MASSACHUSETTS GENERAL HOSPITAL

HARVARD MEDICAL SCHOOL

Annual Report 2018-2019

To the Massachusetts Department of Mental Health

Mass DMH Department of Mental Health

The Center of Excellence for Psychosocial and Systemic Research
A Massachusetts Department of Mental Health
Research Center of Excellence

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Executive Summary

We were very pleased to have been awarded the contract by the Massachusetts Department of Mental Health (DMH) to establish a Center of Excellence (COE) for Psychosocial and Systemic Research. We appreciate DMH's philosophical commitment to psychosocial research, which reflects the increased understanding in our field of the importance of psychosocial treatment approaches to prevention, illness management, and recovery in mental health. We began this venture as a collaboration between affiliates of the Massachusetts General Hospital (MGH) Schizophrenia Clinical and Research Program and the MGH Division of Public and Community Psychiatry and with expert consultation from Dr. Anne Whitman, a certified peer specialist, who co-founded both the Metro Boston Recovery Learning Community and the Cole Resource Center at McLean Hospital.

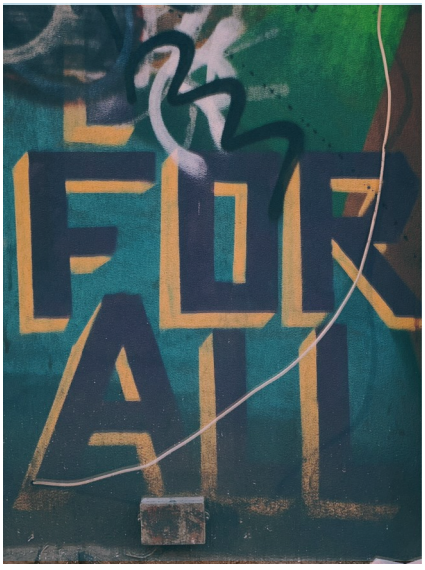
In Year 1 (Y1), we have created a foundation by including diverse groups of stakeholders across Massachusetts that will help inform future research aimed at improving the health care and recovery trajectories for a broad spectrum of individuals and family members affected by mental health challenges.

Our Center seeks to develop collaborative relationships with family members, persons with lived experience, schools, human service agencies, insurers, health and community health centers, advocacy groups, and recovery communities across the state of Massachusetts. Through mentorship provided by the senior staff of the Center, we seek to build a community of early career care providers, researchers, and scientists in the Center who share our vision and mission of collaboration and transparency.

We hope to serve as an incubator for research ideas, to implement pilot studies guided by stakeholder input, and to co-create these projects with community partners with the goal of securing external grant funding. We will share results of research projects widely with our stakeholder communities.

We are committed to the needs of vulnerable and underserved populations and care deeply about social justice and race equity. From the start, we have taken steps to self-evaluate both our culture as a Center and our proposed work in terms of cultural humility and structural competence, and we will continue to do this work as we develop.

Mission Statement



The MGH Center of Excellence for Psychosocial and Systemic Research will develop collaborative relationships with stakeholders, including family members, persons with lived experience of mental health challenges, schools, human service agencies, insurers, health and community health centers, advocacy groups, and recovery communities, across the state of Massachusetts. Our goals are to: collaboratively develop and implement research and quality improvement projects, to advance knowledge in the development of interventions and systems of care for individuals and family members of individuals who are either at risk for mental illness or who have been diagnosed with mental illness, to train a new generation of providers in evidence-based practices, and strive to identify and remediate health care disparities for individuals with mental health challenges generally and vulnerable subgroups in particular.

Highlights of Year 1

- Hired 25 staff, including 8 individuals with lived experience of mental health challenges, who have conducted 14 listening groups with geographically diverse communities across Massachusetts to identify priority areas and develop relationships.
- Convened a Steering Committee comprised of individuals with lived experience, family members, leadership from human service agencies, advocacy groups, researchers, care providers, and a representative from MassHealth; has met quarterly in Y1.
- Launched 7 new pilot/quality improvement projects with diverse populations, including:

  1) residents at DMH transitional shelters,

  2) at-risk Latinx youth from MGH Pediatrics in Chelsea, MA,

  3-4) individuals receiving treatment for first episode/early psychosis (2 projects),

  5) family members of individuals with schizophrenia,

  6) individuals with diabetes and serious mental illness (SMI),

  7) individuals receiving lithium treatment.
- Center staff contributed to 38 publications, 29 presentations, and 31 posters.
- Our Statement of Concern on Marijuana Policy in Massachusetts was covered by the local press:

Dozens of doctors, scientists warn Mass. marijuana is ripe for 'regulatory failure'

By Naomi Martin Globe Staff, May 30, 2019, 2:08 p.m.

(MARTIN BERNETTI/AFP/GETTY IMAGES)

Martin, N. Dozens of doctors, scientists warn Mass. marijuana is ripe for 'regulatory failure' (2019). Boston Globe.

- Wrote a white paper at the request of DMH on the use of LAI medication in state hospital settings.
- Secured 5 grants with a total amount awarded of $1,293,679.
- Hosted a meeting with our iSPARC colleagues to learn more about their activities and identified many areas of philosophical overlap and potential research synergies between our two Centers.

I. Operations

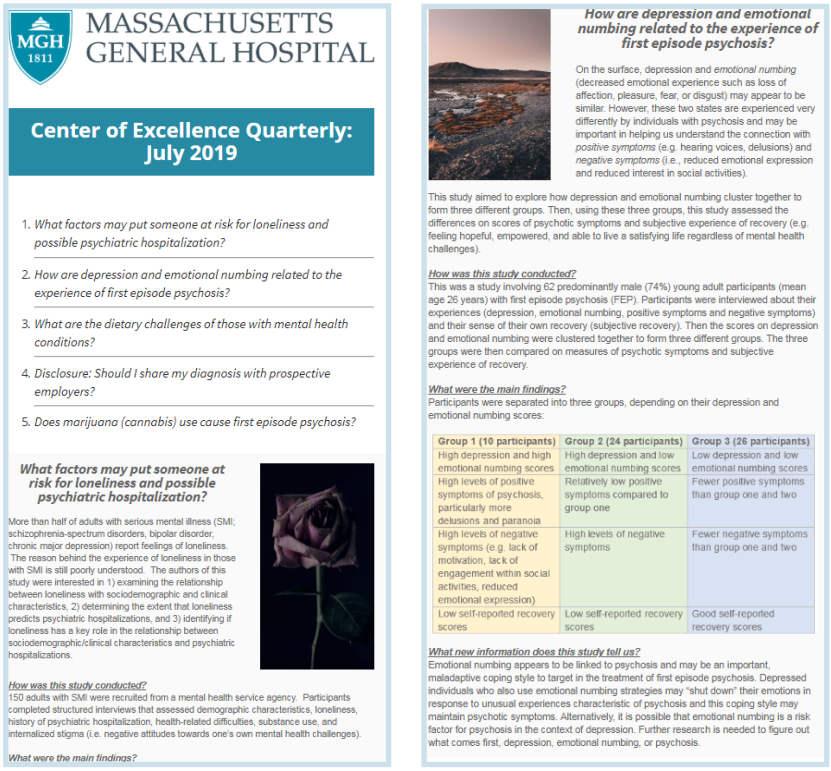
On 11/1/18, the COE for Psychosocial and Systemic Research moved into our dedicated space at MGH, located on the 6th floor of 151 Merrimac Street in Boston, MA. The space is well-located for a number of reasons, including its proximity to DMH Central office and the MGH main campus, as well as our proximity to both the MGH Recovery Research Institute (Director: John Kelly, PhD) and the Center for Addiction Medicine (Director: A. Eden Evins, MD, MPH).

On 12/21/18, the COE hosted an open house to introduce individuals and community partners to our location, staff members, and mission. Approximately 40 people attended, including community members, MGH professionals, and DMH partners (see Appendix A for the open house handout).

We hired 25 individuals in Y1, including a director (Dr. Corinne Cather), 6 core senior investigators (Drs. Abigail Donovan, A. Eden Evins, Oliver Freudenreich, Daphne Holt, Kim Mueser, and Derri Shtasel), and 8 individuals with lived experience as core team members in the role of Community Researchers (CRs). We have also hired a program manager, two research coordinators, two post-doctoral fellows, three junior psychologists, a social worker, and an administrative assistant (see Appendix B). Our Center receives support from Joy Rosen, Vice President, Behavioral Health MGH Department of Psychiatry and for Community Health Initiatives.

We are in the process of developing a COE website, which will be hosted by the MGH Department of Psychiatry. The Department is currently revamping the structure used for websites, which has delayed our initial timeline for launching the site by a couple of months. We anticipate having the site launched by September 1, 2019.

A quarterly electronic educational newsletter, designed to disseminate research findings and provide links to relevant resources, is also being developed. The newsletter contains plain language summaries of recent publications highlighting key "take-aways" for diverse readers (e.g., individuals with lived experience, family members, clinicians, administrators/policy makers). All members of the COE, including CRs, are invited to contribute to and provide feedback on the newsletter.



MASSACHUSETTS GENERAL HOSPITAL

Center of Excellence Quarterly: July 2019

1. *What factors may put someone at risk for loneliness and possible psychiatric hospitalization?*
2. *How are depression and emotional numbing related to the experience of first episode psychosis?*
3. *What are the dietary challenges of those with mental health conditions?*
4. *Disclosure: Should I share my diagnosis with prospective employers?*
5. *Does marijuana (cannabis) use cause first episode psychosis?*

What factors may put someone at risk for loneliness and possible psychiatric hospitalization?

More than half of adults with serious mental illness (SMI; schizophrenia-spectrum disorders, bipolar disorder, chronic major depression) report feelings of loneliness. The reason behind the experience of loneliness in those with SMI is still poorly understood. The authors of this study were interested in 1) examining the relationship between loneliness with sociodemographic and clinical characteristics, 2) determining the extent that loneliness predicts psychiatric hospitalizations, and 3) identifying if loneliness has a key role in the relationship between sociodemographic/clinical characteristics and psychiatric hospitalizations.

How was this study conducted?

150 adults with SMI were recruited from a mental health service agency. Participants completed structured interviews that assessed demographic characteristics, loneliness, history of psychiatric hospitalization, health-related difficulties, substance use, and internalized stigma (i.e. negative attitudes towards one's own mental health challenges).

What were the main findings?

How are depression and emotional numbing related to the experience of first episode psychosis?

On the surface, depression and *emotional numbing* (decreased emotional experience such as loss of affection, pleasure, fear, or disgust) may appear to be similar. However, these two states are experienced very differently by individuals with psychosis and may be important in helping us understand the connection with *positive symptoms* (e.g. hearing voices, delusions) and *negative symptoms* (i.e., reduced emotional expression and reduced interest in social activities).

This study aimed to explore how depression and emotional numbing cluster together to form three different groups. Then, using these three groups, this study assessed the differences on scores of psychotic symptoms and subjective experience of recovery (e.g. feeling hopeful, empowered, and able to live a satisfying life regardless of mental health challenges).

How was this study conducted?

This was a study involving 62 predominantly male (74%) young adult participants (mean age 26 years) with first episode psychosis (FEP). Participants were interviewed about their experiences (depression, emotional numbing, positive symptoms and negative symptoms) and their sense of their own recovery (subjective recovery). Then the scores on depression and emotional numbing were clustered together to form three different groups. The three groups were then compared on measures of psychotic symptoms and subjective experience of recovery.

What were the main findings?

Participants were separated into three groups, depending on their depression and emotional numbing scores:

Group 1 (10 participants)	Group 2 (24 participants)	Group 3 (26 participants)
High depression and high emotional numbing scores	High depression and low emotional numbing scores	Low depression and low emotional numbing scores
High levels of positive symptoms of psychosis, particularly more delusions and paranoia	Relatively low positive symptoms compared to group one	Fewer positive symptoms than group one and two
High levels of negative symptoms (e.g. lack of motivation, lack of engagement within social activities, reduced emotional expression)	High levels of negative symptoms	Fewer negative symptoms than group one and two
Low self-reported recovery scores	Low self-reported recovery scores	Good self-reported recovery scores

What new information does this study tell us?

Emotional numbing appears to be linked to psychosis and may be an important, maladaptive coping style to target in the treatment of first episode psychosis. Depressed individuals who also use emotional numbing strategies may "shut down" their emotions in response to unusual experiences characteristic of psychosis and this coping style may maintain psychotic symptoms. Alternatively, it is possible that emotional numbing is a risk factor for psychosis in the context of depression. Further research is needed to figure out what comes first, depression, emotional numbing, or psychosis.

Quarterly Newsletter Excerpt (Appendix A)

Steering Committee

The COE has convened a Steering Committee comprised of persons with lived experience (20%), family members (15%), researchers, care providers, administrators, representatives from advocacy groups, and a representative from MassHealth. The Steering Committee is chaired by Derri Shtasel, MD, MPH, Director of the Division of Public and Community Psychiatry in the MGH Department of Psychiatry.

Table 1. Steering Committee Membership

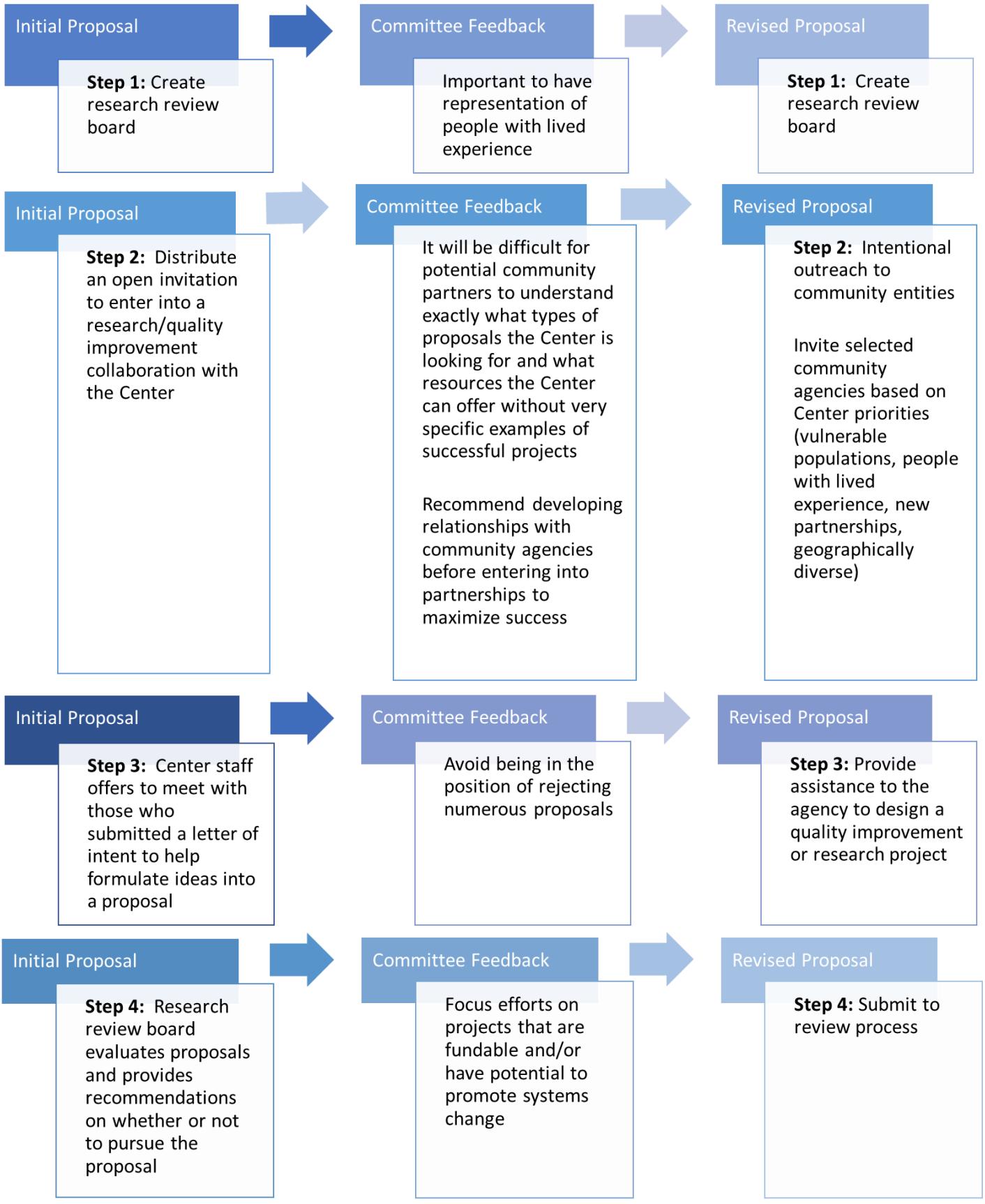
Steering Committee Member	Title/Perspective
Travis P. Baggett, MD	Director of Research, Boston Health Care for the Homeless Program
Steve Bartels, MD, MS	Director, The Mongan Institute, MGH Department of Medicine
David Beckmann, MD, MPH	Staff Psychiatrist, MGH First Episode and Early Psychosis Program and MGH
Stephanie Brown	Director, Office of Behavioral Health for MassHealth
Jonathan Burke	Person with lived experience
Deborah Delman	Senior Advisor and former Executive Director, Transformation Center
Kush Desai	Person with lived experience
Lenyn Ferreira	Person with lived experience
Jean Frazier, MD	Executive Director, Eunice Kennedy Shriver Center at UMass Medical School
Guen Gwanyalla	Family member
Kevin Henze, PhD	Psychologist, U.S. Department of Veteran Affairs, Assistant Professor of
Carrie Landa, PhD	Director, Behavioral Medicine and Associate Director of Clinical Services,
Danna Mauch, PhD	President and Chief Executive Officer of the Massachusetts Association for
Jackie K. Moore, PhD	Chief Executive Officer, North Suffolk Mental Health Association
Norma Mora	Family member
Ircania Valera	Person with lived experience
Corrie Vilsaint, PhD	Principal Investigator at the Recovery Research Institute and Center for
Mark Viron, MD	Medical Director, Advocates Inc
Carolyn White	Family member
Janet Wozniak, MD	Director, Quality and Safety, Department of Psychiatry; Director, Pediatric Bipolar Disorder Clinical and Research Program, MGH Department of Psychiatry
Derri Shtasel, MD, MPH	Director, Division of Public and Community Psychiatry

Our Steering Committee meets quarterly for 90 minutes and is charged with providing guidance on the engagement of individuals from racially and ethnically diverse backgrounds in research, internal quality improvement initiatives and self-assessment, and developing the COE's annual research agenda. In subsequent years, we will seek assistance from the Steering Committee to disseminate the COE's research findings to our key stakeholder groups. We have met with the Steering Committee a total of 3 times in Y1. Our kickoff meeting served the purpose of orienting the Committee to the Center and to the role of the Committee as providing broad oversight, helping us to increase the COE's visibility, leveraging external relationships to form new collaborations, and providing an annual review of the COE's performance, specifically in terms of remaining mission-focused, representing stakeholder and client diversity, and upholding our commitment to vulnerable populations. Our last two meetings have focused on updating the Steering Committee on the status of specific COE projects, including sharing the process and results from the listening groups we have conducted across the state.

Additionally, our last two Steering Committee meetings introduced and sought feedback on a proposed process of establishing Center-Community quality improvement/research project partnerships (see Figure 1). This

exemplifies our intended iterative process of soliciting feedback from the Steering Committee and modifying our internal processes and policies to incorporate the input and ideas generated by this group.

Figure 1. COE Process for Establishing Center-Community Collaborative Projects



II. Contributions of Individuals with Lived Experience

Input from and partnership with persons with lived experience is critical to the COE's work. The COE has prioritized the goal of implementing community-based participatory research (CBPR) to facilitate partnerships between researchers, peer recovery communities, and stakeholder groups to identify and co-create research studies and quality improvement projects to enhance outcomes and reduce disparities. In Y1, we have begun to lay the foundation for infusing CBPR into the COE through actively seeking input and partnering with our CRs.

CRs are persons with lived experience of mental health challenges and/or substance misuse. With the leadership and guidance from Dr. Anne Whitman, who served as a founding member of the COE and who currently supervises the CRs, we have hired 7 CRs with lived experience and diverse backgrounds to contribute to the COE's activities. The CRs bring a diverse set of cultural and linguistic backgrounds, expertise, skills, and motivations to the COE and are geographically dispersed across Massachusetts. Through partnership with CRs, there has been mutual learning and growth among COE team members. For example, CRs have developed knowledge and skills in research processes, record keeping, and production of reports. Researchers and administrators have witnessed first-hand the value of empowering CRs to take the lead, of sensitivity to person-centered language, and of responding flexibly to the needs and preferences of leadership and members of recovery communities.

In Y1, CRs have been essential in the COE's goals including:
1) outreach and engagement with diverse recovery communities across Massachusetts,
2) identifying needs and priorities of community members and families impacted by mental health concerns, and
3) dissemination efforts.

Outreach and Engagement

CRs have outreached to recovery communities, non-profit agencies, and stakeholder groups to share the mission and priorities of the newly established COE, to strengthen existing relationships, and to establish mutually beneficial partnerships. This scope of work would not have been possible without the trusting relationships our CRs have with many of these communities and their work has been absolutely critical to this effort.

Due to historical mistreatment by healthcare and research institutions, many vulnerable communities are wary of engaging and participating in mental health care and research. Rather than have academics and researchers engage recovery communities, our CRs have led outreach and engagement initiatives. In Y1, CRs have begun to outreach and engage with a variety of recovery communities, including Latinx, African American/Black, LGBTQ, homeless, urban, and rural communities. Outreach and engagement activities happened in a variety of formats, including e-mails, telephone calls, in person meet-and-greets, and formal presentations.

Identification of Community Members' Needs through Listening Groups

The aims of the listening groups are to establish trust, build and strengthen partnerships, give voice, capitalize on community strengths, and identify unaddressed needs and priorities of recovery communities. CRs have taken the lead in developing and implementing the listening groups with administrative support from other COE team members. CRs independently developed the listening group process and format, and facilitated an internal listening

group at the Center among themselves to refine this process and make their own contribution to the needs assessment.

Figure 2. Aims of Listening Groups

CRs have conduced 14 listening groups with recovery communities in Y1 which has resulted in input from 124 adults with lived experience (see Table 2). Listening groups were conducted in geographically diverse areas of Massachusetts, including Boston Metro, Northeast, Central, Western, and Southeast Massachusetts. All participants were community members with lived experience, with 54% identifying as certified peer specialists. Participants (51% female) ranged in age from 18 to 88 years, with a mean age of 46.7 years. The majority of participants identified their race as White (59%), 9% identified as Black, and 37% identified as having Hispanic/Latino ethnicity. In Year 2 (Y2), our first priority is to implement two listening groups with African American/Black participants.

Table 2. Listening Groups Completed in Y1

Recovery Community	Location	Facilitator(s)	Number of Participants
North East Recovery Learning Community (NERLC)	Lynn	Jacqueline Martinez & Dr. Anne Whitman	8
Depression Bipolar Support Alliance (DBSA)	Hyannis	Sandra Whitney-Sarles	8
Kiva Center	Worcester	Ryan Markley & Valeria Chambers	8
Depression Bipolar Support Alliance (DBSA)	Belmont	Dr. Cynthia Piltch	13
South East Recovery Learning Community (SERLC)	Fall River	Sandra Whitney-Sarles	4
Metro Boston Recovery Learning Community (MBRLC)	Boston	Sandra Whitney-Sarles & Valeria Chambers	13
Open Door/Open Pantry	Springfield	Paul Alves	10
Southbridge Community Access Center	Southbridge	Jacqueline Martinez	10 (conducted in Spanish)
MassHire	Holyoke	Paul Alves & Jacqueline Martinez	10
South East Recovery Learning Community (SERLC)	Brockton	Sandra Whitney-Sarles	9
Rosie's Place	Boston	Jacqueline Martinez	10 (conducted in Spanish)
Zia Young Adult Access Center	Worcester	Ryan Markley	3
Daybreak Clubhouse	Martha's Vineyard	Sandra Whitney-Sarles	8
Gandara Center	Springfield	Jacqueline Martinez	10 (conducted in Spanish)

Listening groups have been audio-recorded and transcribed which has enabled the identification of emerging themes in five domains to date:

1) health (weight and nutrition, mind-body medicine, access to medical care),
2) homelessness (barrier to employment and recovery, relapse as precursor to homelessness),
3) research (results need to get back to individuals with lived experience, more peer-led research),
4) multicultural issues (lack of culturally and linguistically competent care, white privilege), and
5) relationships (loneliness and aging, parenting challenges, value of peer support; see Figure 3).

Figure 3. Themes and Participant Quotations from Listening Groups

Health	"Whenever a nurse or doctor will see on their chart medication for… a mental health problem, that changes how they interact with you because of the stigma. And I've seen people whose pain and health issues have been pushed aside and ignored because of that…"Oh, this is in your mind. You're just imagining it."
Homelessness	"My first period of homelessness started on the first day of my first ever partial hospitalization program. …. But I remember my physician…asked, "Well, where are you staying?" And I said, "I'm sleeping in my car, currently." And she said, "We can't have you in the program if you're sleeping in your car."
Multicultural Issues	"One of many barriers in our community is the lack of Spanish speaking providers, no therapist, doctors, workers that understand our culture. The lack of reliable transportation, interpreters and waiting so long to schedule an appointment…it's very discouraging. It feels like we don't matter."
Relationships	"The systems are not designed to keep you and your kid together. You have to choose between your wellness and your child."
Research	"I would hope that peers could be involved in every stage of the research, from conceptualization and thinking about the question, to deciding how to go about it, to also looking at the results and to have the peer perspective, our peer eyes, because often what one person may see, another person doesn't see. So I think the more the better. And then also, even the writing up of the research for an article and dissemination."

Feedback from participants in listening groups has been overwhelmingly positive. Participants have expressed excitement regarding the development of the COE and have endorsed several aspects of the process, including benefits of CR-facilitated listening groups, value of representation and having voice, and interest in continued engagement with the COE to learn about the findings and outcomes of the listening groups and to stay informed about COE activities and new research findings. Participants have expressed previous mistrust and trauma from

research institutions and healthcare systems, and have expressed appreciation for the COE's efforts in taking a different approach by establishing trust and partnership with recovery communities with leadership from CRs.

Dissemination Efforts

Community members have shared the need to have better access to research findings relevant to their recovery and overall wellness. Individuals with lived experience are leaders in sharing results and findings from the COE widely in accessible language and innovative media. We have implemented a variety of dissemination efforts by CRs, including the COE Newsletter, poster presentations, panel discussions, community-based presentations, and advocacy events to reach diverse stakeholder groups and recovery communities across Massachusetts.

Examples of dissemination efforts by CRs include the following:

- The first quarterly COE Newsletter will be sent out to stakeholder groups and recovery communities in late Summer 2019. CRs identified key stakeholder groups and recovery communities to receive the COE Newsletter, have prioritized the inclusion of peer and recovery-oriented research, have contributed content, and edited with an eye to person-centered language. Our first newsletter features a piece on loneliness co-authored by Sandra Whitney-Sarles and Dr. Anne Whitman.
- Dr. Anne Whitman, Paul Alves, Valeria Chambers, Katherine Hintz, Ryan Markley, Jacqueline Martinez, Dr. Cynthia Piltch, & Sandra Whitney-Sarles co-authored and co-presented a poster at the 7th Annual MGH Public and Community Psychiatry Symposium titled: "The MGH Center of Excellence for Psychosocial & Systemic Research: Mission and Progress Report."
- COE leadership and Dr. Anne Whitman, Jacqueline Martinez, Dr. Cynthia Piltch, and Ryan Markley collaboratively developed and presented a panel discussion highlighting the mission and priorities of the COE at the Massachusetts Psychosocial Rehabilitation Association (Mass PRA) Annual Conference, which provided opportunity not only to share information on the center, but also to elicit feedback from the community.
- Drs. Anne Whitman and Corinne Cather engaged in a discussion with the NAMI GBCAN group at Center Club and presented encouraging results from our research on diabetes self-management. Several members of GBCAN and Center Club had participated in this particular study and were pleased to learn of the results and provide feedback on their own experience in the study as well as on their current efforts to manage their diabetes.
- CRs have been active in local advocacy efforts. For example, Jacqueline Martinez, Dr. Anne Whitman, Dr. Cynthia Piltch, and Sandra Whitney-Sarles participated in the annual National Alliance on Mental Illness (NAMI) Walks of Massachusetts, representing both their local recovery organizations and the COE. Additionally, Dr. Anne Whitman, Sandra Whitney-Sarles and Dr. Cynthia Piltch have been active in attending community events such as Express Yourself and have begun to network with parents and families struggling with mental health concerns. Sandra Whitney-Sarles and Dr. Anne Whitman also attend the Massachusetts Association of Mental Health Annual Award Dinner. The CRs attendance at such events conveyed their interest to the stakeholders' successes as well as providing an opportunity to voice their personal concerns as well as their community's concerns and priorities.

III. Race Equity, Cultural and Linguistic Factors

Conduct of effective, equitable and respectful high-quality research, inclusive of communities historically under-represented in research and responsivity to diverse cultural beliefs, preferred languages, and other communication needs, are core values of Massachusetts General Hospital. The COE plans to incorporate and build upon these critical principles, particularly through commitment to thoughtful consideration of the ways in which racism affects not only the onset and recovery trajectory of mental health challenges, but also access and quality of behavioral and physical health care. In alignment with our current understanding of the importance of assuming the default mode is to neglect the role of racism and discrimination driven by implicit biases at the individual and systems level, we aspire to intentionally evaluate the ways in which racism affects outcomes and our systems of care.

In Y1, the COE has addressed the value of **race equity** in the following ways:

- Conducting a chart review study in partnership with DMH to evaluate the ways in which race and ethnicity relate to length of stay and disposition in DMH shelters.
- Conducting an intervention study to promote resilience in Latinx youth in Chelsea.
- Identification of the promotion of racial equity as a priority focus for future QI/pilot projects with community agencies.
- Solicitation of feedback from individuals with lived experience in listening groups about their personal experiences of racism as it relates to their care.
- Engagement of stakeholders with diverse backgrounds, including people with lived experience and vulnerable populations.
- Prioritization of the inclusion of traditionally under-represented communities, including women, immigrants, and people of diverse ethnic, cultural, and linguistic backgrounds in quality improvement/ research projects.
- Training to staff to improve self-awareness, knowledge, and skills around cultural humility, white privilege, microaggressions, and institutional racism.
- The Steering Committee has been tasked to review the annual report to assess program's strengths and areas for growth and will submit recommendations. The processes will assist in the Center's on-going self-assessment, quality improvement, and accountability in upholding the values of diversity and cultural humility.

In Y1, the COE has addressed the value of **cultural and linguistic factors** in the following ways:

- Recruitment of bilingual/multilingual and bi-cultural staff.
- Translation of research consent forms and study materials for the Community-Based Resilience Training for Adolescents study into Spanish.
- Development and implementation of group sessions in Spanish for parents/guardians of adolescents enrolled in the Community-Based Resilience Training for Adolescents.
- Development of a 1-page COE Information Sheet in accessible English and Spanish for listening groups.
- Development of an electronic newsletter highlighting current research in accessible English.
- Evaluation and adaptation of current research study demographic questionnaires to align with the Health and Human Service data collection standards and where applicable with both sexual orientation and gender identity standards.
- Identification of preliminary themes of community members' recovery priorities and unaddressed needs from listening groups.

IV. Center-Community Collaboration

The COE is uniquely positioned to translate community engagement quickly into pilot research, community development, and quality improvement programs to improve health care disparities among diverse communities impacted by SMI. The COE builds on an already strong collaboration between MGH Schizophrenia Clinical and Research Program and MGH Division of Public and Community Psychiatry, a partnership which capitalizes on the reach of Partners-affiliates throughout the Commonwealth; in addition, the efforts of the Division have fostered community partnerships that expand reach to individuals with mental health needs who are racial, cultural and ethnic minorities, homeless, involved with the criminal justice system, trauma survivors, opioid-dependent, and/or representative of LGBTQ populations. In Y1, COE leadership has prioritized both strengthening existing relationships with community organizations and building new ones. We have had also had some meetings with academic colleagues who have established community partners (or want to build these partnerships) .

Examples of Center-Community meetings completed in Y1 include:

- Dr. Cather and Dr. Whitman met with the Board, and subsequently with community members of the Transformation Center to solicit applicants to the Center with lived experience with a focus on those from minority groups.
- Dr. Cather and Dr. Shtasel met with leadership of Boston Healthcare for the Homeless to discuss potential collaboration. We also met with Dr. Keith McInnis and Dr. Donald Miller from the Bedford VA, regarding a pending grant they have with Boston Health Care for the Homeless which uses smartphone apps to help with medication and appointment reminders as well as providing some information about circumstances that might be associated with breakdowns in transitions from homelessness.
- Dr. Cather and Dr. Freudenreich met with North Suffolk Mental Health Association (NSMHA) to discuss ways that the Center might be helpful to NSMHA which began a conversation about a quality improvement project that could decrease use of inappropriate emergency room visits for individuals residing NSMHA group living environments.
- Dr. Freudenreich holds monthly meetings with the Chief Medical Officer of NSMHA to promote: 1) better collaboration between academic psychiatry and community psychiatry (e.g., education and workforce development), 2) improved med-psych integration for NSMHA clinics (i.e., North Suffolk), and 3) developing community-relevant research. An outgrowth of this collaboration has been Dr. Freudenreich's development of a registry for lithium-treated patients who cared for by NSMHA.
- Dr. Cather connected with Dr. Aaron Beck and Dr. Aaron Brinen at the University of Pennsylvania and Beck Center for Cognitive Therapy to build on previous work in cognitive behavioral therapy with The Bridge (now Open Sky) in Worcester that has been provided by both Dr. Cather and the Beck Center.
- Dr. Evins and Dr. Cather met with MA Prevention Alliance (MAPA), a non-profit organization whose mission is to education and protect youth from negative effects of substance use in October 2018. In this initial meeting, they discussed potential collaborations regarding communicating risks of cannabis use to youth and young adults. In November 2018, Dr. Eden Evins arranged a working meeting with MA Prevention Alliance (MAPA) to outline potential white papers and other communication strategies regarding risks of cannabis use in youth and young adults. In May 2019, Drs. Corrine Cather, Eden Evins, Daphne Holt, Derri Shtasel were among a consortium of clinicians, researchers, and scientists that publicly released the Statement of Concern: Marijuana Policy in Massachusetts (http://

www.mapreventionalliance.org/wp-content/uploads/2019/05/MA-MJ-Policy_Statement-of-Concern-5-9-19_FINAL.pdf) that was widely distributed across Massachusetts.

- Dr. Cather met with Dr. Emily Kline (MassMental Health Center: Technical Assistance Center) about training methods for community providers in coordinated specialty care treatment models and patients with first episode psychosis. In May 2019, Dr. Cather met with NSMC leadership to determine their interest in applying and to offer technical assistance with the application. Due to competing priorities associated with the merger between NSMC and Union hospital, NSMC was not in a position to apply for this cycle, but we were able to connect NSMC with the MMHC TAC for FEPP so that NSMC could be involved in future FEP trainings.
- Dr. Cather and Dr. Daphne Holt met with Girma Asfaw, President of the Haddis Girma Continuity Forum in April 2019. The Haddis Girma Continuity Form's mission is increase MH awareness in the Ethiopian community living in Greater Boston. They expressed interest in: 1) assistance in determining the prevalence of SI and completed suicide in their community, 2) expert speakers to present at their annual MH education day, and 3) Space to hold their weekly language/culture classes for youth and parents.
- Dr. Cather and Dr. Shreedhar Paudel, MD, an MGH psychiatrist and founding director of Health Foundation Nepal, met to talk about the COE and discuss the possibility of future collaboration regarding assessment of barriers to MH care among the Nepalese population in Greater Boston and the Commonwealth.
- Dr. Cather met with Dr. Jose Hidalgo, the attending psychiatrist at Nashua Street Jail to discuss the possibility of a QI project to improve recognition of complex PTSD (cPTSD) in those awaiting trial and characterize differing symptom and behavioral profiles of cPTSD and antisocial or borderline personality disorder in this population.
- Dr. Shtasel and Dr. Cather met with Dr. Kiame Mahaniah, medical director of Lynn Community Health to discuss potential opportunities for collaboration.

V. Research & QI

Although our goal is to grow into a Center that undertakes full model consumer based participatory action research with community partners, for our first 9 months, we recognized that this goal was not feasible. Therefore, in this first partial year, we undertook mostly investigator-initiated projects aligned with our stakeholder's interests and sought consultation from our CRs. We hope these projects will serve as a springboard for future projects in which individuals with lived experience and community partnerships play a more central role in the formation of the study question, design, implementation, and analysis of results.

Research

Identifying Factors Associated with Length of Stay in DMH Shelters
PIs: Derri Shtasel, MD, MPH and David Hoffman, MD
Funding: DMH contract to MGH COE
Time Frame: 7/1/18-12/1/19
Description: The DMH Transitional Shelter Chart Review is a study on the effects of sex, race, ethnicity, legal history, and other variables in the duration of homeless tenure in DMH transitional shelters in Boston. The factors associated with duration of homelessness, and the factors associated with exit from homelessness, particularly in persons with serious mental illness (SMI), have been minimally studied, and the possible correlations with race even less so. As criminal history is a common and major barrier to housing, and men of color are primary victims of the war on drugs and mass incarceration, it has been assumed that their exit is slower for this reason. In settings where cross-system collaboration is embedded in the model of service provision, including the transitional shelter system, differences in length of stay should be more closely examined. This study seeks to better define the factors contributing to entry into and out of homelessness. Demographics and duration of time in transitional shelters will potentially highlight unrecognized service needs and allow for the development of more targeted treatment interventions and integrated systems of care for people served in the transitional shelter system.

Integrated Behavioral Diabetes Management for Individuals with Serious Mental Illness (SMI) (Parent Study)
PI: Eden Evins, MD, PhD
Funding Parent Study: MGH Executive Committee on Community Health
Funding for Qualitative Study: DMH contract to MGH COE
Time Frame Parent Study: 12/14/16- 4/1/19; Secondary study of qualitative interviews with participants: 10/23/18 – 9/1/18
Parent Study Description: This project was developed in order to improve health outcomes for people with serious mental illness (SMI) and diabetes, a highly prevalent comorbidity that results in high levels of healthcare utilization and poor medical outcomes, including significant premature mortality. The project integrated diabetes education into the community mental health setting with a program that aimed to advance patient knowledge, motivation, skills and self-efficacy for managing diabetes in a community setting. The weekly groups included goal setting, identification of environmental barriers, in-class activities, teaching and promoting healthy behaviors (diet, exercise, smoking cessation, medication adherence), and guided problem solving. Participants were randomly assigned to receive the 16-week group intervention first followed by a 16-week observation period or vice versa, with a total of 35 participants completing at least one group. Promising results included improved glycemic control and decreased BMI as well as improved diabetes self-care over the intervention period.

Figure A. Factors Increasing Mortality Impact of Diabetes in SMI
Baptista, 2004; Regenold. 2002; Mauer , 2010; Thorndike, 2016.

Figure B. Enrollment

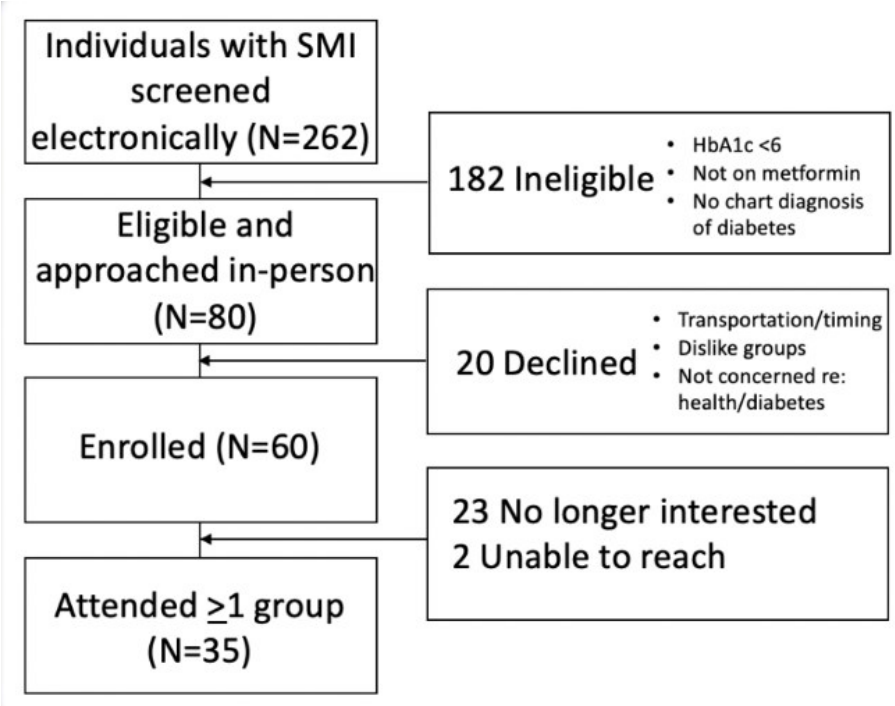


Figure C. Improved Glycemic Control

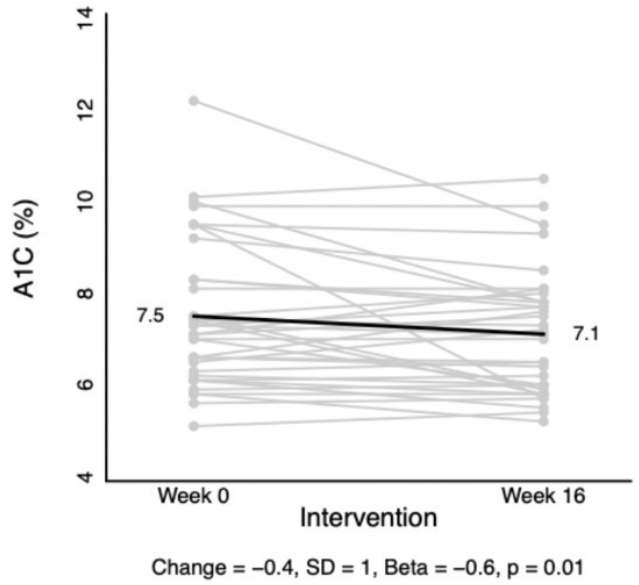
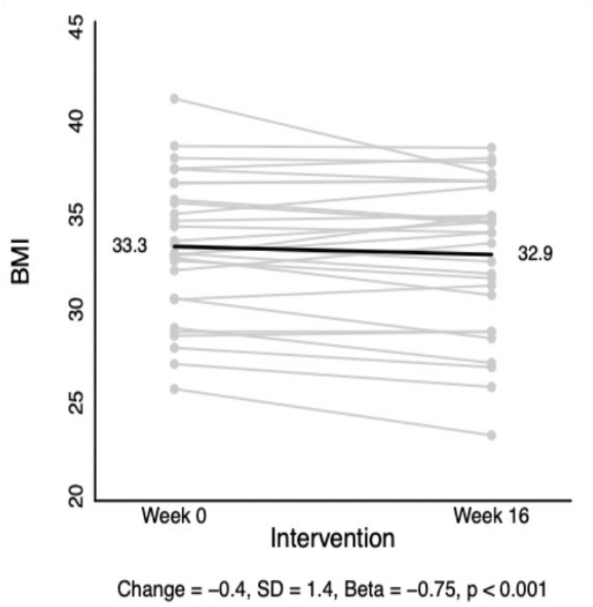


Figure D. Improved BMI



Qualitative Study Description: Qualitative interviews were conducted with participants following the end of the diabetes self-management study to understand the participants' experience (i.e., what was most helpful, reasons for not engaging, ways to improve the intervention). A total of 33 participants completed qualitative interviews.

Participants cited a variety of sustained lifestyle changes (such as cutting out alcohol, increasing daily walking, eating more vegetable). Other themes that emerged from qualitative data analysis included accountability and consistency associated with attending weekly groups, positive reinforcement afforded by the group setting, and a greater sense of well-being. Major barriers were the time commitment and transportation.

Figure E. Participant Quotes

"Fiber and vegetables, and stay away from fats and carbohydrates… wheat bread instead of white bread…black coffee, no sugar now…more vegetables…like sometimes I'll eat a lot of meat and very little vegetables. That's a big problem for me."

"I learned that I can't drink soda. The orange juice, I only drink it when my sugar level is low….when I buy soda, I try to buy diet…It's good. It is. I learned that here too."

"… if I'm going to eat a peanut butter and jelly sandwich, I take the jelly away. I eat the peanut butter sandwich. "

"…they gave us, actually, a plastic plate with a cover on it. And half of the plate was supposed to be vegetables, and a quarter of the plate was supposed to be meat, and then a quarter of the plate was something like beans or rice or something like that. So that's what I learned about portion control."

"I switched over to diabetic meals on Meals on Wheels and I have healthy meals come to my house."

"I walk, make sure I get a little exercise every day, like going to the store or something like that, and walking around using my cane."

Community-Based Resilience Training for Adolescents

PI: Daphne Holt, MD, PhD

Funding: The Sidney R. Baer Jr Foundation and the DMH Contract to the MGH COE

Time Frame: 10/1/18-6/30/2020

Description: The Community-Based Resilience Training for Adolescents is an 8-session group intervention based in Chelsea, MA, that is designed for Latinx youth between the ages of 11 and 14 with low-level mental health symptoms, such as mild depression, anxiety, or challenges following rules. The goal of the group is to promote well-being by increasing emotional resilience. The group provides a safe environment for group members to learn skills that will help them navigate personal and social challenges across various contexts including at school, in the community, and at home. Eligible participants are identified by the Pediatrics Department at the MGH Chelsea Healthcare Center. Parents and caregivers of participants are also invited to participate in two parent/caregiver sessions. These sessions are led by bilingual and bicultural members of the study staff. Participants engage in a variety of activities aimed at teaching emotion identification and regulation, impulse control, self-compassion, and mindfulness. The immediate goal of the intervention is to determine whether it is feasible and acceptable in the community, and the ultimate goal is to determine whether such an intervention can prevent the development of psychiatric conditions and improve the long-term outcomes for Latinx youth.

Integrated Behavioral Management of Healthy Lifestyle for Individuals with Recent Onset Psychotic Illness

PI: Abigail Donovan, MD

Funding: DMH grant to the MGH First Episode and Early Psychosis and the MGH COE

Time Frame: 2/1/2019- 10/15/2019

Description: Premature mortality due to cardiovascular disease in individuals with schizophrenia is the largest lifespan disparity in the US and is growing. Adults in the US with schizophrenia die on average 28 years earlier than those in the general population. These earlier deaths are mostly attributable to physical health conditions, including obesity, diabetes and cardiovascular disease. A recent large US study assessed cardiovascular risk in 394 participants within a First Episode Psychosis program and demonstrated 48% of those participants were obese or overweight, 51% smoked and 57% had dyslipidemia (unhealthy levels of fat in one's blood) (Correll et al., 2014). The duration of their mental health illness was associated with higher body mass index, fat mass and percentage and waist circumstance. Therefore, these cardiovascular risk factors are present early in the course of illness and likely due to the effects of antipsychotic medication treatment, unhealthy lifestyle (poor diet, sedentary lifestyle, cigarette smoking), and the underlying psychotic illness itself. It is essential to develop innovative interventions to improve health outcomes for those early in the course of their illness. Importantly, those with SMI are receptive to medication, disease self-management strategies, and weight loss programs when provided. We developed an 11-week group behavioral and educational program, for young adult participants with early psychosis. Each weekly session begins with a 60-minute high intensity interval training (HITT) exercise class at a local health club facilitated by a certified group fitness instructor. After completing the HITT class, participants attend a 60-minute interactive education and skills group that incorporates nutritional education, motivational interviewing, self-care skills drawn from positive psychology principles, and problem-solving skills taught by an interdisciplinary team of psychiatrists, psychologists, social workers, and nutritionists. A certified peer specialist also participates in the exercise and education groups. At the end of each class, participants identify personalized nutrition and/or exercise goals, identify barriers and solutions to reaching these goals, and track their daily progress to review in the next session. The primary goals of this study are to promote increases in physical activity, psychological well-being, and nutritional knowledge that persists following the end of the intervention. We will also examine changes in waist-hip ratio, weight, and laboratory results, such as cholesterol.

Motivation for Work and School in Those Recently Experiencing a Psychotic Illness

PI: Nicole DeTore, PhD

Co-Investigator: Corinne Cather, PhD

Funding: NIDILRR

Time Frame: 6/1/2019- 12/01/2019

Description: This study aims to examine several factors previously found related to work and school outcomes in recent onset schizophrenia such as stigma and family support, and to determine barriers and facilitators of

motivation for work and school. This cross-sectional, mixed methods study involves an assessment lasting approximately one hour and fifteen minutes including: 45 minutes of clinician-rated and self-report measures including demographics, a brief cognitive measure, a psychiatric symptom assessment, and questionnaires obtaining level of parental support, experience of stigma, and psychosocial functioning and a brief semi-structured interview. This study will begin to fill the gaps in the literature surrounding both the impact of schizophrenia on, and the factors related to motivation to return to work and school in first episode schizophrenia. This study will further examine a potentially rich area for early clinical intervention promoting functional recovery, which may contribute to the decrease of the high unemployment rates found post first episode.

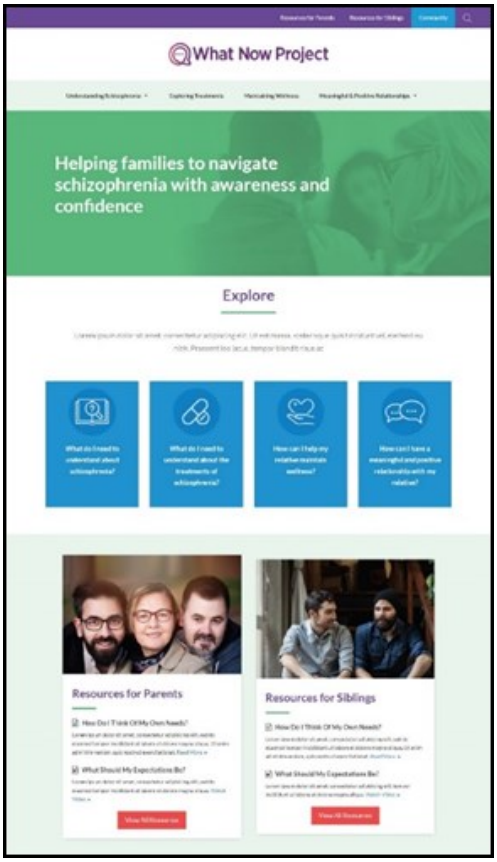
What Now? An Innovative Web-Based Tool for Family Caregivers of Individuals with Schizophrenia

PI: Rebekah Zincavage, PhD
Co-Investigator: Corinne Cather, PhD
Funding: National Institute of Mental Health (Award #: 1R43MH111305)
Time Frame: 7/1/17-6/30/19
Description: Family psychoeducation and skills training is an underutilized evidence-based practice for the treatment of schizophrenia. As a result, family members face the challenges of navigating psychotic symptoms and social functioning impairments experienced by their loved one without adequate knowledge and skill, which can increase family stress and adversely affect recovery for the individual with schizophrenia. Family members often experience burden, chronic strain, and powerlessness magnified by isolation and stigma.

We conducted a first round of focus groups with family members recruited from the community (N=28) and clinicians (N=18) to understand the practical and conceptual needs of family members to inform program design, content, and interactive features. Through combined content analysis of caregiver and clinician data, over 250 topics and challenges were identified. What Now? includes clips of video interviews with family members and professionals, interactive quizzes, myth-busters, communication skills training tips, and community resources.

Four key content areas were included on the website:

- Understanding Schizophrenia to provide a multidimensional look into schizophrenia--causes, symptoms, diagnostic process, early intervention, and family emotional responses.
- Exploring Treatments to outline the treatment process and options available.
- Maintaining Wellness to cover key aspects of daily self-care, recovery, and the role of families in maintaining long-term wellness.
- Building a Relationship focuses on caregiver self-care and provides techniques for communication and problem-solving skills.



We recruited 60 family members, gave them unlimited access to the website for one month, and evaluated pre-post changes in knowledge about schizophrenia, well-being, and family communication. These 60 family members and 32 clinicians were also recruited for a second round of focus groups to assess the feasibility, tolerability, and usability of the website.

At one-month evaluation, the prototype was associated with significant improvements in caregiver strain, knowledge about schizophrenia, empowerment, and communication baseline to one-month follow-up in this sample ($p<.05$). Burden did not significantly change from baseline to one-month follow-up (>.05). Caregivers were

highly engaged in the What Now? prototype review. They demonstrated tremendous enthusiasm and support for the program and offered insightful feedback about its strengths and areas for modification. Many reiterated "I can't emphasize enough that there just isn't anything else out there like this." One caregiver explained it as "I felt like I had an oxygen tank put in front of me." Caregivers indicated the four thematic sections were comprehensive, relevant to their experiences, and helpful. Overall, "What Now?" can provide easily accessible and widely available support to family members (importantly, even extended family members) of individuals with schizophrenia. This website has the potential to not only improve caregiver well-being, but also to improve outcomes for the individuals with schizophrenia whose family members access this resource. We have now applied for an R01 Feb 1, 2019 to test website in a randomized controlled trial.

Quality Improvement

Lithium Registry

PI: Oliver Freudenreich, MD

Funding: DMH Contract to MGH COE (Dr. Freudenreich's time on project)

Time Frame: 10/1/18-ongoing

Description: Lithium is the gold-standard treatment for bipolar disorder, however, currently, there is no standardized monitoring mechanism for lithium use (similar to the national registry for clozapine) in psychiatric practice, which can lead to lithium toxicity, comorbidity (i.e. hypothyroidism, renal insufficiency, neurotoxicity), and death. Of 36 patients on lithium in our mental health clinics, only 67% were adherent with current guidelines. To improve rates of lithium monitoring, we created a lithium registry and adapted current gold standard monitoring guidelines to fit the needs of our population. This lab bundle includes yearly lithium level, basic metabolic panel, thyroid stimulating hormone, and calcium to determine drug levels, kidney function, thyroid function, and parathyroid function. Providers were educated about best practice recommendations as well as the "bundling technique" which will help improve work flow and accountability. The registry will allow for population-based monitoring of guideline-concordant safety labs to avoid lithium toxicity. This QI effort is in collaboration with NSMHA (SMO and the SCRP and has been in response to several cases of lithium toxicity among patients in the Freedom Trail Clinic.

VI. Dissemination

Publications

Peer-reviewed publications

Achtyes, E.D., Ben-Zeev, D., Luo, Z., Mayle, H., Burke, B., Rotondi, A.J., Gottlieb, J.D., Brunette, M.F., **Mueser, K. T.,** Gingerich, S., Meyer-Kalos, P.S., Marcy, P., Schooler, N.R., Robinson, D.E., & Kane, J.M. (2019). Off-hours use of a smartphone intervention to extend support for individuals with schizophrenia spectrum disorders recently discharged from a psychiatric hospital. Schizophrenia Research, 206, 200-8.

Browne, J., Bass, E., **Mueser, K.T.,** Meyer-Kalos, P., Gottlieb, J.D., Estroff, S.E., & Penn, D.L. (2019). Client predictors of the therapeutic alliance in individual resiliency training for first episode psychosis. *Schizophrenia Research, 204*, 375-80.

Browne, J., **Mueser, K.T.,** Meyer-Kalos, P., Gottlieb, J.D., Estroff, S.E., & Penn, D.L. (in press). The therapeutic alliance in individual resiliency training for first episode psychosis: Relationship with treatment outcomes and therapy participation. *Journal of Consulting and Clinical Psychology*.

Dalcin, A.T., Jerome, G.J., Appel, L.J., Dickerson, F.B., Wang, N.Y., Miller, E.R., Young, D.R., Charleston, J.B., Gennusa, J.V., Goldsholl, S., Heller, A., **Evins, A.E.**, **Cather, C.**, McGinty, E.E., Crum, R.M., & Daumit, G.L. (2018). Need for cardiovascular risk reduction in persons with serious mental illness: design of a comprehensive intervention. *Frontiers in psychiatry*, *9*. http://dx.doi.org/10.3389/fpsyt.2018.00786

DeCross, S.N., Farabaugh, A.H., Holmes, A.J., Ward, M., Boeke, E.A., Wolthusen, R.P.F., Coombs III, G., Nyer, M., Fava, M., Buckner, R.L., **Holt, D..J.** (2019). Increased amygdala-visual cortex connectivity in youth with persecutory ideation. *Psych Med*, 12:1-11. DOI:10.1017/S0033291718004221

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DeTore, N. R., **Mueser, K. T.,** Byrd, J. A., & McGurk, S. R. (2019). Cognitive functioning as a predictor of response to comprehensive cognitive remediation. *Journal of Psychiatric Research, 113*, 117-24.

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Evins, A.E., **Cather, C.**, & Daumit, G. (In Press). Tailored intervention to improve engagement of smokers with severe mental illness in cessation services. *Lancet Psychiatry.*

Goff, D.C., **Freudenreich, O.**, **Cather, C.**, **Holt, D.**, Bello, I., Diminich, E., Tang, Y., Ardekani, B.A., Worthington, M., Zeng, B., & Wu, R. (2019). Citalopram in first episode schizophrenia: The DECIFER trial. *Schizophrenia research*, *208*, 331-337.

Gaudiano, B. A., Ellenberg, S., Ostrove, B., Johnson, J., **Mueser, K. T.,** Furman, M., & Miller, I. W. (in press). Feasibility and preliminary effects of implementing acceptance and commitment therapy for inpatients with psychotic-spectrum disorders in a clinical psychiatric intensive care setting. *Journal of Cognitive Psychotherapy*.

Gilman, J.M., Yücel, M.A., Pachas, G.N., Potter, K., Levar, N., Broos, H., Manghis, E.M., Schuster, R.M., & **Evins, A.E.** (2019). Delta-9-tetrahydrocannabinol intoxication is associated with increased prefrontal activation as assessed with functional near-infrared spectroscopy: A report of a potential biomarker of intoxication. *NeuroImage*. https://doi.org/10.1016/j.neuroimage.2019.05.012

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K. T. (in press). Predicting and preventing symptom onset in schizophrenia: A meta-review of current empirical evidence. *Journal of Abnormal Psychology*.

Marques, L., Valentine, S.E., Kaysen, D., Mackintosh, M.A., De Silva, D., Louise, E., Ahles, E.M., Youn, S.J., **Shtasel, D.L.**, Simon, N.M., & Wiltsey-Stirman, S. (2019). Provider fidelity and modifications to cognitive processing therapy in a diverse community health clinic: Associations with clinical change. *Journal of consulting and clinical psychology*, *87*(4), 357. http://dx.doi.org/10.1037/ccp0000384

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Vance, M., Bui, E., **Shtasel, D.,** & Borba, C. (2019). Health advocacy among resident physicians. *MedEdPublish*, *8*. DOI: https://doi.org/10.15694/mep.2019.000029.1 February 2019

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Youn, S.J., Sauer-Zavala, S., Patrick, K.A., Ahles, E.M., Aguilar, S.Y., Greig, A., Marques, L., & **Shtasel, D.L.** (2019). Barriers and facilitators to implementing a short-term transdiagnostic mental health treatment for homeless persons. *The Journal of nervous and mental disease*.

Non-peer reviewed publications

Beckmann, D., Bender, S., Cassidy, L.J., **Cather, C.**, Chadi, N., Chang, M., DeJong, S., **Evins, A.E.**, Fan, X., Greene, D., Gilman, J., Gump, M., Hadland, S., Harris, S., **Holt, D.J.**, Hopkins, J., Horner, T., Kansra, N., Katz, R., Kelly, J.F., Levy, D.L., Levy, S., Lukas, J.C., Madras, B.K., McKowen, J., Medina, S., Potee, R.A., Price, L.F., Rothschild, A.J., Sarvey, D., Schuster, R.M., **Shtasel, D.,** Snyder-Roche, S., Turncliff, A.K.J., Vilsaint, C., Vining, M., Yule, A., Berkowitz, C., Jeffers-Terry, M., Peterson, K., & Dalal, M. (*Submitted*) Statement of concern—Marijuana

policy in Massachusetts.

Freudenreich, O., **Cather, C.**, **Arntz, D., Canenguez, K., Wright, A., & Shtasel, D.** (2019). The value of long-acting injectable antipsychotics (LAIS) for state mental health systems: A white paper.

Mueser, K.T. (2019). Assertive community treatment for patients with severe mental illness. *Up to Date, Topic 105343*. https://www.uptodate.com/contents/assertive-community-treatment-for-patients-with-severe-mental-illness

Youn, S.J., Aguilar-Silvan, Y., Baldwin, M., Chablani-Medley, A., Patrick, K.A., **Shtasel, D.L.**, & Marques, L (2018). Ensuring the fit of an evidence-based curriculum for high-risk Latina young mothers using implementation science. Roca Young Moms Paper Draft CBPR-IS Argument.

Book/Book Chapters

Baldelli-Pelletier, A., **Holt, D.J.** (2019). Deficits in Social Cognition and Negative Symptoms in Schizophrenia. In Lewandowski KE, Moustafa AA (Ed) *Social Cognition in Psychosis.* Elsevier: Philadelphia.

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Medlock, M.M., **Shtasel, D.,** Trinh, N.H.T., & Williams, D.R. (Eds.). (2018). Racism and Psychiatry: Contemporary Issues and Interventions. New York: Springer International Publishing.

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Wright, A., Cather, C., & Evins, A.E. (In press). Role of cannabis in youth onset psychosis and the changing landscape of this topic. *Child and Adolescent Psychiatric Clinics*.

Wright, A., Browne, J., **Mueser, K.T.**, & **Cather, C.** (In press). Evidence-Based Psychosocial Treatment for Individuals with Early Psychosis. *Child and Adolescent Psychiatric Clinics*.

Conference Presentations: National

Cather, C., Glynn, Kring, Myrick , & Niendam. Resilience, maintaining gains & community engagement. Presented at: SAMHSA CBT for Persons with Schizophrenia Spectrum Disorders Conference. Rockville, MD, May, 2019.

Evins, A.E. Smoking and schizophrenia: Still a burning problem. Presented at: Schizophrenia International Research Society (SIRS) conference. Orlando, FL, April, 2019.

Grant, P., Perivoliotis, D., **Cather, C.**, & Sivec, H. Motivation, treatment engagement, & recovery. Presented at: SAMHSA CBT for Persons with Schizophrenia Spectrum Disorders Conference. Rockville, MD, May, 2019.

Mueser, K.T. Effects of adding peer-led exercise to cognitive remediation in persons with severe mental illness on cognition and BDNF: Results of a pilot RCT. Presented as part of a symposium on French and US innovations in cognitive remediation (Chairs: F. Petitjean & J. Talbott) at: 172nd Annual Meeting of the American Psychiatric Association. San Francisco, CA, May 19, 2019.

Mueser, K.T. Integrated treatment for co-occurring disorders. Workshop presented at Behavioral Health Recovery

Conference: Building a Resilient & Thriving Community. DC Department of Behavioral Health, Washington, DC, June 5, 2019.

Wright, A., Browne, J., **Mueser, K.T.**, **Cather, C.**, Brown, H., Schnitzer, K., Thayer, K., **Arntz, D.**, **Zvonar, V.**, & **Donovan, A.L.** Exercise your mind and body: Boosting physical activity and cognition in severe mental illness. Accepted for: ABCT conference Symposium. Atlanta, GA. November, 2019.

Conference Presentations: Regional

Mueser, K.T. Treatment of first episode psychosis. Presented at: Grand Rounds. Bedford VA Medical Center, Bedford, MA, April, 2019.

Medlock, M., Hairston, D., Gordon-Achebe, K., & **Shtasel, D.** Racism and psychiatry: Growing a diverse psychiatric workforce and developing structurally competent psychiatric providers. Workshop at: American Psychiatric Association. May, 2019.

Shtasel, D.L., Beckmann, D.L., Alegria, M., Brown, V., & Hansen, H. Racism and psychiatry: Understanding context and developing policies for undoing structural racism. Workshop at: American Psychiatric Association, May, 2019.

Conference Presentations: International

Palmer-Cooper, E, **Wright, A.C.,** Cella, M., Dlugunovych, V., Laloyaux, J., McGuire, N., Moffatt, J., Montagnese, M., Davies, G., Greenwood, K., Wykes, T. Metacognition and hallucinations in psychosis spectrum disorders: novel methods and approaches in a study protocol. To be presented at: International Consortium Hallucination Research meeting. Durham, UK. September, 2019.

Colman, D., **Wright, A.C.,** Dung, Y.W., & **Holt, D**. The impact of childhood trauma and emotional reactivity on psychotic experiences in college students. To be presented at: Early Career Hallucination Research meeting. Durham, UK. September, 2019.

Posters

Aguilar-Silvan, Y., Youn, S., Patrick, K.A., Ahles, E.M., **Shtasel, D.L.,** Marques, L. Serving high-risk Latina young mothers in community settings: The adaptation of a cognitive behavioral theory skills curriculum. Poster presented at the 52nd Annual Convention Association for Behavioral and Cognitive Therapies (ABCT), Washington, DC. November, 2018.

Aguilar-Silvan, Y., Bartuska,A.D., Zepeda, E.D., **Shtasel, D.L.**, Marques, L., & Youn, S. Arrested and Out of Work: Examining Predictors of Employment Maintenance Among High-Risk Young Men Within a Community Setting. Poster presented at the 52nd Annual Convention Association for Behavioral and Cognitive Therapies (ABCT), Washington, DC. November, 2018.

Aguilar-Silvan, Y., Youn, S., Mackintosh, M., Bartuska, A.D., **Shtasel, D.L.**, Wiltsey-Stirman, S., & Marques, L. Cognitive processing therapy in a diverse community health center: The nuances of flexing with fidelity. Poster presented at the Anxiety and Depression Association of America (ADAA) 39th Annual Conference. Chicago, IL. March, 2019.

Aguilar-Silvan, Y., Mackintosh, M., Bartuska, A.D., **Shtasel, D.L.**, Wiltsey-Stirman, S., Marques, L., & Youn, S. Predictors of Provider Modifications to Cognitive Processing Therapy in a Diverse Community Health Center. Poster presented at the 7th Annual MGH Public and Community Psychiatry Symposium. Boston, MA. March, 2019.

Arntz, D., **Whitman, A., Alves, P., Chambers, V., Hintz, K., Markley, R., Martinez, J., Piltch, C., Whitney-Sarles, S., Wright, A., Kritikos, K.**, & **Cather, C.** The MGH Center of Excellence for Psychosocial & Systemic Research: Mission and Progress Report. Poster presented at: 7th Annual MGH Public and Community Psychiatry Symposium. Boston, MA, March, 2019.

Bartuska, A.D., Youn, S., Zepeda, E.D., Aguilar-Silvan, Y., **Shtasel, D.L.**, & Marques, L. The Effectiveness of a Cognitive Behavioral Theory (CBT) Skill Curriculum for High-Risk Young Men Within a Community Setting. Poster presented at the Anxiety and Depression Association of America (ADAA) 39th Annual Conference. Chicago, IL. March, 2019.

Bartuska, A.D., Zepeda, D., Aguilar-Silvan, Y., **Shtasel, D.,** Marques, L., & Youn, S. Impact of a Cognitive Behavioral Theory (CBT) Skill Curriculum on Job Attainment and Community Program Enrollment for High Risk Young Men. Poster presented at: 7th Annual MGH Public and Community Psychiatry Symposium. Boston, MA. March, 2019.

Bartuska, A.D., Aguilar Silvan, Y., Zepeda, E.D., **Shtasel, D.**, Marques, L., & Youn, S. Predicting Community Program Enrollment Duration Among High-Risk Young Men Practicing Cognitive-Behavioral Theory (CBT) Skills. Poster to be presented at the International Society for Traumatic Stress Studies (ISTSS) 35th Annual Meeting. Boston, MA. November, 2019.

Canenguez, K., Clauss, J., **Diaz, Y.P.**, **Burke, A.**, Han, K., Namey, L., **Zvonar, V.**, Lambert, R., **Cather, C.**,& **Holt, D.** Pilot study of a resilience-building prevention program for youth in Chelsea, MA: Preliminary evidence for feasibility, acceptability, and effects on emotion recognition. Poster presented at: 11th Annual Massachusetts General Hospital for Children Pediatric Research Day. Boston, MA. May, 2019.

Cather, C., **Evins, A.E.**, Schnitzer, K., Daumit, G., & Chwastiak, L. Outcomes that matter: Maximizing the chances that effective cardiovascular risk reduction interventions are accessible to individuals with serious mental illness (SMI) Submitted a panel presentation to IPS for the annual meeting in October, 2019.

Clauss, J., Blackford, J., **Holt, D.J.** Common Functional MRI Markers of Risk for Psychotic, Mood and Anxiety Disorders: A Meta-Analysis. Poster presented at the 74th Annual Society of Biological Psychiatry, Chicago. May, 2019.

Clauss, J.A., Han, K., **Pimental-Diaz, Y.**, **Burke, A.**, Namey, L., **Canenguez, K.**, **Zvonar, V.**, Lambert, R., Lyons-Hunter, M., **Cather, C.**, & **Holt, D.J.** A pilot study of a preventive intervention for at-risk adolescents in Chelsea, MA: preliminary evidence for feasibility, acceptability and effects on emotion recognition. Poster presented at: 7th Annual MGH Public and Community Psychiatry Symposium. Boston, MA. March, 2019.

Coshal, S., Ujkaj, M., Pantone, B., MacLaurin, S., & **Freudenreich, O.** Quality improvement project to improve lithium monitoring in community health setting. Poster presentation at: 7th Annual MGH Public and Community Psychiatry Symposium. Boston, MA. March, 2019.

Deng, W., **Burke, A.S.**, Nyer, M.B., Leathem, L., Landa, C., **Cather, C.**, & **Holt, D.J.** Baseline symptom levels and resilience-promoting factors predict mental health outcomes in college students. Poster presented at: 7th Annual MGH Public and Community Psychiatry Symposium. Boston, MA. March, 2019.

Deng, W., Burke, A., Shapero, B., Leathem, L., Nyer, M., Pelletier-Baldelli, A., Namey, L., Landa, C., **Cather, C., Holt, D.J.** A transdiagnostic prevention program for at-risk college students: Preliminary effects on subsyndromal psychotic symptoms, social functioning and resilience factors. Poster presented at 53rd Annual Convention of the Association for Behavioral and Cognitive Therapies, Atlanta, GA. November, 2019

Deng, W., Tuominen, L., Nasiriavanaki, Z., Leathem, L., Mow, J., Barbour, T., **Holt, D.J.** Altered amygdala subnuclei connectivity and fear responses in college students with subclinical psychosis. Poster presented at 33rd Annual Meeting of the Society for Research in Psychopathology, Buffalo, New York. September, 2019.

Deng, W., Tuominen, L., Nasiriavanaki, Z., Leathem, L., Mow, J., Barbour, T., **Holt, D.J.** Persecutory beliefs are associated with abnormal medial temporal lobe responses during fear learning. Poster presented at the 74th Annual Society of Biological Psychiatry, Chicago. May, 2019.

Nasiriavanaki, Z., Barbour, T., Tuominen, L., Farabaugh, A., Fava, M., Holmes, A., Mow, J., Tootell, R.B.H., **Holt, D.J.** Insecure attachment is associated with over-responsivity of a parietofrontal network that monitors peri-personal space. Poster presented at the 74th Annual Society of Biological Psychiatry, Chicago. May, 2019.

Freudenreich, O., MacLaurin, S.A., Irwin, K.I., **Cather, C.**, Schnitzer, K.M., Paudel, S., Donahue, L., Mulligan, C., & Ujkaj, M. Smoking cessation in serious mental illness: a multi-pronged approach using the treatment cascade framework. Poster presented at: 27th European Congress of Psychiatry. Warsaw, Poland. April, 2019.

Fulford, D., Meyer-Kalos, P., & **Mueser, K.T.** An active ingredient for motivation enhancement? The importance of addressing personally meaningful goals in comprehensive care for first-episode psychosis. Poster presented at: Schizophrenia International Research Society (SIRS) conference. Orlando, FL. April, 2019.

Harikumar, A., Barbour, T., Nasiriavanaki, Z., Hines, S., Coman, D., Mow, J., Tootell, R.B.H., **Holt, D.J.** Measuring Responses to Social Reward in Psychosis: Validation of a Novel Experimental Paradigm. Poster presented at the 74th Annual Society of Biological Psychiatry, Chicago. May, 2019.

Medlock, M., Hairston, D., Gordon-Achebe, K., & **Shtasel, D.L.** Racism and Psychiatry: Growing a Diverse Psychiatric Workforce and Developing Structurally Competent Psychiatric Providers. Poster presented at: the American Psychiatric Association. May, 2019.

Pachas, G., Maravic, M.C., Potter, K., **Cather, C.**, Reyering, S., & **Evins, A.E.** Choice of smoked tobacco product and effect on exhaled carbon monoxide in smokers with serious mental illness. Poster accepted for APHA Annual Meeting & Expo. Philadelphia, PA. November, 2019.

Schnitzer, K.*, **Cather, C.***, Thorndike, A.N., Potter, K., **Freudenreich, O.**, MacLaurin, S., Vilme, M., Dechert, A., Wexler, D.,** & **Evins, A.E.****. (2019). Improved glycemic control and other diabetes relevant outcomes in adults with serious mental illness and diabetes with an open sixteen-week, reverse integrated care, behavioral and educational intervention. Poster presented at: Schizophrenia International Research Society (SIRS) conference. Orlando, FL. April, 2019. (* contributed equally as first author;** contributed equally as senior authors)

Schnitzer, K.*, **Cather, C.***, Thorndike, A., Maclaurin, S., Vilme, M., Dechert, A., Pachas, G., Potter, K., **Freudenreich, O.**, Wexler, D.**, & **Evins, A.E.****. An open trial of integrated diabetes management for individuals with serious mental illness (SMI). Presented at Schizophrenia International Research Society (SIRS) conference. Orlando, FL. April, 2019.

Schooler, N.R., Severe, J.B., Robinson, D.G., Stefanovics, E., Rosenheck, R., **Mueser, K.T.**, Estroff, S., Correll, C., Marcy, P., & Kane, J.M. Recovery in first episode psychosis: Domain specific measurement of health, home, purpose and community. Poster presented at the Annual Meeting of the Association for Clinical Neuropharmacology. Washington, DC, March, 2019.

Shtasel, D.L., Beckmann, D.L., Alegria, M., Brown, V., & Hansen, H. Racism and Psychiatry: Understanding Context and Developing Policies for Undoing Structural Racism. Poster presented at: the American Psychiatric Association. May, 2019.

Wright, A.C., Lysaker, P.H., Fowler, D., & Greenwood, K. Depression and emotional numbing and their association with the experience of First Episode Psychosis. Poster presented at: SIRS conference. Orlando, FL. April, 2019.

Wright, A.C., Lysaker, P.H., Fowler, D., & Greenwood, K. Metacognition and insight in First Episode Psychosis: The impact on functioning. Poster presented at: Schizophrenia International Research Society (SIRS) conference. Orlando, FL. April, 2019.

Zapetis, S., Nasiriavanaki, Z., Tuominen, L., DeCross, S., Leathem, L., Barbour, T., Tootell, R.B.H., **Holt, D.J.** Size of Personal Space Correlates with Levels of Social Anhedonia in Healthy, Subsyndromal and Psychotic Populations. Poster presented at the 74th Annual Society of Biological Psychiatry, Chicago. May, 2019.

Zincavage, R., Coleman, J., Maurao, M., Harty, B., Keshavan, M., Woodberry, K., & **Cather, C.** What Now? An Innovative Web-Based Tool for Family Caregivers of Individuals with Schizophrenia. Poster presented at: 7th

Presentations to diverse stakeholders

Burke, A., **Diaz, Y.P.**, & **Canenguez, K.** Massachusetts General Hospital Resilience Program: Emotional leadership development group. Talk given at: MGH COE and UMMS iSPARC Center to Center Meeting. May, 2019.

Cather, C. Overview of COE mission and goals. Talk given to: Division of Public and Community Psychiatry. September, 2018.

Cather, C., & **Whitman, A.** Diabetes pilot study results. Talk given to: Transformation Center (TC). November, 2018.

Cather, C., & **Whitman, A.** Goals and objectives of COE, process for involving persons with lived experience in setting the research agenda. Talk given to: DMH Planning Subcommittee. December, 2018.

Cather, C., & **Whitman, A.** Shared methods and results from our pilot work in diabetes self-management. Talk given to: DMH Planning Subcommittee. December, 2018.

Cather, C. Results of Integrated Behavioral Diabetes Management for Individuals with Serious Mental Illness. Talk given to: Division of Public and Community Psychiatry's Steering Committee. February, 2019.

Cather, C. Communication and Family Relationships. Talk given to: NAMI Somerville-Cambridge. January, 2019.

Cather, C. How FEP care differs from "treatment as usual" and how their programs operate. Panel discussion at: First Episode Psychosis: The Why, What, and How of Implementing Evidence-Based Practice conference. March, 2019.

Cather, C. Cognitive Behavioral Therapy for Schizophrenia and Other Psychotic Disorders. Talk given at: 3rd Annual MGH Bridging the Divide: Mental Health and Cancer Care symposium. April, 2019.

Cather, C. Cognitive Behavioral Therapy for Schizophrenia and Other Psychotic Disorders. Talk given at: NSMH Grand Rounds. April, 2019.

Cather, C., & **Martinez, J.** Increasing Access to Cancer Care and Research: Prevention, Treatment, and Survivorship. Talk given at: 3rd Annual MGH Bridging the Divide: Mental Health and Cancer Care symposium. April, 2019.

Cather, C., & **Shtasel, D.L.** The MGH COE: Who are we, what have we done and where are we going? Talk given to: Partners Psychiatry leadership at McLean Hospital. April, 2019.

Cather, C. Overview of the MGH Center of Excellence: Priorities and processes. Talk given at: MGH COE and UMMS iSPARC Center to Center Meeting. May, 2019.

Cather, C. CBT for Psychosis Training. Presented at: Main Medical Center. Portland, ME. June, 2019.

Evins, A.E. What clinicians and scientists are learning and seeing locally on the marijuana-psychosis link. Presented at: MAPA luncheon event Marijuana: Addiction, mental health and policy – Advances in research. Boston, MA. June, 2019.

Piltch, C. Data and Narrative: Communicating Science to the Public. Talk given at: 3rd Annual MGH Bridging the Divide: Mental Health and Cancer Care symposium. April, 2019.

Piltch, C., **Whitman, A.**, **Cather, C.**, & **Martinez, J.** Collaboration between Individuals with Lived Experience and Massachusetts General Hospital in a Center of Excellence: What we have done together so far. Panel presented at: MassPRA 2019 Annual Conference. Marlborough, MA. May, 2019.

Schnitzer, K. Improved glycemic control and other diabetes-related outcomes in adults with serious mental illness and diabetes. Talk given at: MGH COE and UMMS iSPARC Center to Center Meeting. May, 2019.

Shtasel, D.L. I'm not a racist…White Privilege and Behavioral Health. Talk given at: Massachusetts Department of Mental Health, State Medical Directors meeting. Worcester, MA. June, 2019.

Yanos, P.T., & **Mueser, K.T.** Written Off: Mental Health Stigma and the Loss of Human Potential. Book. Talk given at: John Jay College. New York, NY. April, 2019.

VII. Grants

Grants Submitted

Wearable Acoustic Sensing-Based Health System for Monitoring Social Dysfunction in Schizophrenia
PIs: Jie Xiong, PhD, Ivan Lee, PhD
Site PI: Daphne Holt, MD, PhD
Funding: National Science Foundation/National Institute for Mental Health
Time Frame: 09/01/2019 - 08/31/2023
Description: The goal of this proposed project is to develop and pilot a wearable sensing device based on novel acoustic technology that will continuously monitor physical proximity to others, providing an objective indicator of social functioning in schizophrenia.
Status: Pending review

Engaging Stakeholders to Change the Culture of Recovery for Severe Mental Illness
PI: Corinne Cather, PhD, Anne Whitman, PhD
Funding: Eugene Washington Patient-Centered Outcomes Research Institute (PCORI) Engagement Award
Description: We proposed to use the Engagement Award to empower people with lived experience of SMI in leadership roles as CRs within the COE. CRs will develop new partnerships with diverse stakeholders and facilitate listening groups with community members to identify gaps and barriers to recovery in current MA healthcare system. This approach will strengthen engagement of stakeholders in identifying priorities, participating actively in the research process, and co-creating pilot projects. This award would allow the COE to increase the participation of current CRs, hire new CRs in expanded research roles, and provide more substantive training in research methods to these team members.
Status: Advised to reapply with a focused CBPR project

What Now? An Innovative Web-based Tool to Help Family Members Navigate Schizophrenia with Awareness and Confidence
PI: Rebekah Zingrave, PhD, New England Research Institute
Funding: National Institute of Health (NIH)- National Institute of Nursing Research (NINR)
Budget: $940,800
Time Frame: 12/01/19 - 11/30/23
Description: This project will facilitate continued development, implementation and evaluation for What Now? which is a family psychoeducational website for family members/family caregivers of individuals with schizophrenia.
Status: Pending review

Metacognition and Predictive Processing in Psychosis and Hallucinations
PIs: Abigail Wright, PhD and Emma Palmer-Cooper, PhD
Funding: Academic of Medical Science Springboard
Description: This study will explore metacognition and predictive processing in psychosis and hallucinations.
Status: EOI was accepted to submit full proposal.

Validating the use of a novel Ecological Momentary Assessment Tool to Explore Mechanisms of Metacognition in First Episode Psychosis.
PI: Abigail Wright, PhD
Co-Investigators: Corinne Cather, PhD, Daphne Holt, MD, PhD, and Kim Mueser, PhD
Funding: One Mind Rising Star philanthropic funding
Description: This study will validate the use of a novel Ecological Momentary Assessment tool to explore mechanisms

of metacognition in first episode psychosis.
Status: Not awarded

Grants Received

Interrupting Developmental Pathways to Schizophrenia: Protecting Youth At Risk for Cannabis Use and Psychosis
PIs: Daphne Holt, MD, PhD and Randi Schuster, PhD
Funding: Henry and Allison McCance Center for Brain Health (Mass General Neuroscience)
Budget: $149,997
Time Frame: 09/01/2019-08/31/21
Description: The goal of this project is to establish temporal precedence of emotion dysregulation as an upstream risk factor for subsequent cannabis use and psychosis, by conducting a randomized controlled trial of a brief intervention targeting emotional regulation.

Development and Validation of an Electronic Health Record Prediction Tool for First Episode Psychosis
PIs: Jordan Smoller, MD and Ben Reis, PhD
Co-Investigator: Daphne Holt, MD, PhD
Funding: National Institute of Health
Budget: $691,558
Time Frame: 02/05/19 - 08/31/22
Description: The goal of this project is to leverage the scale and scope of electronic health records to develop and validate an automated risk prediction tool for the detection of first-episode psychosis. We will also engage key clinical stakeholders in the process of developing a prototype clinician-facing EHR-based screening tool and release it as an open source SMART app.

Enhancing the Data Science Capabilities (Project 2)
PIs: Dost Ongur, PhD, MD, John Hsu, MD, MBA, Miguel Hernan, PhD
Consortium Lead Investigator: Daphne Holt, MD, PhD
Funding: National Institute of Mental Health
Budget: $26,062
Time Frame: 05/15/2019-3/31/2023
Description: This project at the Laboratory for Early Psychosis Research Center helps build the data foundation for addressing gaps in FEP clinical knowledge base.

Examining Disease Heterogeneity within Early Psychosis (Project 3)
PIs: Dost Ongur, PhD, MD, John Hsu, MD, MBA, Miguel Hernan, PhD
Consortium Lead Investigator: Daphne Holt, MD, PhD
Funding: National Institute of Mental Health
Budget: $26,062
Time Frame: 04/01/2020-3/31/2023
Description: This project at the Laboratory for Early Psychosis Research Center will classify first episode psychosis (FEP) patients into groups based on their outcome trajectories (i.e., unwind the clinical heterogeneity), predict the trajectory group for individual patients, and assess the effectiveness of early psychosis treatment across groups of patients.

Mixed Methods Study of Facilitators and Barriers to Implementation of Integrated Smoking Cessation Treatment for Smokers with Serious Mental Illness
PI: Eden Evins, MD, MPH
Funding: Patient-Centered Outcomes Research Institute
Budget: $400,000
Time Frame: 2019-2021
Description: The major aim of this qualitative supplement is to identify facilitators and barriers to implantation of an integrated smoking cessation treatment for smokers with serious mental illness.

VIII. Honors and Awards

Awards

1. Zincavage, R., Coleman, J., Maurao, M., Harty, B., Keshavan, M., Woodberry, K., Cather, C. What Now? An Innovative Web-Based Tool for Family Caregivers of Individuals with Schizophrenia. Poster presented at: 7th Annual MGH Public and Community Psychiatry Symposium; 2019, March 27; Boston, MA. Awarded First Prize.
2. Derri Shtasel, MD, MPH was awarded the MPS Outstanding Psychiatrist Award for the Public Sector at the 2019 Massachusetts Psychiatric Society Meeting & Dinner in Waltham, MA; April 30, 2019.
3. The What Now? Website (collaborative effort between MGH and NERI) was awarded the 25th Annual (2019) Communicator Silver Awards of Distinction Media Industry Award. The Communicator Awards are judged and overseen by the Academy of Interactive and Visual Arts (AIVA), a 600+ member organization of leading professionals from various disciplines of the visual arts dedicated to embracing progress and the evolving nature of traditional and interactive media. Current AIVA membership represents a "Who's Who" of acclaimed media, advertising, and marketing firms including: AirType Studio, Condè Nast, Disney, Keller Crescent, Lockheed Martin, Monster.com, MTV, rabble+rouser, Time Inc., Tribal DDB, Yahoo!, and many others.

IX. Broad Plans for Year 2

- Identify champions to help promote Center connection with affiliation groups.
- Continue listening groups through the first quarter of Y2 with a focus on increasing representation of Blacks, the deaf and hard of hearing community, and younger adults. We are also planning to meet with Wampanoag tribe on the Cape to hear concerns and priorities of that community. Following the completion of this round of listening groups, we will focus on synthesizing the results of the listening groups with two aims: the first will be to bring what we have learned back to the recovery communities and other stakeholders and the second will be to use what we have learned to implement a peer-led research or quality improvement project.
- Expand our website and link current and archival issues of our newsletter to the website. Translate portions of both the website and the newsletter into Spanish.
- Continue to meet and work with existing and new community partners to develop collaborative research/QI projects. It is our aim to be of service to these community partners and assist them to answer or address internal questions that would improve the care of those they serve. We are also actively seeking a community partner for a randomized controlled trial of diabetes self-management for individuals with SMI. We will be doing an in-service on this topic with staff from Eliot Services on September 6, 2019 and discussing this possibility with agency leadership and care providers.
- Provide ongoing training to staff to improve self-awareness, knowledge, and skills around cultural humility, white privilege, microaggressions, and institutional racism.
- Seek consultation on policies and practices to promote project and staff diversity.
- Create an internal Research Review Board (RRB), which will include Center leadership, individuals with expertise in culturally informed research, and at least one member of the MGH.
- Provide training in evidence-based psychosocial treatment (NAVIGATE model for psychopharmacological, individual, family, and team treatment) to 5 new first episode programs concentrated in the Northeast Area.

Appendix A: COE Dissemination Products

COE Open House Handout

Center of Excellence
for Psychosocial and Systemic Research

Dear Stakeholder,

We were very pleased to have been awarded a grant by the Massachusetts Department of Mental Health to establish a Center of Excellence (COE) for Psychosocial and Systemic Research. We began this venture as a collaboration between affiliates of the MGH Schizophrenia Clinical and Research Program and the MGH Division of Public and Community Psychiatry. Through the Center, our vision is to expand the reach of the Center to include diverse groups of stakeholders across Massachusetts to help inform future research aimed at improving the health care and recovery trajectories for a broad spectrum of individuals and family members affected by mental health challenges.

We seek to develop collaborative relationships with family members, persons with lived experience, schools, human service agencies, insurers, advocacy groups, and recovery communities across the state of Massachusetts. Through mentorship provided by the senior staff of the Center, we seek to build a community of early career care providers, researchers, and scientists in the Center who share our vision and mission of collaboration and transparency.

We hope to serve as an incubator for research ideas, to implement pilot studies guided by stakeholder input, and to co-create these projects with the goal of securing external grant funding. We will share results of research projects widely with our stakeholder communities.

We welcome you to the Center and want to take this opportunity, in our very early days, to introduce you to the members of our dedicated and diverse staff. For those of you able to come to our open house in person, we hope that you will have the chance to introduce yourself and talk about your interests with us. And for those of you not able to attend, we look forward to future meetings and the opportunity to hear your perspective about the most pressing issues relevant to our Center's mission.

Sincerely,

Corinne Cather, PhD Derri Shtasel, MD, MPH

Corrine Cather, Center Director
ccather@mgh.harvard.edu

Dr. Corinne Cather is a clinical psychologist at MGH in both the Schizophrenia Clinical Research Program and the Center for Addiction Medicine, and an Associate Professor of Psychology at Harvard Medical School. She has specialized training in cognitive behavioral therapy (CBT) interventions and family interventions for individuals affected by first episode psychosis, schizophrenia, and dual diagnosis. She has developed numerous psychosocial treatment manuals and has trained providers across the country in evidence-based practices such as coordinated specialty care for first episode psychosis, CBT for psychosis, and cognitive-behavioral smoking cessation treatments for smokers with severe mental health challenges. One of her current research interests is the translation of diabetes self-management interventions to community mental health settings. She currently provides care within the MGH First Episode and Early Psychosis Program and consults to individuals and their families in the MGH Psychosis Service. In her role as Center Director, she is responsible for overseeing the administrative and research aspects of the Center as well as the supervision of the junior investigator staff.

Dr. Cather earned her undergraduate degree in biopsychology at Hamilton College in Clinton, NY and her PhD in clinical psychology from Rutgers University where she received specialized training in CBT and behavioral medicine. She completed an internship at UMDNJ/Rutgers and joined the Schizophrenia Clinical and Research Program in 1999 as a fellow.

Derri Shtasel, Steering Committee Chair
dshtasel@partners.org

Dr. Derri Shtasel is a psychiatrist, the Michele and Howard J. Kessler Chair and Director of the Massachusetts General Hospital Division of Public and Community Psychiatry, and an Associate Professor of Psychiatry at the Harvard Medical School. Her work focuses on strengthening relationships among community providers and hospital-based programs, enhancing resident and medical student education in community psychiatry, increasing access to care for underserved populations, and creating academic-community collaborations as a platform for integrated service delivery models and research. She provides direct clinical care as a provider with Boston Healthcare for the Homeless.

From 2012-2017, Dr Shtasel also served as the founding Executive Director of the Kraft Center for Community Health Leadership. This Center linked community health centers to academic medicine through developing and implementing community-based, post-residency leadership training programs for mission-driven physicians and nurse practitioners from all primary care disciplines.

Dr. Shtasel is a graduate of Swarthmore College, Temple University School of Medicine and the Harvard School of Public Health. She completed residency training in Psychiatry at New York University/Bellevue Hospital. She is a recipient of an Exemplary Psychiatrist Award from the National Alliance on Mental Illness and has been named a Distinguished Fellow of the American Psychiatric Association. She is the 2014 recipient of the Dr Jim O'Connell award from Boston Healthcare for the Homeless as well as the 2014 and 2017 MGH Department of Psychiatry Mentorship Award.

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Diana Arntz, Junior Co-Investigator
darntz@mgh.harvard.edu

Dr. Diana Arntz is a post-doctoral psychology fellow whose research, clinical, and advocacy work aim to address the social justice issue of health care disparities among underserved and marginalized communities. Through the Center, she will implement pilot research projects, identify grant opportunities, and contribute to the scientific writing of grant proposals, manuscripts and data analyses. She is passionate about recovery-oriented and integrated health care to empower individuals with severe and persistent mental health concerns, immigrant and refugee communities, veterans, and economically disadvantaged and homeless populations.

Dr. Arntz obtained her PhD in clinical psychology from Suffolk University. She completed both her internship in Primary Care Behavioral Health and postdoctoral fellowship in Psychosocial Rehabilitation at the Edith Nourse Rogers Memorial Veterans Hospital (Bedford VA).

Katia Canenguez, Junior Co-Investigator
kcanenguez@mgh.harvard.edu

Dr. Katia Canenguez is a clinical psychologist in the Department of Child and Adolescent Psychiatry at the Massachusetts General Hospital. She is a bi-cultural/bi-lingual (Spanish speaking) clinician/researcher interested in health/mental health disparities and providing integrative pediatric health care. Through the Center, she will implement pilot research projects, identify grant opportunities, and contribute to the scientific writing of grant proposals, manuscripts and data analyses. In her role at the Partners Pediatric Multiple Sclerosis (MS) Center, she provides clinical assessment, psychoeducational and psychotherapeutic services to pediatric patients and their families affected by MS. In addition, Dr. Canenguez coordinates school consultation to ensure the appropriate academic programs are implemented.

Dr. Canenguez received a BA from Boston College, an EdM from Harvard University, and a PhD from University of Massachusetts, Boston and completed her pre-doctoral internship at MGH.

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Valeria Chambers, Community Research Consultant
valeriac@transformation-center.org

Ms. Valeria Chambers, certified peer specialist trainer, is the Community Voice Policy Development and Research Coordinator for the Transformation Center, a robust mental health advocacy and peer support training community located in Roxbury, MA. In this capacity, she collaborates with researchers and policy makers on several projects to identify and address mechanisms underlying mental health care disparities in underserved communities. Another focus of her work involves co-creating models to better implement and evaluate trauma informed practices in peer support. Over the past year, she has been the principal researcher for The Transformation Center's Pipeline to Proposal grant, entitled "Blacks Addressing Mental Health and Healing Through Comparative Effectiveness Research." In this work, she has experience interacting with a statewide network to identify areas of satisfaction and areas that minorities and their allies would like to see change in health care.

In her consultant role with the Center, she will systematically solicit peer input to the Center's research agenda by organizing and running focus groups with individuals with lived experience who belong to different recovery communities. She will also assist the Center in building collaborative, reciprocal relationships with peer and recovery communities. These enduring relationships will facilitate the mutual development of priorities and the research agenda of the Center as well as the effective dissemination of findings.

Ms. Chambers has a Master's degree and certificate of advanced studies, having completed graduate course work and internships in pastoral care, counseling and cross-cultural psychology at the University of Chicago and Harvard University. She received her BS from Tufts University.

Abigail Donovan, Senior Co-Investigator
aldonovan@partners.org

Dr. Abigail Donovan is a child-trained psychiatrist, an Assistant Professor of Psychiatry at Harvard Medical School, the Director of the MGH First Episode and Early Psychosis Program, and the Associate Director of the Acute Psychiatry Service at Massachusetts General Hospital. Dr. Donovan's interests include the early diagnosis and treatment of schizophrenia in adolescents, as well as systems issues and quality of care improvement in acute psychiatry.

Dr. Donovan is a former member of the Board of Trustees of the American Psychiatric Association (APA), where she represented the national interests of residents and fellows. She has also served as a consultant to the APA's Council on Children, Adolescents and their Families. She is the co-author of the book "Suicide by Security Blanket, and Other Stories from the Child Psychiatry Emergency Service."

Dr. Donovan earned her Bachelor of Science and Medical Degree from Yale University. She completed an internship in Pediatric medicine at the Massachusetts General Hospital. She then completed her residency in Adult Psychiatry, and her fellowship in Child and Adolescent Psychiatry, both at the Massachusetts General Hospital and McLean Hospital training program.

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Eden Evins, Senior Co-Investigator
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Dr. Eden Evins is a psychiatrist, the Cox Family Professor of Psychiatry in the field of Addiction Medicine at Harvard Medical School, and the founder and Director of the Center for Addiction Medicine at MGH. Dr. Evins' research interests include cardiovascular risk reduction among individuals with severe mental health challenges, the efficacy of pharmacotherapeutic cessation aids in smokers with and without severe mental health challenges, and the effect of nicotine on cognitive performance in those with and without schizophrenia. She has also studied the relationship between cue reactivity and relapse to drug use, and the effect of cannabis on psychiatric symptoms, cognitive function, and addictive behaviors. She has had extensive ties with large community mental health centers that have made it possible to conduct large clinical studies.

Dr. Evins completed her residency in adult psychiatry at the Massachusetts Mental Health Center and Longwood Psychiatry Residency Training Program. In addition, she completed a fellowship in molecular biology at the Mailman Research Center of McLean Hospital, a fellowship in clinical research at the Massachusetts General Hospital, and a Master's in Public Health with a concentration in Clinical Effectiveness at the Harvard School of Public Health in 2005.

Oliver Freudenreich, Senior Co-Investigator
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Dr. Oliver Freudenreich is a psychiatrist and an Associate Professor of Psychiatry at Harvard Medical School. He serves as co-director of the MGH Schizophrenia Clinical and Research Program and directs the MGH Fellowship in Public and Community Psychiatry.

Dr. Freudenreich's research interests are in the area of optimal psychopharmacological treatment for schizophrenia, including clozapine for refractory psychosis, early course schizophrenia, the role of medical morbidity in schizophrenia, the integration of medicine and psychiatry, and treatment adherence. In addition to his clinical and clinical trial expertise in schizophrenia, Dr. Freudenreich provides psychiatric consultations for medically complex patients with serious mental health challenges or diagnostically difficult cases with psychosis. He is a deputy editor for the journal Psychosomatics. He has published extensively in his areas of interest and he wrote a handbook on psychotic disorders. Dr. Freudenreich is an active teacher who lectures regularly at national meetings and at his home institution. At MGH, he is the course director for the Department of Psychiatry's monthly "Morbidity and Mortality" conference.

Dr. Freudenreich received his medical degree from the University of Heidelberg in Germany. He completed his psychiatric residency at UMDNJ/Rutgers in New Jersey. Additional training included a 2-year fellowship at Duke University in psychiatric research and a 1-year fellowship at MGH in psychosomatic medicine. For his involvement in research and medical education, he has received fellowships from the Society of Biological Psychiatry, from the Academy of Psychosomatic Medicine, and the American Association of Directors of Psychiatric Residency Training.

Kathryn Hintz, Community Research Consultant
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Ms. Kathryn Hintz is a researcher at the Center for Psychiatric Rehabilitation (CPR) at Boston University, a recovery community which uses an adult education model that is located on the BU campus. In her current position, she interviews persons with lived experience about attitudes and experiences towards employment for the Opening Doors project and interviews for Photovoice, an intervention designed to decrease stigma and increase well-being through creativity and writing. She also conducts data analysis and co-authors academic papers. Currently, she is working on an exciting new app for persons with lived experience. In the spring, in addition to her research duties, she will be co-leading two classes and co-hosting "Coffee and Conversation" at the CPR.

In her consultant role with the Center, she will systematically solicit peer input to the Center's research agenda by organizing and running focus groups with individuals with lived experience who belong to different recovery communities. She will also assist the Center in building collaborative, reciprocal relationships with peer and recovery communities. These enduring relationships will facilitate the mutual development of priorities and the research agenda of the Center as well as the effective dissemination of findings.

Ms. Hintz received her Master's degree from Boston College in counseling psychology.

Daphne Holt, Senior Co-Investigator
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Dr. Daphne Holt is a psychiatrist and an Associate Professor of Psychiatry at Harvard Medical School. She also serves as Director of the Emotion and Social Neuroscience Laboratory at Massachusetts General Hospital (MGH), Director of the Resilience Program at MGH, and Co-Director of the MGH Schizophrenia Clinical and Research Program.

Dr. Holt's research focuses on understanding the neural basis of emotional function and social behavior, and abnormalities in these domains in neuropsychiatric syndromes such as schizophrenia. She is also beginning to identify changes in these systems in young people who are at risk for neuropsychiatric syndromes, in an effort to develop methods to detect these changes before the onset of these syndromes. She also oversees a clinical program that focuses on reducing risk for neuropsychiatric syndromes.

Dr. Holt attended medical school at the University of Chicago Pritzker School of Medicine, where she also received a PhD in neurobiology. She received her training in psychiatry in the Massachusetts General/McLean Hospital adult psychiatry residency program, becoming a faculty member of the Massachusetts General Hospital Psychiatry Department in 2004.

Katherine Kritikos, Program Manager
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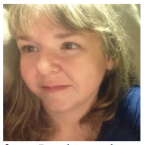
Ms. Katie Kritikos is the program manager for the Center. Prior to joining MGH, she managed a PCORI-funded intervention at Children's National Health System in Washington, DC, which investigated the effects of parent navigation (peer-to-peer support) on neonatal intensive care unit graduates and their parents. In her role as program manager, she provides higher level administration and oversees project coordination, IRB management, financial management, and research funding for the Center. Her research interests include health behavior, translational science, and risk perception.

Ms. Kritikos received a BS in public health sciences from the University of Massachusetts Amherst and an MPH from Boston University.

Ryan Markley, Community Research Consultant
rmarklev0@gmail.com



Ms. Ryan Markley is a certified peer specialist who facilitates peer support groups for the Central Mass Recovery Learning Community and Kiva Center, a recovery community located in Worcester, MA. She also serves as a family partner at Open Sky Community Services, a large mental health service agency in Worcester, MA.

As a trauma survivor, artist and single mom, Ms. Markley uses her lived experience in creative ways to help families who are struggling with mental health issues communicate in ways that promote healing relationships. She is a strong advocate for LGBTQIA rights and for those who have had traumatic or disempowering experiences in mental health treatment. In the future, Ryan hopes to be more involved in conducting much needed research in the field of peer support.

In her consultant role with the Center, she will systematically solicit peer input to the Center's research agenda by organizing and running focus groups with individuals with lived experience who belong to different recovery communities. She will also assist the Center in building collaborative, reciprocal relationships with peer and recovery communities. These enduring relationships will facilitate the mutual development of priorities and the research agenda of the Center as well as the effective dissemination of results.

Ms. Markley received a BA in psychology from the University of Alabama in Huntsville.

Jacqueline Martinez, Community Research Consultant
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Ms. Jacqueline Martinez is a certified peer specialist and was the Hub Manager for the Northeast Recovery Learning Community, a network of peer support communities providing support groups, social events, trainings, wellness classes, and one-to-one peer support. Ms. Martinez also facilitates peer support including the evidence-based Wellness Action Plan classes, Whole Health Action Management classes and National Alliance on Mental Illness (NAMI) Connections support groups. She is Vice President for NAMI Latino in Massachusetts, training facilitators nationally in both English and Spanish. Ms. Martinez served as President of The Transformation Center Board of Directors and is the Chair of the Protection and Advocacy for Individuals with Mental Illness (PAIMI) Advisory Council. She works as a peer specialist with guests and staff at a Boston shelter to ensure guests are supported to establish and sustain mental wellness. She has vast experience in survey research and the evaluation of health service quality through eliciting and valuing the perspective of those using the service. She is currently working with the Disability Policy Consortium on an evaluation of One Care and on an evaluation of wrap-around services designed to support families who have children with mental health or trauma recovery needs. As a person with her own recovery and healing experience, and as the parent of a child with a mental health condition, she has a passion for educating parents, teachers and community about the need for open communication, training, support and awareness of services that are there to help people to live life with enjoyment and purpose.

In her consultant role with the Center, she will systematically solicit peer input to the Center's research agenda by organizing and running focus groups with individuals with lived experience who belong to different recovery communities. She will also assist the Center in building collaborative, reciprocal relationships with peer and recovery communities. These enduring relationships will facilitate the mutual development of priorities and the research agenda of the Center as well as the effective dissemination of findings.

Kim Mueser, Senior Co-Investigator
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Dr. Kim Mueser is a clinical psychologist and Professor at the Center for Psychiatric Rehabilitation at Boston University. Dr. Mueser's clinical and research interests include family psychoeducation, the treatment of co-occurring psychiatric and substance use disorders, psychiatric rehabilitation for serious mental illnesses, and the treatment of posttraumatic stress disorder. His research has been supported by the National Institute of Mental Health, the National Institute on Drug Abuse, the Substance Abuse and Mental Health Administration, and the Brain & Behavior Research Foundation. He is the co-author of over 10 books and treatment manuals, and has published extensively, including numerous peer reviewed journal articles and book chapters. Dr. Mueser has also given numerous lectures and workshops on psychiatric rehabilitation, both nationally and internationally.

Dr. Mueser received a BA in psychology from Columbia College and a PhD in psychology from the University of Illinois at Chicago.

Ylira Pimentel-Diaz, Senior Co-Investigator

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Ms. Ylira Pimentel-Diaz is a bicultural and bilingual licensed independent clinical social worker and owner of Wellness Therapist LLC, a private practice for psychotherapy, consulting, and coaching with offices in Boston's Back Bay and the North Shore. Driven by her life experiences as a child immigrant from Dominican Republic, resident of public housing into her early twenties, and a graduate of Boston Public Schools, she is committed to improving the lives of underserved communities through initiatives that develop resiliency through emotional wellbeing and leadership skills. Her professional career began over 17 years ago with 4 years in early childhood education. Since then, she has dedicated 11 years to behavioral health within diverse communities and through administrative and clinical roles in residential facilities. She has also provided in-home and outpatient psychotherapy at agencies such as Vinfen and Bay Cove as well as Massachusetts General Hospital's Chelsea Healthcare Center where she delivered psychotherapy to children, adolescents, and adults.

Ms. Pimentel-Diaz earned a Bachelor's in psychology from the University of Massachusetts and a Master's in social work and Certificate in child and adolescent trauma from Simmons College.

Anne Whitman, Director of Community Research Consultants

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Dr. Anne Whitman is a certified peer specialist, a co-founder of the Metro Boston Recovery Learning Community, the Cole Resource Center, and Bright Horizons Work Family Solutions. She has also held significant academic, administrative and outreach positions at Harvard, MIT, and Wheaton College. She will provide the Center with assistance in recruiting, interviewing and hiring consultants with lived experience and fostering collaborations with the peer community and other stakeholders across the Commonwealth in part through the RLC network. She has had over 30 years of experience in starting, supporting, and guiding peer communities in providing mutual support while maintaining the core values of empathy and resiliency. With her diverse background in research, and in building innovative organizations combined with significant experience in peer and family communities, she hopes to help build a creative, innovative, and productive research center--an entity which holds families and persons with lived experience at its very core and inspires them to develop a flexible Center of Excellence focused on community concerns, hopes, and desires.

Dr. Whitman holds a PhD and MA in anthropology from Harvard University, an MS in education and a BA in Anthropology from the University of Pennsylvania and an MBA from Boston University.

Sandra Whitney-Sarles, Community Research Consultant

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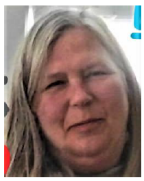

Ms. Whitney-Sarles is a certified peer specialist and the Program Director for the South East Recovery Learning Community, a DMH-funded recovery community administrated by Boston Medical Center and located in Hyannis, MA. Ms. Whitney-Sarles has worked in the mental health field for over 18 years in a variety of roles starting as a direct care worker in a group residential program. She has collaborative working relationships with the NAMI affiliates, DMH site directors and mental health providers in the Southeast area. Prior to her current profession, Ms. Whitney-Sarles worked as an educator at a university and an elementary school. In her role as a teacher with the Hyannis Fire Department and County of Barnstable, she developed and taught a diversion program for court-mandated juvenile fire setters. She has been active in her own mental health recovery for over 40 years.

In her consultant role with the Center, she will systematically solicit peer input to the Center's research agenda by organizing and running focus groups with peers who belong to different recovery communities. She will also assist the Center in building collaborative, reciprocal relationships with peer and recovery communities. These enduring relationships will facilitate the mutual development of priorities and the research agenda of the Center as well as the effective dissemination of findings.

Ms. Whitney-Sarles holds a BA in philosophy, a BFA in sculpture, and an MS in education. Her varied background has enabled her to offer support and understanding to the wide range of people with whom she works.

Vanya Zvonar, Clinical Research Coordinator

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Ms. Vanya Zvonar is a clinical research coordinator at the Center of Excellence for Psychosocial and Systemic Research. She has spent the last two years living in Quito, Ecuador, teaching English and volunteering in a variety of community healthcare settings where she functioned as a medical translator. In her role as a clinical research coordinator with the Center, she has been conducting interviews with participants with severe mental health challenges who enrolled in our diabetes self-management study. We hope to elicit their feedback on the most and least helpful aspects of the intervention to inform a future, larger, NIH application for funding. In this proposal we will seek to improve diabetes self-management, knowledge, quality of life and decrease associated health care costs for this population. She has also been preparing materials for the Institutional Review Board in Spanish and English for an intervention aimed at decreasing mental health risk among 11-14 year olds seen at the MGH Chelsea Healthcare Center. She hopes to attend medical school in the near future and continue exploring her interests and public and global health.

Ms. Zvonar graduated from Harvard University in 2016 with a BA in chemistry and a minor in Italian studies.

MASSACHUSETTS GENERAL HOSPITAL

Center of Excellence Quarterly: July 2019

1. *What factors may put someone at risk for loneliness and possible psychiatric hospitalization?*
2. *How are depression and emotional numbing related to the experience of first episode psychosis?*
3. *What are the dietary challenges of those with mental health conditions?*
4. *Disclosure: Should I share my diagnosis with prospective employers?*
5. *Does marijuana (cannabis) use cause first episode psychosis?*

What factors may put someone at risk for loneliness and possible psychiatric hospitalization?

More than half of adults with serious mental illness (SMI; schizophrenia-spectrum disorders, bipolar disorder, chronic major depression) report feelings of loneliness. The reason behind the experience of loneliness in those diagnosed with SMI is still poorly understood. The authors of this study were interested in 1) examining the relationship between loneliness with sociodemographic and clinical characteristics, 2) determining the extent that loneliness predicts psychiatric hospitalizations, and 3) identifying if loneliness has a key role in the relationship between sociodemographic/clinical characteristics and psychiatric hospitalizations.

How was this study conducted?

150 adults diagnosed with SMI were recruited from a mental health service agency. Participants completed structured interviews that assessed demographic characteristics, loneliness, history of psychiatric hospitalization, health-related difficulties, substance use, and internalized stigma (i.e. negative attitudes towards one's own mental health challenges).

What were the main findings?

- Predictors of loneliness included:
  - ***High rates of health-related difficulties.*** Participants with health issues were more than 3 times as likely to be lonely.
  - ***Least willing to ask for help***. In comparison those who were most willing to ask for help were 70% less likely to be lonely.
  - ***High levels of internalized stigma.*** Participants with high levels of internal stigma were 10 times more likely to experience loneliness
- Loneliness predicts psychiatric hospitalization: Participants that were most lonely were almost 3 times likely to be hospitalized than those who were less lonely.
- Loneliness has a key role in the relationship between internalized stigma and psychiatric hospitalization. Individuals with SMI who feel inferior due to their mental health challenges experience loneliness due to this internalized stigma, which may in turn increase risk for psychiatric hospitalization.

What new information does this study tell us?

The study suggests that loneliness and psychiatric hospitalizations may be reduced through efforts to increase skills and comfort in asking for help, improving overall health-related difficulties, and addressing internalized stigma in those recovering from SMI.

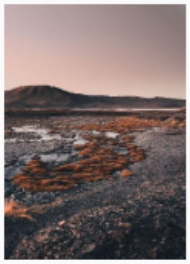
How can we use this study to help facilitate recovery?

- **Individuals with lived experience** can combat loneliness and risk for psychiatric hospitalizations by 1) improving overall physical health by working closely with primary care providers and taking charge of their own health behaviors, 2) enhancing skills in asking for help through working with a therapist or a peer specialist, 3) and engaging with like-minded individuals in recovery or other communities.
- **Providers** should 1) regularly assess loneliness among individuals with SMI, 2) provide integrated medical care for chronic health conditions, 3) role-play assertiveness and help-seeking skills, 4) provide skills training in how to identify and respond to negative self-talk, and 5) assist individuals to connect with positive peer models of recovery either in person or through video examples.
- **Administrators** should 1) widely distribute information on current public resources that encourage social connection and community participation, 2) train providers and healthcare institutions in screening tools to identify those at-risk for loneliness, and 3) invest in disseminating evidenced-based interventions that enhance health-promoting behaviors and social skills as well as reduce stigma for vulnerable communities.

Links to resources:

- National Alliance on Mental Illness (NAMI)
- Recovery Learning Communities

Prince, J. D., Oyo, A., Mora, O., Wyka, K., & Schonebaum, A. D. (2018). Loneliness among persons with severe mental illness. *The Journal of Nervous and Mental Disease, 206*(2), 136-141. DOI: 10.1097/NMD.0000000000000768



How are depression and emotional numbing related to the experience of first episode psychosis?

On the surface, depression and *emotional numbing* (decreased emotional experience such as loss of affection, pleasure, fear, or disgust) may appear to be similar. However, these two states are experienced very differently by individuals with psychosis and may be important in helping us understand the connection with *positive symptoms* (e.g. hearing voices, delusions) and *negative symptoms* (i.e., reduced emotional expression and reduced interest in social activities).

This study aimed to explore how depression and emotional numbing cluster together to form three different groups. Then, using these three groups, this study assessed the differences on scores of psychotic symptoms and subjective experience of recovery (e.g. feeling hopeful, empowered, and able to live a satisfying life regardless of mental health challenges).

How was this study conducted?

This was a study involving 62 predominantly male (74%) young adult participants (mean age 26 years) with first episode psychosis (FEP). Participants were interviewed about their

experiences (depression, emotional numbing, positive symptoms and negative symptoms) and their sense of their own recovery (subjective recovery). Then the scores on depression and emotional numbing were clustered together to form three different groups. The three groups were then compared on measures of psychotic symptoms and subjective experience of recovery.

What were the main findings?

Participants were separated into three groups, depending on their depression and emotional numbing scores:

Group 1 (10 participants)	Group 2 (24 participants)	Group 3 (26 participants)
High depression and high emotional numbing scores	High depression and low emotional numbing scores	Low depression and low emotional numbing scores
High levels of positive symptoms of psychosis, particularly more delusions and paranoia	Relatively low positive symptoms compared to group one	Fewer positive symptoms than group one and two
High levels of negative symptoms (e.g. lack of motivation, lack of engagement within social activities, reduced emotional expression)	High levels of negative symptoms	Fewer negative symptoms than group one and two
Low self-reported recovery scores	Low self-reported recovery scores	Good self-reported recovery scores

What new information does this study tell us?

Emotional numbing appears to be linked to psychosis and may be an important, maladaptive coping style to target in the treatment of first episode psychosis. Individuals who experience depression and also use emotional numbing strategies may "shut down" their emotions in response to unusual experiences characteristic of psychosis and this coping style may maintain psychotic symptoms. Alternatively, it is possible that emotional numbing is a risk factor for psychosis in the context of depression. Further research is needed to figure out what comes first: depression, emotional numbing, or psychosis.

How can we use this information in the real world to help facilitate recovery?

- **Clinicians** should ask patients diagnosed with psychotic disorders about their experiences of depression and/or emotional numbing and explore individual needs and risks of groups within FEP. Click on the links for the Cambridge Depersonalization Scale and the Hamilton Depression Rating Scale.
- **Individuals with lived experience and family members** should be encouraged to discuss negative emotions openly and be aware of the negative relationship between emotional avoidance, higher levels of psychosis, and poorer recovery outcomes.
- **Researchers** should aim to further understand the causal relationship between depression and emotional numbing for those who experience psychosis. This could be achieved by measuring these different aspects across time and across recovery in early psychosis in order to understand the causal path between these experiences.

Wright, A.C., Lysaker, P.H., Fowler, D. & Greenwood (In Preparation). Depression and emotional numbing and their association with the experience of First Episode Psychosis. *Schizophrenia International Research Society Conference. Orlando, April 2019.*

What are the dietary challenges of those with mental health conditions?

People diagnosed with psychotic disorders and bipolar disorder die approximately 15 years earlier than individuals in the general population. These earlier deaths are mostly attributable to physical health conditions, including obesity, diabetes, and cardiovascular disease. Poor diet and medication may contribute to the poorer physical health of individuals diagnosed with these mental health conditions.

How was this study conducted?

This study summarized 58 studies which collected information on food intake (e.g. energy intake, intake of protein, carbohydrates, fat, and caffeine) in adults with and without mental health condition.

What were the main findings?

Studies showed those diagnosed with mental health conditions had less healthy dietary patterns overall, consuming 1332 more calories and 322mg more salt per day than those without mental health conditions. Individuals diagnosed with mental health conditions were *more likely* to have a "cereal" dietary pattern (e.g. bread, rice, sweets) and *less likely* to eat fruits, vegetables, fish, nuts and vegetable oil compared to a group of individuals without mental health conditions. There was no clear differences in intake of vitamins/minerals. Fiber intake was mixed, although those diagnosed with mental health conditions tended to eat less fiber than national recommendations. Individuals diagnosed with mental health conditions had higher intake of carbonated/sweetened drinks and caffeine. To understand the reasons behind these differences, one study demonstrated that those diagnosed with mental health conditions had low diet knowledge and found it difficult to obtain and/or cook food. Another study showed that self-reported life stress was associated with increased sugar intake.

What new information does this study tell us?

Those diagnosed with mental health conditions eat more calories and salt, are more likely to eat a cereal-based diet and less likely to eat fruits and vegetables. These differences may be due to living in environments that offer less healthy food options (e.g., residential programs), limited knowledge about a healthy diet, life stress, feeling more hunger due to medication or boredom, or preference for fast food (i.e. foods high in sugar, salt, and fat, and low in nutrients). In addition, while this study did not assess financial resources (e.g. money), there is a role of limited money as a potential explanatory factor for the poorer diets. These challenges to healthy eating, in combination with challenges to regular exercise, could help explain physical health problems and early mortality for people with mental health conditions.

How can we use this information in the real world to help facilitate recovery?

- **Clinicians** should: 1) regularly ask their clients about their diet, 2) ask about their knowledge of food to eat/avoid, and 3) provide information in this area (e.g., how to read a nutrition label).
- **Individuals with lived experience and family members** should 1) be mindful of food intake by reading food labels to identify calories and nutrients, 2) recognize certain type of foods to eat or avoid, and 3) use food diaries to log food, e.g. using free mobile apps, such as MyFitnessPal. Family members can help by increasing their own knowledge of a healthy diet and improving the food environment in the home.
- **Researchers** should 1) develop food intake assessments which are suited to those diagnosed with mental health challenges and 2) use mobile apps to collect information on food intake.

Additional Information

What is the recommended daily allowance for calories?
What is the recommended daily allowance for sodium?
Food portions and labels: helpful tips and information
Ten Tips for nutrition success

Should I Share My Diagnosis with Prospective Employers?

Finding meaningful work can be an important part of recovery. However, employment rates are generally low for those diagnosed with serious mental illness (SMI; schizophrenia spectrum disorders, bipolar disorder, chronic major depression). Sharing that one has a psychiatric disorder with a potential employer is a complex decision. Researchers in the current study aimed to better understand the personal characteristics of those who disclose and the potential workplace benefits of disclosure.

How was this study conducted?

This study used existing data from a large completed study in which participants were randomly assigned to different vocational rehabilitation programs, including an evidenced-based supported employment program (Individual Placement and Support, IPS), clubhouse program, and standard vocational services. The current study included 91 adults diagnosed with SMI that obtained competitive work through IPS. Participants completed assessments that measured thinking (cognitive) skills, self-esteem, symptoms of mental health difficulties (e.g. depression, anxiety, psychotic symptoms), one's ability and confidence to engage everyday real-life tasks, quality of life, and work activity.

What were the main findings?

More than half of participants disclosed their mental health difficulties to potential employers. Those who disclosed:

- Had more severe symptoms at the time they were looking for work
- Were more likely to get a job that matched their preferences
- Kept their position significantly longer compared to those that did not disclose (32.6 vs. 12.5 weeks)
- Were more likely to obtain workplace accommodations (e.g. contact with employment specialist while on the job, modified work schedule)

What new information does this study tell us?

Individuals participating in a supported employment program who disclose their mental health difficulties to prospective employers may have better work outcomes. Participants who disclosed were more likely to get positions that matched their work preferences and obtain accommodations, both of which may have contributed to better work outcomes. Disclosure was also found to be the most important predictor for length of time in work, suggesting that there may be additional benefits of disclosure on work outcomes above and beyond job match or obtaining accommodations.

How can we use this study to help facilitate recovery?

- **Individuals with lived experience** should 1) determine possible pros and cons of disclosure, 2) identify potential workplace accommodations to negotiate, and 3) work with an ally to prepare for the job interview and practice effective strategies for disclosure. For additional information to support your decision, please see the article: Disclosing Your Disability to an Employer.
- **Providers** should 1) assist patients in weighing the benefits and risks of disclosure, 2) collaboratively identify potential workplace accommodations, 3) share information on protections against workplace discrimination, and 4) offer referrals to supported employment programs from local vocational rehabilitation services.
- **Researchers** should 1) identify the benefits of disclosure for community members with different levels of functioning and more diverse mental health difficulties, 2) investigate the impact of disclosure on both supervisors and co-workers, and 3) develop targeted system-level efforts to enhance workplace cultures to be more affirming of employees with mental health difficulties.

DeTore, N. R., Hintz, K., Khare, C., & Mueser, K. T. (2019). Disclosure of mental illness to prospective employers: Clinical, psychosocial, and work correlates in persons receiving supportive employment. *Psychiatry Research, 273*, 312-317. DOI: 10.1016/j.psychres.2019.01.017

Does marijuana (cannabis) use cause first episode of psychosis?

Cannabis is becoming more available and there is concern about effects of increased use on increasing rates of psychotic disorders. Prior studies have found that early cannabis use, daily use of cannabis, and use of high potency cannabis each are associated with increased risk for a psychotic disorder. However, there remain questions about whether these findings indicate cannabis use causes psychosis in those who would not have otherwise developed it.

How was this study conducted?

A total of 901 patients between the ages of 18 and 64 years seeking psychiatric services for a first episode of psychosis and 1237 healthy controls were interviewed about their current and past use of cannabis. In order to look at the specific relationship between cannabis and the risk of a first episode psychosis, the researchers used statistical techniques to remove the contribution of other factors (i.e. age, gender, ethnicity, education level, employment status, use of other drugs including tobacco). Electronic medical records were used to estimate the number of people with new-onset psychosis in selected areas of Europe and Brazil over a 5-year period and estimate the availability of high potency cannabis in these areas.

What were the main findings?

- Daily marijuana use compared to never use was associated with a 3-fold increase in the likelihood of having a first episode of psychosis.
- Those who used high potency marijuana daily compared to never users were 5 times more likely to be in the first episode psychosis group than the control group.
- Regions where higher potency marijuana was available showed stronger relationships between marijuana use and the probability of having a first episode of psychosis.
- The authors conclude that 12% of all first episode psychosis cases could be prevented if high potency marijuana was not available, with more preventable cases of first episode psychosis in areas where high-potency cannabis is more widely available (e.g., 30% of cases in London and 50% of cases in Amsterdam).

What new information does this study tell us?

This study shows a connection between the probability of seeking treatment for a first episode of psychosis and the frequency as well as the potency of cannabis use. This study also suggests that countries with greater availability of high potency marijuana have a higher incidence of new onset psychosis.

How can we use this study to help us facilitate recovery?

- **Schools** should implement Screening, Brief Intervention, and Referral to Treatment (SBIRT) and provide education about the mental health risks of using cannabis in late adolescence and early adulthood, the period of highest risk for the development of a psychotic disorder. Prevention efforts are needed in all adolescents, but particularly among those with greater vulnerability for psychosis (e.g., those with a family history of psychosis).
- **At the state level**, data on cannabis (and other drugs) should be collected and monitored for concerning public health trends. State funded labs should properly test products for potency so consumers can be informed about what they are being exposed to.
- **Clinicians** should assess cannabis use (and other drug use) in all patients presenting with symptoms of psychosis and provide education about the risks of cannabis use in compromising recovery from a psychotic disorder.
- **Siblings** of individuals with a psychotic disorder should be advised not to use cannabis, due to concern about shared vulnerability to psychosis.
- **Individuals with lived experience and their family members** should be educated on the risks of cannabis so they can make informed decisions about whether to use or support use.

Di Forti, M., Quattrone, D., Freeman, T. P., Tripoli, G., Gayer-Anderson, C., Quigley, H., ... van der Ven, E. (2019). The contribution of cannabis use to variation in the incidence of psychotic disorder across Europe (EU-GEI): a multicentre case-control study. *The Lancet Psychiatry, 6*(5), 427–436. DOI: 10.1016/S2215-0366(19)30048-3

The Effectiveness of a Cognitive Behavioral Theory (CBT) Skill Curriculum for High-Risk Young Men Within a Community Setting

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Background

- Up to 90% of previously incarcerated youth (aged 24 and below) will reoffend. [1]
- Recidivism rates are disproportionately greater among men. [1]
- Risk for reoffending is increased by: [2-3]
  - Unemployment
  - Lack of skills to transition to independence
  - Underdeveloped emotion regulation skills
  - Elevated rates of mental health problems
- Cognitive behavioral theory (CBT) has been found to increase job seeking, job attainment, [4-5] and decrease dropout from community services. [6]
- However, lack of staff with specialized mental health training has limited the use of CBT programs in community settings.

Aim

To evaluate the impact of a paraprofessional-delivered CBT skills program for high-risk young men on job attainment and enrollment in a community-based organization.

Methods

Setting and Participants

Community Organization Characteristics

- Relentless Outreach
- Improving Employment
- Life Skills Education
- Academic Achievement

Sites N = 4

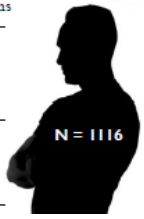
Community Organization Mission

Disrupt the cycle of incarceration among high-risk youth by reducing recidivism and increasing pro-social skills

Study Participants: High-risk young men enrolled at the organization for at least 6 months

High-Risk

- History of arrest or incarceration, gang involvement, high school dropout, and/or substance use problems
- They are not ready, willing, or able to participate in traditional programming or maintain employment



Methods

Cognitive Behavioral Theory Curriculum

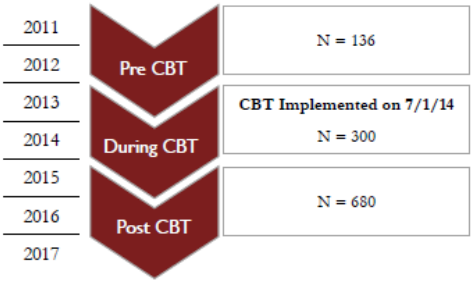
Development

- A **community-based participatory research partnership** emphasizing equitable contribution and leverage of the unique strengths of each partner was created.
- Through an iterative process, a **modular 10 skill CBT curriculum** was created to enhance emotional literacy and promote behavioral change.

Implementation

- CBT skills were delivered to the young men by trained community organization staff during formal interactions such as classes and informal brief impromptu interactions.

Implementation Timeline



Measures

- Programmatic data regularly collected by the community organization
  - Employment attainment (yes/no)
  - Total number of days enrolled in the community organization

Data Analysis

- Total number of days enrolled at the community organization were log-transformed for normality.
- Data was adjusted for site and total days enrolled prior to conducting analyses.
- Generalized and log-linear modeling was conducted to compare young men who were enrolled in the organization pre (N=136), during (N=300), and post (N=680) CBT implementation.

Results

Participant Descriptives

	Pre CBT N (%) / M (SD)	During CBT N (%) / M (SD)	Post CBT N (%) / M (SD)	Combined N (%) / M (SD)
At the time of enrollment				
Age	20 (2.3)	21 (2.1)	21 (2.3)	21 (2.3)
Currently unemployed	115 (85)	256 (85)	515 (76)	886 (79)
Employed at least once in the past 6 months	11 (8)	56 (19)	193 (28)	260 (23)
Previously arrested	114 (84)	284 (95)	582 (86)	980 (88)
Number of prior arrests	3.9 (3.8)	3.9 (4.1)	6.4 (6.6)	5.4 (5.9)
Previous felony charge	90 (66)	211 (70)	482 (71)	783 (70)
At the time of data collection				
Total days enrolled	391 (153)	1145 (383)	550 (293)	691 (416)
Total CBT skills practiced	0 (0)	20.7 (41.9)	41.6 (63.1)	30.9 (55.8)
Participants who practiced at least one CBT skill	0 (0)	167 (56)	597 (88)	765 (69)

Job Attainment

	Estimate	Std. Error	z value	p value
(Intercept)	-11.869	0.917	-12.94	0.000***
During CBT	0.590	0.289	2.044	0.041*
Post CBT	0.773	0.249	3.111	0.001**
Site 2	-0.025	0.194	-0.129	0.898
Site 3	-0.298	0.171	-1.743	0.081
Site 4	-0.357	0.272	-1.313	0.189
Total Days Enrolled	1.786	0.147	12.110	0.000***

Program Enrollment

	Estimate	Std. Error	t value	p value
(Intercept)	5.900	0.044	133.241	0.000***
During CBT	1.074	0.052	20.732	0.000***
Post CBT	0.295	0.049	5.907	0.000***
Site 2	-0.043	0.043	-1.006	0.314
Site 3	-0.023	0.037	-0.629	0.530
Site 4	-0.027	0.060	-0.452	0.651

Cohort Differences: $F(5,1110)=131.2$, $R^2=0.3715$, $p<0.001$

Conclusion

Findings indicate that CBT delivered by paraprofessionals can help high-risk young men involved in the criminal justice system attain employment and maintain enrollment in programmatic services, both of which have been shown to reduce risk for future recidivism.

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The Impact of a Cognitive Behavioral Theory (CBT) Skill Curriculum on Job Attainment and Community Program Enrollment for High-Risk Young Men

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[2] Department of Psychiatry, Massachusetts General Hospital/Harvard Medical School
[3] Boston University School of Public Health

Background

- Up to 90% of previously incarcerated youth will reoffend. [1]
- Recidivism rates are disproportionately greater among men. [1]
- Risk for reoffending is increased by: [2-3]
  - Unemployment
  - Lack of skills to transition to independence
  - Underdeveloped emotion regulation skills
  - Elevated rates of mental health problems
- Cognitive behavioral theory (CBT) has been found to increase job seeking, job attainment, [4-5] and decrease dropout from community services. [8]
- However, lack of staff with specialized mental health training has limited the use of CBT programs in community settings.

Aim

To evaluate the impact of a paraprofessional-delivered CBT skills program for high-risk young men on job attainment and enrollment in a community-based organization.

Methods

Setting and Participants

Community Organization Characteristics
Sites (N = 4)

- Relentless Outreach
- Improving Employment
- Life Skills Education
- Academic Achievement

Community Organization Mission: Disrupt the cycle of incarceration among high-risk youth by reducing recidivism and increasing pro-social skills

Study Participants: High-risk young men enrolled at the organization for at least 6 months (N=1116)

High-Risk

- History of arrest or incarceration, gang involvement, high school dropout, and/or substance use problems
- They are not ready, willing, or able to participate in traditional programming or maintain employment

Cognitive Behavioral Theory Curriculum

Development

- **A community-based participatory research partnership** emphasizing equitable contribution and leverage of the unique strengths of each partner was created.
- Through an iterative process, a **modular 10 skill CBT curriculum** was created to enhance emotional literacy and promote behavioral change.

Implementation

- CBT skills were delivered to the young men by trained community organization staff during formal interactions such as classes and informal brief impromptu interactions.

Measures

- Programmatic data regularly collected by the community organization
  - Employment attainment (yes/no)
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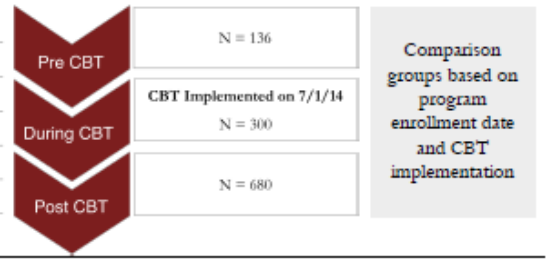
Methods Cont.

Implementation Timeline



Data Analysis

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Conclusion

Findings indicate that CBT delivered by paraprofessionals can help high-risk young men attain employment and maintain enrollment in programmatic services, both of which have been shown to reduce risk for recidivism.

Pilot study of a resilience-building prevention program for youth in Chelsea, MA: Preliminary evidence for feasibility, acceptability, and effects on emotion recognition

K. Canenguez[1,2,3], J. Clauss[1,2,6,7], Y. Pimentel Diaz[8], A. Burke[1,2], K. Han[2], L. Namey[1], V. Zvonar[1,3], R. Lambert[4], M. Lyons Hunter[5], C. Cather[1,2,3], D. Holt[1,2,6]

[1]Department of Psychiatry, Massachusetts General Hospital, Boston, MA, [2]Harvard Medical School, Boston, MA, [3] Center of Excellence in Psychosocial and Systemic Research, Boston, MA, [4]Pediatrics, MGH Chelsea Health Center, Chelsea, MA, [5]Behavioral Health, MGH Chelsea Health Center, Chelsea, MA, [6]Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Charlestown, MA, [7]Department of Psychiatry, McLean Hospital, Belmont, MA, [8]Wellness Therapist, LLC

INTRODUCTION

- Adolescent mental-health is a significant area of unmet need, particularly in underserved populations.
- Suboptimal mental-health outcomes in vulnerable populations are influenced by a myriad of factors, including: socioeconomic status[1], lack of access to youth-friendly services, limited language proficiency, as well as inadequate detection of mental-health needs
- Research has provided evidence for the impact of early life experiences on social-emotional development, physical health, and overall wellness in adulthood, therefore early intervention is essential[2]
- Mindfulness and self-compassion strategies have been shown to enhance resiliency in youth[3] , however, there is a gap in the application of these interventions among youth
- The current pilot research study aims to:
  1. Assess how to best engage and implement a resilience-building prevention program in a community-based setting with youth
  2. Determine the feasibility and acceptability of the intervention in the community
  3. Identify social-emotional benefits of the interventions

METHODS

Recruitment

- Youth ages 11-14 were screened in the Massachusetts General Hospital Chelsea Health Center General Pediatrics Clinic
- Screening was offered in English and Spanish
- Screening was conducted with the Strengths and Difficulties Questionnaire (SDQ)[4] – eligible participants were identified using total score as well as specific domain cut off scores
- Participants did not have any current history of psychiatric treatment or major medical illnesses.

EL PROGRAMA DE LIDERAZGO EMOCIONAL

EMOTIONAL LEADERSHIP PROGRAM

Study Approach

- Pre- and post-intervention measures included:
  - ➢ SDQ, Child Behavior Checklist (CBCL)[5]
  - ➢ Screen for Childhood Anxiety Related Disorders (SCARED)[6]
  - ➢ Emotion Regulation Questionnaire (ERQ)[7]
  - ➢ Emotion Regulation for Children and Adolescents (ERICA)[8]
- Participants completed an emotion labeling task in which they identify the emotion of each face using a button press
- Participants were compensated with $10 gift cards for each group session and $30 gift cards for the follow-up session

METHODS

Intervention

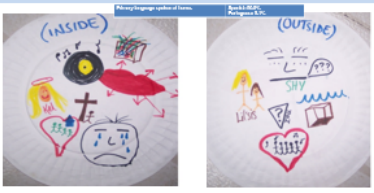
- 10 week group intervention held at the Chelsea Public Library
- **Resilience training: session structure**
  1. Start with a grounding exercise to settle the group and focus us for the session
  2. Check-in using skills learned in previous groups
  3. Review of previous lesson and home practice
  4. Teach/Discuss topic of the day, e.g., self-compassion, mindfulness
  5. Engage in experiential exercise (practice) highlighting topic of the day
  6. Close group with a mindfulness exercise to cool down

Resiliency skills:

Mindfulness | Self-Compassion | Emotion Recognition | Stress Management | Emotion Regulation

Example of Group Activity

What are some aspects of your identity that you may not present to others but that you still want them to know about? (These are ideas you might want to include on the inside of your mask.)



RESULTS

Screening

- 60 youth were screened
- 36 (60%) youth were eligible for the intervention
- 11 (30%) youth enrolled in the intervention
- 10 (91%) youth completed the intervention
- Follow-up data was collected on 9 youth (90% follow-up rate)

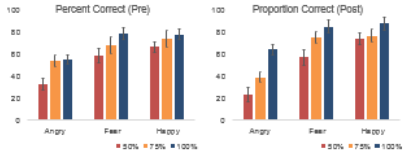
	Females	Males	P-value
N	4	7	
Age (years)	12.0 ± 0.7	12.4 + 0.4	ns
Grade	6.5 ± 1.3	6.7 ± 1.2	ns

- Primary language spoken at home:
  - Spanish 9 (90%)
  - Portuguese 1 (10%)

RESULTS

- Youth reported finding the group interesting (t=6.1, p<0.001)
- Youth were glad they participated (t=9.0, p<0.001)
- Youth said they would recommend the group to friends (t=2.4, p=.04).
- Pre- to post-intervention, panic symptoms decreased in females (t=9.8, p=0.01)
- Pre –to post- intervention rule breaking decreased in males (t=2.9, p=0.02).
- Following the intervention, youth were more accurate in identifying the 100% happy faces (t=2.5; p=.04).
- At six-month follow up, prosocial behavior increased and difficulties with peers decreased (both p<0.05).

Face Rating



SUMMARY & CONCLUSIONS

- Overall, the group produced good acceptability ratings
- 91 % of youth that participated in the program (N=10) completed the program
- Participation in resiliency intervention modules shows that participants had an increased emotional identification as shown by increase scores on the emotion labeling task
- Youth were open and interest in the resiliency-focused community based intervention
- A larger sample and a randomized control design are needed to evaluate efficacy further
- Future directions include collecting longitudinal assessment of youth outcomes including future need of mental health services.
- The addition of a waitlist control arm; and the collection of objective outcomes such as neuroimaging data to identify markers of risk and protective factors, as well as responses to the intervention
- The addition a cross-sectional group
- The addition a parent/caregiver group

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The MGH Center of Excellence for Psychosocial & Systemic Research: Mission and Progress Report

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[a]MGH Center of Excellence for Psychosocial & Systemic Research
[b]Metro Boston Recovery Learning Community
[c]Choice Recovery Coaching
[d]The Transformation Center
[e]MGH Disparities Research Unit
[f]Cambridge Health Alliance Equity Research Lab
[g]Boston University Center for Psychiatric Rehabilitation
[h]Central Mass Recovery Learning Center
[i]Open Sky Community Services
[j]Massachusetts Department of Mental Health
[k]The Disability Law Center
[l]National Alliance on Mental Illness
[m]McLean Hospital
[n]Massachusetts Statewide Mental Health Advisory Council
[o]Southeast Recovery Learning Center

Introduction

Serious mental illness (SMI) (i.e. schizophrenia, bipolar disorder, recurrent major depression) affects over 10 million adults in the U.S.[1] and approximately 222,000 adults (4.2%) in Massachusetts[2]. Individuals with SMI are vulnerable to poverty, homelessness, incarceration, trauma, and early mortality[3-4].

While there are empirically supported psychosocial treatments to improve symptoms, functioning, and health behaviors for individuals with SMI, many people lack access or are unaware of these potentially beneficial interventions—the "research to practice gap[5]." The peer support movement, which provides mentoring and advocacy from persons with similar experiences[6], emerged in response to failures in the healthcare system to adequately support recovery goals. Peer support has led to improvements in functioning, quality of life, and treatment outcomes[6-8]; however, peers' roles as collaborators in mental health research have been limited despite their desire to be involved.

Methods

MGH staff and affiliated faculty with interest in public and community mental health partnered with individuals with lived experience to establish a Center of Excellence in Psychosocial and Systemic Research. The Center aims to:

- employ community-based participatory research[9] (CBPR, see *Figure 1*) to facilitate collaboration between researchers, peer recovery communities, and stakeholder groups to identify and co-create research studies to improve outcomes and reduce disparities;
- engage with vulnerable groups from geographically diverse areas of MA through outreach;
- train the next generation of clinicians-researchers in CBPR, transparency, and recovery-oriented principles.

Figure 1. Community Based Participatory Research Process

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Results

The Center began work on October 1, 2018. Our newly established team includes senior faculty members, junior investigator clinical psychologists, post-doctoral psychologists, a program manager, a clinical research coordinator, and a staff assistant.

We have hired 7 Community Research Consultants (CRCs) with lived experience and diverse backgrounds to contribute to the Center's activities. CRCs are tasked with facilitating listening groups across MA in recovery communities (see *map below*). CRCs have conducted 3 listening groups and have identified preliminary themes (see *Figure 2*), with plans to complete 15 additional listening groups in Year 1.

In addition to our CRC team, we have convened a Steering Committee comprised of persons with lived experience (25%), family members (20%), care providers, researchers, policy makers, and a representative from MassHealth to support the success of the Center's mission.

Current Community Partnerships Across MA

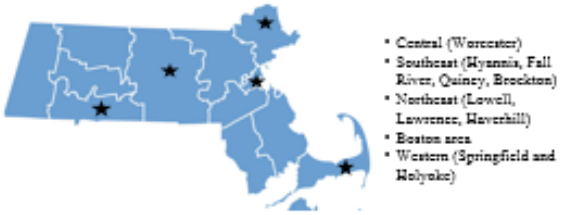

Figure 2. Priorities Identified in Listening Groups and Aligned Current Center Projects

Priority Identified through Listening Groups	Aligned Current Center Project
Weight/Nutrition	Open pilot of an 11-session group incorporating High Intensity Interval Training (HITT) exercise class, nutrition education, and positive psychology skills for individuals early in the course of a psychotic illness
Diabetes	Analysis of qualitative interviews with participants in an open trial of a 16-week group diabetes self-management intervention for adults with SMI and diabetes to identify barriers to participation and ways of enhancing the intervention that will be tested in a randomized controlled trial as a next step
Homelessness	Collaborative retrospective chart review with DMH to understand how sex, race, ethnicity, legal history and other factors correlate with both the duration of tenure in DMH transitional shelters in Boston and housing placement

Figure 3. Other Identified Priorities

Conclusion

We have begun to identify priority areas through listening groups conducted among people with lived experience across the state. Our current projects align with some of these priority areas, however, we see opportunities for future projects to address these more comprehensively using a CBPR framework. We will continue to assess needs and develop pathways for the Center to collaborate with community partners and will maintain a focus on sharing our results, current research findings in the field, and resources with the community in accessible language and modalities.

Funding

This work is funded by the Massachusetts Department of Mental Health (Contract # SCDMH82201908396000).

Cognitive Processing Therapy in a Diverse Community Health Center: The Nuances of Flexing with Fidelity

Aguilar Silvan, Y.,[1] Youn, S.,[2] Mackintosh, M.,[3] Bartuska, A.D.,[1] Shtasel, D.L.,[2] Wiltsey Stirman, S.,[4] and Marques, L.[2]

[1] Department of Psychiatry, Massachusetts General Hospital [2] Department of Psychiatry, Massachusetts General Hospital / Harvard Medical School
[3] Stat Craft, LLC [4] National Center for PTSD & Stanford University

BACKGROUND

Community providers modify (i.e., change or deviate from[1]) evidence-based treatments (EBTs)[2-6]	Provider-level Factors: Ethnicity, acculturation level, years of experience in the field, attitudes towards EBTs, & treatment (Tx) trajectories
	Patient-level Factors: Stigma, cultural beliefs about mental health (MH), poverty, language, low literacy, & ongoing violence
Providers make different types of modifications[1,3]	Fidelity-consistent Modifications: Do not change core elements of treatment
	Fidelity-inconsistent Modifications: Are not theoretically consistent with the Tx, or that remove certain core Tx elements
Different types of modifications have distinct effects on Tx outcome[6]	More fidelity-consistent modifications to Cognitive Processing Therapy (CPT) were related to greater reductions in post-traumatic stress disorder (PTSD) & depression scores[6]
Limited research on what impacts providers to make different types of modifications	Providers who perceived EBTs appealing (i.e., saw EBTs as making sense & being able to be used correctly) made more fidelity-inconsistent modifications[1]
	Providers who were trained to have high CBT skill reported more fidelity-inconsistent modifications[1]

AIMS

1. Understand whether providers differ in the types of modifications used across Tx phases
2. Explore patient-predictors (demographics, initial symptom severity, perceived barriers to Tx) of providers' patterns of modification types in early & later phases of Tx demographics

METHODS

SETTING & PARTICIPANTS

- Community MH center
- Serves an inner city population
- 19 providers
- 52 patients
- Providers treated an average of 3 patients (SD = 1.81)

	Providers	Patients
	n (%)	
Gender - Female	15 (78.9%)	35 (67.3%)
Primary Race[a]		
Black or African American	1 (5.3%)	2 (3.8%)
Latino / Hispanic	1 (5.3%)	26 (50.0%)
White	15 (78.9%)	19 (36.5%)
Other or biracial	2 (10.5%)	4 (7.7%)
	Mean (SD)	
Age (years)	45.7 (13.8)	40.1 (14.3)

Note. [a] Responses do not add up to 100% as people did not respond to the item or data are missing.

PROCEDURES

- National Institute of MH-funded implementation-effectiveness hybrid pilot study
- Providers were trained in CPT (i.e., 12-session manualized protocol)
- Providers recruited patients as part of routine clinical care

MEASURES

Demographic Form
- 18-items asking pertinent demographics
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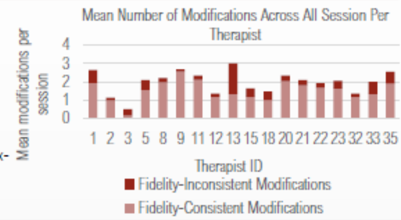
- Missing data: Multiple imputation procedures with 100 datasets
- Pearson correlations: Modification types & early (session 1-4) & later (session 5-12) Tx phases
- Multiple linear regressions: Predictors of provider's patterns of modification types in Tx phases

RESULTS

PROVIDER MODIFICATIONS ACROSS Tx Phases

- 463 CPT sessions were rated.
- Providers made on average 1.53 (SD = 0.42) treatment-consistent.
- Providers made on average 0.43 (SD = 0.21) treatment-inconsistent modifications.
- Providers maintained similar levels of Tx-consistent modifications (r = .54, p < .001) & Tx-inconsistent (r = .61, p < .001) modifications across treatment phases.



PREDICTORS OF PROVIDER'S PATTERNS OF MODIFICATION TYPES IN EARLY & LATER Tx PHASES

Variables	Average Number of Therapist Consistent Modifications Early Sessions	Average Number of Therapist Inconsistent Modifications Early Sessions	Average Number of Therapist Consistent Modifications Later Sessions	Average Number of Therapist Inconsistent Modifications Later Sessions
Language: English/Spanish	0.52 (-.17, 1.20) p = .139	-0.02 (-.35, .32) p = .924	-0.44 (-1.08, .20) p = .179	0.13 (-.30, .55) p = .559
Age	0.01 (-.01, .02) p = .531	0.001 (-.01, .01) p = .904	0.01 (-.01, .03) p = .371	0.01 (-.02, .01) p = .426
Gender: Male/Female	0.20 (-.33, .73) p = .460	-0.16 (-.40, .09) p = .216	0.03 (-.46, .52) p = .897	0.08 (-.25, .41) p = .639
Hispanic: Yes/No	0.21 (-.43, .86) p = .521	-0.03 (-.33, .27) p = .843	0.13 (-.49, .75) p = .685	-0.06 (-.45, .35) p = .788
Highest Education	0.06 (-.08, .21) p = .384	0.01 (-.06, 0.08) p = .793	0.02 (-.12, .15) p = .781	-0.04 (-.13, .05) p = .358
Social Functioning	0.06 (-.07, .18) p = .401	0.02 (-.04, .08) p = .560	0.03 (-.09, .14) p = .675	-0.02 (-.10, .05) p = .527
Baseline PCL-S Score	0.001 (-.02, .02) p = .932	-0.01 (-.02, .01) p = .364	-0.01 (-.03, .01) p = .506	0.00 (-.01, .01) p = .999
Consistent Mods in Tx Phase 1	n/a	-0.06 (-.20, .09) p = .453	0.59 (.29, .88) p < .001	0.09 (-.10, .27) p = .373
Inconsistent Mods in Tx Phase 1	-0.25 (-.91, .41) p = .455	n/a	0.14 (-.54, .82) p = .680	1.03 (.58, 1.47) p < .001
BTQ – Logistical/Financial	-0.01 (-.07, .05) p = .719	0.004 (-.02, .03) p = .778	0.07 (.01, .12) p = .017	-0.002 (-.04, .04) p = .898

Increased logistical & financial barriers significantly predicted more Tx-consistent modifications during the later Tx phase (β = 0.07, p = .017).

No other patient-level characteristics predicted Tx consistent nor inconsistent modifications in the early or later Tx phases.

DISCUSSION

Overall, providers are consistent in the types of modifications that they make across Tx phases. → This information could be leveraged during consultations to identify the providers who are likely to continue making Tx-inconsistent modifications and address this major concern[10] early in Tx.

Baseline patient factors do not predict *inconsistent* modifications, but logistical and financial barriers at baseline predicted *consistent* modifications in later Tx phases. → Given the lack of research on who is involved and who makes the final decisions in the adaptation process[10], this information might suggest that providers are using specific patient factors to make modifications.

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10. [illegible]

ACKNOWLEDGMENTS: Thank you to the providers & patients who participated in this study.

Predictors of Provider Modifications to Cognitive Processing Therapy in a Diverse Community Health Center

Aguilar Silvan, Y.,[1] Mackintosh, M.,[2] Bartuska, A.D.,[1] Shtasel, D.L.,[3] Wiltsey Stirman, S.,[4] Marques, L.[3] and Youn, S.,[3]

[1] Department of Psychiatry, Massachusetts General Hospital
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[4] National Center for PTSD & Stanford University

BACKGROUND

Community providers modify (i.e., change or deviate from[1]) evidence-based treatments (EBTs)[2-4]	Provider-level Factors: Ethnicity, acculturation level, years of experience in the field, attitudes towards EBTs, & treatment (Tx) trajectories
	Patient-level Factors: Stigma, cultural beliefs about mental health (MH), poverty, language, low literacy, & ongoing violence
Providers make different types of modifications[1,3]	Fidelity-consistent Modifications: Do not change core elements of treatment
	Fidelity-inconsistent Modifications: Are not theoretically consistent with the Tx, or that remove certain core Tx elements
Different types of modifications have distinct effects on Tx outcome[5]	More fidelity-consistent modifications to Cognitive Processing Therapy (CPT) were related to greater reductions in post-traumatic stress disorder (PTSD) & depression scores[6]
Limited research on what impacts providers to make different types of modifications	Providers who perceived EBTs appealing (i.e., saw EBTs as making sense & being able to be used correctly) made more fidelity-inconsistent modifications[1]
	Providers who were trained to have high CBT skill reported more fidelity-inconsistent modifications[1]

AIMS

1. Understand whether providers differ in the types of modifications used across Tx phases
2. Explore patient-predictors (demographics, initial symptom severity, perceived barriers to Tx) of providers' patterns of modification types in early & later phases of Tx demographics

METHODS

SETTING & PARTICIPANTS

- Community MH center
- Serves an inner city population
- 19 providers
- 52 patients
- Providers treated an average of 3 patients (SD = 1.81)

		Providers	Patients
		n (%)	
Gender - Female		15 (78.9%)	35 (67.3%)
Primary Race[a]			
	Black or African American	1 (5.3%)	2 (3.8%)
	Latino / Hispanic	1 (5.3%)	26 (50.0%)
	White	15 (78.9%)	19 (36.5%)
	Other or biracial	2 (10.5%)	4 (7.7%)
		Mean (SD)	
Age (years)		45.7 (13.8)	40.1 (14.3)

Note. [a] Responses do not add up to 100% as people did not respond to the item or data are missing.

PROCEDURES

- National Institute of MH-funded implementation-effectiveness hybrid pilot study
- Providers were trained in CPT (i.e., 12-session manualized protocol)
- Providers recruited patients as part of routine clinical care

MEASURES

Demographic Form

- 18-items asking pertinent demographics
- Age, Gender, Race/ethnicity, Language, Educational level, Functioning

Posttraumatic Stress Disorder Checklist (PCL-5)[7]

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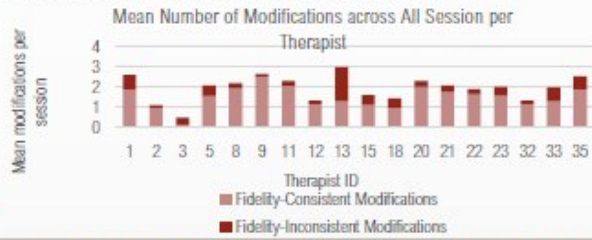

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Baseline symptom levels and resilience-promoting factors predict mental health outcomes in college students

Wisteria Deng[1], Anne S. Burke[1,2], Maren B. Nyer[1,2], Logan Leathem[1], Carrie Landa[3], Corinne Cather[1,2,4], Daphne J. Holt[1,2,4]

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Introduction

Symptoms of severe mental illnesses often begin during late adolescence and early adulthood[1], including the college years. However, few early detection and intervention programs have been implemented in college settings in which a substantial number of students would benefit from them. To date, the majority of college students experiencing symptoms of mental illnesses still do not receive adequate clinical attention[2]. Given this, we have developed an early identification and prevention program tailored to college students that includes:
1) a campus mental health screening to identify at-risk students;
2) a brief resilience-building intervention for eligible students;
3) longitudinal follow-up of academic performance and mental health services usage.
One goal of this program is to identify baseline predictors of adverse academic and mental health outcomes in this population. Given the gap in care due to the limited resources available on campus and stigma-related barriers to help-seeking, identifying predictors of academic decline and mental health outcomes could help allocate clinical resources, deliver early interventions to at-risk students and potentially prevent adverse mental health outcomes. Here we conducted a preliminary analysis (n=237 of the screened) of baseline predictors of mental health outcomes occurring during the first year following the baseline screening.

Methods

- **On-campus screening (N = 416):**
  Students aged 18-23 were screened at a local college using the following measures:
  - Beck Depression Inventory (BDI)[3]
  - Peters Delusions Inventory (PDI)[4]
  - State-Trait Anxiety Inventory (STAI)[5]
  - Self-Compassion Scale (SCS)[6]
  - General Self-Efficacy (GSE)[7]
  - Psychological Well-Being Midus 1 Version (PWB)[8]
  - Time Alone Questionnaire (TAQ)[9]
- **Brief resilience-building intervention (N = 60):**
  - The 4-session intervention combines elements of three evidence-based approaches: mindfulness[10], mentalization based treatment (MBT)[11], and mindful self-compassion (MSC)[12]
  - Initial findings of an one-arm study suggest the intervention effectively impacts targeted outcomes, leading to a reduction in psychotic, depressive, and anxiety symptoms and an increase in measures of self-compassion, self-efficacy, social motivation, and well-being.
- **Longitudinal follow-up of academic performance and mental health services usage (N = 237):**
  - Mean age = 18.99; 61.8% female.
  - The following outcome measures are collected through university health services, both in the semester of the screening and at 1-year intervals post-screening: number of 1) visits to the counseling center, 2) crisis calls, 3) hospitalizations, 4) referrals to outside mental health providers, 5) medications, 6) diagnoses and 7) leave of absence for mental health reasons.
  - In the current analysis, we focused on the first three outcome measures: 1) visits to the counseling center, 2) crisis calls, and 3) hospitalizations.

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or Daphne Holt, MD PhD
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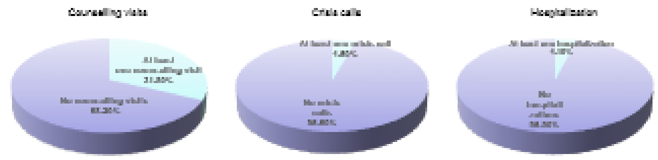
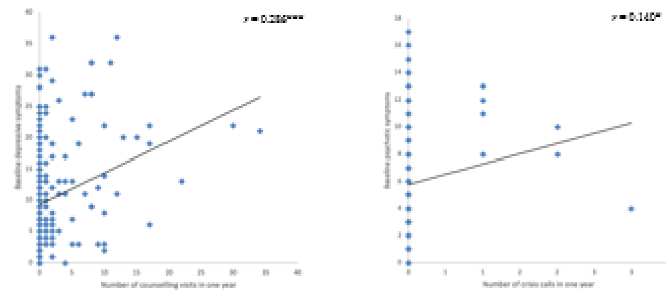
Results

Incidence rate of the three outcome measures



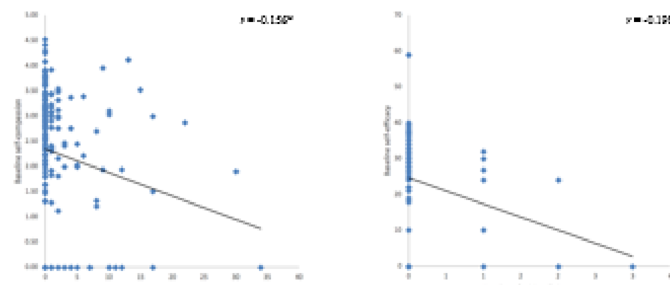
Symptom Measures vs. Outcomes Correlations

- Higher baseline depression and anxiety levels predicted a greater number of clinician visits ($r = 0.286$, $p < 0.001$; $r = 0.175$, $p = 0.017$), hospitalizations ($r = 0.174$, $p = 0.009$; $r = 0.159$, $p = 0.031$) and crisis calls ($r = 0.188$, $p = 0.005$; $r = 0.236$, $p = 0.001$) during the year following the screening.
- The severity of psychotic experiences and the level of conviction associated with these experiences was positively associated with the number of crisis calls only ($r = 0.140$, $p = 0.037$; $r = 0.143$, $p = 0.033$).



Resilience Factors vs. Outcomes Correlations

- A higher level of resilience-promoting factors at baseline, including self-compassion and self-efficacy, predicted a lower number of counselling visits ($r = -0.156$, $p = 0.039$; $r = -0.259$, $p = 0.001$), hospitalizations ($r = -0.170$, $p = 0.025$; $r = -0.289$, $p < 0.001$) and crisis calls ($r = -0.231$, $p = 0.002$; $r = -0.198$, $p = 0.009$) during the following year.



Note: * p < .05, ** p < .01, **. p < .001

Conclusions and Future Directions

- We also plan to test whether our program produces similar results and is useful across a range of campus settings, including private, public and community colleges. Modifications are likely necessary at different sites, to address the specific needs of each student population.
- During the course of this study, we hope to develop a predictive algorithm that will help us better identify students in need, improve intervention designs and prevent adverse outcomes.
- These data also highlight the importance of protective resilience-promoting factors in influencing the mental health of young people over time.

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Smoking cessation in serious mental illness: a multi-pronged approach using the treatment cascade framework

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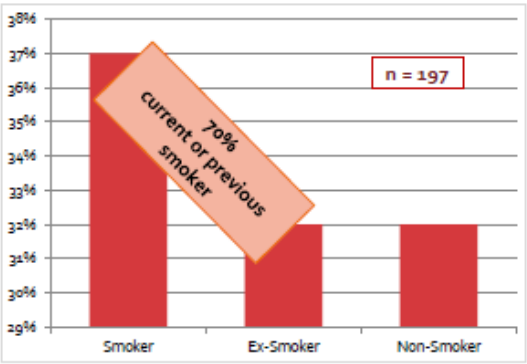
Background

Nicotine dependence contributes significantly to medical mortality in patients with serious mental illness.[1] A system-wide effort addressing the varied obstacles to smoking cessation is needed to improve this health disparity.

High rates of smoking persist in a clozapine cohort of a community mental health center



Objectives and Aims

✓**Introduce the treatment cascade framework** and apply it to nicotine dependence.
✓Show how this conceptual framework can **guide program development** to address smoking cessation in patients with serious mental illness.

Methods

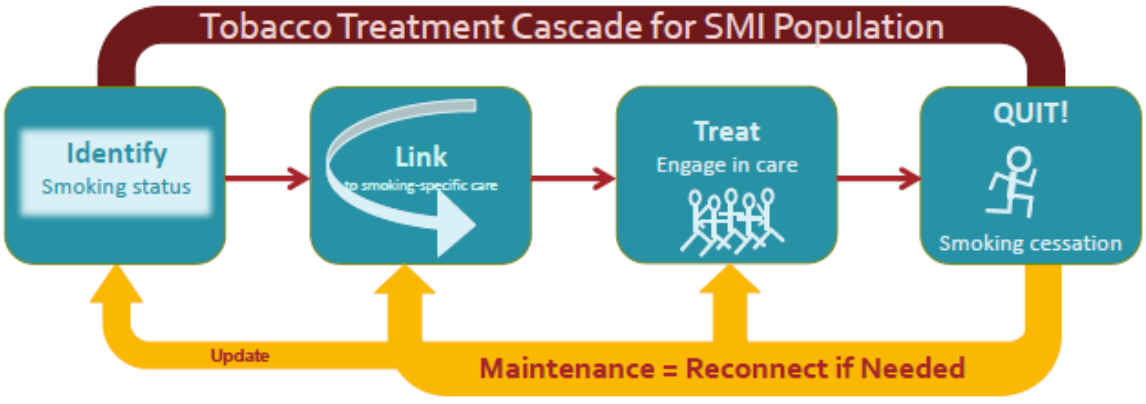
✓Using quality improvement projects, we reviewed smoking histories and treatments for clozapine patients in a community mental health clinic.
✓Focus groups with clinical staff and psychiatry residents identified obstacles to addressing smoking cessation.

Results

1. Smoking status, and history, was not uniformly reported in the electronic medical record, preventing population-based management.
2. Even motivated patients could not easily be linked to the full spectrum of care, particularly psychosocial interventions.
3. Less than 50% of patients who quit had received pharmacological treatments.
4. There was no mechanism to track patients who had quit longitudinally.

Conclusions

❑The treatment cascade framework can **organize smoking cessation efforts** for patients with SMI.
❑The framework emphasizes the **need for population-based management** if we want to reduce smoking in SMI.
❑**QI projects** are underway to **increase pharmacotherapy** for smoking cessation.



Diagnosis
→ Record smoking history
→Add to problem list

Linkage
→Develop own expertise in smoking cessation
→Identify local resources

Treatment
→Pharmacotherapy
-Clear role for psychiatrist[2]
→Psychosocial therapies
- Motivational interviewing

Cessation
→Maintenance groups
→ Quit peers as coaches

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AN OPEN TRIAL OF INTEGRATED DIABETES MANAGEMENT FOR INDIVIDUALS WITH SERIOUS MENTAL ILLNESS (SMI)

K Schnitzer*[1,2], C Cather*[1,2], A Thorndike[3], S Maclaurin[2,3], M Vilme[1,2], A Dechert[1,2], G Pachas[1,2], K Potter[1], O Freudenreich[2,3], D Wexler**[4], AE Evins**[1,2]

1. Center for Addiction Medicine, Department of Psychiatry, Massachusetts General Hospital; 2. Schizophrenia Research Program, Massachusetts General Hospital; 3. North Suffolk Mental Health Association and Erich Lindemann Mental Health Center, Freedom Trail Clinic, Boston; 4. Diabetes Center, Department of Medicine, Massachusetts General Hospital; 5. General Medicine Division, Department of Medicine, Massachusetts General Hospital

Aim

The goal of this project was to improve diabetes self-management for individuals with serious mental illness (SMI) and diabetes, a comorbidity that occurs in approximately 20% of this population and results in high levels of healthcare utilization and poor medical outcomes. We developed and evaluated a 16-week group behavioral diabetes self-management program conducted in a community mental health care center.

Background

- Premature mortality due to cardiovascular disease in those with schizophrenia is the largest lifespan disparity in the US.
- Adults in the US with schizophrenia die on average 28 years earlier than those in the general population.[1]
- An estimated 1in 5 people with SMI has diabetes.[2]
- Lifetime rates of diabetes in those with schizophrenia are 2-3 times higher than for those in the general population.[3,4]
- Contributing factors to high rates of diabetes include effects of antipsychotic medication, unhealthy lifestyle, lower socio-economic status, and schizophrenia disease-related factors.
- People with SMI may have lower diabetes-specific knowledge and are receptive to medication, disease self-management education, and weight loss programs when provided.
- One large study found *greater* adherence to oral hypoglycemic medications among diabetes patients with than without comorbid schizophrenia.[5]
- There is a significant gap in the literature for effective, evidence-based interventions that can improve glycemic control through diabetes self-management in those with SMI.

Methods

We developed and tested a 16-week, tailored, behavioral and educational group intervention for individuals with schizophrenia and diabetes, utilizing the concept of 'reverse integrated care,' bringing medical intervention into the community mental health setting. Core features of this intervention include specific community-informed and disease-informed goal setting, basic education, and problem-solving.

1º Outcome:
- Glycemic control (HbA1c)

2º Outcomes:
- Lipid panel
- Brief Adherence Rating Scale
- Ratings of Diabetes Knowledge and Self Care
- Blood pressure
- Weight/BMI
- Smoking Status
- Weekly step count

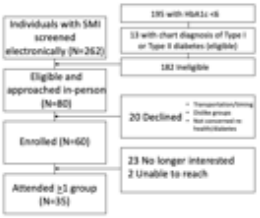
Eligibility:

SMI and
- HbA1c >6.5 OR
- HbA1c >6 and metformin OR
- Diabetes diagnosis

Baseline Characteristics:

	Attended no sessions N = 25	Attended 1 or more group sessions N = 35
Age, years - M (SD)	56.9 (12.2)	52.9 (10.9)
Female - N (%)	10 (40)	8 (22.9)
White	16 (64)	16 (45.7)
African American	5 (20)	12 (34.3)
Other race	3 (12)	7 (20)
Hispanic	1 (4)	3 (8.6)
Any antipsychotic, n (%)	12 (75)	34 (97.1)
Clozapine	8 (50)	14 (40)
Olanzapine	1 (6.2)	8 (22.9)
Mood stabilizers	4 (25)	12 (34.3)
Antidepressants	6 (37.5)	10 (28.6)
Metformin	6 (37.5)	23 (65.7)
Other oral diabetes medication	3 (18.8)	12 (34.3)
Insulin	2 (12.5)	9 (25.7)
BMI - M (SD)		33.3 (3.8)
Systolic, mmHg - M (SD)		127 (12)
Diastolic, mmHg		81 (11)
A1C, %	8.5 (1.1)	7.5 (1.6)
Total cholesterol, mg/dL	168 (41)	160 (39)
LDL, mg/dL	95 (44)	75 (28)
HDL, mg/dL	41 (14)	38 (15)

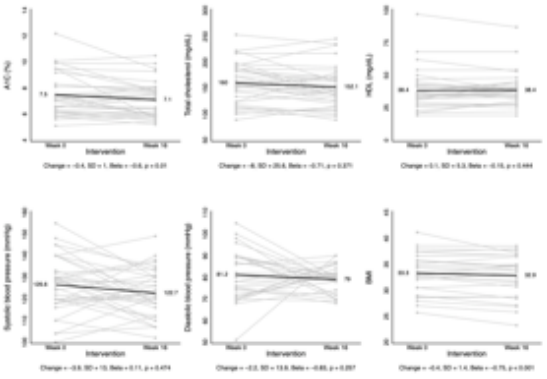
Participant Flow:



Results

Variables	Baseline	End of Treatment	Observed effect	Potential population effect $	p value
Physiologic measures					
HbA1c, %	7.5 (1.6)	7.1 (1.4)	-0.6	-0.6 (0.23)	0.01
HbA1c (baseline >6.4%, n = 34)	8.0 (1.3)	7.6 (1.3)	-0.6	-0.63 (0.23)	0.005
Weight, lbs	200.3 (40.3)	197.7 (42.3)	-2.6	-1.41 (0.61)	0.021
BMI	33.3 (3.8)	32.9 (4.1)	-0.4	-0.75 (0.17)	<0.001
Total cholesterol, mg/dl	160 (39.3)	160.4 (38.3)	+0.4	-0.71 (0.47)	0.371
HDL, mg/dl	38.4 (14.3)	38.4 (12.7)	0	-0.42 (0.47)	0.444
HDL, mg/dl (baseline <40 mg/dl, n = 33)	30.4 (5.6)	32.8 (8.8)	2.4	1.84 (0.88)	0.043
Systolic blood pressure, mmHg	126.8 (12.2)	122.7 (12.3)	-4.0	-3.41 (1.72)	0.474
Systolic blood pressure (baseline >130mmHg, n = 15)	144.8 (8.8)	128.8 (0.7)	-16.0	-13.43 (2.42)	0.001
Diastolic blood pressure, mmHg	81.2 (11.2)	78 (8.8)	-3.2	-0.83 (1.28)	0.027
Diastolic blood pressure (baseline >80mm Hg, n = 17)	90.6 (8.2)	78.8 (8.4)	-11.8	-7.82 (1.68)	<0.001
Steps, per day	8008 (4487)	8787 (4258)	780	0.43 (3.83)	0.488
Diabetes knowledge and self care					
Diabetes knowledge (DKN)	7.2 (2.7)	8.6 (2.7)	1.4	1.72 (0.42)	<0.001
Personal diet self care, days	2.8 (2.2)	4.8 (1.8)	2.0	1.21 (0.34)	0.001
Specific diet self care, days	3.2 (2.4)	4 (3.4)	0.8	0.88 (0.32)	0.001
Exercise self care, days	2.7 (2.2)	4.1 (2.4)	1.4	1.08 (0.3)	0.010
Foot self care, days	4 (3.4)	4.2 (3.4)	0.2	0.28 (0.28)	0.120
Diabetes distress (PAID)	42 (21)	37 (18)	-5	-4.78	0.033

Comparisons considered significant at p<0.022



- HbA1C significantly improved, 7.5 (1.6) to 7.1 (1.4), effect estimate =0.6, p=0.01
- BMI significantly improved 33.3 (3.8) to 32.9 (4.1), effect estimate =0.75, p<0.001.
- We observed improvement in other parameters associated with high cardiovascular risk, particularly in participants with abnormal baseline measurements.
- One-year follow up in 20 participants suggests durability of effect.

Conclusions

The results of this open trial of a community informed, 16-week, reverse integrated care behavioral and educational group intervention suggest participation is associated with significantly improved glycemic control, BMI, diabetes knowledge and self-care, and other parameters associated with elevated cardiovascular risk. The results warrant larger scale, controlled testing with the aim of refining an effective, scalable intervention to improve diabetes care and outcomes in those with SMI.

Support

This work was funded by a Health Equity Grant from the MGH Executive Committee on Community Health (ECOCH). We would like to thank our community partners, North Suffolk Mental Health Association, and Drs. David Schoenfeld, Christine Ulbrich, and Trina Chang for their technical assistance.

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What Now? An Innovative Web-Based Tool for Family Caregivers of Individuals with Schizophrenia

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Background

Family psychoeducation and skills training is an underutilized evidence-based practice for the treatment of schizophrenia. As a result, family members face the challenges of navigating psychotic symptoms and social functioning impairments experienced by their loved one without adequate knowledge and skill, which can increase family stress and adversely affect recovery for the individual with schizophrenia. Family members often experience burden, chronic strain, and powerlessness magnified by isolation and stigma.

Methods

We conducted a first round of focus groups with family members recruited from the community (N=28) and clinicians (N=18) to understand the practical and conceptual needs of family members to inform program design, content, and interactive features.

Through combined content analysis of caregiver and clinician data, over 250 topics and challenges were identified. **What Now?** includes clips of video interviews with family members and professionals, interactive quizzes, myth-busters, communication skills training tips, and community resources.

We recruited 60 family members, gave them unlimited access to the website for one month, and evaluated pre-post changes in knowledge about schizophrenia, well-being, and family communication. These 60 family members and 32 clinicians were also recruited for a second round of focus groups to assess the feasibility, tolerability, and usability of the website.

Figure 1. What Now? Homepage

Key Content Areas

Understanding Schizophrenia

Provides a multidimensional look into schizophrenia--causes, symptoms, diagnostic process, early intervention, and family emotional responses. Offers practical tips, suggestions, and experiential activities to help understand the experience of schizophrenia.

Exploring Treatments

Outlines the treatment process and effective therapeutic approaches including medication and psychotherapy, and medication side effects.

Maintaining Wellness

Covers key aspects of daily self-care, recovery, and the role of families in maintaining long-term wellness. Offers guidance on planning for the future, as well as practical information on legal and financial planning and community and public resources.

Building a Relationship

Focuses on caregiver self-care and provides strategies and techniques for improving communication and problem solving as well as avoiding conflicts, setting boundaries and taking respite.

Key Findings

Figure 2. How Family Members Feel

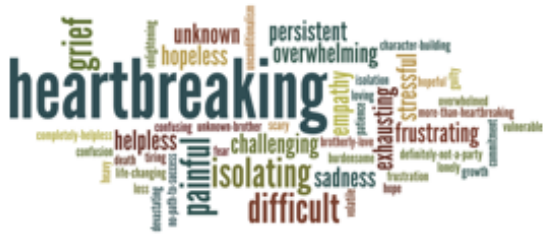

Figure 3. Provider Feedback on Interactive Features

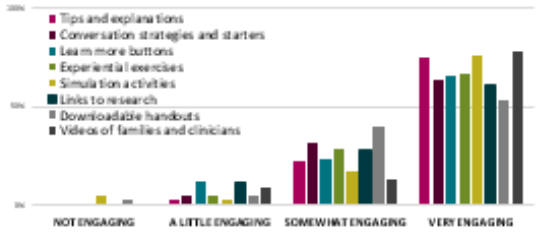

Figure 4. Select Family Feedback on Prototype

"My initial reaction is the profoundly great need for this website and how convenient it is to navigate....It's a gift to those of us who have to deal with this."

"I was pretty blown-away. I walked away saying it's the best thing I've ever seen. It's really well-written. It's a lot of information...it's both deep and wide. It feels so authentic. You took a lot of information and you presented it in a very thoughtful, insightful, inspiring way. You couldn't have done any better. I read every single line, every single word, I give it an A+."

"It was so refreshing and hopeful to discover that I am not alone. I have never spoken with anyone outside of my immediate family about our experience. This information is wonderful..."

"I am very excited about this project and feel that it will have a tremendous impact. The site contains valuable information that addresses the emotional as well as the learning side of dealing with a family member who has a mental illness. The content is consistently presented in a practical and exceptionally understandable, even comfortable, manner."

"I have a deep respect and gratitude for the effort that has gone behind this project. You are going to be making an enormous difference for countless peoples' lives. They will not recognize the absence of information that currently exists because of your work."

Table 1. Family Member Demographics

	First group (N=28)*	Second group (N=60)
Gender		
Male	32%	22%
Female	64%	78%
Race/Ethnicity		
Hispanic/Latino	4%	5%
Asian	10%	10%
Black/African American	4%	5%
White or Caucasian	78%	82%
Relationship		
Parent	61%	58%
Sibling	39%	30%
Other relative	0	12%
Age		
20-39	15%	17%
40-59	46%	46%
60-79	36%	37%

*One respondent did not provide answers to gender, race/ethnicity, and age

Table 2. Clinician Demographics

	First group (N=18)	Second group (N=32)
Gender		
Male	22%	84%
Female	78%	16%
Race/Ethnicity		
Hispanic/Latino	0%	3%
Asian	11%	6%
Black/African American	0%	3%
White or Caucasian	89%	88%
Years of Relevant Experience		
<1 year	5%	3%
1-5 years	17%	28%
6-10 years	11%	25%
>10 years	67%	44%

At one-month evaluation, the prototype was associated with significant improvements in caregiver strain, knowledge about schizophrenia, empowerment, and communication. Caregivers were highly engaged in the **What Now?** prototype review. They demonstrated tremendous enthusiasm and support for the program and offered insightful feedback about its strengths and areas for modification. Many reiterated *"I can't emphasize enough that there just isn't anything else out there like this."* One caregiver explained it as ***"I felt like I had an oxygen tank put in front of me."*** Caregivers indicated the four thematic sections were comprehensive, relevant to their experiences, and helpful.

Table 3. Mean Changes in Summary Scores from Baseline to 1 Month Follow-up

Survey Measures	Baseline Mean ± SD (N)	30 Day Mean ± SD (N)	Paired Difference 95% CI	P-value[3]
Burden[1]	2.9 ± 0.71 (46)	2.8 ± 0.76 (46)	-0.10 (-0.30, 0.11)	0.335
Chronic Strain[2]	2.9 ± 0.61 (46)	2.6 ± 0.67 (45)	-0.23 (-0.40, -0.05)	**0.012**
Knowledge about Schizophrenia[3]	84.1 ± 8.61 (46)	88.2 ± 8.86 (46)	4.08 (1.86, 6.30)	**0.001**
Self-Efficacy and Empowerment[4]	3.5 ± 0.75 (46)	3.7 ± 0.73 (46)	0.19 (0.02, 0.35)	**0.025**
Communication[5]	3.1 ± 0.91 (46)	3.3 ± 0.87 (45)	0.17 (0.05, 0.30)	**0.008**

[1] Zarit Burden Interview: 1:Never - 5: Nearly Always; [2] Perceived Chronic Strain Scale: 1:Not Stressful at All - 4: Very Stressful; [3] Knowledge about Schizophrenia Test: 0% - 100%; [4] Family Empowerment Scale: 1: Not True at All – 5: Very True; [5] Family Problem Solving Communication Scale: 1: Never – 5: Always

[3] P-values are shown for paired t-tests

Conclusions and Implications

"What Now?" can provide easily accessible and widely available support to family members (importantly, even extended family members) of individuals with schizophrenia. This website has the potential to not only improve caregiver well-being, but also to improve outcomes for the individuals with schizophrenia whose family members access this resource. The next step for this project is completion of the website and a randomized controlled trial.

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Metacognition and Insight in First Episode Psychosis: The Impact on Functioning

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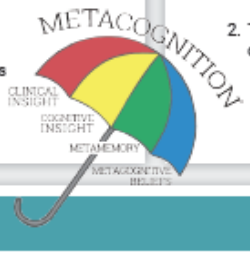
INTRODUCTION

Metacognition involves forming an integrated representation of oneself, others, and the world and using these representations to perform or accomplish a task[1]. Metacognition is an umbrella term, encapsulating may forms of self-reflection and insight [2,3].

Metacognition predicts social and occupational outcomes in First Episode Psychosis (FEP) [4]. We are interested in which particular aspects of metacognition have the largest role on functioning in FEP.



HYPOTHESES

1. Metacognitive ability, clinical insight and cognitive insight will be associated with each other in First Episode Psychosis.
2. These variables will predict functioning in FEP, independent of cognitions and negative symptoms.
3. Metacognitive ability will be the strongest predictor of functioning, above clinical and cognitive insight in FEP.

METHODS

Cross-sectional study with 60 First Episode Psychosis participants
Mean age = 26.3, SD 5.8, 73% male
Measures include:

- Antipsychotic medication (yes/no)
- Two-part IQ (Vocabulary and matrix reasoning tests)[6]
- Positive and Negative Syndrome Scale (PANSS)[7]
- Clinical insight: Item from PANSS[7]
- Cognitive insight: Beck Cognitive Insight Scale (BCIS)[8]
- Metacognitive Assessment Interview[5]
- Functional outcome (hours of structured activity per week)[9]

DESCRIPTIVE STATISTICS

Table 1: The descriptive statistics.

N=60	Mean (SD), range
Antipsychotic medication/No AP Medication (% AP)	41/19 (68%)
Vocabulary task	51.5 (13.1), range 20-70
Matrix Reasoning task	52.97 (8.0), range 26-66
Cognitive ability (2-part IQ)	104.98 (14.7), range 61-131
PANSS P	11.3 (4.8), range 6-26
PANSS N	13.3 (5.8), range 8-40.5
Clinical Insight (PANSS item)	1.92 (.98), range 1-4
BCIS composite index	8.9 (5.7), range -1-23
BCIS - self-reflectiveness	15.4 (4.46), range 6-25
BCIS - self-certainty	6.45 (3.1), range 0-16
Metacognitive Assessment Interview (MAI (total)	3.18 (.85), range 1.19-4.56
Time-Use (hours in structured activity)	38.9 (24.3), range 5-109

RESULTS

Hypothesis 1: Metacognitive ability was associated with cognitive insight (r= .34, p=.01) and clinical insight (r= .63, p<.001) in FEP. However, clinical insight and cognitive insight in FEP were not related (p=.19).

Hypothesis 2: Clinical insight predicted functional outcome in FEP (p=.003). After controlling for known variables (IQ, negative and symptoms), clinical insight was a significant predictor of functional outcome, R=.24, F(3, 56)=5.52, p=.002 (table 2). Clinical insight significantly improved the baseline model (r^2 change= .07, p=.04), explaining 7% of the total 24% variance explained. Clinical insight remained significant when including mediation as a covariate (p=.005)

Cognitive insight did not predict functioning.

Hypothesis 3: When including metacognitive ability as an additional predictor in the stepwise regression, clinical insight was the strongest predictor of functioning in FEP.

Table 2: Full regression model for predictive value of insight on functional outcome, with covariates.

		B	SE B	ß	p value	CI
Model 2						
	Constant	77.36				
	IQ	-.04	.2	-.02	.85	-.44, .37
	PANSS Negative	-1.9	.8	-.31	.02*	-3.46, -.26
	Clinical Insight	-7.3	3.3	-.28	.04*	-13.96, -.55

*<.05

MAIN TAKE - AWAY

1. Metacognition is an umbrella term, associated with different aspects of insight. The way someone thinks themselves and their lives as a whole was associated with how the individual reflected on their illness and how they reflected on their current everyday experiences.
2. During the early stage of the illness, being aware of one's illness and how to manage one's symptoms had the most impact on engagement in every day functioning in FEP.
3. Being aware of illness had a larger role on functioning than reflecting on one's life as a whole, suggesting specific effects of this umbrella term.

These findings can be taken forward:

- Developing a model of metacognitive insight in FEP to understand the role of different self-reflective capacities.
- Supports the use of interventions tackling insight (or metacognitive insight) in order to improve functioning in the early stages of psychosis[10].

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HARVARD MEDICAL SCHOOL

MASSACHUSETTS GENERAL HOSPITAL

Depression and Emotional Numbing

Their Association with the Experience of First Episode Psychosis

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INTRODUCTION

On the surface, depression and emotional numbing may appear to be similar. However, these two concepts are experienced very differently by the individual[1]; the former relating to low mood and the latter considered an aspect of depersonalization and detachment from one's emotions. Both are prevalent in psychosis[2,3] and may differentially influence the experience of psychosis and recovery.

This study aimed to explore the how **depression and emotional numbing are clustered together, and their relationship with symptoms and the subjective experience of recovery** in first episode psychosis.

METHODS

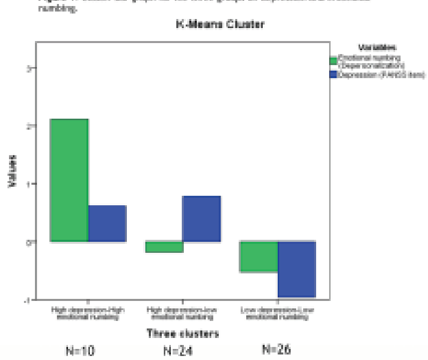
This was a cross-sectional study involving 62 individuals with First Episode Psychosis (FEP). Mean age was 26.2 years (SD= 5.66, range 18-43), with 74% (n=46) males.

Measures included:

- PANSS depression item[4]: Depression
- Cambridge Depersonalisation Scale[5]: Emotional numbing subscale[1]
- Positive and Negative Syndrome Scale (PANSS)[4] positive, negative (community and expressive[6]) and general psychopathology subscales
- Questionnaire of Process of Recovery[7]: Subjective recovery outcome.

RESULTS

Figure 1: Cluster bar graph for the three groups on depression and emotional numbing.



K-Means cluster analysis identified three homogeneous groups for PANSS depression item and Cambridge Depersonalization Scale 'emotional numbing' subscale (CDS). Two people were not classified within the cluster analysis.

High depression-high emotional numbing group were more likely to have:

- Higher levels of positive symptoms (p=.01), specifically delusions (p=.001) and paranoia (p=.01)
- Higher levels of negative community symptoms (p=.001)
- Low recovery scores compared to group three (p=.05)

High depression-low emotional numbing group were more likely to have:

- Higher negative community symptoms (p=.05)
- Low recovery scores compared to group three (p=.05)
- Relatively low positive symptoms, compared to group 1 (p<.05)

Low depression-low emotional numbing group were more likely to have better scores across symptoms and recovery, compared to both groups.

Table 1: Comparison of demographics, depersonalization, symptoms, and recovery scores.

N=60	Cluster 1	Cluster 2	Cluster 3	Test	P
	10	23	26		
Gender	9 (90%)	18 (75%)	17 (69%)	X²=2.3	.32
Age (n, % male)	25.1 (5.65)	27.1 (5.62)	25.8 (6.06)	F(2, 58)=18.41	.58
PANSS Depression	3.3 (1.06)	3.43 (.59)	1.35 (.49)	F(2, 58)=30.55	<.001***
CDS Emotional numbing	28.9 (5.5)	8.09 (5.05)	4.62 (5.13)	F(2, 58)=2204.85	<.001***
PANSS Positive	2.53 (.7)	1.96 (.54)	1.57 (.53)	F(2, 58)=3.45	.005**
PANSS Delusions	3.6 (.97)	2.13 (1.52)	1.73 (1.0)	F(2, 58)=12.72	.001***
PANSS Hallucinations	2.7 (1.17)	2.43 (1.88)	1.65 (.98)	F(2, 58)=5.64	.071
PANSS Grandiosity	1.4 (.97)	1.43 (1.08)	1.27 (.81)	F(2, 58)=.88	.26
PANSS Paranoia	3.7 (1.7)	2.74 (1.29)	2.27 (1.29)	F(2, 58)=7.43	.010*
PANSS Negative	1.85 (.5)	1.62 (.66)	1.62 (.86)	F(2, 58)=.22	.67
PANSS Negative expressive	1.58 (.58)	1.46 (.6)	1.56 (.95)	F(2, 58)=.09	.86
PANSS Negative community	2.6 (.94)	1.94 (.71)	1.51 (.59)	F(2, 58)=4.44	<.001***
PANSS Insight	2.0 (1.05)	1.74 (.88)	2.08 (1.06)	F(2, 58)=.72	.48
PANSS Anxiety	4.0 (.82)	3.78 (.85)	2.23 (1.11)	F(2, 58)=19.19	<.001***
Subjective recovery (0-88)	53.1 (13.1)	58.2 (11.7)	67.1 (12.8)	F(2, 58)=5.28	.008**
PANSS Cognitive	1.71 (.38)	1.57 (.42)	1.57 (.57)	F(2, 58)=.09	.7
PANSS Hostility	1.25 (.39)	1.34 (.4)	1.41 (.42)	F(2, 58)=.099	.55

DISCUSSION

- Depression and emotional numbing can be separated in First Episode Psychosis.
- Those with high depression-high emotional numbing may experience an overload of environmental stimulation (anomalous sensory stimulation) and the individual may "shut down" their emotions to these experiences (emotional numbing) to avoid distress, and then develop unusual beliefs (positive experiences) to explain these experiences and simultaneously experience feelings of low mood.
- Those with high depression-low emotional numbing do not emotionally "numb out", but display negative symptoms, particularly reduced engagement within the community and simultaneous low mood.
- Both groups have poor recovery.

REAL-WORLD IMPLICATIONS

Clinicians should ask patients with psychosis about their experiences of depression and emotional numbing. This study highlighted the importance of noting individual needs and risks of groups displaying emotional numbing or depression within FEP.

These findings can be taken forward in two ways:

- Those with high depression-high emotional numbing may be at-risk of developing further distressing paranoia and may potentially be hospitalized;
- Those with high depression-low emotional numbing may be at-risk of developing further difficulties in functioning and may potentially disengage with services.

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HARVARD MEDICAL SCHOOL

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Appendix B: Staff Hired in Year 1

- Paul Alves: Community Researcher in Western MA, 0.1 FTE (start date: 1/30/19)
- Diana Arntz, PhD: Psychologist, Junior Investigator, 0.8 FTE (start date: 12/13/18)
- Julia Browne, MS: Postdoctoral Fellow, 1.0 FTE (start date: 7/25/19)
- Anne Burke, PhD: Psychologist, Junior Investigator, 0.2 FTE (start date: 10/1/18)
- Katia Canenguez, PhD: Psychologist, Junior Investigator, 0.5 FTE (start date: 10/1/18)
- Corinne Cather, PhD: Director, COE, 0.7 FTE (start date: 10/1/18)
- Valeria Chambers, MS: Community Researcher in Metro Boston, 0.1 FTE (start date: 12/6/18)
- Abigail Donovan, MD: Senior Psychiatrist, Senior Co-Investigator, 0.1 FTE (start date: 10/1/18)
- Eden Evins, MD, MPH: Senior Psychiatrist, Senior Co-Investigator, 0.1 FTE (start date: 10/1/18)
- Oliver Freudenreich, MD: Senior Psychiatrist, Senior Co-Investigator, 0.1 FTE (start date: 10/1/18)
- Kathryn Hintz, MS: Community Researcher in Metro Boston, 0.1 FTE (start date: 12/6/18)
- Daphne Holt, MD: Senior Psychiatrist, Senior Co-Investigator, 0.1 FTE (start date: 10/1/18)
- Katherine Kritikos, MPH: Program Manager, 1.0 FTE (start date: 11/12/18)
- Ryan Markley: Community Researcher in Central MA, 0.1 FTE (start date: 12/6/18)
- Jacqueline Martinez: Community Researcher in Northeast MA, 0.1 FTE (start date: 12/6/18)
- Kim Mueser, PhD: Senior Psychologist, Senior Co-Investigator, 0.2 FTE (start date: 10/1/18)
- Cynthia Piltch, PhD: Community Researcher in Metro Boston (start date: 1/9/19)
- Ylira Pimentel-Diaz, MSW, LICSW: Social Worker, Senior Co-Investigator (start date: 1/1/19)
- Stephanie Shou, BA: Administrative Assistant, 0.8 FTE (start date: 3/18/19)
- Derri Shtasel, MD, MPH: Steering Committee Chair, 0.3 FTE (start date: 10/1/18)
- Hannah Skiest, BA: Clinical Research Coordinator, 1.0 FTE (start date: 6/3/19)
- Anne Whitman, PhD: Director, Community Researchers (start date: 10/1/18)
- Sandra Whitney-Sarles, MS: Community Researcher in Southeast MA, 0.1 FTE (start date: 12/6/18)
- Abigail Wright, PhD: Postdoctoral Fellow, 1.0 FTE (start date: 1/24/19)
- Vanya Zvonar, BA: Clinical Research Coordinator, 1.0 FTE (start date: 10/1/18)