Evaluating a telehealth-enabled collaborative care program for behavioral health in rural primary care

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- Patient care is provided at 16 hospitals (includes owned or governing interest)
- Approximately 2,700 beds and four additional hospital locations in development
- Nearly 750 care locations situated in all regions of South Carolina.

Center for Telehealth at MUSC

- The Center for Telehealth has over 15 years of experience providing telehealth, offering over 100 unique telehealth services to over 280 sites across South Carolina.
- Care settings include over 45 hospitals, over 90 schools, and over 100 community clinics and other facilities.

Learning Objectives

1. Analyze the barriers and facilitators to patient enrollment in a telehealth-enabled collaborative care management (CoCM) program within rural primary care
2. Evaluate the impact of telehealth-enabled delivery on patient-reported mental health outcomes and accessibility using triangulated mixed-methods data

Background

- Approximately **one in five American adults** has a diagnosed mental or behavioral health condition[1,2]
- While the prevalence of mental and behavioral health conditions is similar for those living in rural and urban areas, there are **well-documented differences in behavioral (including mental) healthcare access and availability of healthcare providers** with specialized training[3]
- Digital tools, including telehealth, can significantly improve access to behavioral healthcare by **overcoming geographic barriers, reducing stigma, and enabling access to high-quality services**[4-6]

Background

- Psychiatric collaborative care management (CoCM) effectively addresses behavioral health, due to its **integration in primary care** settings and its reliance on **team-based** care, **population-focused** approach, and **measurement-based** care[7,8]
- CoCM **uptake in rural communities remains challenging** for a variety of reasons, including the **shortage of behavioral health providers** in local areas[8]
- The pilot study of the CoCM program described its implementation in 18 clinics statewide,[8] and it has **since grown to 41 referring clinics**
  - This evaluation is situated as part of a larger quality improvement initiative

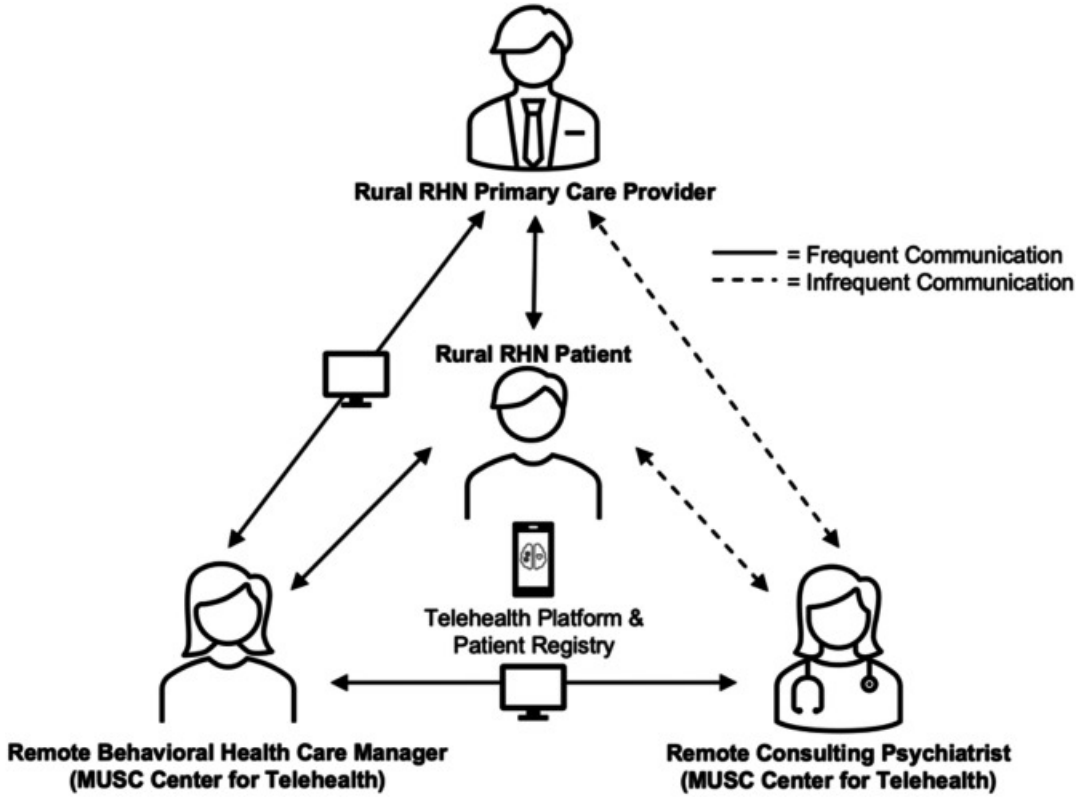
MUSC's CoCM Program

- **Three core elements of CoCM[8]:**

1. **Team-based care**: Employs a multidisciplinary team, including a Behavioral Health Care Manager, Primary Care Provider, and Psychiatrist

2. **Population-focused approach**: Focused on treating patients through preventative, universal screenings and referrals to treatment

3. **Measurement-based care:** Regularly administers validated behavioral health assessments (e.g., PHQ-9) to identify patient need



Methods: RE-AIM

- The **RE-AIM Framework** is used to guide real-time, data-driven decisions to improve the CoCM program[9]
  - **Reach:** The number of participants and their characteristics
  - **Effectiveness:** The impact of the program on patient outcomes
  - **Adoption:** The providers and rural primary care practices who adopt the program
  - **Implementation:** Consistency and adaptations made to the program
  - **Maintenance:** Sustainability of the CoCM program, and the extent to which it has become routine and operationalized

Methods

- Data were analyzed from June 1, 2023 – June 30, 2025
- Data sources:
  - Electronic health records (N=1,065 referred patients)
  - Neuroflow platform data for enrolled patients (N = 608)
  - Electronic surveys from patients who did and did not enroll in CoCM (N=120)
    - Enrollees (*n* = 65), Non-enrollees (*n* = 55)
  - In-depth interviews with patients who did and did not enroll in CoCM (N=13)
- Quantitative data were analyzed using descriptive statistics
- Qualitative data were analyzed via deductive thematic analysis

Reach

- Since 2023, CoCM has grown from **serving 18 to 41 referring primary care clinics** statewide
- **1,065 patients were referred** to CoCM from 06/01/2023 – 06/30/2025 (Fig. 1)
- **Of referred patients, 608 patients enrolled** into the program and completed an index assessment and intake visit with a behavioral health manager

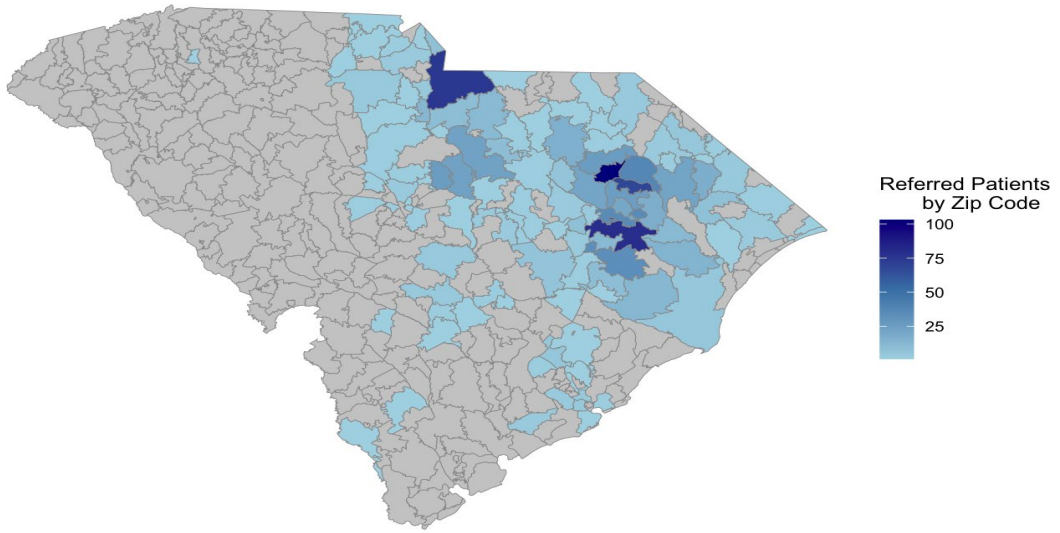


Figure 1. Patients referred to CoCM by zip code from 06/01/2023 – 06/30/2025.

Effectiveness

- Of patients who enrolled and discharged (N=465), **45% successfully graduated**
- The majority of enrollees reported **improvements in their mental health** (e.g., mood, stress, anxiety) since joining CoCM
  - Significant (18.5%) or some improvements (41.5%)
  - No change (35.4%)
- 71% of enrollees reported **“always” or ”most of the time” feeling comfortable** discussing their mental health concerns with their care manager
- Enrollees’ also described:

“It has **completely turned my whole life around** …They really hit the nail on the head. They got personal quick…And they did so good guiding me, helping me through all that and opening me up.”

Adoption

- Referred patients who did not enroll often **did not remember receiving the information** from their primary care provider (38.2%)
- Enrollees (31%) and non-enrollees (31%) reported **"flyers"** as the best way to reach patients
- Enrollees (80%) and non-enrollees (53%) reported information was **easy to understand**
- The majority of enrollees stated it was **"very easy"** (56.9%) or **"somewhat easy"** (13.8%) to continue the CoCM program, after their first sessions
- Following appointments with behavioral health care manager, 43.1% of enrollees stated their primary care provider discussed information at their next appointment
- **Non-enrollees stated mixed results** on whether their primary care provider followed up about the CoCM following referral
  - Yes (34.5%), No (36.4%), Don't know (27.3%)

Adoption

Opportunity to improve reach	"…dropping the stigma, helping make mental health services known, talking about it, having flyers up in the doctor's office, maybe even in grocery stores, just making it normalized." - Non-enrollee
Facilitators and barriers to enrollment	"Just me to know that I'm not alone and there are people interested in helping me. It's person-centered. It a choice, it's not being forced on somebody. It gives you the ability to grow in your own time frame." - Enrollee "I have thought about it, but I lost the information on it, so I let it go." - Non-enrollee
Access	"I think the duration and how easy it is to contact them, especially in between appointments when you need them." - Enrollee

Implementation

- Enrollees participated in a **mean of 124.9 days** (SD = 92.5, IQR = 66.0-171.0)
- Over half of enrollees reported they were **"satisfied" (16.9%) or "very satisfied" (47.7%)** with the frequency of visits with the behavioral health care manager
- Interviewees highlighted **benefits of the telehealth-enabled delivery, accessibility, flexibility, and program support**

"I knew right off the bat I wanted to participate because [PCP] told me she couldn't manage my symptoms and she knew that [CoCM] could, and that's really what made me continue with it **because I was exhausted. I was tired and I was looking for the help**." – Enrollee

Patient-provider communication: "I knew it was someone I could talk to. I didn't feel judged. She didn't know me on a personal level so it doesn't matter…I feel like I could openly talk to her because it was someone I had never met." - Enrollee

Maintenance

- Over half of enrollees (58%) reported being **“confident” or “very confident”** that they could maintain their progress after CoCM
- 62% of enrollees reported they **would recommend the CoCM program to others** in need of mental or behavioral health support
- Nearly **three-quarters (74.5%) of non-enrollees** reported a behavioral health program like CoCM may benefit their health and well-being

Maintenance

- Enrollees' perspectives of program sustainability:

"Personal reasons as far as me committing to something that I felt like would better my mental health. That kept me staying involved in [CoCM] and giving it a try because **this was my first time ever speaking to a therapist at all**. Me having that **commitment to myself** made me keep going."

"Since the beginning, number one, why I stayed is **it's telehealth and just super convenient**."

"Whatever the highest score is, 10, 10, 10. No problems. I liked it. I would continue…I liked the **flexibility.** I think it's **helpful. I would probably do it the rest of my life if I can."**

Conclusions & Next Steps

- Feedback from referred patients, including those enrolled and not enrolled, informs data-driven decisions to improve accessibility, patient outcomes, and long-term scalability
  - Ex: practical takeaways, like flyers to improve reach, or additional education to referring providers
- Next steps include a continued, comprehensive evaluation with robust analyses of:
  - Patient-reported data (i.e., sleep and mood trackers, clinical screening tools) in a patient-facing digital health platform
  - Acute care utilization patterns among enrollees (and potential ROI)
  - Additional sustainability measures, including revenue per program participant, rather than reliance on grant funding, and revenue growth rate (month-over-month) from CoCM participants

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