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Implementation of a student-led interprofessional education clinic at a safety net community health center

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ABSTRACT

Background: Interprofessional education (IPE) through multidisciplinary student-led patient care in the free clinic setting teaches students collaborative practice.
Purpose: To characterize the role of an IPE clinic at a free community health center.
Methods: A retrospective chart review identified common intervention types made by the IPE team over a 2-year period and their rates of follow through. Intervention types were: 'Recommendation for a Medication Therapy Related Change', 'Referral', 'Vaccination', 'Release of Records', 'Laboratory Work', 'Scheduling an Appointment', 'Education', 'Screening', and 'Assistance to Obtain Medication/Treatment'.
Results: There were 14 patients, 25 clinic visits, and 175 interventions. The most common intervention types were 'Referrals' (32%) and 'Education' (30.86%). Those with the highest follow through rates were 'Screenings' (100%), 'Education' (88.89%) and 'Assistance to Obtain Medication/Treatment' (83.33%).
Discussion: The wide range of intervention types and high follow through rates on key types made the IPE clinic a positive addition. Further research may determine its impact on clinical outcomes.

1. Introduction

Interprofessional collaboration is defined by the Canadian Interprofessional Health Collaborative as "a partnership between a team of health providers and a client in a participatory, collaborative, and coordinated approach to shared decision-making around health and social issues".[1]

Similar to interprofessional collaboration is collaborative practice in health care, which according to the World Health Organization (WHO), "occurs when multiple health workers provide comprehensive services by working together synergistically along with patients, their families, carers and communities to deliver the highest quality of care across settings". A recent study examined global case studies exemplifying this definition of collaborative practice. It was found that across all the case studies, collaborative practice was important in facilitating prompt, appropriate, and cost-effective treatment. Collaborative practice in these case studies typically involved regular team meetings in which common goals and management plans for patients were discussed and negotiated. The benefits of collaborative practice were apparent, particularly in those patients with chronic disorders, mental illnesses, and social conditions.[2]

Understanding the importance of collaborative practice in improving patient care, an increasing number of institutions have made interprofessional education (IPE) for their students a priority. The American Association of Colleges of Pharmacy (AACP) Task Force has stated that IPE "involves educators and learners from two or more health professions and their foundational disciplines who jointly create and foster a collaborative learning environment" and that "the goal of these efforts is to develop knowledge, skills and attitudes that result in interprofessional team behaviors and competence".[3] A systematic review analyzing interprofessional education in the primary, outpatient, or ambulatory care settings found that participating students appeared to have improved their teamwork skills and knowledge of the roles of other disciplines.[4]

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Another study investigated the effect of an interprofessional service-learning course at The Ohio State University on its students' Interprofessional Education Collaborative (IPEC) competencies. These competencies are divided into four domains (Values and Ethics, Roles and Responsibilities, Interprofessional Communication, and Teams and Teamwork). The course involved both providing patient care in a student-run free clinic and bi-weekly workshops focused on interprofessional aspects (e.g., communication skills, team dynamics, reflection on experiences and challenges). Upon completion of the course, students demonstrated significant improvement in all four domains.[5]

Student-run free clinics have also been shown to improve patient clinical outcomes. For example, a free clinic associated with Texas A&M University has an interprofessional team that provides diabetes focused medical care for its patients. The team consists of a physician, clinical pharmacist, full time nurse practitioner, and several pre-medicine, nursing, and pharmacy students. In addition to interdisciplinary care in the clinic, the program also schedules team-building exercises for participating students. A randomized controlled study demonstrated that this program was effective in significantly improving hemoglobin A1C by 10%, systolic blood pressure by 9%, and triglycerides by 62 .6%.[6]

Established in 2000, the Mercy Health Clinic (MHC) is a non-sectarian, non-profit, community health clinic that serves uninsured, low-income, primarily Latino adult residents of Montgomery County, Maryland. MHC provides care to patients through numerous specialty clinics (e.g., cardiology, endocrinology, gynecology, psychiatry, medication therapy management) in addition to primary medical care and health education. In 2014, MHC implemented an interprofessional education (IPE) clinic with a team of health professions students from the University of Maryland Baltimore and University of Maryland Baltimore County and their licensed preceptors.

While current literature on interprofessional, student-run free clinics shows improvement in IPEC competencies and to some extent, patient clinical outcomes, it is limited in studies that characterize the specific types of interventions an interprofessional team of students recommends. It is important to address what exactly is being done by the team that may ultimately contribute to student learning and positive patient outcomes. This characterization helps to lay the foundation for development of a successful student-run free clinic model. Therefore, the purpose of this study is to identify common categories of interventions made in the IPE clinic at MHC and their rates of follow through.

2. Materials and methods

The methods for this study were reviewed and approved by the University of Maryland, Baltimore Institutional Review Board (IRB). The methods are explained in two parts, the formation and structure of the IPE clinic, and the electronic medical record (EMR) data collection and analysis.

2.1. IPE clinic formation and structure

The first IPE clinic was held in October 2014. Data for this study were collected from the clinic's inception through April 2016. This 2-year period was divided into 4 semesters: Fall 2014, Spring 2015, Fall 2015, and Spring 2016. The total number of IPE sessions held during each semester, and for each patient, varied depending on factors such as number of patient volunteers, perceived patient need, scheduling conflicts, and the availabilities of students from each of the disciplines.

The IPE clinic had two teams of students; each team had one pharmacy student (from the University of Maryland Baltimore School of Pharmacy), one social work student (from the University of Maryland Baltimore School of Social Work or the University of Maryland Baltimore County) and one or two nursing students (from the University of Maryland Baltimore School of Nursing). Pharmacy students were in the last of four years of the Doctor of Pharmacy program; graduate social work students were in either year of their two-year masters of social work program; undergraduate social work students were in their final year of study; and nursing students were in their last year of the RN-BSN program. New pharmacy students rotated to the clinic every 10–12 weeks, new social work students rotated each year, and new nursing students rotated each semester. Each team was supervised by a professional, licensed preceptor in either the pharmacy, social work, or nursing field.

Patient participation in the IPE clinic was voluntary. Those patients with complex medical or social needs were referred to the IPE clinic by their primary care provider (PCP). The two IPE teams saw different patients during separate appointments. Prior to each appointment, students of the same profession on a team met separately to identify points of concern spanning a wide range of medical, functional, and psychosocial issues through review of the patient's chart. Afterwards, all students within a team convened in a "huddle" to discuss their concerns, decide on their top three priorities, and determine which students will lead specific points of the conversation with the patient.

The IPE team then met with the patient to further assess the patient's care needs and their understanding and management of their illness. The team discussed both its own priorities that were agreed on during the "huddle" as well as items of concern identified by the patient. This was followed by a short, private debrief among the students and preceptor to discuss a plan for the patient. After the debrief, the team again met with the patient to review with them the plan. If at the end of the session the team believed a follow up IPE visit is needed and the patient is willing to return, a future IPE visit was scheduled. Each IPE visit with a patient lasted a total of 60–90 min. Following the visit, members of the IPE team created a SOAP (subjective/objective/assessment/plan) note in the patient's electronic medical record (EMR) to document their encounter.

2.2. Electronic medical record data collection

Mercy Health Clinic uses eClinicalWorks® as its electronic medical record (EMR) platform. Prior to data collection, the following categories of patient interventions were defined: 'Recommendation for a Medication Therapy Related Change' (further classified as either 'Change in Dose', 'Initiation of Therapy', or 'Discontinuation of Therapy'), 'Referral' (further classified as either 'Healthcare Related Referral', 'Healthcare Related Referral Plus Appointment', or 'Social Work Referral'), 'Vaccination', 'Release of Records', 'Laboratory Work', 'Scheduling an Appointment' (further classified as either 'Scheduling an IPE Appointment' or 'Scheduling a PCP Appointment'), 'Education', 'Screening', and 'Assistance to Obtain Medication/Treatment'.

All SOAP notes written by the IPE team were reviewed independently, by two study investigators, for patients who had at least one documented IPE visit. These notes were used to determine what interventions were recommended during each visit, categorize the interventions, and assess if recommended follow up interventions were completed. Additionally, follow through on interventions was determined through review of the EMR for the list of scheduled visits that the patient attended (e.g., nutrition, behavioral health, medication therapy management, primary care), progress notes from these visits, telephone encounters, laboratory work, imaging history, and release forms.