

Implementing Telehealth-enabled Psychiatric Collaborative Care (CoCM) in Rural South Carolina

Ryan Kruis, PhD(c), LISW-CP

Director, Research & Grants, MUSC Center for Telehealth

Candace Sprouse, PhD, LISW-CP(S), LCSW

Collaborative Care Manager, MUSC Center for Telehealth

**11TH Annual Telehealth
Summit of South Carolina
December 4 - 6, 2023**
Hyatt Regency Greenville
Greenville, South Carolina



Funding Acknowledgement

The development of this presentation was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of the National Telehealth Center of Excellence Award (U66 RH31458). The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS or the U.S. Government.

11TH **Annual Telehealth Summit of South Carolina**
December 4 - 6, 2023
Hyatt Regency Greenville
Greenville, South Carolina



Learning Objectives

- Understand the key components of the CoCM model.
- Identify barriers and facilitators of to implementing CoCM in rural areas.
- Describe how telehealth can be used to enhance the CoCM model and aid its implementation in rural communities.

11TH *Annual Telehealth Summit of South Carolina*
December 4 - 6, 2023
Hyatt Regency Greenville
Greenville, South Carolina



Background

11TH *Annual Telehealth
Summit of South Carolina*
December 4 - 6, 2023
Hyatt Regency Greenville
Greenville, South Carolina



U.S. Behavioral Health

- Mental illness and substance use disorders are highly prevalent in the United States.
 - 1 in 5 adults and 1 in 6 youth experience mental illness each year.¹
 - 13.9% of U.S. adults meet the criteria for alcohol use disorder and 3.9% for another drug use disorder.²
 - Acuity has only worsened since pandemic.³
- High costs of healthcare associated with not addressing behavioral health (BH)^{4,5}
 - Treatment for medical conditions among individuals with BH disorders is 2.8-6.2 times higher than the costs for those without BH disorders.⁴
 - Although patients with BH disorders account for more than half of all healthcare spending, only 4.4% of these costs are actually for BH services.⁴

11TH Annual Telehealth Summit of South Carolina
December 4 - 6, 2023
Hyatt Regency Greenville
Greenville, South Carolina



Rural Behavioral Health

- Rural individuals experience similar rates of BH disorders yet severely lack access to adequate treatment.¹
- Fewer BH providers working in rural areas as compared to rest of country.^{6,7}
- Limited access to BH services likely contributes to higher suicide rates among rural Americans (nearly 2x that of urban Americans).⁸
- Most rural residents receive BH services in the context of primary care.^{9,10}

11TH Annual Telehealth Summit of South Carolina
December 4 - 6, 2023
Hyatt Regency Greenville
Greenville, South Carolina



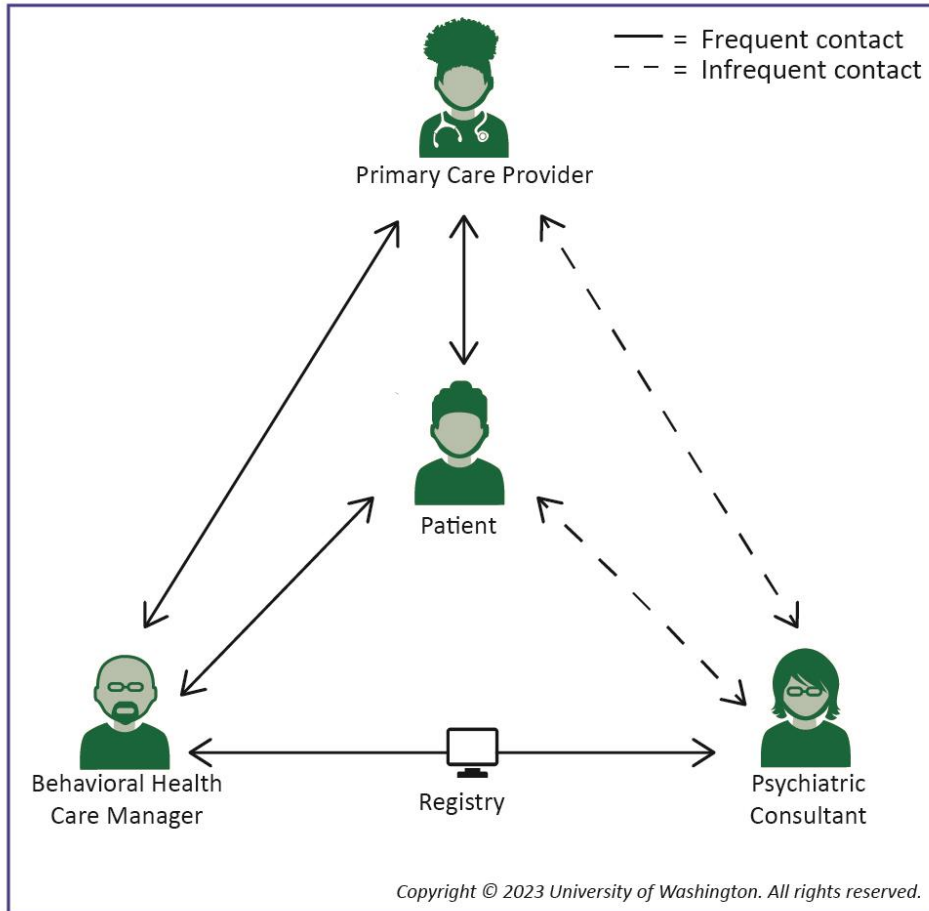
Psychiatric Collaborative Care Model (CoCM)

- Psychiatric collaborative care management (CoCM) is a model for treating BH in the context of primary care
- Strong evidence base with over 90 clinical trials across a variety of primary care settings,¹¹ and adoption has become a key policy priority^{12,13}
- Key components:¹¹
 1. Team-based Care: Primary care provider, BH care manager, psychiatric consultant
 2. Population-focused: universal, preventative screenings and referrals to treatment; patient registries for efficient management
 3. Measurement-based: Regularly administered, validated BH assessments to monitor progress toward to reach treatment goals

11TH **Annual Telehealth Summit of South Carolina**
December 4 - 6, 2023
Hyatt Regency Greenville
Greenville, South Carolina



CoCM Model - Staffing



- Behavioral Health Care Manager (BHCM)
 - Develops treatment plans
 - Provides brief intervention & care coordination
 - Powers the program and does bulk of work
- Psychiatric consultant
 - Meets weekly with BHCM to review complex cases and patients not improving to advise on treatment strategies
 - Available for direct consult with primary care provider (PCP) or patient as needed
- PCP:
 - Prescribe meds to patient based on psychiatrist recommendations

CoCM in Rural Communities

- CoCM has great potential for rural BH given its efficient use of limited BH resources, ability to be conducted via telehealth, and focus on primary care.
- Implementation has proved difficult:
 - Limited availability for BH workforce.
 - Limited training and implementation resources for rural contexts.
 - Financial constraints for small practices to hire own BH care manager.

11TH **Annual Telehealth
Summit of South Carolina**
December 4 - 6, 2023
Hyatt Regency Greenville
Greenville, South Carolina



MUSC Telehealth-enabled CoCM Pilot

- Funded using HRSA's Telehealth Center of Excellence
- Develop and pilot a telehealth-enabled CoCM model in 4 rural, MUSC regional health network sites.
- Funding to hire BH care manager (1.0 FTE) & psychiatric consultant (0.05FTE), and to support mixed methods, implementation science evaluation
- Aims:
 - Determine ideal CoCM program model & implementation strategies to aid uptake.
 - Identify initial barriers and facilitators to implementation of telehealth-enabled CoCM pilot among the 4 rural clinics.

11TH **Annual Telehealth
Summit of South Carolina**
December 4 - 6, 2023
Hyatt Regency Greenville
Greenville, South Carolina



Methods

11TH **Annual Telehealth Summit of South Carolina**
December 4 - 6, 2023
Hyatt Regency Greenville
Greenville, South Carolina



Rooted in Implementation Science

- Implementation science deploys diverse study methods to support the uptake of evidence-based treatments into routine practice.¹⁴

11TH *Annual Telehealth
Summit of South Carolina*
December 4 - 6, 2023
Hyatt Regency Greenville
Greenville, South Carolina





MUSC Telehealth
Center of Excellence

171 Ashley Avenue,
Charleston, SC
(843) 792-1414

[TelehealthCOE.org](https://telehealthcoe.org)

Telehealth Centers
of Excellence

Implementation Science

Telehealth Toolkit



- Available on COE website:^{15, 16}
 - <https://telehealthcoe.org/wp-content/uploads/2023/07/MUSC-COE-Implementation-Science-Telehealth-Toolkit.pdf>
- Johnson EE, Kruis R, Verdin R, Wells E, Ford DW, Sterba KR. Development of an Implementation Science Telehealth Toolkit to Promote Research Capacity in Evaluation of Telehealth Programs. *Telemed Rep.* 2023 Oct 4;4(1):286-291. doi: 10.1089/tmr.2023.0039. PMID: 37817872; PMCID: PMC10561742.

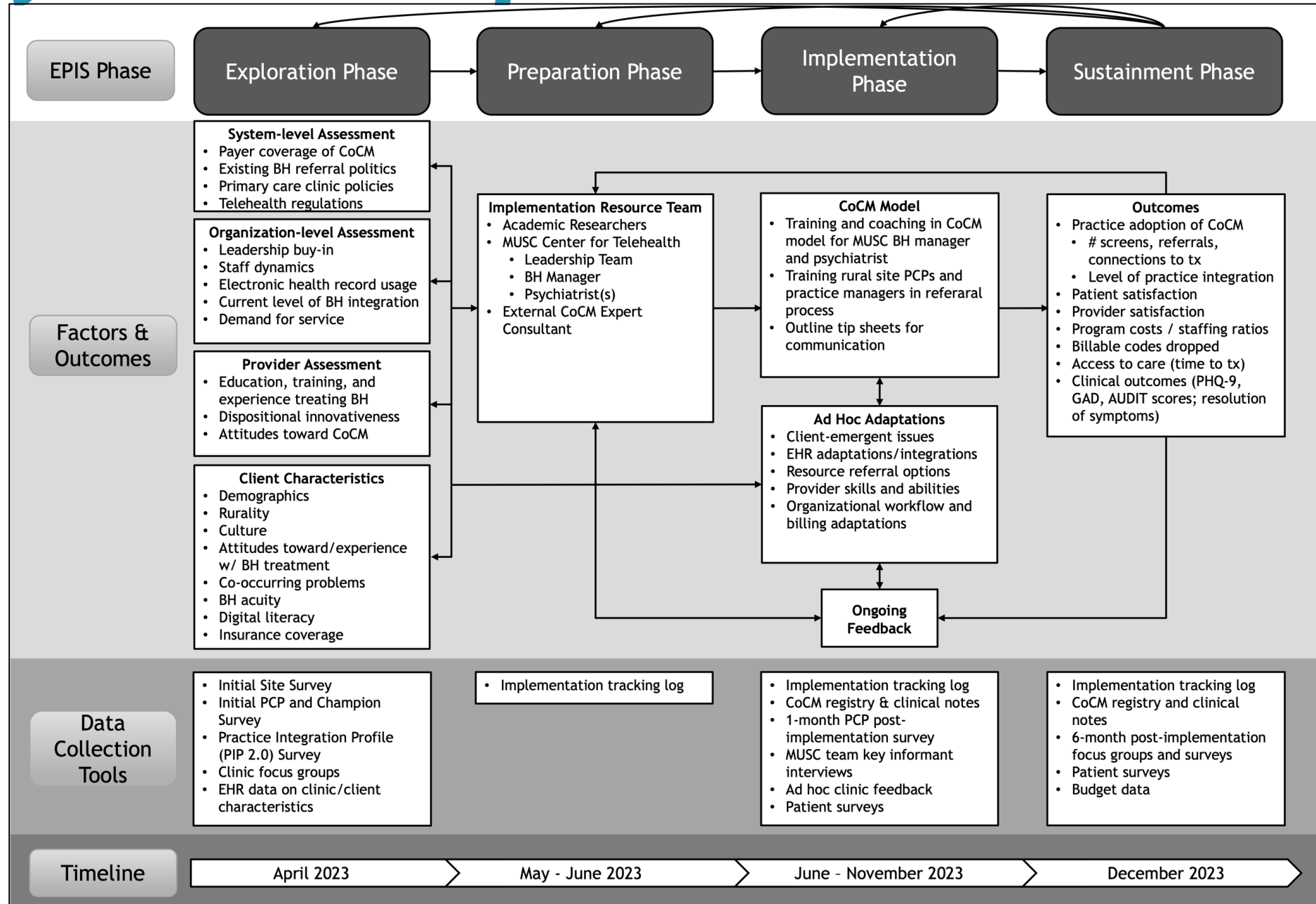
Implementation Science & CoCM

- Very few IS studies however have examined specific factors related to CoCM rollout in rural primary care. ^{17, 18}
- Even fewer have focused on telehealth-enabled CoCM.¹⁹
- Model for this research:
 - Aarons' Dynamic Adaption Process (DAP)²⁰ model based on his EPIS (Exploration, Preparation, Implementation, Sustainment)²¹ model

11TH **Annual Telehealth Summit of South Carolina**
December 4 - 6, 2023
Hyatt Regency Greenville
Greenville, South Carolina



Dynamic Adaptation Process Model



Results

11TH **Annual Telehealth Summit of South Carolina**
December 4 - 6, 2023
Hyatt Regency Greenville
Greenville, South Carolina



Initial Needs Assessment

- Conducted 4 focus groups and administered surveys to PCPs and practice managers (n=13)
- Top barrier to meeting BH needs:
 - Lack of BH providers for referrals. Most indicated >8 weeks for psych referral.
- Other commonly cited barriers:
 - Adequate time, financial resources, space/staff for behavioral health resources.

11TH **Annual Telehealth Summit of South Carolina**
December 4 - 6, 2023
Hyatt Regency Greenville
Greenville, South Carolina



Initial Needs Assessment

- Strong interest in program and seen as greatly needed.
- Obtained detailed information on implementation including:
 - Referral methods
 - Handouts for patients
 - Methods for communication with PCPs
 - Types of patient referrals

11TH *Annual Telehealth Summit of South Carolina*
December 4 - 6, 2023
Hyatt Regency Greenville
Greenville, South Carolina



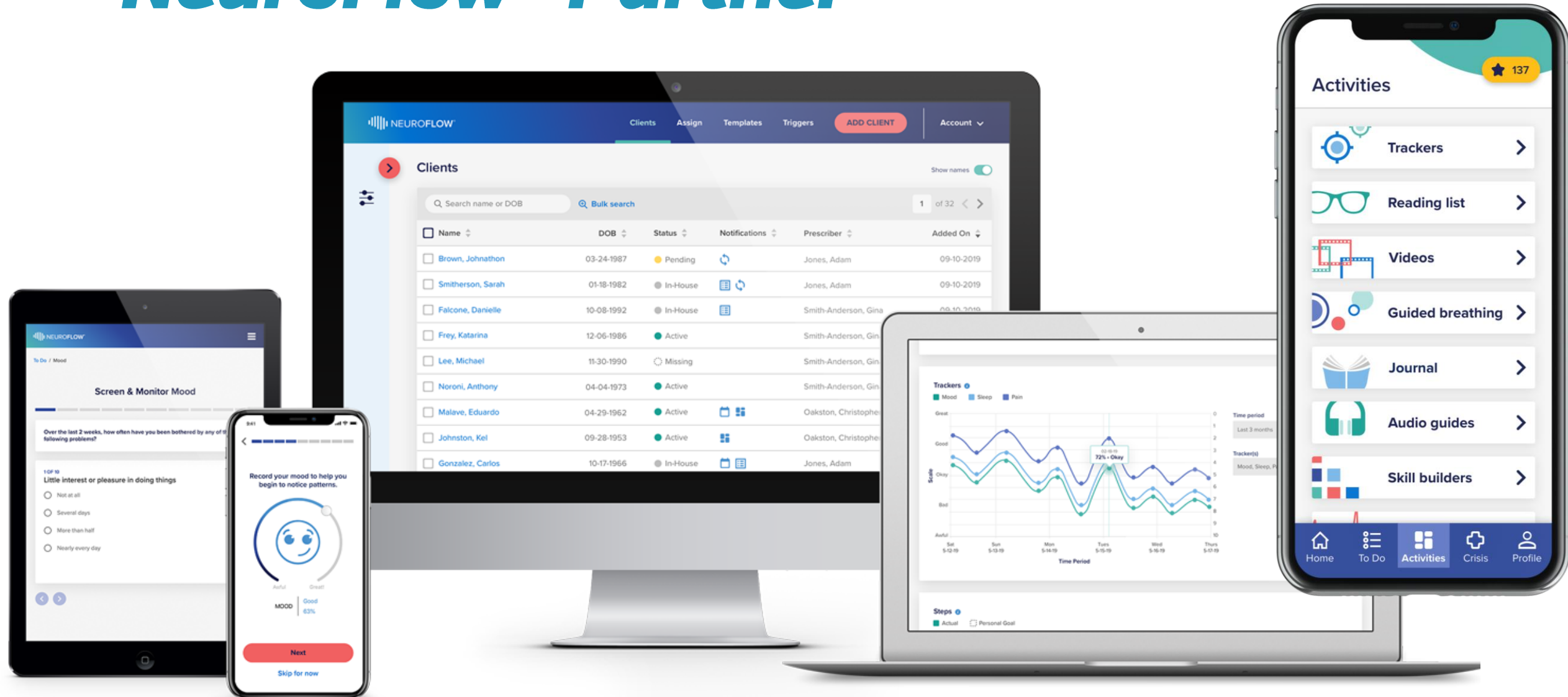
Pilot Process

- PCP refers patients to program
 - Initial focus: depression and anxiety disorders
- Enrolled patients complete measurement-driven assessment, triage, and treatment via digital platform (NeuroFlow®) or telephonically with BHCM
- BH care management services include:
 - Brief intervention and care coordination
 - Psych review with BHCM
- Information sharing facilitated via EHR
- Monthly reports available for documenting treatment plan, assessment scores, and time spent (for billing)

11TH Annual Telehealth Summit of South Carolina
December 4 - 6, 2023
Hyatt Regency Greenville
Greenville, South Carolina



NeuroFlow[®] Partner



The image displays the NeuroFlow interface across four devices:

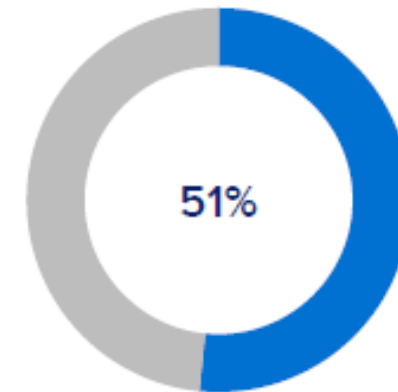
- Desktop Monitor:** Shows the main dashboard with a navigation bar (Clients, Assign, Templates, Triggers, ADD CLIENT, Account) and a 'Clients' table.

| Name | DOB | Status | Notifications | Prescriber | Added On |
|-------------------|------------|----------|---------------|----------------------|------------|
| Brown, Johnathon | 03-24-1987 | Pending | [Refresh] | Jones, Adam | 09-10-2019 |
| Smitherson, Sarah | 01-18-1982 | In-House | [Refresh] | Jones, Adam | 09-10-2019 |
| Falcone, Danielle | 10-08-1992 | In-House | [Refresh] | Smith-Anderson, Gina | 09-10-2019 |
| Frey, Katarina | 12-06-1986 | Active | [Refresh] | Smith-Anderson, Gina | 09-10-2019 |
| Lee, Michael | 11-30-1990 | Missing | [Refresh] | Smith-Anderson, Gina | 09-10-2019 |
| Noroni, Anthony | 04-04-1973 | Active | [Refresh] | Smith-Anderson, Gina | 09-10-2019 |
| Malave, Eduardo | 04-29-1962 | Active | [Refresh] | Oakston, Christophe | 09-10-2019 |
| Johnston, Kel | 09-28-1953 | Active | [Refresh] | Oakston, Christophe | 09-10-2019 |
| Gonzalez, Carlos | 10-17-1966 | In-House | [Refresh] | Jones, Adam | 09-10-2019 |
- Laptop:** Displays a 'Trackers' graph showing Mood, Sleep, and Pain over a 'Time Period' (Last 3 months). A data point for Tuesday, 5-15-19, is highlighted with a callout: '72% - Okay'.
- Tablet:** Shows a 'Screen & Monitor Mood' screen with a survey question: 'Over the last 2 weeks, how often have you been bothered by any of the following problems?' and a list of options: 'Not at all', 'Several days', 'More than half', 'Nearly every day'.
- Smartphone:** Displays a mood recording screen with a smiley face icon and a 'MOOD' indicator showing 'Good 83%'. Below the indicator are 'Next' and 'Skip for now' buttons. To the right, another smartphone shows the 'Activities' menu with options: Trackers, Reading list, Videos, Guided breathing, Journal, Audio guides, and Skill builders.

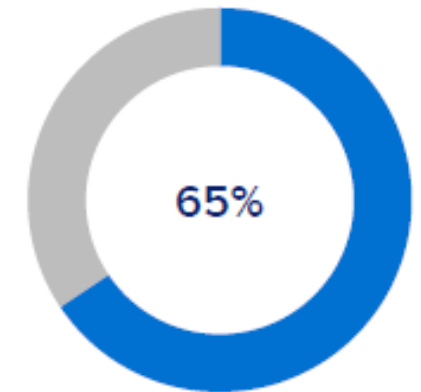
Utilization & Clinical Results

- 130+ referrals since go-live (June 2023)
- 53 enrollments
 - only 3 lost to contact
- 42 medication recommendations based on psych review

SYMPTOM REDUCTION AFTER 8 WEEKS



of patients with reduction
in **GAD-7** scores



of patients with reduction
in **PHQ-9** scores

11TH **Annual Telehealth Summit of South Carolina**
December 4 - 6, 2023
Hyatt Regency Greenville
Greenville, South Carolina

*Digitally Integrated:
The Hybrid Healthcare Future*

www.palmettocareconnections.org

Post-launch Qualitative Feedback

- What aspects have been most helpful from the program?

“Please continue to offer the service. I believe patients are very satisfied. I am happy with the feedback/ notes / recommendations from Miss Candace.”

“Ease of sending referrals and great communication from Candace.”

“The notes that I receive after a patient is referred to keep up with their progress and recommendations from psychiatry have been the most helpful.”

“Being able to quickly connect patients with a counselor.”

- Received helpful feedback re: closing out referral process and working with practice referral specialists

11TH **Annual Telehealth Summit of South Carolina**
December 4 - 6, 2023
Hyatt Regency Greenville
Greenville, South Carolina

*Digitally Integrated:
The Hybrid Healthcare Future*

www.palmettocareconnections.org

Discussion & Next Steps

11TH *Annual Telehealth
Summit of South Carolina*
December 4 - 6, 2023
Hyatt Regency Greenville
Greenville, South Carolina



Discussion

- Telehealth-enabled CoCM is feasible for supporting rural practice participation in CoCM
- Providers and patients alike find the service extremely beneficial, especially given shortage of psychiatrists and other BH specialists
- Further examination of financial sustainability and business models are needed.
 - All major payers pay for CoCM with the exception of SC Medicaid
 - Advocacy to support sustainable payment may be necessary
- Examination of feasibility beyond pilot is necessary.

11TH **Annual Telehealth
Summit of South Carolina**
December 4 - 6, 2023
Hyatt Regency Greenville
Greenville, South Carolina



Next steps

- More formal analysis and write-up of findings, looking at both implementation and clinical outcomes
- Pilot to scale to 20 MUSC sites in early 2024 (including peds)
- Examination of opportunities to extend this partnership/model to non-MUSC affiliated sites
 - Need to address contracting, billing, and information sharing challenges
- Other use cases: school-based BH; perinatal BH

11TH Annual Telehealth Summit of South Carolina
December 4 - 6, 2023
Hyatt Regency Greenville
Greenville, South Carolina



Acknowledgements

- Jimmy McElligott, MD, MSCR
- Andrew Alkis, MD
- Jillian Harvey, PhD, MPH
- Emily Johnson, PhD, MHA
- Connie Guille, MD
- Elana Wells, MPH
- Rebecca Verdin, MHA
- Samantha D’Orio
- Ryan Lau, MS
- Sshune Rhodes, MHA
- Peter Gardella, MBA, RN
- Eve Fields, MD
- Pilot Sites
- NeuroFlow[®] Partners

11TH Annual Telehealth Summit of South Carolina
December 4 - 6, 2023
Hyatt Regency Greenville
Greenville, South Carolina



References

1. National Alliance on Mental Illness. Mental Health By the Numbers. Accessed 2/25/2023, <https://www.nami.org/mhstats>
2. Grant BF, Saha TD, Ruan WJ, et al. Epidemiology of DSM-5 Drug Use Disorder: Results From the National Epidemiologic Survey on Alcohol and Related Conditions–III. *JAMA Psychiatry*. 2016;73(1):39-47. doi:10.1001/jamapsychiatry.2015.2132
3. Panchal N, Saunders H, Rudowitz R, Cox C. *The Implications of COVID-19 for Mental Health and Substance Use*. 2023. March 20, 2023. Accessed August 31, 2023. <https://www.kff.org/mental-health/issue-brief/the-implications-of-covid-19-for-mental-health-and-substance-use/>
4. Davenport S, Gray TJ, Melek S. *How do individuals with behavioral health conditions contribute to physical and total healthcare spending?* 2020. Milliman Research Report. 04/29/23. <https://www.milliman.com/-/media/milliman/pdfs/articles/milliman-high-cost-patient-study-2020.ashx>
5. Niles L, Olin S. *Behavioral Health Quality Framework: A Roadmap for Using Measurement to Promote Joint Accountability and Whole-Person Care: A White Paper*. 2021.
6. Andrilla CHA, Patterson DG, Garberson LA, Coulthard C, Larson EH. Geographic Variation in the Supply of Selected Behavioral Health Providers. *Am J Prev Med*. Jun 2018;54(6 Suppl 3):S199-s207. doi:10.1016/j.amepre.2018.01.004
7. Miller BF, Petterson S, Burke BT, Phillips RL, Jr., Green LA. Proximity of providers: Colocating behavioral health and primary care and the prospects for an integrated workforce. *Am Psychol*. May-Jun 2014;69(4):443-51. doi:10.1037/a0036093
8. Hedegaard H, Curtin, S. C., Warner, M. *Suicide Mortality in the United States, 1999–2017*. Data Brief. 2018. *NCHS Data Brief*. November 2018. Accessed 10/1/22. <https://www.cdc.gov/nchs/data/databriefs/db330-h.pdf>
9. Wang PS, Demler O, Olfson M, Pincus HA, Wells KB, Kessler RC. Changing profiles of service sectors used for mental health care in the United States. *Am J Psychiatry*. Jul 2006;163(7):1187-98. doi:10.1176/appi.ajp.163.7.1187
10. Powers DM, Bowen DJ, Arao RF, et al. Rural clinics implementing collaborative care for low-income patients can achieve comparable or better depression outcomes. *Fam Syst Health*. Sep 2020;38(3):242-254. doi:10.1037/fsh0000522
11. University of Washington AIMS Center. AIMS Center: Advancing Integrated Mental Health Solutions. Accessed 10/1/2022, <https://aims.uw.edu/>

11TH Annual Telehealth Summit of South Carolina
December 4 - 6, 2023
 Hyatt Regency Greenville
 Greenville, South Carolina

*Digitally Integrated:
 The Hybrid Healthcare Future*

www.palmettocareconnections.org

References

11. University of Washington AIMS Center. AIMS Center: Advancing Integrated Mental Health Solutions. Accessed 10/1/2022, <https://aims.uw.edu/>
12. Eighteen Organizations Express Support for the Collaborate in an Orderly and Cohesive Manner (COCM) Act Which Would Bolster Innovative Model of Provision of Mental Health Care. September 9, 2021, 2021. Accessed 10/1/2022. <https://psychiatry.org/news-room/news-releases/eighteen-organizations-express-support-for-the-col>
13. Bipartisan Policy Center. *Tackling America's Mental Health and Addiction Crisis Through Primary Care Integration: Task Force Recommendations*. 2021. March 2021. Accessed August 31, 2023.
14. Curran GM, Bauer M, Mittman B, Pyne JM, Stetler C. Effectiveness-implementation hybrid designs: combining elements of clinical effectiveness and implementation research to enhance public health impact. *Med Care*. Mar 2012;50(3):217-26. doi:10.1097/MLR.0b013e3182408812
15. Johnson, E., & Sterba, K. (2023). Implementation Science Telehealth Toolkit. MUSC Telehealth Center of Excellence. www.telehealthcoe.org
16. Johnson EE, Kruis R, Verdin R, Wells E, Ford DW, Sterba KR. Development of an Implementation Science Telehealth Toolkit to Promote Research Capacity in Evaluation of Telehealth Programs. *Telemed Rep*. 2023 Oct 4;4(1):286-291. doi: 10.1089/tmr.2023.0039. PMID: 37817872; PMCID: PMC10561742.
17. Williams D, Eckstrom J, Avery M, Unützer J. Perspectives of Behavioral Health Clinicians in a Rural Integrated Primary Care/Mental Health Program. *J Rural Health*. Fall 2015;31(4):346-53. doi:10.1111/jrh.12114
18. Myers K, Stoep AV, Thompson K, Zhou C, Unützer J. Collaborative care for the treatment of Hispanic children diagnosed with attention-deficit hyperactivity disorder. *General Hospital Psychiatry*. 2010/11/01/ 2010;32(6):612-614. doi:https://doi.org/10.1016/j.genhosppsych.2010.08.004
19. Fortney JC, Pyne JM, Ward-Jones S, et al. Implementation of evidence-based practices for complex mood disorders in primary care safety net clinics. *Fam Syst Health*. Sep 2018;36(3):267-280. doi:10.1037/fsh0000357
20. Moullin JC, Dickson KS, Stadnick NA, Rabin B, Aarons GA. Systematic review of the Exploration, Preparation, Implementation, Sustainment (EPIS) framework. *Implementation Science*. 2019/01/05 2019;14(1):1. doi:10.1186/s13012-018-0842-6
21. Aarons GA, Green AE, Palinkas LA, et al. Dynamic adaptation process to implement an evidence-based child maltreatment intervention. *Implement Sci*. Apr 18 2012;7:32. doi:10.1186/1748-5908-7-32

11TH Annual Telehealth Summit of South Carolina
December 4 - 6, 2023
 Hyatt Regency Greenville
 Greenville, South Carolina

