BRIEF
REPORTS

Impact of Interprofessional Care Conferences Across Primary Care and Mental Health Organizations on Family Medicine Resident Learning

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BACKGROUND AND OBJECTIVES: Patients with severe mental illness often lack care coordination between primary care and mental health providers which can negatively impact patient outcomes. Team-based care is integral in the effective management of patients with multiple comorbidities, with the family physician central in coordinating holistic care. Family medicine residency programs must provide models of effective interprofessional collaboration and mental health treatment to prepare residents to navigate an evolving health care landscape. The objective of this study was to evaluate family medicine residents' learning about providing holistic care with an interprofessional team and medication safety monitoring from the interprofessional cross-organizational care conference experience.

METHODS: To bridge care and cultivate the necessary skills, a family medicine clinic and mental health clinic implemented monthly interprofessional care conferences to coordinate care for their shared patients during 2019. Residents who participated in the care conference each (n=11) completed a retrospective pre/postsurvey (11/11=100% response rate) to gather perceptions of what they learned from the interprofessional care conference experience.

RESULTS: After participating in the care conference, all residents agreed they understood the elements that must be considered to provide holistic patient care, were confident conducting medication safety monitoring for their patients taking second-generation antipsychotics (eg, lipids, A1C, ECG), and agreed the care conference helped them develop a more comprehensive patient-centered care plan. Additionally, they all intend to work collaboratively across professions in the future.

CONCLUSIONS: Interprofessional and cross-organizational care conferences create an authentic learning environment that enhances family medicine residents' understanding and confidence in providing collaborative and holistic care for patients with severe and persistent mental illness.

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Increased suicide rates, comorbid psychiatric and medical conditions, psychiatric medication adverse reactions, and diminishing access to mental health services are some of the challenges facing today's primary care physicians.[1-4] This is particularly concerning in rural communities where disparities in access to mental health services exist.[5] Treatment of severe mental illness (SMI) requires collaboration between mental health and primary care, which is challenging when these services are delivered across separate organizations. Integrated care coordination is an opportunity to address and prevent serious medical and/or medication-related consequences.[4,6-11]

Family medicine residencies must cultivate effective interprofessional collaboration and mental health

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treatment skills to prepare residents for practice. Family medicine residents and other learners can develop and practice these skills through interprofessional care conferences,[12-14] which have been shown to improve patient care.[15,16] The purpose of this study was to evaluate the residents' learning about treatment of SMI from the care conference experience.

Methods

Care Conference

Beginning in 2019, monthly 75-minute interprofessional care conferences between family medicine and mental health were hosted at the family medicine residency training clinic. The care conference model was adapted from the EFECT (**E**licit the narrative of illness, **F**acilitate a group meeting, **E**vidence-based gap analysis, **C**are plan, **T**rack changes) framework for interprofessional education in the patient-centered medical home[12] and the Veterans Affairs Patient-Aligned Care Team Interprofessional Care Update (PACT-ICU) model.[13,14] The care conference process is described in detail in Tables 1 and 2, including care team members and their roles.

Evaluation

We used a paper-based retrospective pre/postsurvey to gather perceptions of what was learned from the care conference experience (Supplemental Material 5). We designed the retrospective pre/postsurvey to save time and reduce response-shift bias compared with a traditional pre/postsurvey. Although many experts would recommend including both measures—a traditional pre/post self-evaluation as well as the retrospective pre/post self-evaluation—to truly assess any response shift, we were unable to do so. The survey was designed to ascertain the residents' understanding of providing holistic care, confidence in medication safety monitoring of second-generation antipsychotics (SGAs), developing comprehensive patient-centered care plans, understanding of interprofessional roles, and future plans for interprofessional collaboration. Statistical analyses were not planned given small sample size of nonnormal data. The University of Minnesota Institutional Review Board deemed the study exempt from review.

Results

During 2019, a total of 11 second- and third-year residents participated in one of the 11 monthly care conferences (five PGY-2 and six PGY-3 residents), and all completed the postcare conference survey (100% response rate). When asked how well they understood all of the elements (biological, psychological, social) that must be considered to provide holistic patient care, residents reported an average baseline rating of 3.68 prior to the care conference, that increased to 4.32 following the care conference (scale=1 [not at all] to 5 [completely]). Confidence in conducting medication safety monitoring for patients taking SGAs increased from an average of 3.45 to 4.18 pre/postcare conference. Understanding of team members' roles in care of complex patients increased from an average of 3.45 to 4.27 pre/post on a scale of 1 (minimal) to 5 (excellent). All residents agreed the care conference helped them develop a more comprehensive patient-centered care plan (average rating=4.82/5), and residents identified all care conference participants as contributing to the development of the treatment plan. All residents agree they plan to engage with an interprofessional team in the future care of patients (average rating=4.73/5). A list of what residents found most helpful and areas for improvement of the care conference experience are detailed in Table 3.

Discussion

Resident feedback indicates the care conferences were useful for enhancing their knowledge and confidence in caring for patients with mental illness taking SGAs. There was strong agreement that the residents plan to engage with an interprofessional team in the future care of patients. These findings align with the PACT-ICU evaluation where 100% of trainees reported the care conferences were helpful or very helpful, and expressed satisfaction with the PACT-ICU conference.[13] Compared with the PACT-ICU evaluation, our residents reported a higher mean baseline understanding of team members' roles in care of complex patients and the elements that must be considered to provide holistic patient care.[14]

Care conferences facilitated shared decision making across psychiatry and primary care. The majority of residents reported the most helpful part of the care conference was the comprehensive multidisciplinary review, which consisted of reconciliation of diagnoses and medications. Face-to-face conversation with the psychiatrist also appeared to bolster resident confidence in leading the management of metabolic monitoring of the patient moving forward.

Cultural and resource considerations need to be evaluated should one choose to incorporate interprofessional care conferences across organizations. An interprofessional collaborative culture already existed at this residency clinic. Residents participate in collaborative education and patient care throughout their training beginning with an interprofessional orientation and shadowing activity. They spend time engaging with other interprofessional colleagues in practice on their rotations and participate in interprofessional didactic conferences. Because it is a residency training program, faculty have dedicated time for precepting and teaching that may not be available in a typical family medicine clinic. Using the 2015 Institute of Medicine conceptual framework for measuring the impact of interprofessional education,[17] we determined the professional and institutional culture, workforce and financial policies in this residency program were enabling rather than interfering factors for success. A key to the infrastructure necessary for

Table 1: Care Conference Process

Overview
Identified shared patients between DFMC and HDC who were taking second-generation antipsychotics (SGAs) (Supplemental Material 1).
Pre-Care Conference
Family medicine residents are chosen in advance for care conferences based on availability and rotation. RN care coordinator meets with this resident approximately one month prior to the care conference. The patient list is reviewed with resident. The resident then chooses 1-3 patients that they are familiar with to present at the care conference. The behavioral health faculty educates the resident about the care conference flow and their role. (Supplemental Material 2).
The RN care coordinator sends a message to DFMC staff involved in the care conference informing them of the selected patients for the upcoming care conferences.
The RN care coordinator communicates the patient list with the HDC care coordinator and requests the patient's medication list and office visit notes.
The patient's medication list and notes are received at DFMC.
Notes are scanned into the electronic health record, and the medication list is routed to the pharmacy resident for medication reconciliation (visible to all at DFMC in EHR); the pharmacy resident requests pharmacy fill records to aid in reconciliation; the pharmacy resident also identifies medication-related opportunities to review at the care conference
Preconference EHR summary snapshots are printed to allow participants to review at the care conference, take notes, etc.
Care Conference
The care conference team (Table 2) meets monthly for a scheduled 75-minute care conference held at DFMC and available for remote connection through secure Skype.
Two to three shared patients are discussed using the care conference template agenda as a guide (Supplemental Material 3).
Post-Care Conference
The completed care conference note from the resident is printed and faxed to HDC with the reconciled medication list (Supplemental Material 4).
The post-care conference paper survey is completed by family medicine resident (given time after care conference to complete; Supplemental Material 5).
The post-care conference quality improvement survey is sent to all care conference participants by email (Supplemental Material 6).
Care Conference Upkeep
Daily "huddle sheets" are given to residents with their scheduled patients of the day. Questionnaires (eg, PHQ-9/GAD-7), lab monitoring, health care maintenance are all pended for the provider to review and sign at the time of visit.
An alert is visible in the electronic health record to notify the physician that the patient is part of this care coordination process. Writer will go through appointments and print and fax updated notes to HDC.

Abbreviations: DFMC, Duluth Family Medicine Clinic; HDC, Human Development Center; SGAs, second-generation antidepressants; RN, registered nurse; EHR, electronic health record.

interprofessional collaborative care conferences is having engaged and committed health-system partners. Details about logistics are included in Tables 1 and 2, and Supplemental Materials 1-6.

Our survey measured resident learning outcomes at the reactions/attitudes/perceptions level,[18] but we anticipate the ongoing education and collaboration will result in benefits to patients. In an ongoing study we are measuring higher level educational outcomes, including the pre/postchange in appropriate SGA monitoring for patients discussed at the care conference. The care conference team continues to meet monthly to discuss shared patients, including follow-up check-ins for shared patients that have previously been discussed who are not meeting goals.

Limitations

This study was limited to one family medicine residency training program over 1 year with a small sample size, and there is a lack of validation data for the survey items used. Only subjective measures were used for evaluation, and there was no follow-up evaluation for persisting value, nor was there objective assessment of knowledge or behavior change.

Although the importance of effective interprofessional collaboration is understood, its advancement is mired by limited clinical training sites that model authentic interprofessional team-based care.[13,19] These monthly care conferences provided an educational opportunity for modeling of authentic interprofessional team-based care to experientially

Table 2: Care Conference Team Member Roles

Team Member	Role
Duluth Family Medicine Clinic	
RN care coordinator	• Identifies shared patients • Coordinates with HDC to share diagnosis list, office visit notes, medication list, and upcoming appointments • Provides preparatory information to DFMC team • Pends orders for resident to review
Behavioral health faculty	• Orients resident prior to care conference to prepare them for participation • Keeps time during care conference • Provides information regarding diagnosis clarification and other pertinent social and emotional functioning
Pharmacy resident	• After an initial orientation by pharmacy faculty, the pharmacy resident independently serves as the pharmacist on the care team for their 6-month experiential commitment to the family medicine residency clinic • Reconciles medications and documents discrepancies to be discussed at the care conference • In accordance with the consensus monitoring guidelines between the organizations, evaluates if the patient's medications are being appropriately monitored, especially in relation to their second-generation antipsychotics • Identifies and facilitates discussion about non-behavioral health medication-related opportunities to optimize medications
Family medicine faculty	• Reviews the chart of each patient to be presented • Facilitates the care conference, inviting each presenting member to share their information about the patient according to the care conference template agenda • Makes learning points about the case and invites and/or poses questions to further facilitate discussion and learning
Family medicine resident	• Reviews the chart of each patient to be presented • Presents patient case overview to the interprofessional team • Navigates the EHR, allowing others to ask questions and review information pertinent to the care conference • Reconciles the problem list and medications in consultation with the team • Summarizes the shared care plan and places orders • Completes the care conference comprehensive care plan documentation
Clinic manager	• Supports the team with an emphasis on clinic function and potential improvements or changes to achieve patient comfort and adherence
Human Development Center	
Nurse care coordinator	• Coordinates with nurse care coordinator at DFMC to share information • Provides the medication list, last psychiatry progress notes, and list of upcoming appointments to the DFMC nurse care coordinator, HDC psychiatrist, and psychiatric pharmacist • If needed, facilitates discussion of patients prior to conference date at HDC Psychiatry team meeting • Facilitates patient follow-up after the care conference
Psychiatrist	• Clarifies the patient's diagnosis and treatment recommendations • Provides education through "teachable moments" to residents during the care conferences with a goal of helping residents develop a working understanding of diagnoses and plan • Facilitates communication between DFMC and HDC staff
Psychiatric pharmacist	• Assesses the patient's current and past psychiatric medications to clarify dose changes, high medication dosages, reasons for polypharmacy, side-effects, drug interactions specific to psychiatric medications, and alternative medication therapy options • Provides education through "teachable moments" to residents during the care conferences • Clarifies psychiatric medication changes that occurred in the primary care setting for HDC mental health providers

Abbreviations: DFMC, Duluth Family Medicine Clinic; HDC, Human Development Center; EHR, electronic health record.

Table 3: Family Medicine Resident Feedback on Helpfulness of the Care Conference and What Could Be Improved

Resident #	The most helpful part of the care conference was:	The care conference experience could be improved by:
1	• Streamlining diagnosis list • Medication monitoring	Having [primary care provider] at conference
2	Multidisciplinary review of patient record for coordinated comprehensive care.	
3	[Psychiatrist's] input	• Happening more often • Being scheduled for a slightly longer period of time
4	Education from [psychiatrist]	Getting more teaching from [psychiatrist]
5	Team centered action	Unknown
6	Further background on the patients	
7	1:1 in-person, real time interaction with cross-functional team	
8	Getting on the same page	Discuss your own patient
9	Reconciling the meds/problems and identifying issues to be addressed going forward	This was excellent!
10	Having the psychiatrist present. Often, we are both prescribing medications without knowing for sure what the other is doing. It was helpful to be together to discuss the patient.	More guidance up front what the resident should be presenting at the conference/is responsible for.
11	• Catching patients and their care that falls through the cracks. • Understanding SGA monitoring. • Collaboration in teams.	

Abbreviation: SGA, second-generation antipsychotic.

achieve milestones of interprofessional education and collaboration.

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