005) conducted a study to improve communication and collaboration between healthcare professionals in a medical setting. The study occurred over a two-year period on two nursing units. An intervention unit was created

that differed from the control medical unit by the addition of a nurse practitioner to each inpatient medical team, the appointment of a hospitalist medical director, and the institution of daily multidisciplinary rounds (Vazirani et al., 2005). The authors found that interprofessional collaboration among the participants improved on the interventional unit (Vazirani et al., 2005). The study also reported that nurse practitioners were a good addition to healthcare teams to foster communication and collaboration (Vazirani et al., 2005).

The Institute of Medicine (IOM) has provided considerable evidence about the positive impact that interprofessional collaboration can have on key dimensions of organizational performance. The report committee's recommendation that opportunities be expanded for nurses to lead and diffuse collaborative improvement efforts, highlights the need to foster interprofessional collaboration among healthcare professionals (IOM, 2010). In addition, the Robert Wood Johnson Foundation's Interdisciplinary Nursing Quality Research Initiative (INQRI) is an excellent example of interprofessional collaboration among scholars from nursing and other professions such as social scientists. It must also be reported that an increasing amount of literature reports that deficiencies in collaboration between healthcare professionals have a negative impact on healthcare services and on patient outcomes (O'Daniel & Rosenstein, 2008). Studies indicate that when IPC is poor, the patients' needs for coordinated services are not sufficiently met and resources are ineffectively utilized (Fredheim et al., 2011). Chong et al. (2013) reported that when healthcare professionals fail to collaborate and communicate, patient safety is at risk for several reasons: (a) unclear orders, (b) misinterpretation of information, and (c) lack of critical information. More specifically, the Joint Commission on Accreditation of Healthcare Organizations (2005) reported communication failures as the leading root cause for medication errors, delays in treatment, and wrong-site surgeries.

Identification of the Quality Improvement Project

Interprofessional collaboration has been increasingly promoted in mental health settings. Interprofessional collaboration, communication, and quality have become key concepts in the dialogue of mental health services and is recognized as being necessary to achieve and improve patient care while also improving the work environment (Greenfield, Nugus, Travaglia, & Braithwaite, 2010). However, the transition from idea to reality can be a challenge due to changing culture, attitudes, and practices in the mental health setting (Greenfield et al., 2010). A substantial number of studies reported that programs and interventions directed at improving interprofessional collaboration can improve patient outcomes. For example, a randomized clinical trial found that geriatric patients who received care from an interprofessional collaborative team were significantly less likely than controls to lose functional ability (Boult et al., 2001).

Another study showed that patients with mental health disorders treated with collaborative care interventions experienced enhanced treatment outcomes including reduced financial burden, substantial increases in treatment adherence, and long-term improvement in symptoms and functional outcomes compared with those who did not receive collaborative care (Katon & Guico-Pabia, 2011). In the United States, close to 50% of Americans will be diagnosed with a mental illness at some point in their lives and worldwide more than 450 million people suffer from mental illness (World Health Organization, 2010). An example of the value of interprofessional collaboration and communication in mental health healthcare is most apparent when healthcare professionals face someone like this:

> Mrs. T. is a 63-year-old with a history of bipolar disorder, diabetes mellitus, hypertension, hearing loss, alcohol dependency, and a current diagnosis of cellulites of

right lower leg and ascites. Her husband of 30 years recently died. Plans are being made to relocate her to an apartment in the city where one of her daughters lives. The daughter requests information about a low-cost apartment, transportation, and home provider services.

The problems to be solved in this case are in the realm of many different disciplines who must communicate and work together to holistically manage the situation. Mrs. T. is an example of the many patients who need an interprofessional collaboration approach to directly impact patient care, safety, and quality. When healthcare professionals and organizations can effectively provide collaborative care across treatment settings as well as between the behavioral and physical healthcare systems, results will provide gains in quality and outcomes, and reduced treatment costs (American Hospital Association, 2012). Because of the evidence-based information, the aim of this quantitative DNP project was to

- Assess and enhance the awareness and utilization of interprofessional collaboration between healthcare professionals in the mental health community center.
- Discuss the association of interprofessional collaboration and patient outcomes. A standard definition of an outcome in mental healthcare is the effect on a patient's health status due to an intervention by a health professional or health service (Newton et al., 2010). The criteria used for outcome measures were emergency room visits, inpatient hospital admissions between clinic visits, and case management referrals.
- Provide an executive summary to the organization.

The mental health clinic's administrative staff along with the clinical staff demonstrated willingness to address the use of interprofessional collaboration and its impact on patient outcomes.

The mental health community center was located in a large metropolitan city and provided outpatient healthcare services to adult patients with mental health disorders. The identified mental health community center was committed to excellence through continuous quality monitoring and improvement. This required ongoing communication with patients, stakeholders, board of trustees, and healthcare professionals in all departments and services. Its mission was to improve the lives of people with mental health, developmental disabilities, and substance abuse challenges. The center's staff spent most of their time doing individual work or performing discipline specific duties. An important aspect at the community clinic was a good working relationship between healthcare professionals. The mental health center had a team that consisted of a psychiatrist, psychiatric nurse practitioners (PNPs), registered nurses (RNs), case managers, social workers, directors, and a medical doctor. Therefore, there was the potential that a patient seeking services at the center could possibly interact with 10 to 11 healthcare providers. This structure required an interprofessional team approach to facilitate sharing of expertise, reasoning, decision-making, and perspectives.

Interprofessional collaboration and communication received minimal or no attention. Healthcare professionals often worked independently and may or may not have shared patient information or needs and referrals thereby creating barriers in the areas of patient outcomes, collaboration, coordination, and communicating between professions. For example, the nurse practitioners (NPs) interacted with patients and families from their own professional perspective. When a patient was referred to the case manager, it was not face-to-face, no additional follow-up was performed, and the patient did not always adhere to the referral request. This was not known unless the patient reported a problem to the organization or unless this was discussed during a follow-up visit. This lack of interprofessional collaborative practice often resulted in

delays in completing the patient's referrals to another department. The complex, unpredictable, and dynamic work of the departments possessed challenges for effective collaboration and communication.

The Johns Hopkins Nursing Evidence-Based Practice (JHNEBP) model was used to guide the clinical inquiry strategies for the DNP project; the JHNEBP model contained three major components: (a) practice question, (b) evidence, and (c) translation (Melnyk & Fineout-Overholt, 2011). Using this model, the first step was to identify and formulate an answerable clinical question. The PICOT system was used for formulating the evidence-based question and was the principle used for reviewing the literature. The acronym PICOT stands for patient, intervention, comparison, outcome, and time (Melnyk & Fineout-Overholt, 2011). The following question reflected the project's focus for people seeking psychiatric mental health services: How will interprofessional collaboration influence patient outcome? The aim of this clinical inquiry was to assess, identify, and describe interprofessional collaboration between healthcare professionals employed at the mental health community center and its effect on patient outcomes.

Stakeholder Analysis

Stakeholders are those individuals, group, or organizations that have an interest in a business and may be patients, employees, clinicians, researchers, advocacy groups, professional societies, businesses, policymakers, or others (Agency for Healthcare Research and Quality [AHRQ], 2014). The stakeholders involved in the success of the project were the organization, administration, chief nursing officer, advance practice nurses (nurse practitioners), medical records officer, social workers, case managers, registered nurses, department managers, psychiatrist, and the physician. Other stakeholders included psychologists, general practitioners,

community organizers, pharmacists, patients, families, and Capella University. The chief nursing officers, organizational and administrative staff, were interested in promoting high-quality patient care, positive patient outcomes, and safety. The community clinic was associated with the community hospital and the local state university and was expected to be involved in quality improvement and research. As the community mental health center for the county, the organization must provide ongoing work to assure nursing excellence. The accrediting body also required the community clinic to maintain and foster collaborative working relationships. A Stakeholder Planning Sheet as designed by Thompson (2013) is located in Appendix A.

Chief Nursing Officer, Organizational and Administrative Staff

The chief nursing officers and the organizational and administrative staff were interested in promoting high-quality patient care, positive patient outcomes, and safety. Quality improvement projects were part of the organization's accrediting requirements. Administrators at all levels are interested in making healthcare decisions about what works well or what does not work well for the organization (AHRQ, 2014).

Patient and Families

Patients and their families were important members of the team. They were the customers as well as the stakeholders. Effective communication and collaboration with a patient helps the team to develop an individualized treatment plan. Involving the patient in the decision-making process is essential in all healthcare settings, including psychiatry. Patients were the ultimate responsibility and the reason for the existence of the organization.

All Health Care Professionals

The stakeholders were all registered nurses (staff and managerial), nurse practitioners, psychiatrists, physicians, case managers, social workers, and clerical staff. Social workers and

case managers inherently used a collaborative approach to identify and facilitate services and options for the patients. Key components of this position were communication and collaboration. They knew what internal and external resources were available and how to access the resources. Ineffective communication with case managers and social workers can lead to missed services, unnecessary delays in discharges, and failure to utilize available resources. Discharge planning was essential for all patients. With the reduced hospital stay, community partners, outpatient care resources, and services were considered stakeholders in this project.

Ancillary Departments

Other ancillary departments, including environmental services, were essential. Thoroughly sanitizing the floors, walls, and other surfaces was required to help prevent the spread of infection and also influenced overall patient and employee satisfaction about the clinic experience. According to Goehring (2002), improving patient satisfaction was also linked with satisfied employees.

The complexity and rapidity of change in patient conditions makes interprofessional collaboration a necessity in the clinic. At this center, all representatives of the department were expected to champion a team environment. Interprofessional collaborations affect diagnostic treatments, procedures, admissions to the relevant hospital, and community referrals. People diagnosed with mental illness often require extensive outpatient care. Community referral collaboration helps the patient with shelter, social, emotional, and personal skills on an outpatient basis. The center for healthcare services was the key community stakeholder and supported this initiative.

Capella University and the organization's administration were responsible for approving and facilitating the clinical project. All individuals working in the healthcare industry had an

obligation to create a culture in which everyone was involved and working together in the best interest of the patient.

Literature Review

A review of the literature was accomplished by using search engines and databases. These included PubMed, EBSCOHost, CINAHL, MIDLINE, and Google Scholar. Databases were searched for relevant studies using the key words interprofessional collaboration, communication, and mental health. Professional organizations were also included.

Several studies have examined the use of interprofessional collaboration in treating the mental health patient. Craven and Bland (2006) reviewed the literature to identify evidence-based interventions for promoting effective outcomes using interprofessional collaboration in providing mental healthcare. Their analysis of 38 studies showed that mental health services with high or moderate levels of interprofessional collaboration between healthcare professionals resulted in positive patient outcomes (Craven & Bland, 2006). A literature review of 45 studies conducted by Katon and Guico-Pabia (2011) found that when patients diagnosed with mental health disorders were treated with interprofessional collaborative care, they experienced improved outcomes as compared to those patients who did not receive interprofessional care.

Dingley, Daugherty, Derieg, and Persing (2005) implemented and evaluated a standardized toolkit to facilitate interprofessional collaboration. The study was conducted in an integrated urban medical center on the medical intensive care unit, an acute care unit, and the psychiatric units utilizing the communication toolkit. The authors used a pre- and post-test design to collect baseline data. This was performed over a 24-month period. A particular area of interest was the time it took healthcare providers to communicate and resolve a patient issue. Nonparametric statistics were used to compare intervention times. It was determined that

interprofessional collaboration and communication problems could jeopardize patient safety. The following communication problems jeopardized patient care:

- Communications that were late.
- Communications that failed to communicate with all relevant individuals on the team.
- Communications that were not consistently complete and accurate.
- Communications whose purposes were not achieved.

The study demonstrated the value of utilizing interprofessional collaboration and communication and its benefits in the patient-care setting. The findings suggested that practice intervention focused research was lacking. To improve patient safety and outcomes, there needed to be a focus on collaboration and shared responsibilities.

In a research study conducted by Van Soeren, Hurlock-Chorostecki, and Reeves (2011), two questions were addressed. The first question was: How does the nurse practitioner's (NP) expanding role contribute to enhancing patient care? The second question was: What contributions do nurse practitioners make to patient care by utilizing interprofessional collaboration? A mixed-methods approach that gathered onsite tracking and observation, self-recorded logs of consultations, and focus group interviews of team members and NPs were used to gather data from Nurse Practitioners/Advanced Practice Nurses (APN). A sample of 46 NP/APNs and 243 various professionals from nine geographical locations participated. The data from the study indicated that the NP role was patient-focused and contributed to the promotion of interprofessional practice by acting as a liaison between the medical and interprofessional team. The NP was viewed as an integral member of the interprofessional team. The NP provided a central coordinating role in the delivery of care to patients to ensure that the interprofessional collaborative care was provided in a safe and effective manner.

The study contained a number of limitations: (a) self-selected participants and (b) the small sample size that can influence the qualitative power for statistical analysis. In conclusion, the results of the study illustrated how the NP role facilitated positive clinical outcomes for consumers and enhanced interprofessional practice and communication (Van Soeren et al., 2011).

Rice et al. (2010) collected 90 hours of interviews and observations to generate detailed accounts of interprofessional collaboration and relationships. The qualitative study explored interventions to improve interprofessional collaboration and communications using comparison intervention units. The data were analyzed by a diverse group of healthcare professionals, which was found to be appropriate and unique to this study. The findings indicated that IPC was important for patient outcomes, but that IPC was not a priority on the patient units due to the pace of work and interprofessional hierarchies.

Vazirani et al. (2005) conducted a study to improve communication and collaboration between healthcare providers. The study occurred over a two-year period on two nursing units. An interprofessional team approach to patient care was compared to a traditional approach to care. The authors found that interprofessional communications were improved on the interventional unit; however, there were differences in the physicians' and nurses' perceptions and definition of collaboration (Vazirani et al., 2005). In this study, Vazirani et al. (2005) identified that nurse practitioners were a good addition to healthcare teams to foster communication and collaboration. The authors of this report clearly demonstrated the impact of NP care on collaboration and communication.

Interprofessional education (IPE) parallels the emergence of research that has suggested that collaborative relationships among healthcare providers positively affect patient and family

outcomes. IPE is challenging but will help bridge the gap between education and what is required for safe practice. It is also an area to study to enhance the graduate nurse's ability to navigate the complexity of the current healthcare system.

Bernsteiner, Disch, Hall, Mayer, and Moore (2007) discussed a number of strategies to facilitate IPE. The researchers demonstrated that using IPE helped to prepare nursing students to understand the varied healthcare roles, the importance of teamwork, communication, and collaboration in the delivery of high quality, safe patient care. One strategy explored how shared learning occurs when there are alternating experiences and joint reflection by students and faculty in the IPE experience. The study supported that training future nurses to use communication and interprofessional collaboration will result in improved clinical patient outcomes.

Weller, Barrow, and Gasquoine (2011) interviewed 25 beginning doctors and nurses to identify their experiences of working together. Interviews were transcribed, entered into a qualitative analysis software package, and data were coded against a theoretical framework for healthcare team function. Areas assessed included quality of communication, shared mental models, team coordination, and communication. They also explored the interactions, activities and, issues affecting new doctors and nurses working in a hospital setting. The study confirmed the need to maintain an environment in which open communication could take place. The study also identified that interprofessional communication impacted patient safety. This study identified barriers related to interprofessional hierarchies but did recommend interventions to address the barriers. The findings of the study indicated that more rigorous research in this field is needed along with the expansion of areas related to interprofessional collaboration.

The literature was also examined for existing interprofessional collaboration assessment tools. There are a limited number of psychometrically developed tools that assess interprofessional collaboration in mental healthcare. Given the increased emphasis on interprofessional collaboration, it is important to consider tools used to measure the attitudes toward collaboration among healthcare professionals. The nurse-physician relationships have been studied using a variety of instruments. These instruments have undergone initial reliability and validity testing and include the Collaborative Practice Scale, Collaboration, and Satisfaction about Care Decisions, Intensive Care Unit Nurse-Physicians Questionnaire, Nurses Opinion Questionnaire, and the Jefferson Scale of Attitudes toward Physician-Nurse Collaboration.

In the research conducted by Ward et al. (2008), the Jefferson Scale of Attitude toward Physician-Nurse Collaboration (JSAPNC) was used to investigate the attitudes toward physician-nurse collaboration among students. The study included nursing and medical students grouped by work experience, gender, ethnicity, marital status, and future career plans. The aim of the study was to determine the validity and reliability of the JSAPNC. The author described physician-nurse collaboration as nurses and physicians cooperatively working together, sharing responsibilities for solving problems, and making decisions to formulate and carryout plans for patient care (Ward et al., 2008). The authors' research included educational preparation, maturity, and prior working experience as factors that affect collaboration. This instrument was found to be psychometrically sound to use when examining attitudes about interprofessional collaboration in the educational environment as well as in other settings, countries, and cultures.

The findings of this study provided evidence in support of the reliability and validity testing of the JSAPNC for undergraduate students; therefore, the results supported the questions posed by the authors. The Jefferson Survey of Attitudes Scale toward Physician-Nurse

Collaboration has been used to compare attitudes toward collaboration between countries and cultures (Dougherty & Larson, 2005). The studies showed a correlation between nurse-physician collaboration, positive patient outcomes, and staff satisfaction outcomes; however, it did not provide evidence-based interventions on how to foster effective interprofessional collaboration and communications. The continued testing of the instruments is necessary to support additional research on interprofessional collaboration.

Dougherty and Larson (2005) reviewed five published scales that have focused on nurse-physician collaboration and relationships. In the study, Dougherty and Larson (2005) defined collaboration as a true partnership when the power on both sides was valued by both, with recognition and acceptance of separate and combined practice spheres of activity, mutual safeguarding of the legitimate interest of each party, and a commonality of goals that is recognized by each party.

The Assessment of Interprofessional Team Collaboration Scale (AITCS) was reviewed and was found to be psychometrically sound and included discrete elements of interprofessional collaboration (Orchard et al., 2012). Results from a study performed by Orchard et al. (2012) provided evidence for internal consistency, reliability, and construct validity. The tool also was appropriate because it can be used as the basis for a quantified measurement tool allowing teams to integrate learned knowledge into their team working relationship (Orchard et al., 2012).

Interprofessional collaboration and better coordination of care for patients are essential components of the broad effort to improve healthcare quality and efficiency in the United States (National Quality Forum, 2008). Interprofessional collaboration was so important to patient care that it was one of the features used to determine whether hospitals achieved magnet status (American Nurses Credentialing Center, 2003). The effective use of interprofessional

collaboration will require healthcare professionals to move away from a service-oriented delivery system to a patient-centered collaborative approach to care.

Based upon the review of the literature and the findings, a number of conclusions can be made. Although intervention research was limited (Zwarenstein & Reeves, 2006), a number of studies indicated that programs and interventions aimed at improving interprofessional collaboration in healthcare improve patient outcomes. Sharing of clinical knowledge, skills, and work practices may be an effective way for healthcare professionals to provide patient-centered care. Educational programs proved to be successful in improving collaboration between new nurses and medical residents.

This review of the literature revealed the importance of interprofessional collaboration and interprofessional collaborative practice. The findings suggested that substantial work still needs to be accomplished to understand more clearly the benefits and challenges of interprofessional collaboration and the manner in which interprofessional collaboration affects outcomes. The critical appraisal of the articles presented is located in Appendix B.

Despite the major healthcare concern about outcomes and quality of care, outcome research is limited in the mental health setting (Gilbody, House, & Sheldon, 2002). Outcome research evaluates competing interventions that are already used in care settings and uses data collected by clinicians with the results being applied generally (Gilbody et al., 2002). Evaluating outcomes in mental health services has been an area of research that was very complex because it involved specific treatments and a combination of treatments. Recently, approaches have been used to assess outcome domains such as quality of life and symptomatology.

Method

The Johns Hopkins Nursing Evidence-Based Practice (JHNEBP) model was used to guide the implementation strategies for this clinical inquiry (Melnyk & Fineout-Overholt, 2011). The Lippitt's theory (Mitchell, 2013) of change provided the framework for managing and evaluating the project. Lippitt's theory incorporated a more detailed plan of how to generate change and included seven phases of planned change. According to Lippitt's theory (Mitchell, 2013), change is defined as a consciously planned effort that moves a system, organization, or an individual in a new direction. Therefore, it can be used with an individual, group, or institution and is appropriate for this scholarly project. This theory focused more on the role and responsibility of the thing causing the change, rather than focusing on the change, and it also used four elements of the nursing process: (a) assessment, (b) planning, (c) implementation, and (d) evaluation. To start a change process, it is necessary to understand the reason for the change. Lippitt's change management model (Mitchell, 2013) stated that a motivation for change must be generated before change can occur. The intent was to obtain a comprehensive assessment about the use of IPC by collecting IPC data before and after an interprofessional collaboration education learning and feedback session.

Setting

The DNP quality improvement project was conducted in an outpatient mental health center that provided assessments, treatments, and support to adults diagnosed with mental health disorders and addictive disorders. The community center employed 50 full and/or part-time healthcare professionals. The project was discussed with the nursing department, starting with the site preceptor. After obtaining the support and approval of the nursing department, administrative approval was obtained. This was accomplished by attending the organization's monthly meeting and presenting the project information to all the stakeholders of the organization and the senior

administrator. The stakeholders approved the project but requested that the project be brief, time sensitive, and not interrupt the flow of work. The project was discussed weekly at the morning huddles and was advertised using flyers posted at the nurses' station and in the breakrooms. All of the stakeholders were invited to participate in the clinical project. After receiving stakeholder approval and support, the Institutional Review Board's (IRB) approval was obtained. All of the clinical inquiry procedures and survey were reviewed by the appropriate IRB. It was determined that IRB oversight and review were not required. In addition, confidentiality, voluntary, and anonymous participation were applied. The initial assessment of the knowledge and understanding about IPC was accomplished through observations at the morning huddle meetings. The huddles only included the nursing department healthcare professionals, the psychiatrist, and on some days the medical doctor.

Assessment Instrument

Based upon the preceding literature review, assessing or measuring the knowledge, understanding, and utilization of interprofessional collaboration were accomplished by using the assessment of interprofessional team collaboration scale (AITCS) questionnaire (Orchard et al., 2012). Verbal and written approval to use the AITCS was also obtained from the AITCS author. The AITCS is a diagnostic instrument designed to measure the interprofessional collaboration among team members (Orchard et al., 2012). The AITCS contained 37 statements describing teamwork processes and key elements of interprofessional collaboration. The interprofessional collaboration assessment tool included three essential elements or subscales: (a) partnership/ shared decision-making, (b) cooperation, and (c) coordination. Orchard et al. (2012) believed that the focus of interprofessional collaboration included patient involvement; therefore, patient-centered interprofessional collaborative care was included in each of the subscales.

Partnership and shared decision-making within the project involved recognizing and respecting the role and contributions of healthcare professionals and working together to explore treatment options and mutually agreed upon decisions (Orchard et al., 2012). Cooperation existed when each healthcare professional's knowledge, skills, and expertise were valued, respected, and acknowledged, thereby achieving quality outcomes by meeting the needs of the patients (Orchard et al., 2012). Coordination was defined as working together harmoniously to obtain the necessary time and resources needed to provide quality care.

Quantitative data were collected using the self-administered AITCS survey. The tool consisted of 37 questions (three subscales) and assessed interprofessional collaboration using a 5-point Likert scale that ranged from 1=*never*; 2= *rarely*; 3= *occasionally*; 4= *most of the time*; to 5= *always* (Orchard et al., 2012). The survey took 15-20 minutes to complete. The pre- and post-AITCS questionnaire (Orchard et al., 2012) was used to collect data and was administered to the healthcare professionals employed at the mental health community clinic.

Quality Improvement Survey Procedure and Interventions

The data collection and interprofessional collaboration education training sessions were implemented over an eight-week period. The mental health clinic was a complex environment with several different service departments. The healthcare professionals included in the interprofessional collaboration education sessions were the psychiatrists, general practitioners, nurse practitioners, nurses, case managers, social workers, counselors, medical office specialists, and reimbursement staff. The interprofessional collaboration education sessions and data collection were accomplished by attending the following department team meetings:

- In-house case managers
- Field case managers

- Medical office specialist
- Integrated care
- Healthcare providers

The interventions included administration of the AITCS and interprofessional collaboration education learning sessions and feedback sessions. According to Greenfield et al. (2010), interprofessional learning and interprofessional practice are strategies for healthcare services striving to improve patient care. As requested by the stakeholders, the interventions were simple, non-interruptive, brief, and fit seamlessly into the flow of the organization. Data collection methods included the AITCS questionnaire, semi-structured interviews with the center's healthcare professionals, and information from public documents.

The AITCS was completed before the orientation and interprofessional collaboration education sessions were conducted as well as after the completion of the education sessions. The healthcare professionals who attended the team meetings were all invited to participate in the clinical project and self-recruited to complete the AITCS questionnaire. Fifteen-minute orientation and education learning sessions were used to promote understanding about IPC and collaborative practices. The orientation and education dialogue included the following aspects: (a) self-introductions; (b) introduction and information about the DNP project; (c) a verbal and written definition of the concepts and key elements used for the project (interprofessional collaboration, partnership, shared decision-making, coordination, and cooperation); (d) a description of the survey; (e) participation information; (f) and what to do with the completed surveys and feedback.

At the end of the interprofessional education learning session, there was an opportunity for questions and feedback. The AITCS was completed on the participant's own time.

Envelopes were given to each department director for collecting the completed surveys. A total of 25 healthcare professionals completed and returned the pre (prior to the interprofessional collaboration education sessions) and post (after the interprofessional collaboration education sessions) AITSC questionnaire. The data collection interventions are summarized in Appendix C.

The written comments from the initial or pre-AITCS participants were minimal and included the following:

- "I feel very separated and isolated."
- "Low on the totem pole as far as decision-making goes."
- "Plans are not always known."

After the initial (pre education sessions) surveys were conducted, interprofessional collaboration education and feedback sessions were provided at the same department meetings to clarify and define IPC as it was being used for the project, along with defining the essential elements of IPC (partnership/shared decision-making, cooperation, coordination). The sessions also included the opportunity for feedback and discussion about roles, trust, and perceptions about the use of interprofessional collaboration at the center. The interprofessional collaboration education sessions were expected to enhance the understanding and utilization of partnership, shared decision-making, cooperation, and coordination that ultimately should affect patient outcomes (Orchard et al., 2012). The evidence-based interventions are summarized in Appendix D. The interprofessional education sessions occurred at each of the previously stated department meetings after the initial surveys were administered. Five structured interprofessional collaboration learning sessions were conducted with the center's healthcare professionals.

In addition, observations during structured department meetings, morning huddles, and clinic department interactions were conducted before and after the educational sessions. The observational experiences included attending the morning huddles, conducting semi-structured interviews, and observing clinical outcomes. The patient's outcomes were assessed in real time via conducting semi-structured interviews, gathering referral data, and performing observations with the nurse practitioner and any other mental health clinic health professionals. Outcomes were also assessed by observing the health professionals' interactions at team meetings and the clinic's team experiences and referrals. The following questions were used to assess outcomes:

- Were the patients offered and did they receive case management services at the time of the clinic visit?
- Did the patient use emergency room services between clinic visits?
- Was the patient hospitalized between clinic visits?

Based upon the observations, it was identified that the organization's utilization of interprofessional collaboration was limited. Each department or service had its own specific monthly department meeting, but the clinic did not have a combined monthly organization meeting. The primary reason was lack of time. The findings were reported to the organization, participants, and stakeholders using a PowerPoint presentation. Posters were used to encourage and to remind the healthcare providers to integrate interprofessional collaboration into their daily patient care activities.

Data Analysis

The survey data analysis and narrative interpretation were processed using Statistic Solutions (2014). The following tests were performed:

- The respondents' frequencies and percentages for nominal variables and demographics;
- Cronbach alpha reliability testing;
- Descriptive statistics for the three key characteristics of interprofessional collaboration.

The mental health team members consisted of psychiatric nurse practitioners (advance practice nurses), clinical practitioners, licensed vocational nurses, medical assistants, case managers, social workers, counselors, psychiatrist, physician, medical office specialist, and reimbursement specialists. A Cronbach alpha reliability analysis was conducted on three scales: (a) partnership/shared decision-making, (b) cooperation, and (c) coordination. The Cronbach alpha reliability was assessed using George and Mallery's (2010) guidelines on reliability, where alpha values greater than .90 indicated excellent reliability, alpha values greater than .80 indicated good reliability, alpha values greater than .70 indicated acceptable reliability, alpha values greater than .60 indicated questionable reliability, and alpha values less than .60 indicated unacceptable reliability. Results of reliability testing showed that partnership had excellent reliability ($\alpha = .91$). Results of reliability testing showed that cooperation had excellent reliability ($\alpha = .95$). Results of reliability testing showed that coordination had good reliability ($\alpha = .81$). Results of Cronbach alpha reliability testing are presented in Appendix E.

The majority of participants fell into the category of female for gender (19 or 76%). Many of the participants fell into the age category of 20 to 29 (8 or 33%) or 30 to 39 (11 or

46%). The majority of participants fell into the category of full-time for employment (25 or 100%). The majority of participants fell into the category of 0 for certificate (19 or 76%). The most frequent response for discipline categories was counselor (4 or 16%). The participants fell into the category of 1 to 5 years for years in practice (8 or 38%) or 1 to 5 years for years with current team (10 or 45%). Other participants were in the category of 0 to 1 year for years with current team (9 or 41%). Frequencies and percentages for respondent characteristics are presented in Appendix F.

Descriptive statistics were used to describe and explore the main characteristics of the interprofessional collaboration variables: (a) shared decision-making/partnership, (b) coordination, and (c) cooperation. For partnership/shared decision-making the pre- and post-responses ranged from 3.26 to 4.89, with an average observation of 4.16 (*SD* = 0.49). For cooperation, the pre- and post-responses ranged from 2.64 to 5.00, with an average of 4.20 (*SD* = 0.62). For coordination the pre- and post-responses ranged from 2.14 to 5.00, with an average observation of 3.74 (*SD* = 0.78). The pre- and post-survey means and standard deviations data for the subscales are summarized and presented in Appendices G and H. This data also shows the results relevant to the projects aim of enhancing interprofessional collaboration

Findings

The evidence-based interventions occurred over an eight-week period. The project included five different departments, five education learning and feedback sessions, and the administration of the AITCS survey. The request to complete the AITCS survey and the interprofessional collaboration orientation and education learning sessions were all well received by the healthcare professionals. The AITCS questionnaire assessed the healthcare respondent's

level of interprofessional collaboration within the three subscales of partnership/shared decision-making, cooperation, and coordination.

The findings revealed that many of the healthcare professionals utilized a degree of interprofessional collaboration in the areas of partnership/shared decision-making, cooperation, and coordination. Examination of the scores and the discipline responses indicated that many of the healthcare professionals did use interprofessional collaboration on some level at the time of the initial AITSC survey. The nursing department, physician, psychiatrist, medical office specialist, and the reimbursement professionals scored higher in partnership/shared decision-making and cooperation before and after the learning sessions. All of the healthcare professional respondents had significantly lower scores in the coordination subscale before the interprofessional collaboration orientation and education sessions. The respondents' scores on the AITCS showed moderate changes in the key characteristics of partnership/shared decision-making, cooperation, and coordination after the interprofessional collaboration education learning sessions.

Therefore, the respondent scores on the AITCS did indicate an increase in all of the three subscales after the interprofessional collaboration education learning sessions. The scores did increase after the IPC education sessions. The results identified the discipline specific perspectives about interprofessional collaboration and provided indicators and dimensions for assessing interprofessional collaboration. Results of reliability testing suggested that partnership, shared-decision-making, and cooperation were perceived by the respondents as effective components of interprofessional collaboration. Results indicated that there was inadequate coordination in the work environment that included team structure and team processes, so

coordination was identified as a characteristic or subscale of interprofessional collaboration that required continued attention and improvement. The findings are summarized in Appendix I.

Assessing interprofessional collaboration was difficult due to the limited number of tools specifically designed to measure IPC and patient outcomes in the mental health community settings. The AITCS successfully evaluated the interprofessional collaboration among team members in the different departments and the integration of patient involvement as part of the team practice.

Overall, the respondent scores indicated that the IPC orientation and educational sessions enhanced interprofessional collaboration. IPC coordination of care was identified as an area of concern as it related to patient outcomes. An IPC educational intervention was designed to assist the staff in utilizing interprofessional interventions to coordinate care in an effort to reduce or avoid emergency department visits and hospitalizations as well as to improve utilization of referral services of case management. Case management is a term used to describe the assessing, coordinating, and providing of different areas of treatment to patients.

Because of the IPC educational sessions, the mental health professionals' morning huddles and team meeting agenda's included information about patients' case management referrals, needed services, emergency room visits, and inpatient hospitalizations between clinic visits. After the IPC sessions, the clinic's healthcare professionals reported that after the completion of the intake paperwork, the patient needs were identified, and the patient was then assisted in accessing community resources and other psychiatric services. The quantitative and anecdotal data indicated that coordinated care resulted in minimal-to-no inpatient and emergency department visits between clinic visits. The data also showed an increased adherence to a medication regimen and an improvement in sleep patterns and quality of life. Appendix J

summarizes the IPC coordinated care services and outcomes assessed after the IPC educational intervention.

There are a limited number of acceptable outcome measures that are recognized or endorsed by relevant national entities (Substance Abuse and Mental Health Services Administration [SAMSHA], 2010). The national behavioral health quality framework was used as a guiding document for identifying key quality measures of coordination of care (SAMSHA, 2010). The AITSC key elements or subscales integrated constructs of patient-centered interprofessional collaboration into each of the subscales (Orchard et al., 2012).

This project's goal was to assess and discuss the association of interprofessional collaboration and patient outcomes in the mental health community setting. Identifying how the intervention of interprofessional collaboration education affected patient outcomes was a complicated endeavor and was not adequately captured in the project. Patient-centered care involves the patient in determining outcomes. Patients are important members of interprofessional collaboration. The mental health patient did not participate in the IPC survey; therefore, the patient's understanding, perspective, and involvement in interprofessional collaborative care were not assessed.

Research that includes and engages the patients as part of the team is needed in the mental health setting. In addition, research is needed that identifies evidence-based interprofessional collaborative interventions that are effective in improving patient outcomes in the mental health community setting. A method for assessing the quality of coordination of services is also needed.

The project was considered successful in bringing about a sharing of information and understanding about interprofessional collaboration among healthcare professionals in the

different disciplines. For example, the morning huddles that initially consisted of nursing personnel, the psychiatrist, and the medical doctor have added a representative from case management. The team initially discussed nursing care needs, but now includes information about preventive care needs, referrals, hospitalizations, and emergency department visits. As a result, the project created conversations and initiatives about improving coordination of services.

The healthcare professionals were the essential change agents because of their ability to promote and enhance the department and organizational interprofessional collaboration practices. The change plan focused on the healthcare organization and human behavior factors. Successful implementation required involvement by the entire team in order to create a sense of ownership, a desire for success, the confidence to challenge obstacles, and learning with and from one another.

The IPC strategies were designed to assess and enhance the institutionalization of interprofessional collaboration as well as improve patient outcomes. Introducing non-intrusive evidence-based interventions into the mental health community setting was found to be well received and effective. Continued assessment, education learning sessions, and commitment to interprofessional collaboration by all healthcare professionals at all levels may be necessary to maintain a substantial change.

Discussion

Calls from policymakers, professional organizations, and the public for IPC to improve patient safety are significant and was one of the goals of the project. The project goal was to improve interprofessional collaboration, provide the organization with information about the actual practice of interprofessional collaboration, and to discuss the association of interprofessional collaboration and patient outcomes. The project goal was partially

accomplished by using an IPC assessment tool and interprofessional learning sessions at staff meetings. An executive summary was also provided to the organization at the end of the project.

Conclusion

Interprofessional collaboration is a complex phenomenon. The clinical project focused on issues that were concerns of all the disciplines: (a) partnership/shared-decision-making, (b) cooperation, and (c) coordination. By using the AITSC, the project explored the mental health community healthcare employees' perception of interprofessional collaboration. The results of the survey suggested that IPC and coordination in the mental health clinical practice setting were in need of improvement. This demonstrated the need for interprofessional collaboration coordination and support. Results from the clinical inquiry indicated that maximizing interprofessional collaboration and coordination hold promise for improving patient care and working relationships. In addition, the findings indicated that an interprofessional collaboration team model that incorporated partnership/shared decision-making, coordination, and cooperation may influence employee satisfaction that can form a foundation to improve patient outcomes.

To facilitate patient-centered care, improving coordination of care and interprofessional collaboration were identified as important approaches and areas of concern. In essence, findings suggested that changes may be necessary at the mental health community center to implement effective coordination of care associated with interprofessional collaboration. Without interprofessional collaboration, team members may not reach agreement among themselves or with patients about important decisions, or interprofessional teams may make decisions on behalf of patients without their involvement. This demonstrated the need for IPC support and implementation at many levels. Calls from policymakers, professional organizations, and the public for IPC to improve patient safety was significant and the essential goal of the project.

Evidence of the efficacy of programs to improve these processes must be established to justify their implementation and sustained use. Successful implementation required involvement by the entire team in order to create a sense of ownership, a desire for success, the confidence to challenge obstacles, and to learn with and from one another. The clinical inquiry identified the need for research and how the utilization of interprofessional collaboration affected patient outcomes in the mental health community setting.

The clinical project involved a variety of health and social care workers who provided care to the mental health patient. Regardless of the discipline and years of experience healthcare workers, in all areas, who participated in the survey value partnership, shared decision-making, cooperation, and coordination. Although it was becoming widely accepted that no single discipline can provide complete care for patients, interprofessional collaboration was not always achieved. Successful interprofessional collaboration in practice required acknowledging and legitimizing multiple ways of knowing, displacing dominant perspectives to surface alternatives that traditionally may have operated as marginalized and subjugated (Ewashen, McInnis-Perry, & Murphy, 2013). More attention should be given to interprofessional collaboration in the mental health community center. Just putting healthcare workers together will not necessarily produce teamwork (Orchard et al., 2012).

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Appendix A. Stakeholder Planning Sheet

Stakeholder Name	Commun. Approach	Key Interest and Issues	Current Status	Desired Support Desired project role (if any)	Action Desired (if any) Unable to determine at this time	Messages Needed	Action and Communication
Patients,	Keep Satisfied	High/High	Supporter	High	Unable to determine at this time	Quality care and outcomes. Increase patient satisfaction	Vulnerable population Not surveyed
Family/ Significant Others	Keep Satisfied	High/High	Supporter	High	Unable to determine at this time	Quality care and outcomes. Increase patient satisfaction	Written information about process and flyers
CN0	Keep Satisfied	High/High	Supporter	High	Unable to determine at this time	Delivery of patient safe care and positive outcomes	Department Meetings
Capella University	Keep Satisfied	High/High	Supporter	High	Unable to determine at this time	Positive outcomes	Required capstone documentation forms
Nursing Staff (all levels),	Manage Closely	High/High	Supporter	High	Unable to determine at this time	Nursing excellence/ safe quality care/patient satisfaction	Department education orientation and learning sessions. PowerPoint presentations
Case Managers, Social Workers,	Manage Closely	High/High	Advocate	High	Unable to determine at this time	Increase utilization of community resources	Department education orientation and learning sessions. PowerPoint presentations
Technicians	Manage Closely	Low/less	Neutral	High	Unable to determine at this time	Increase knowledge and confidence	Dept. education orientation and learning sessions. PowerPoint presentations

Appendix A (Continued)

Stakeholder Name	Commun. Approach	Key Interest and Issues	Current Status	Desired Support Desired project role (if any)	Action Desired (if any) Unable to determine at this time	Messages Needed	Action and Communication
Admin. Organization	Keep Informed	High/High	Supporter	High	Unable to determine at this time	Increase profitability continued reputation as center of excellence	Department education orientation and learning sessions. PowerPoint presentations Executive summary
Physicians	Keep Informed	High/High	Supporter	High	Unable to determine at this time	Safe quality care/patient satisfaction	Department education orientation and learning sessions. PowerPoint presentations
Community Partners	Keep Informed	Low/High	Advocate	Medium	Unable to determine at this time	Increase utilization of community referrals and utilization	Executive Summary
Ancillary Staff, and Departments	Monitor	Low/Less	Advocate	Medium	Unable to determine at this time	Increase in information about role as a member of team	Unit/Dept. meeting Department education orientation and learning sessions. PowerPoint presentations

Note. Planning sheet was developed using MindTools Stakeholder Analysis Tool.

Appendix B. Evidence Table

Citation	Conceptual Framework	Design/ Model	Sample/ Setting	Major Variables Studied and Definitions	Finding	Level of Evidence
Bernsteiner, Disch, Hall, Mayer, and Moore (2007)	NONE		School of Health professions Hospitals Adults			V
Dingley, Daugherty, Derieg, and Persing (2005)			Integrated urban medical center on the medical intensive care unit, an acute care unit and the psychiatric units			II
O'Daniel and Rosenstein (2008)	NONE	Checklist Standard Communication tools team training	Nurses, doctors, techs clinical settings		Lack of empirical data	I
Van Soeren, Hurlock-Chorostecki, and Reeves (2011)	NONE	Mixed which gathered qualitative & quantitative data into Excel, summary frequency tables, triangulation & inductive thematic approach	NP/APN Hospitals Self-reporting Focus group Demographics Hospital size		Reports how NPs contribute to enhancing patient care; NP contribution through improved IP practice	II
Ward et al. (2008)	NONE	Survey JSAPNC JSE	Under graduate students, ADN, BSN Programs		Supports the validity and reliability of JSAPNC	III

SR = Systematic review; MA = Meta analysis.
Adapted from Melnyk, B. M. & Fineout-Overholt, E. (2011). Evidence-based practice in nursing and healthcare: A guide to best practice (2nd ed.) Philadelphia, PA, Lippincott.

Appendix C. Quality Improvement Data Collection Interventions

Problem	Intervention	Stakeholder	Delivery Method	Timeline
•Ineffective interprofessional collaboration and lack of understanding about interprofessional collaboration and roles •The restructuring of the mental health services which included the addition of the three Psychiatric Nurse Practitioners	•Observations during morning huddles •Conducted an internal pre and post assessment to identify utilization of IPC •Enhanced the use IPC by sharing the results of the questionnaire with each department and provided an executive summary to the organization. *Determined the impact of IPC on the patient outcome by assessing the utilization of ER or hospital admissions between the three-month clinic visits •Evaluation-IPC can positively impact patient outcomes	Nursing Staff (all levels), •All Nursing department staff •Psychiatrist •Medical Doctor •Case Managers, •Social Workers, •Physicians, •Community Partners, & •Capella University	•Direct observation •AITCS Survey tool & Department Meetings •Interprofessional education at the monthly department meetings •A system of education to clarify IPC definition, responsibilities and current level of IPC utilized in at the center •Collaborative huddles• •Sharing information effectively	•Spring-Summer 2015 • A final PowerPoint presentation with a written abstract was presented.

Appendix D. Evidence-Based Interventions

Interprofessional Education Learning Session Content and Intervention	Rice et al. (2010)	Vazirani et al. (2005)	Weller et al. (2011)
Formally introduce self and team members			X
Role performance and identification: Have all participants state the professional role in the team and describe what it means in relation to patient-centered care			X
Educational learning in-services about sharing knowledge, capabilities, and skills of other health professionals			
Learning sessions about interprofessional collaboration, partnership, shared-decision-making, cooperation and coordination			X
Elicit feedback from other healthcare team members	X	X	

Appendix E. Cronbach Alpha Reliability Testing Results and Means and Standard Deviations for Continuous Variables

Scale	No. of Items	α
Partnership/SDM	19	.91
Cooperation	11	.95
Coordination	7	.81

Appendix F. Frequencies and Percentages for Nominal Variables and Demographic Table

Variables	*N*	%
Gender		
Female	19	76
Male	6	24
Age		
20-29	8	33
30-39	11	46
40-49	2	8
50-59	2	8
60-69	1	4
Employment		
Full-Time	25	100
Certificate		
No Certificate	19	76
Certificate	6	24
Bachelor s Degree		
No Bachelor’s Degree	23	92
Bachelor's Degree	2	8
Diploma		
No Diploma	20	80
Diploma	5	20
Master s Degree		
No Master’s Degree	14	56
Master's Degree	11	44
Discipline Categories		
Case Manager	2	8
Clinical Practitioner	2	8
Counselor	4	16
Licensed professional counselor	1	4
MA	1	4
Medical Assistant	1	4
Medical Office Specialist	3	12
Nurse Practitioner	3	12
Nursing: Practical Nurse	1	4
other	3	12
Physician(Medicine)	1	4
Reimbursement	1	4
Social Worker	1	4

Appendix F. (Continued)

Variables	*N*	%
Years in Practice		
0-1 years	6	29
11+ years	2	10
1-5 Years	8	38
2-5 years	1	5
5-10 years	2	10
N/A	2	10
Years with current team		
0-1 years	9	41
1-5 Years	10	45
5-10 years	1	5
N/A	2	10

Note. Due to rounding error, percentages may not add up to 100.

Appendix G. Disciplines and the Subscales of Interprofessional Collaboration

AITCS Results Before the IPC Education Sessions

Discipline Categories	Mean Partnership/SDM	Mean Cooperation	Mean Coordination
Case Manager	3.39	3.44	2.33
Clinical Practitioner	3.83	3.57	2.82
Counselor	3.84	3.82	2.82
Licensed Professional Counselor	4.05	3.91	3.29
Medical Assistant	3.84	4.00	3.57
Medical Office Specialist	4.18	4.23	3.71
No Discipline Specified	4.19	4.24	4.00
Nurse Practitioner (APN)	4.19	4.27	4.05
Licensed Vocational Nurse	4.28	4.27	4.14
Physician/Psychiatrist	4.11	4.73	3.14
Reimbursement	4.63	5.00	4.43
Social Worker	4.05	3.91	4.00

SDM = Shared decision-making
AITCS results *before* the interprofessional collaboration education learning session.

Appendix H. Disciplines and the Subscales of Interprofessional Collaboration

AITCS Results After the IPC Education Sessions

Discipline Categories	Mean Partnership/SDM	Mean Cooperation	Mean Coordination
Case Manager	4.18	4.00	3.57
Clinical Practitioner	4.20	4.64	3.71
Counselor	3.83	3.57	3.14
Licensed Professional Counselor	4.42	4.27	3.29
Medical Assistant	4.11	4.23	4.29
Medical Office Specialist	4.28	4.73	4.24
No Discipline Specified	4.61	4.27	4.43
Nurse Practitioner (APN)	4.20	4.24	4.05
Licensed Vocational Nurse	4.63	5.00	4.14
Physician/Psychiatrist	4.61	3.82	4.29
Reimbursement	4.74	5.00	5.00
Social Worker	4.74	5.00	5.00

SDM = Shared decision-making.

Appendix I. Descriptive Statistics Were Used to Describe the Subscales of IPC Before and After the Interprofessional Collaborative Education Session

Education Intervention	Mean Partnership/SDM	Mean Cooperation	Mean Coordination
No	4.07	4.07	3.50
Yes	4.17	4.31	3.88

SDM = Shared decision-making.
M (mean) = The average value of a scale-level variable.

Appendix J. Interprofessional Collaboration and Outcomes Measures After Education Session

IPC Care	Patient Outcome Measures
Medication therapy	Medication adherence
Group/talk therapy	Improvement in quality of life
Referrals and access to other services	and mental health symptoms
	Emergency room visits
	Inpatient hospitalization
	Utilization of referral services

Appendix K. Statement of Original Work

Academic Honesty Policy

Capella University's Academic Honesty Policy (3.01.01) holds learners accountable for the integrity of work they submit, which includes but is not limited to discussion postings, assignments, comprehensive exams, and the dissertation or capstone project.

Established in the Policy are the expectations for original work, rationale for the policy, definition of terms that pertain to academic honesty and original work, and disciplinary consequences of academic dishonesty. Also stated in the Policy is the expectation that learners will follow APA rules for citing another person's ideas or works.

The following standards for original work and definition of *plagiarism* are discussed in the Policy:

> Learners are expected to be the sole authors of their work and to acknowledge the authorship of others' work through proper citation and reference. Use of another person's ideas, including another learner's, without proper reference or citation constitutes plagiarism and academic dishonesty and is prohibited conduct. (p. 1)
>
> Plagiarism is one example of academic dishonesty. Plagiarism is presenting someone else's ideas or work as your own. Plagiarism also includes copying verbatim or rephrasing ideas without properly acknowledging the source by author, date, and publication medium. (p. 2)

Capella University's Research Misconduct Policy (3.03.06) holds learners accountable for research integrity. What constitutes research misconduct is discussed in the Policy:

> Research misconduct includes but is not limited to falsification, fabrication, plagiarism, misappropriation, or other practices that seriously deviate from those that are commonly accepted within the academic community for proposing, conducting, or reviewing research, or in reporting research results. (p. 1)

Learners failing to abide by these policies are subject to consequences, including but not limited to dismissal or revocation of the degree.

Statement of Original Work and Signature

I have read, understood, and abided by Capella University's Academic Honesty Policy (3.01.01) and Research Misconduct Policy (3.03.06), including the Policy Statements, Rationale, and Definitions.

I attest that this dissertation or capstone project is my own work. Where I have used the ideas or words of others, I have paraphrased, summarized, or used direct quotes following the guidelines set forth in the APA *Publication Manual*.

Learner name and date	Dorothy Williams, December 1, 2015
Mentor name and school	Catherine Suttle, PhD, School of Nursing and Health Sciences