

MGH Chelsea HealthCare Center Community Research Day

Friday, October 11, 2019
8-11 am

Program Guide

MGH Chelsea Community Research Day is brought to you by the Community Research Program at MGH Chelsea. The Community Research Program at MGH Chelsea is guided by the MGH Chelsea Research Council. Support for Research Day is provided by MGH Chelsea Administration, the Mongan Institute, and the Community Council of MGH's Division of General Internal Medicine



MASSACHUSETTS
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DEPARTMENT OF MEDICINE



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THE MONGAN INSTITUTE

Research Day Schedule

Poster Sessions: 8-9:40 am

Session 1: 8:00 – 8:45 am

Session 2: 8:55 – 9:40 am

Welcome remarks: 9:50 – 10:00 am

Keynote address: 10:00 – 11:00 am

Stephen Bartels MD, MS

Director, MGH Mongan Institute

“Advancing Health Equity Through Community- Engaged Health Care Delivery Team Science”

Background on Community Research Program & Research Day

Background

In May 2013, a group of 6 people interested in community-based research gathered at the MGH Chelsea HealthCare Center. This group evolved into a monthly research forum called Research Roundtable, which expanded to include a Research Council and Advisory Board and eventually became known as the MGH Chelsea Community Research Program. The Research Program reaches over 250 individuals by email, has sparked collaborations across Partners and within the greater Boston area, has increased interest in and support for research, and brings together approximately 20 participants each month at Roundtable meetings in addition to 100 people at its annual Research Day. The Community Research Program is supported by MGH Chelsea HealthCare Center Administration, the MGH Division of General Internal Medicine, the MGH Department of Medicine Community Council, and the Mongan Institute.

Mission Statement: The Community Research Program at MGH Chelsea HealthCare Center supports research across the lifespan. We emphasize interdisciplinary and community collaborations that target health disparities, advance clinical practice, and improve the well-being of our patients and their communities.

You can learn more about the MGH Chelsea Research Program online at <http://www.massgeneral.org/chelsea/research/>.

Council & Advisory Board

The Community Research Program has grown since its inception in 2013 thanks to input from our MGH Chelsea-based interdisciplinary Research Council members who serve a 3-year minimum term, and our Advisory Board members who represent a diverse range of stakeholders who support research throughout the Partners system.

Council Member as of 7/19	MGH Chelsea Departments Representing
Chandra, Rohit	Behavioral Health
Cohen-Hausmann, Adriana	Pediatrics
Devine, Sofia	Physical Therapy
Fishman, Bonnie	Pediatrics
Ford, Colleen	Adult Medicine
Izen, Amy	Speech, Prenatal (Susan Hernandez, contact)
Levison, Julie	Medical Specialties, Imaging (Patricia Daunais & Efren Flores, contact/Operations Manager)
Marable, Danelle	MGH Chelsea Community Health Improvement (CCHI)
McCarty, Tara	WIC
McWilliams, Jeannette	Administration

Miller, Pam	Behavioral Health
Percac-Lima, Sanja	Adult Medicine
Vaillancourt, Donna	Pediatrics, Nursing

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Advisory Board Member	Constituency Representing
Alegría, Margarita	MGH Disparities Research Unit, Department of Medicine
Banister, Gaurdia	MGH Institute for Patient Care/Munn Center for Nursing Research
Bartels, Steve	Mongan Institute & Disparities Solution Center
Fava, Maurizio	MGH Division of Clinical Research
Jackson, Jonathan	MGH Division of Clinical Research/CARE
Johnson, Alex	MGH Institute of Health Professions
Metlay, Josh	MGH Division of General Medicine
O'Rourke, Pearl	Partners IRB
Quinlan, Joan	MGH Center for Community Health Improvement (CCHI)
Taveras, Elsie	MGH Division of General Pediatrics
Thorndike, Anne	MGH Executive Committee on Research & ECOCH
Xerras, Dean	MGH Executive Committee on Community Health (ECOCH) and Chelsea Board of Health

Vision

Our vision for Research Day is to encourage the MGH Chelsea HealthCare Center staff and their community partners to further an interest in research by participating in Research Day, to showcase the diversity of research conducted at MGH Chelsea Healthcare Center, to stimulate new research partnerships, and to strengthen existing partnerships. We are thrilled to have participation from Departments across the MGH Chelsea HealthCare Center, the other MGH Community HealthCare Centers including MGH Charlestown, MGH main campus, the Institute of Health Professions, Harvard School of Public Health, and other Partners-affiliated Departments, Institutes, and Centers.

The poster presentations reflect themes encountered while delivering health care to inhabitants of Chelsea and its surrounding communities. This year's posters include the following themes:

- Clinical Innovation

- Alcohol and Substance Use Disorders
- Mental Health and Neuroscience
- Population Health
- Health Program Development/Evaluation
- Social Determinants of Health
- Women and Children's Health

Today's Research Day is possible due to the energy, initiative, and input of numerous colleagues who have participated in the Community Research Program. We are deeply grateful to our colleagues and the communities our health center serves. Thank you for being a part of our program.

Amy Izen, M.S., CCC-SLP; Julie Levison, MD, MPhil, MPH; Rohit Chandra, MD; Jose Gonzalez, MPH

MGH Chelsea Community Research Program

Information about MGH Chelsea & Chelsea, MA

MGH began its work in Chelsea in 1971. At that time, a small primary care practice was established in the basement of a local church in response to the community's concern that health care be more accessible. Since that time, the MGH Chelsea HealthCare Center has grown as the community and its population has evolved. MGH Chelsea existed at the Chelsea Memorial Hospital from the mid-1970s through 1994 when the MGH Chelsea HealthCare Center's freestanding building opened.

As new waves of immigrants come to Chelsea, the HealthCare Center continues to respond to the medical and social needs of these populations. Today, the Center provides services to varied ethnic groups (U.S. and non-U.S. born). The HealthCare Center works closely with community agencies, including the City's Health Department, to understand the specific needs of our patient populations and to provide the most appropriate services in both primary and specialty care services.

MGH Chelsea continues its commitment to provide an integrated program of primary and specialty care services that are sensitive to the community and the culturally diverse needs of its residents. Highlights from the 2019 Community Health Needs Assessment conducted by the MGH Center for Community Health Improvement (CCHI) include:

- Chelsea population is 37,581; per capita income is \$21,722, and 5.58% are unemployed
- 64.2% Hispanic or Latino, 48% White, 5% Black, 3% Asian, 7% other
- 29.3% did not complete high school
- 44% population is foreign born
- 42.4% population age 5+ with limited English proficiency
- 18.65% families live in poverty

Keynote Speaker

Stephen Bartels, MD, MS Director, The Mongan Institute

James J. and Jean H. Mongan Chair in Health Policy and Community Health

Dr. Stephen Bartels is the inaugural James J. and Jean H. Mongan Chair in Health Policy and Community Health in the Department of Medicine and Director of The Mongan Institute at MGH which serves as the academic home for 9 centers dedicated to health care delivery and population science. Before coming to MGH from Dartmouth in September 2018, he was the Herman O West Professor of Geriatrics, Professor of Psychiatry, Professor of Community & Family Medicine at the Geisel School of Medicine at Dartmouth, and Professor of Health Policy at the Dartmouth Institute for Health Policy and Clinical Practice.



Among his accomplishments at Dartmouth included establishing and directing the Dartmouth Centers for Health and Aging, serving as Co-Principal Investigator for Dartmouth's SYNERGY Clinical Translational Science Institute, and as the Principal Investigator for Dartmouth's CDC Health Promotion Research Center focusing on reducing cardiovascular risk factors including obesity, tobacco in primary care and in mental health. Dr. Bartels has mentored over 40 early career investigators and served as the Principal Investigator for two post-doctoral research training programs including an NIH multi-site post-doctoral training program in geriatric mental health services research and a HRSA funded primary care research. Over the past two decades he has led a highly productive research group developing, testing, and implementing interventions focused on complex health conditions and health disparities, co-occurring physical and mental disorders, health care management, health coaching, health promotion interventions for obesity and smoking, aging and geriatrics, integration of mental health and primary care, self-management, automated telehealth and mobile technology, evidence-based models of care for complex conditions, population health science, applied health care delivery science, and implementation science. He has published over 330 articles, scientific abstracts, and book chapters.

POSTER SESSION 1

8:00 – 8:45 am

Clinical Innovation (Posterboards 1 – 3)

1. *Treatment Based Classification for Patients with Low Back Pain*
Aliperti, Sara
2. *Regulation of Hippocampal Calcium Activity by Cholinergic System During Sleep-Wake Cycle*
Kusar, Naila
3. Open board

Alcohol and Substance Use Disorders (Posterboards 4-5)

4. *Assessment of Health Outcomes in Patients with Alcohol Use Disorder*
Agusiegbe, Chuks; Torres, Micaela; Ford, Colleen
5. *Assessment of preventive healthcare at MGH Chelsea including pap smears, contraception, and routine STI testing in female patients engaged in addiction treatment and prescribed buprenorphine*
James-Thorpe, Kyunti; McLean, Tamika; Moss, Jacquelyn

Mental Health and Neuroscience (Posterboards 6-8)

6. *Alarmingly Low Rates of Utilization and Knowledge of Exposure and Response Prevention for Obsessive Compulsive Disorder Among Behavioral Health Providers*
Ott, Brian D.; Volpacchio, Alexandra; Glazier Leonte, Kimberly
7. *Partnering with Community Members to Identify the Unaddressed Needs and Priorities of Recovery Communities Across Massachusetts*
Arntz, Diana; Skiest, Hannah; Kritikos, Katherine; Whitman, Anne; Cather, Corinne
8. *Bridge: Conducting a Run-In of a Randomized Trial for Patients with Mental Illness and Cancer*
Barry, Maura; Pappano, Catherine; Corveleyn, Amy; Callaway, Catherine; Park, Elyse R.; Irwin, Kelly

Population Health (Posterboards 9-11)

9. *Five-year MGH demographic trends in clinical trial enrollment*
Sanchez, Angie V.; Gonzalez, Jose; Jackson, Jonathan
10. *Access to Clinical Preventive Services and Cancer Screening in Homeless Population Served by the Chelsea Outreach Team*
Authors: Repucci, Robert S.; Valentin-Agnetta, Gladys; Wolfgang, Kerry; Gibson, Jeffrey; Renton, Scott; Chen-Cheung, Hong; Percac-Lima, Sanja

11. *All of Us Research Program Data Browser: A Resource for MGH and beyond*
Bor, Meg; Clark, Cheryl R.

Health Program Development/Evaluation (Posterboards 12-14)

12. *Evaluating the Implementation of a Before-School Physical Activity Program*
Whooten, Rachel; Horan, Christine; Cordes, John; Dartley, Anna Nicole; Kelter Jr., Brian; Elkin, Randall; Lee, Stacey; Chiang, Sylvia; Taveras, Elsie M.
13. *A Randomized Trial of a Community Health Worker Intervention to Improve Retention in HIV Care for HIV-Positive Latino Migrants and Immigrants*
Levison, Julie; Alegria, Margarita; Bogart, Laura; Tarbox, Andrew; Cubbison, Caroline; Mejia, Diana; Bancalari, Pilar; Rios, Carmen; Yu, Liyang; Chang, Yuchiao; Amaro, Hortensia; Safren, Steven
14. *Analysis of A Patient-Centered Ridesharing Program to Overcome Transportation Barriers in Access to Advanced Imaging Care*
Pappano, Catherine; Tiersma, Keenae; Whorms, Debra; Glover, McKinley; Herrington, Jeremy; Miles, Randy; Narayan, Anand K.; Saini, Sanjay; Flores, Efen J.

Social Determinants of Health (Posterboards 15-16)

15. *WIC Participants Utilization of Food Benefits*
McCarty, Tara; Carranza, Marissa; Cosme, Edna; Vargas, Natalia Andela
16. *Supporting MHG Chelsea Healthy Families with Economical Mobility Tools*
Parra, Maria Yolanda; Oo, Sarah; Hirsi, Fadumo; Burgos, Marcia; Marquez, Brenda; Martinez, Melissa; Ochoa, Brittany

Women and Children's Health (Posterboards 17-18)

17. *Intervention evaluation of a Structured Nature and Physical Activity Prescription Program for Children*
James, Aisha; Kwete, Gracia; Powers Tomasso, Linda; Grilli, Emily; Baker, Cassie; Santos Burren, Angel
18. *Leveraging Access and Resources for Contraception (LARC) in Primary Care*
Sarin Gupta, Priya; Morrill, James Arthur

POSTER SESSION 2

8:55 – 9:40 am

Clinical Innovation (Posterboards 1 – 3)

1. *MGH Chelsea HEAL (Health Engagement in Active Living) Program*
Devine, Sofia; Green, Georgia; Segal, Noam
2. *Intervention Development to Improve Retention in Care for Hiv-Positive Latinx Immigrants and Migrants Who are Men Who Have Sex with Men and/or Have Substance Use Disorders*
Levison, Julie; Bogart, Laura; Tarbox, Andrew; Bancalari, Pilar; Bedoya, Andres; Rios, Carmen; Kanamori, Mariano; Safren, Steven; Alegria, Margarita
3. *Psychiatric Consult and Return Model at MGH Charlestown Healthcare Center: A Pilot Project to Enhance Access to Psychiatric Care in Charlestown Community*
Paudel, Shreedhar; Ross, Cordelia; Robbins, Benjamin; Ginsburg, Katharine; Wanzer, Deborah; Morrill, James

Alcohol and Substance Use Disorders (Posterboards 4-6)

4. *The presence of Ambulatory Nurse Sensitive Indicators in Care of Opioid Use Disorder Patients: A Content Analysis*
Bernhardt, Jean
5. *The Impact of Fentanyl Use on Buprenorphine Treatment Retention and Opioid Abstinence*
Wakeman, Sarah; Chang, Yuchiao; Regan, Susan; Yu, Liyang; Flood, James; Metlay, Joshua; Rigotti, Nancy
6. *You're Always Jumping Through Hoops: Journey Mapping the Care Experiences of Individuals with Opioid Use Disorder-Associated Endocarditis*
Mitton, Julian A.; Bearnot, Benjamin

Mental Health and Neuroscience (Posterboards 7-8)

7. *Folic Acid Underuse Among Women of Childbearing Age at MGH Chelsea: Implications for Mental Health in Under-Served Youth*
Roffman, Joshua; Jackson, Jonathan; Lerou, Paul; Dunn, Erin; Levison, Julie
8. *Mindfulness and Guided Imagery for Spanish-Speaking Family Dementia Caregivers: Feasibility and Acceptability Study of Mentalizing Imagery Therapy*
Ramirez Gomez, L; Johnson, JK; Stewart, A; Chang, T; Mischoulon, D; Jain, FA

Population Health (Posterboards 9-11)

9. *Fostering Inclusivity in Research Engagement for Underrepresented Populations in Parkinson's Disease: The FIRE-UP PD Study*
Sanchez, Angie; Hemley, Helen; Jackson, Jonathan

10. *QI process to implement Faith-based initiatives to improve dissemination of information and access to services for victims of IPV*

Lazzaroni, Marlene; Sanchez, Gloria; Reyes, Yadira; Contreras, Danilo; Chen Cheung, Hong

11. *Understanding Suicide Risk Among Immigrant-Origin Latinx Adolescents: Parent and Youth Perspectives on Precipitating Factors*

Alvarez, Kiara; Guerrero Vazquez, Monica; Platt, Rheanna; Acosta, Jennifer; Bancalari, Pilar; Caicedo, Mariana; Polk, Sarah; Wilcox, Holly

Health Program Development/Evaluation (Posterboards 12-14)

12. *Pilot Study of a Resilience-Building Program for Latinx Adolescents and their Parents/Caregivers: Preliminary Evidence for Feasibility and Acceptability*

Canenguez, Katia; Pimentel Diaz, Ylira; Burke, Anne; Zvonar, Vanya; Kritikos, Katherine; Clauss, Jacqueline; Lambert, Rebecca; Lyons Hunter, Mary; Cather, Corinne; Holt, Daphne

13. *Engaging Pediatric Clinicians to Optimize the Connect for Health Pediatric Weight Management Program*

Cournoyer, Rachel; Simione, Meg; Perkins, Meghan; Roche, Brianna; Cassidy, Jacqueline; Craddock, Cassie; Frost, Holly; Moreland, Jennifer; Wallace, Jessica; Zucconi, Tanya; Sease, Kerry; Hambidge, Simon J.; Taveras, Elsie

14. *Improving Adherence with Cancer Treatment for MGH Community Health Center Patients Newly Diagnosed with Cancer*

Percac-Lima, Sanja; Whited, Emma; Gorton, Emily; Ivan, Sarah; Ashburner, Jeffrey; Benjamin, Carmen; Irwin, Kelly; Morrill, James; Ford, Colleen; Wheeler, Amy; Moy, Beverly

Social Determinants of Health (Posterboards 15-17)

15. *Establishing an Immigrant-Focused Medical Legal Partnership in a Community Health Center to Address Unmet Legal Needs*

Jasrasaria, Rashmi; Henderson-Frost, Josephine; Oo, Sarah; Spiro, Anna; Valdez, Silvestre; Zapata, Cindy; Zeidman, Jessica

16. *Supporting Primary Care Access and Use Among Homeless Persons*

Dickins, Kirsten A.; Weber Buchholz, Susan; Ingram, Diana; T. Braun, Lynne; Karnik, Niranjana S.; Hamilton, Rebekah J.; Earle, Melinda

17. *Insurance Challenges for Childhood Cancer Survivors: Themes of Financial Distress in Qualitative Expert Interviews*

Ponzani, Colin; Kirchhoff, Anne C.; Donelan, Karen; Perez, Giselle; Kuhlthau, Karen A.; Kaiser, Emily; Mann, Karely; Park, Elyse R.

Women and Children's Health (Posterboards 18-19)

18. *Exploring Dose Frequency for Speech Sound Therapy in the Outpatient Setting*

Maietta, Jennifer L.

19. *A Four-Year Case Review of Police-identified Mothers in Chelsea, MA Who Sustained Strangulation Injuries*
Green, Georgia; McGathey, Grace; Wang, Sara; Kyes, Chief Brian; Captain Dunn, Thomas; and Officer Hernandez, Edwin

Clinical Innovation

Treatment Based Classification for Patients with Low Back Pain

Sara Aliperti, Doctor of Physical Therapy, Orthopedic Clinical Specialist

Keywords: Physical Therapy, low back pain, treatment based classification

Summary: Low back pain is the most common diagnosis for outpatient referrals to physical therapy in the Chelsea Healthcare Center. Physical therapy plays a significant role in delivering high quality care at a lower cost, thus it would be beneficial to standardize treatment for this population to result in improved functional outcomes.

Background: Low back pain is the most common diagnosis seen in the outpatient physical therapy arena; affecting nearly 80% of all individuals at least once in their lifetime. Despite the number of clinical trials on low back pain, there is no conclusive evidence proving effectiveness of one clinical intervention over another.

Methods: The aim of this quality improvement project is to improve functional outcomes by implementing evidence-based clinical practice guidelines using a treatment-based classification system (TBC) for patients receiving physical therapy for low back pain in the outpatient clinic at Boston Medical Center, from June 1 to August 31, 2018. Patients evaluated by the team were asked to complete the STarT Back questionnaire, identifying risk of poor treatment outcome. Patients scoring “medium” or “high” risk, received Psychologically Informed Physical Therapy (PIPT), in addition to TBC recommended interventions. The Oswestry Disability Index (ODI) was administered to all patients referred to clinic with LBP to measure functional outcomes. ODI data was also collected at re-evaluation (10 visits or 1 month after evaluation) and discharge, if applicable.

Results: There was a high adherence of team implementation of TBC, likely due to the opportunity for employee engagement, leadership involvement in patient care, and scheduled meetings with deliverables. All patients improved, regardless of approach. There was 11% (median) change in ODI for traditional PT and 12% for those receiving TBC. Those receiving TBC attended fewer visits than those not receiving TBC (6.9 versus 8.3).

Conclusions: The following patient factors at BMC play a huge role in obtaining outcomes- medical condition/comorbidities, psychological factors, attendance/compliance with physical therapy recommendations, completion of therapist recommended episode of care, and ability to complete the ODI questionnaire. Thus, more data is needed to make accurate conclusions on whether TBC +/- PIPT is an effective treatment approach for patients with LBP at this clinic.

Regulation of Hippocampal Calcium Activity by Cholinergic System During Sleep-Wake Cycle

Naila Kausar, MD

Keywords: Hippocampal Calcium Activity, Cholinergic system, Sleep-wake cycle

Summary: In our study we set up a system to target the hippocampal calcium activity and electrophysiology simultaneously across sleep-wake cycle in freely moving mice. We found that hippocampal calcium activity is highly dependent on theta states and modulated by the cholinergic projections from medial septum to the hippocampus. In clinical settings, we do have drugs that are targeting this system but yet we do not have the cure for the disease. Our study gave us a new insight about studying memory and different behavioral states in depth. Our future goals are to study hippocampal function by using the same approach in alzheimer's disease mice models to evaluate novel therapeutic approaches.

Background: Calcium is a critical second messenger that contributes to learning and memory, but how the coordination of action potentials of neuronal ensembles with the hippocampal local field potential (LFP) is reflected in dynamic calcium activity remains unclear. Here, we recorded hippocampal calcium activity with endoscopic imaging with concomitant LFP in freely behaving mice. Calcium activity was greater in exploratory behavior and REM sleep than in quiet wakefulness and slow wave sleep, behavioral states that differ with respect to theta and septal cholinergic activity, and modulated at sharp wave ripples (SWRs). Chemogenetic activation of septal cholinergic neurons increased calcium activity and reduced SWRs. Inhibition of muscarinic acetylcholine receptors (mAChRs) reduced calcium activity while increasing SWRs. These results demonstrate that hippocampal dynamic calcium activity depends on behavioral and theta state as well as endogenous mAChR activation.

Methods: To record hippocampal LFP and calcium imaging at the same site, we injected AAV-hSyn-GCaMp6f-EGFP into CA1. Two weeks later, grin lens and a drivable probe were implanted. After a three-week recovery, we recorded dynamic Ca²⁺ activity and LFP signals simultaneously across behavioral states.

Results: A) Dynamic calcium activity was brain and behavioral state dependent.

B) Paradoxical suppression of calcium activity at ripples.

Trains of clustered SWRs (not singlet) elicits a increased in calcium event transients.

C) Chemogenetic activation of the septal cholinergic projection to the hippocampus increased CA1 calcium activity and reduced ripple rate.

D) Systemic and Intra hippocampal injection of muscarinic receptor antagonist reduced calcium and increase ripple rate."

Conclusion: 1) Hippocampal calcium activity critically depends on behavioral states.

2) Calcium events unexpectedly suppressed at sharp wave ripples.

3) Changes in the activity of cholinergic system across states may underlie these observation .

4) The systemic or Intrahippocampal Injection of muscarinic receptor antagonist reduced calcium activity and increased ripple rate

MGH Chelsea HEAL (Health Engagement in Active Living) Program

Sofia Devine, PT, DPT, MGH Physical Therapy

Georgia Green, LICSW, MGH Behavior Health

Noam Segal, PT, MSc, MGH Physical Therapy

Keywords: Chronic low back pain, inter-disciplinary treatment

Background: Current evidence and guidelines in management of chronic low back pain support the resumption of activities, even when pain is present. This can be very challenging considering the barriers posed by pain and some common associated co-morbidities such as depression, anxiety, trauma and sleep disorders. The Chelsea HEAL (Healthy Engagement in Active Living) is a local community based interdisciplinary intervention where physical therapists (PT) and behavioral health (BH) professionals work in tandem to address different barriers and help facilitate an increase in frequency and intensity of weekly physical activity, cultivate a sense of self-efficacy, and motivate patients to affect change in their lives.

Methods: This program comprises of three Parts. Part 1 was piloted Fall 2018 and Spring 2019. Part 2 and 3 are slated to start in 2020 and 2021 respectively. Part 1 Inclusion Criteria: Chronic low back pain greater than 3 months, English speaking, Keele STarT Back Tool score of moderate to high risk for disability and the clinical judgment of the referring provider. Intervention: Weekly group session lead PT and social worker. Curriculum includes elements of cognitive behavioral therapy, mindfulness and relaxation techniques, pain science education, gradual progressive functional exercises and goals setting. Outcome Measures Primary outcome measures: Oswestry Disability Index (ODI), Chronic Pain Self-Efficacy Scale (CPSE), Patient Health Questionnaire (PHQ-9), Generalized Anxiety Disorder 7 items (GAD-7) and Post-Traumatic Stress Disorder (PCL-5). Minimal data set for PT evaluation and psychosocial assessment. Future plans: Further development of 2 more stages to facilitate monthly engagement and preserve and improve outcomes.

Results: 7 participants completed Part 1. Of the 7 participants, all showed a clinically significant improvement in Chronic pain self-efficacy pain scale. Some of the participants also showed a significant improvement in PTSD (PCL-5) scale. More data is pending.

Conclusions: The preliminary results from Part 1 suggest the Chelsea HEAL program can be beneficial in improving patient's self-efficacy with managing their pain. The initial PTSD (PCL-5) results are promising, but more data is needed.

Summary: The Chelsea HEAL project provides patients access to a local community-based program, provided by both physical therapy and behavioral health professionals to help manage their low back pain. The dual discipline joint-lead group sessions occur at the Chelsea HealthCare Center, where all the participants currently receive care. The preliminary results look promising. The Chelsea HEAL program can also be an alternate non-pharmacological intervention for providers to address pain control.

Intervention Development to Improve Retention in Care for HIV-Positive Latinx Immigrants and Migrants Who are Men Who Have Sex with Men and/or Have Substance Use Disorders

Julie Levison, MD, MPhil, MPH, Massachusetts General Hospital and Harvard Medical School

Laura Bogart, MS, PhD, RAND Corporation

Andrew Tarbox, BA, Massachusetts General Hospital; Pilar Bancalari BA, Massachusetts General Hospital

Andres Bedoya, PhD, Massachusetts General Hospital and Harvard Medical School

Carmen Rios, BA, Boston Healthcare for the Homeless Program

Mariano Kanamori, PhD, Florida International University

Robert Stempel, College of Public Health and Social Work

Steven Safren, PhD, University of Miami

Margarita Alegria, PhD, Massachusetts General Hospital and Harvard Medical School

Keywords: Latinx/Hispanic, retention in care intervention, HIV/AIDS

Background: HIV-positive Latino immigrants and migrants experience multi-level barriers to HIV care that predispose these populations to non-retention in HIV care, a risk factor for HIV transmission. Our objective was to conduct qualitative research to tailor an existing community health worker (CHW)-delivered problem solving intervention paired with a Spanish-language web series, or telenovela, for HIV-positive Latinx: men who have sex with men (MSM) and those with substance use disorders (SUD), females and males.

Methods: Participants who were MSM and/or SUDs and not retained in care (i.e. missed ≥ 1 HIV primary care appointment, ≥ 6 month gap in HIV care, or ≤ 90 days since HIV diagnosis) and/or non-suppressed viral load in past 12 months) were recruited from clinics and local community organizations serving HIV-positive Latinos in Massachusetts. We enrolled participants into focus groups or individual interviews. Interviews explored participants' views on barriers to retention in HIV care and suggestions for improving clinic attendance. Furthermore, participants provided feedback on different health communication tools that could serve to educate patients about HIV care management. We conducted a preliminary analysis and developed and applied a coding scheme based on barriers and facilitators from the Andersen Model of Health Care Utilization, which describes social and individual level factors that influence health care utilization. We also used a deductive analytic approach to identify themes that expanded upon the conceptual model.

Results: Poor quality of care and mismatch between patients' and providers' goals lowered the value of retention in HIV care in HIV-positive Latinx who identified as MSM and females and males with SUDs. Family dynamics and responsibilities served as both a barrier and facilitator to retention in care.

Conclusions: Educating HIV providers and clinic staff in Latinx patients' experiences in HIV care may be an important component in retention in care interventions. Furthermore, greater integration of CHWs is likely to improve patient navigation and case management. Lastly, health communication tools tailored to the experiences of HIV-positive Latinx may serve as an important adjunctive tool developing problem-solving skills and self-efficacy.

Summary: The United Nations "90–90–90" target to identify, treat, and achieve viral suppression in 90% of HIV-infected persons requires engagement in all steps of the HIV care continuum. Latino immigrants in the United States are disproportionately affected by HIV. Barriers to retention in HIV primary care constrain opportunities for

HIV treatment success but have not been specifically assessed in Latinos. Greater provider education to address poor quality of care, integration of CHWs for improved case management, and tailored health communications tools that promote problem solving and self-efficacy may help to offset these barriers and support intervention development.

Psychiatric Consult and Return Model at MGH Charlestown Healthcare Center: A Pilot Project to Enhance Access to Psychiatric Care in Charlestown Community

Shreedhar Paudel, MD, MPH

Cordelia Ross, MD

Benjamin Robbins, MD, MBA

Katharine Ginsburg, LCSW

Deborah Wanzer, LICSW

James Morrill, MD, PhD, Massachusetts General Hospital

Keywords: Consult and return, psychiatric care, Charlestown

Background: Due to lack of psychiatrists, primary care providers (PCP) have been the frontline providers of psychiatric care in the United States. Access to psychiatric care for anxiety and depression can be improved with collaborative care model but this can't replace direct evaluation of patients by a psychiatrist to guide PCPs managing more complex mental illnesses. In this background, we wanted to pilot a psychiatric consult and return model to improve access to psychiatric care in Charlestown community.

Methods: Patients with psychiatric conditions being managed by PCPs at MGH Charlestown HealthCare Center have been receiving collaborative care to support their management. When PCPs feel need of direct psychiatric consultation of their patients they refer the cases to a consulting psychiatrist in the health center. The patients get evaluation by a team of a senior psychiatry resident and a psychiatrist, and are returned back to their PCPs with recommendations for treatment planning. Those patients who need longitudinal psychiatric care are provided follow up appointments with one of the psychiatric providers. Those cases demanding one or more follow up before returning back to PCPs are also provided follow up appointments with the consulting psychiatry resident and a psychiatrist.

Results: From August 2018 to May 2019 total 38 patients were evaluated under psychiatric consult and return model at MGH Charlestown HealthCare Center. Most of the patients were appropriate to be returned back to their PCPs after one time consultation. Some of them needed one or more follow ups before being returned to PCPs and others needed longitudinal psychiatric care. We are also reviewing basic demographic and clinical features of the patients under consult and return model at the health center.

Conclusions: Psychiatric consult and return model can be a good option to improve access to psychiatric care to patients being managed by PCPs in Charlestown community. Further study and piloting will be necessary to verify the sustainability of the model.

Summary: Despite having an inbuilt mental health team at MGH Charlestown HealthCare Center, Charlestown residents have been facing challenges to receive timely psychiatric evaluation. We piloted a psychiatric consult and return model at the health center to improve access to psychiatric care in Charlestown community. The outcome of the model has been promising but further studies will be necessary to verify the sustainability of the model.

Alcohol and Substance Use Disorders

Assessment of Health Outcomes in Patients with Alcohol Use Disorder

Chuks Agusiegbe Jr, BS, MS

Micaela Torres, BS

Colleen Ford, MD

Keywords: AUDIT-C, alcohol use disorder, primary care

Background: Excessive alcohol consumption leads to 5.3% of all worldwide deaths and is the third leading cause of preventable death in the United States. AUDIT-C is useful in identifying patients that engage in risky alcohol consumption and/or meet the criteria for Alcohol Use Disorder (AUD) determined by DSM-V. Healthcare providers at MGH Chelsea began screening patients with the AUDIT-C questionnaire. AUDIT-C may serve as an effective tool in assessing excessive drinking and developing initiatives intended to reduce preventable alcohol-attributable deaths and illnesses.

Methods: A cross-sectional study was conducted using the EPIC Electronic Health Record (EHR) of patients from MGH Chelsea Healthcare Center from Aug 2017-June 2019 to find adult patients with a severe AUDIT-C score (score ≥ 8). An inclusion criterion was implemented, and parameters were obtained from each patient (n=35). A provider survey was administered to physicians from the Adult Medicine Division (n=15) at MGH Chelsea to gauge physician's knowledge and self-awareness on AUD health outcomes.

Results: Health scale determined that many patients with high risk AUDIT-C screens ranked moderate to high on the health outcome scale. 33% of physicians knew the criteria to refer patients to the liver clinic but 0% of patients received a referral to the liver clinic. 33% of providers have fellowship training or certification in substance abuse however 80% of patients were not prescribed medication or treatment. 43% of patients did not have a clinical diagnosis of alcohol use disorder. 34% of patients are due for their annual LFT labs.

Conclusions: Our project found disparities between the provider's self-reported data and the patient's health records. Many of the gaps can easily be addressed with provider intervention to (a) increase the number of providers who are offering treatment for AUD (b) create a preventative protocol for patients at high risk for AUD (c) decrease the amount of stigmatizing language documented in patients' charts.

Summary: Research suggests that there's a significant association between poverty ratios and alcohol problems, especially among people who identified as African American or Hispanic. In Chelsea, the poverty rate is 19.5%. 73% of the population identifies as Hispanic or African American and signifying a higher risk of developing AUD. It is imperative to implement effective community-based interventions to reduce excessive drinking in the community and prevent alcohol-attributable death and cost.

Assessment of preventive healthcare at MGH Chelsea including pap smears, contraception, and routine STI testing in female patients engaged in addiction treatment and prescribed buprenorphine

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Keywords: Women's health, substance use disorder, preventive screening, pap smear

Background: Women living with substance use disorders (SUD) often have other concurrent physical health needs that can be overlooked due to the focus on their addiction treatment and recovery during their visits with clinicians. This study will aim to assess how successfully female patients who are on buprenorphine treatment are getting appropriate preventive health screens such as pap smears, contraception, and STI testing in addition to review of their substance use disorders during their visits.

Methods: EPIC, an electronic medical record system was used to access women's health data at MGH Chelsea, building 100. The buprenorphine registry was accessed to identify women on SUD treatment at MGH Chelsea. The data from EPIC was compared with data from the Buprenorphine registry to determine if these women are up to date on women's health screenings such as pap smears, STI testing, and contraceptive management. Findings were narrowed to 59 patients who met the criteria for our study.

Results: 95% of patients were found to have been seen by providers for Buprenorphine refills in the last year. 17% of patients were noted to have received STI screening in the last year. 46% of patients were found to have either unknown contraceptive status or were found to not be taking any form of reliable birth control. 46% of patients were found to be up to 9 years overdue for pap smears.

Conclusions: Based on the data collected in this study, many of the patients engaged in Buprenorphine treatment at MGH Chelsea are not receiving adequate preventative health screenings. Majority of the patients engaged in Buprenorphine treatment at MGH Chelsea are seen on a regular basis and thus should have access to necessary preventative care. The results of this study indicate an apparent health maintenance gap which should be addressed in order to improve care for this population of patients.

Summary: The current opioid epidemic in the United States is affecting Massachusetts. Many patients who utilize the community health centers in Chelsea are affected by substance use disorders and are followed by the providers at MGH Chelsea. Due to the rigorous nature of substance use disorder programs, patients who are engaged can fall behind on their regular health screening exams, especially female patients. This study is designed to identify these healthcare gaps in an effort to prevent this population of patients from "falling through the cracks".

The presence of Ambulatory Nurse Sensitive Indicators in Care of Opioid Use Disorder Patients: A Content Analysis

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Keywords: Nurse sensitive indicators, opioid use disorder, office-based opioid treatment nurse

Background: Patients with opioid use disorder (OUD) seek care in primary care settings where nurses support the provision of medication assisted treatment. Office-based opioid treatment (OBOT) that includes buprenorphine hydrochloride administration under the supervision of a nurse for stabilization and maintenance therapy has the potential to improve outcomes for patients with OUD in primary care settings. The first step is to determine if OBOT nurses provide nurse-sensitive care which consists of activities that have been demonstrated to make a difference in patient outcomes. The purpose of this initiative was to examine the content and quantity of nursing documentation related to nurse sensitive indicators.

Methods: Retrospective chart review involving a descriptive analysis and qualitative content analysis of 368 nursing notes from 100 patients enrolled in an OBOT program in a primary care clinic at an urban hospital-based community health center was conducted. Data were analyzed descriptively according to quantity and qualitatively according to the content.

Results: Entries indicative of care coordination and transition management were extracted. Seven content categories within care coordination were identified, including harm reduction, medication management, symptom management, communication between providers, promoting adherence, self-management goal setting and patient education. Four areas within transition management were identified including supporting connections to resources, referrals for care, medication reconciliation and communication with other facilities. The framework of using nurse sensitive indicators to guide OBOT nursing practice in patients with OUD has the potential to contribute to nursing quality and make a difference in patient outcomes in primary care.

Conclusions: Most of the notes indicated both care coordination and transition management interventions were provided. Across all nursing notes, care coordination was documented more frequently than transition management. The presence of these two nurse sensitive indicators has the potential to contribute to nursing quality and make a difference in patient outcomes in primary care.

Summary: This initiative examined the presence of two nurse sensitive indicators in OBOT nursing notes. Care coordination and transition management interventions were present in most nursing notes. Additionally, seven activities specific to care coordination and four related to transition management were identified. The framework of using nurse sensitive indicators to guide OBOT nursing practice in patients with OUD has the potential to contribute to nursing quality and make a difference in patient outcomes in primary care.

The Impact of Fentanyl Use on Buprenorphine Treatment Retention and Opioid Abstinence

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Keywords: Fentanyl, buprenorphine, opioid

Background: There has been a rapid increase in the presence of illicitly manufactured fentanyl in the heroin drug supply. Buprenorphine is an effective treatment for heroin and prescription opioid use disorder, however little is known about treatment outcomes among people using fentanyl. We compared six-month treatment retention and opioid abstinence among people initiating buprenorphine treatment who had toxicology positive for heroin compared to fentanyl at baseline.

Methods: Retrospective cohort study of 281 adult patients initiating office-based buprenorphine treatment who had available toxicology testing across an academic health system between August 2016 and July 2017. Exposure was assessed at baseline prior to initiating buprenorphine and was categorized as negative toxicology (n=209) vs. fentanyl positive toxicology (n=53) vs. heroin positive toxicology (n=19).

Results: Six-month treatment retention rates were not different between the fentanyl positive and heroin positive groups (38% (n=20) vs. 47% (n=9); p=0.59), or between the fentanyl positive and the negative toxicology group (38% (n=20) vs. 49% (n=103); p=0.17). Opioid abstinence at six months among those who had testing, did not differ between the fentanyl positive and the heroin positive group (50% (n=6) vs 60% (n=6); p=0.69). The fentanyl positive group had a lower abstinence rate at six months compared to those with negative toxicology at baseline (50% (n=6) vs 94% (n=76); p<0.001).

Conclusions: Buprenorphine treatment retention and abstinence among those retained in treatment is not worse between people using fentanyl compared to heroin at treatment initiation. Both groups have lower abstinence rates at six months compared to individuals with negative toxicology at baseline. These findings suggest that people exposed to fentanyl still benefit from buprenorphine treatment.

Summary: In the context of the ongoing overdose crisis and contamination of the illicit drug supply with fentanyl, it is important to recognize that buprenorphine appears to still be an effective treatment.

You're Always Jumping Through Hoops: Journey Mapping the Care Experiences of Individuals with Opioid Use Disorder-Associated Endocarditis

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Keywords: Addiction, stigma, journey mapping

Background: Infectious complications of opioid use disorder (OUD), including endocarditis, are rising in the U.S. Individuals with OUD-associated endocarditis have poor clinical outcomes and their care is not well understood. Our objective was to perform journey mapping, a qualitative tool that represents individuals' movement through a complex system that has traditionally been used in consumer analysis and now increasingly in health research, to capture common trajectories and patterns of care for people with OUD-associated endocarditis.

Methods: This was an exploratory analysis of qualitative data collected through interviews of individuals who received care at a single health system for OUD-associated endocarditis. We extracted details of participants' care experience. These details were displayed and modified in an iterative journey mapping process. We then used a grounded theory approach when reviewing the maps to help highlight patterns in participants' care and identify emerging themes.

Results: We reviewed ten patient care experiences using a novel patient journey mapping approach to characterize common trajectories and patterns of care. A typical care episode included multiple interactions with the health care system before hospitalization, long hospital stays, leaving care by choice and frequent rehospitalizations and return to drug use. Similar care patterns were identified, including early addiction treatment and intensive outpatient care preceding periods without rehospitalization. Participants frequently left care by choice.

Conclusions: Journey mapping is a novel, patient-centered approach to capturing the experiences and often complex trajectories of a stigmatized patient population. For patients with OUD-associated endocarditis, we identified critical moments before a return to drug use as opportunities to support and engage patients in early addiction and intensive outpatient care to prevent rehospitalization. Stigma continues to be a barrier to care and patients frequently leave care by choice as a result. More can be done to overcome stigma by framing addiction as a chronic but treatable illness.

Summary: Infectious complications of opioid use disorder (OUD), including endocarditis, are a major cause of morbidity in Chelsea and surrounding communities. But the care experiences of patients with OUD-associated endocarditis are not well understood. We used patient interviews and journey mapping, a novel qualitative research tool, to identify opportunities to improve the care for these patients. Early addiction treatment and intensive outpatient care can support patients before a return to drug use and help prevent rehospitalization.

Mental Health and Neuroscience

Alarming Low Rates of Utilization and Knowledge of Exposure and Response Prevention for Obsessive Compulsive Disorder Among Behavioral Health Providers

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Keywords: OCD, exposure and response prevention, utilization and knowledge

Background: While numerous studies have supported the efficacy of ERP for the treatment of OCD, Moreover, the utilization of certain therapeutic approaches, such as providing reassurance, in the treatment of OCD is counter-therapeutic as it reinforces the OCD cycle. Therefore, the purpose of the current study was to assess how frequently mental health providers utilize ERP and their knowledge and beliefs regarding this therapeutic approach.

Methods: 2,550 members of the American Psychological Association (APA) were randomly selected from the APA online membership directory and emailed a brief survey which consisted of one of three OCD symptom presentation vignettes: contamination obsessions, sexual obsessions, or violent obsessions. Upon presentation of the vignette, participants were informed that the client meets diagnostic criteria for OCD and included information regarding an exposure assignment the client completed since the prior session. The scenario concluded with the client at the subsequent session seeking reassurance from the therapist due to the exposure assignment. Participants selected from five response options and answered questions regarding their knowledge of and therapeutic beliefs towards exposure therapy for OCD.

Results: 499 participants completed the study. Approximately half the sample identified CBT as their main theoretical orientation and 35.0% use ERP Most of the time or Always when working with clients with OCD. However, across all three vignettes, participants were least likely to select the exposure response in response to the client's reassurance seeking question. Additionally, when asked how therapeutic each of the five response options would be for long-term reduction of OCD anxiety, the exposure response received the poorest ratings across all three vignettes. The majority of reported the exposure response to be Very Non-Therapeutic or Non-Therapeutic. Furthermore, participants ranked each response in regards to how well it follows the theory and practice of ERP; the majority of participants selected Strongly Disagree or Disagree that the exposure responses were an exposure response.

Conclusions: Results showed alarmingly low rates of ERP utilization across the contamination, sexual, and violent clinical case examples. Moreover, the results found that the majority of participants reported the exposure response was not a helpful approach (i.e., Very Non-Therapeutic or Non-Therapeutic) in regards to how to respond to the client's reassurance seeking question. In addition, while approximately one-third of participants reported doing exposures with their OCD clients on a regular basis (Most of the time or Always), the majority to vast majority of the participants, depending on the content of the OCD, did not understand the concept of exposure.

Summary: Greater awareness and training regarding what ERP is and how to implement it when working with clients with OCD is needed. In addition, due to the large discrepancy between the participants' expressed versus actual knowledge of ERP, further research should examine behavioral health providers' understanding and utilization of exposure work.

Partnering with Community Members to Identify the Unaddressed Needs and Priorities of Recovery Communities Across Massachusetts

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Keywords: Community-based participatory research, recovery, mental health

Background: Community based participatory research (CBPR) facilitates collaboration between researchers and community members to identify and co-create research studies aimed at improving outcomes and reducing disparities. While many researchers have employed CBPR in a variety of settings, persons with lived experience of mental health and substance use challenges, i.e. persons in recovery, are rarely included in the research process, despite their desire to be directly involved.

Methods: Six Community Researchers (CRs), i.e. persons in recovery, were hired to help inform the research agenda for the Center of Excellence (COE) for Psychosocial and Systemic Research. They facilitated listening groups across MA to identify needs and priorities within recovery communities. The CRs designed a semi-structured interview guide for sessions and worked with communities to create and strengthen partnerships. Participants were recruited through advertisements and provided with a small, monetary incentive. CRs conducted listening groups for approximately 1.5 hours in a casual, conversational format.

Results: Thus far, CRs have completed 14 listening groups in the Metro Boston, Southeast, Western, Northeast, and Central Massachusetts areas. The listening groups involved a total of 124 adults (median age 47.5), of which, 16.1% were peer specialists. Most participants were female (54.0%), White (58.9%), and non-Hispanic (63.5%). A preliminary analysis of themes included: 1) barriers to obtaining integrated healthcare (e.g. provider bias, access), 2) homelessness as a barrier to recovery, 3) multicultural issues (e.g. lack of culturally/linguistically-appropriate care), 4) relationship challenges and supports (e.g. parenting, peer support), and 5) the importance of research findings reaching communities.

Conclusions: CRs have helped the COE engage recovery communities and identify needs and priorities to inform the next phases of CBPR. CRs will present findings from listening groups back to recovery communities and elicit feedback for future pilot studies and quality improvement projects.

Summary: The Center of Excellence (COE) for Psychosocial and Systemic Research partnered with Community Researchers (CRs) and conducted 14 listening groups in Massachusetts recovery communities. CRs are persons in recovery with lived experiences of mental health and substance use challenges. CRs were empowered to implement listening groups within several populations, including Latinx, in Boston and Springfield. The goal was to identify communities' recovery needs and health priorities to inform future studies aimed at improving healthcare disparities.

Bridge: Conducting a Run-In of a Randomized Trial for Patients with Mental Illness and Cancer

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Keywords: Disparities, mental illness, cancer care

Background: Individuals with serious mental illness (SMI) experience increased cancer mortality due to inequities in cancer care. Involving psychiatry at cancer diagnosis may protect against cancer care disruptions. However, patients with SMI face barriers to trial participation. Prior to launching a randomized trial of targeted collaborative care, we conducted a run-in to assess the feasibility and acceptability of trial procedures.

Methods: We developed and piloted the Bridge intervention for patients with SMI (schizophrenia, bipolar disorder, or major depression with psychiatric hospitalization) and a new breast, head/neck, gastrointestinal, or lung cancer treated at the Mass General Cancer Center. Bridge includes early identification via screening the electronic health record and partnering with community mental health agencies, person-centered care from psychiatry and social work, and co-management with oncology. Patients were randomized 1:1 to BRIDGE or Enhanced Usual Care (informing oncology of the psychiatric diagnosis and informing the patient and oncology about psycho-social resources), stratified by caregiver presence. Study clinicians utilized a verbal consent process. We assessed acceptability by conducting exit interviews with patients, caregivers, and oncology clinicians.

Results: From 12/2018 – 1/2019, we enrolled 6 patients with SMI and a new cancer and 5 caregivers (3 family members, 2 community mental health). All patients and caregivers who were approached consented to the trial and completed assessments. There were no adverse events. All patients on Bridge reported that involving psychiatry early in cancer care was “very useful;” 100% of oncology clinicians reported that Bridge positively impacted cancer care. We developed a standardized approach to caregiver distress and moved the oncology exit interview to 24 weeks.

Conclusions: Patients with SMI and a new cancer and their caregivers participated in a randomized collaborative care trial with high rates of consent and completion. Patients, caregivers, and oncology clinicians found trial procedures acceptable and informed trial design for an understudied population.

Summary: Individuals with serious mental illness face multiple barriers to trial participation and engagement in specialty medical care that contribute to disparities in health outcomes including low socioeconomic status, limited health literacy, and difficulty with trust. Person-centered approaches and collaboration with community members may promote participation in clinical trials and increase access to care.

Folic Acid Underuse Among Women of Childbearing Age at MGH Chelsea: Implications for Mental Health in Under-Served Youth

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Keywords: Pregnancy, folic acid, mental health

Background: Folic acid, a B-vitamin, reduces risk of certain birth defects that occur before many pregnancies are recognized. Public health agencies universally recommend that all women capable of pregnancy consume at least 400 mcg folic acid supplements daily. Recent work by our group and others also associates folic acid intake early in pregnancy with improved mental health outcomes in the offspring, and to related protective changes in brain development. However, rates of folic acid use in women of child-bearing age are consistently low (below 50%), and even lower in minority and low socioeconomic status groups. Each year several hundred women receive prenatal care at MGH Chelsea, which serves a community with 42% Latinx ethnicity, a 20% poverty rate, and the third highest teen pregnancy rate in Massachusetts. Here, we used the electronic health record to assess vitamin use in women of child-bearing age who receive care at MGH Chelsea.

Methods: Using the Partners Research Patient Data Registry, we measured use of all vitamins, including folic acid, based on appointment-linked medication lists of women, age 15 to 44, who received care at MGH Chelsea from 2016 to 2018. We chose an overly-inclusive umbrella search term (vitamins) to account for highly variable entry of folic acid and prenatal vitamin formulations into the medical record. Results were analyzed separately for all primary care visits and initial prenatal visits.

Results: Among 6,610 women in primary care clinics, 28% had documented use of any vitamin supplement at any visit. Among 828 presenting for their initial prenatal visit, 20% had documented vitamin use.

Conclusions: Documented use of any vitamin, including folic acid, among women of child-bearing age at MGH Chelsea is low. Understanding provider, patient, and community-level barriers is a critical next step toward improving adherence to folic acid recommendations, and potentially toward improved mental health outcomes among underserved youth.

Summary: Folic acid, when taken early in pregnancy, may confer long-term benefits on the child's mental health. We determined that folic acid use among women of childbearing age who receive care at a large local community health center is low. Planned community-based studies may identify barriers to folic acid use among women of child-bearing age, with the long-term goal of addressing a critical area of unmet need through prevention of mental health disorders in under-served youth.

Mindfulness and Guided Imagery for Spanish-Speaking Family Dementia Caregivers: Feasibility and Acceptability Study of Mentalizing Imagery Therapy

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Keywords: Caregivers, dementia, Spanish

Background: Due to psychological and physical strain, family caregivers of patients with Alzheimer's disease and related dementias are at high risk of depressive and anxiety disorders and physical morbidity. We are investigating the feasibility of a Spanish language Mentalizing Imagery Therapy (MIT) adaptation, which provides guided imagery and mindfulness skills training to facilitate self-regulation and increase perspective on the mental life of self and others.

Methods: In this pilot study, we aim to adapt the Mentalizing Imagery Therapy (MIT) protocol for Spanish-speaking family AD/ABDRD caregivers through an iterative refinement process, and to pilot test the feasibility of implementing MIT among diverse, Spanish-speaking Family Dementia Caregivers. The 4-week program, with 6- and 12-week follow-up sessions, is deliverable by master's-level mental health professionals with expertise in dementia care. We will adapt the MIT program for Spanish-speaking caregivers of persons with dementia. The project has the following aims: 1) To iteratively refine the Mentalizing Imagery Therapy (MIT) for Spanish-speaking Family Dementia Caregivers, 2) To conduct a pilot study to establish feasibility and acceptability of the Mentalizing Imagery Therapy (MIT) for Spanish-speaking Family Dementia Caregivers.

Results: We have translated the intervention materials to Spanish and are currently in the recruitment phase. Our strategies for recruitment include posters and flyers to clinics serving Spanish language dementia patients, networking with Primary Care Physicians, Social Workers, Psychiatrists and Neurologists in Spanish Language Clinics, targeted recruitment from Spanish language clinics based on patient diagnosis, advertisements in Spanish language church bulletins and local newspaper advertisements.

Conclusions: Although MIT might be a useful treatment for improving mood and reducing stress in Spanish language family dementia caregivers by teaching them skills of mentalizing and mindfulness, feasibility of MIT in Spanish language caregivers remains to be demonstrated. Recruitment of Spanish language caregivers is challenging and requires a multi-modal strategy.

Summary: Family caregivers of patients with dementia have high levels of psychological and physical strain and are at high risk of depressive and anxiety disorders. We are investigating the feasibility of a Spanish language Mentalizing Imagery Therapy (MIT) adaptation, which provides guided imagery and mindfulness skills training to facilitate self-regulation and increase perspective taking. This specifically pertains to the Spanish speaking community by researching a cultural acceptable intervention to help caregivers improve stress and mood.

Population Health

Five-year MGH demographic trends in clinical trial enrollment

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Keywords: Clinical enrollment; racial trends; MGH

Background: Historically, recruiting participants into clinical trials has been a challenge for researchers and physicians. Despite federal regulations encouraging representative research populations, additional barriers to research remain for minority populations.

Methods: We analyzed reported study enrollment data from the last five fiscal years (2014-2018) at Massachusetts General Hospital (MGH) to identify local demographic trends in clinical trials enrollment.

Results: MGH's enrollment data indicates that participants more than doubled in the five-year period, from 440,317 in 2014 to 980,227 in 2018. White participants, reflecting the racial trends of MGH's clinical population, were consistently the largest study population (82.23% in 2014 and 79.08% in 2018). Despite being Boston's fastest-growing population since 2000, Latino populations remain poorly represented in clinical trials in 2018 (2.39%).

Conclusions: In conclusion, MGH has significantly increased its research recruitment; however, despite changing demographics in Boston, this growth in research participation continues to underserved racial and ethnic minorities

Summary: Five-year MGH demographic trends in clinical trial enrollment show a low participation of underserved racial and ethnic groups. Despite being Boston's fastest-growing population since 2000, Black and Latino populations remain poorly represented in clinical trials. Data suggests that it is necessary to enhance clinical study designs to incorporate minority groups' perspective and incorporate community engagement activities to increase the participation of racial and ethnic minorities.

Access to Clinical Preventive Services and Cancer Screening in Homeless Population Served by the Chelsea Outreach Team

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Keywords: Prevention, cancer screening, homeless

Background: Clinical preventive services are defined as screening tests, immunizations, health behavior counseling, and preventive medications. Despite known benefits, disadvantaged individuals, particularly homeless persons might not access these services leading to higher death rates from preventable/screen-able cancers. Community Action Programs Inter-City, Inc. (CAPIC) collaborated with MGH Chelsea HealthCare Center to explore the utilization of preventive care and cancer screening of “street involved” persons struggling to overcome alcohol and opioid addiction.

Methods: CAPIC’s SUDS Mobile Outreach Team conducted a survey to determine patterns of preventive care seeking behaviors of their clients.

Results: Fifty-six clients responded to the survey: 61% were interested in learning about preventive services, 65.4% had a PCP, (46.5% at MGH and 27.9% at East Boston Health Center), 16.9% used emergency room as site to seek care primarily and 64.3% have had an annual physical within the last 3 years. Lifestyle risks: 12.1% (4/33 smokers) have smoked over 30 years packs, 39.6% primarily used alcohol and 18% mostly heroin. Majority (75.9%) had recent lipid panel, diabetes and blood pressure screening. In regard of prevention and screening for infection: nobody received vaccination against meningococcus, 72% were vaccinated against tetanus, 24% against influenza and 79.3% against hepatitis B. 70% had a “recent” screening for HIV and 58.6% for hep C. Half of the women had mammogram, 3/10 women had Pap smear within last 3 years and 44% (4/9) of clients over 50 years had colonoscopy.

Conclusions: Many surveyed respondents had assigned primary care and their use of cardiovascular screening was similar to general population. The greatest disparity was in cancer screening and vaccination. Despite other overwhelming priorities in the homeless population in Chelsea, MA, there is considerable interest in preventive services. A community access site for cancer screening and vaccination could help to improve preventive care for this underserved population.

Summary: Homeless persons might not engage in preventive services. Exploring current utilization of cancer and cardiovascular screening, immunization and primary care use might help develop strategies such as closer collaboration between health care providers and public health services to improve preventive care and health in this most disadvantaged population.

All of Us Research Program Data Browser: A Resource for MGH and beyond

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Keywords: Biobank, data, diversity

Background: The All of Us Research Program (AoURP) is a historic effort to gather data from one million or more people living in the United States to accelerate research and improve health. By taking into account individual differences in lifestyle, environment, and biology, researchers will uncover paths toward delivering precision medicine. The mission of the AoURP is to accelerate health research and medical breakthroughs, enabling individualized prevention, treatment, and care for all of us. By enrolling one million or more volunteers, the AoURP will have the scale and scope to enable research for a wide range of diseases, both common and rare, as well as increase our understanding of healthy states.

A critical component of the All of Us Research Program is the access to the data and research that is collected. Varying levels of access to the data (depending on individual credentials and clearances) will be granted to doctors, researchers, scientists and citizen scientists alike, all across the country, via the All of Us Data Browser. This interactive tool will allow researchers to see de-identified participant demographics, health histories, and search for any health condition within the data set. There is a significant opportunity for researchers to utilize this data to inform on-going and future research initiatives right here at MGH Chelsea.

Methods: Partners HealthCare System and Boston Medical Center are collaborating as All of Us New England (AoUNE). AoUNE will enroll 93,000 participants, with a target of 46% UBR participants. We use the following methods to build trust, understanding and provide bidirectional benefit to UBR participants: prioritizing the participant voice in roles as co-leaders; soliciting feedback on which program and data sharing elements provide value; training staff continuously to ensure a culturally sensitive workforce; employing a geographic strategy of in-reach and outreach. Recruitment for volunteers and participants takes place in clinic in both in-patient and out-patient settings. AoUNE also employs phone and letter contact to patients, as well as internal communications to staff and physicians, and external community engagement in neighborhoods where the patient population lives and works.

Results: Entering into year 2, enrollment data for AoUNE shows 75.83% of AoUNE participants identifying in the program's UBR categories, with many participants qualifying in more than one category. 40.17% of participants identify race/ethnicity as American Indian/Alaska Native, Asian, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, Multi-Ancestry, or other; 28.14% identify income as below the Federal Poverty Level; 27.82% identify age at consent as 65 years or older; 11.81% identify sexual orientation as bisexual, gay, lesbian, or "none of these describe me"; 10.41% identify education level as less than a high school degree; 1.77% identify geography as living in a rural zip code; and 0.11% identify as intersex, non-binary, transgender, gender identity that is different than sex at birth, or other.

Conclusions: A focus on relationship building and ensuring bidirectional benefit in research are important values to advance in research that successfully engages diverse groups, along multiple lines of social identity.

Summary: Partners HealthCare System and Boston Medical Center are collaborating in New England on a historic effort called the All of Us Research Program to gather data from one million people living in the US to accelerate research and improve health. Data is being collected on individual differences in lifestyle, environment, and biology, helping researchers to speed up breakthroughs in precision medicine. A critical component of the All of Us Research

Program is access to the data that is collected, which will be available to researchers around the world via the All of Us Data Browser. This interactive tool will allow researchers to see de-identified participant demographics, health histories, and search for any health condition within the data set. There is significant opportunity for researchers to utilize this data to inform on-going and future research initiatives right here at MGH Chelsea.

Fostering Inclusivity in Research Engagement for Underrepresented Populations in Parkinson's Disease: The FIRE-UP PD Study

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Keywords: Parkinson's disease, racial and ethnic minorities, clinical trial enrollment

Background: Greater diversity in clinical trial enrollment improves study generalizability and therapy efficacy. However, underrepresented groups (URGs) in Parkinson's disease (PD) research remains rare, even in digital PD research platforms such as Fox Insight (FI). We hypothesized that interventions focused on engaging URGs would enroll a greater proportion of URGs than at passive control sites.

Methods: We define URGs as women, racial and ethnic minorities, individuals of lower socioeconomic status, or rural residents. We implemented a stratified randomization design for ten sites in an exploratory pilot design, in which pairs of sites were assigned to either intervention or control conditions. Each intervention site identified a specific barrier to PD research participation, a targeted URG, and a 6-month intervention to address the URG barrier. All sites report the Trust in Medical Researchers Scale (TIMRS), attitudes towards genetic testing, as well as URG accrual to FI, prior to and following the intervention period. Intervention and follow-up continues through December 2019.

Results: Primary analyses focus on descriptive and qualitative data obtained for future research. We have planned two levels of quantitative analysis: change in person-level TIMRS and accrual to PD research studies. We additionally measure URG accrual to FI from all sites. Digital media are leveraged to determine engagement with PD research.

Conclusions: Improving representation in PD research is a key step towards improving access to PD diagnosis and treatment for everyone. The current pilot proposal explores new ideas to enhance engagement and recruitment of URG in PD research studies. Upon study completion, best practices may be implemented in a larger number of sites to investigate the recruitment mechanisms uncovered in the current study.

Summary: This pilot study addresses barriers to research for underrepresented groups in Parkinson's disease research, and to increase URG enrollment in the online Fox Insight study with a small exploratory intervention.

QI process to Implement Faith-Based Initiatives to Improve Dissemination of Information and Access to Services for Victims of IPV

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Keywords: Intimate partner violence, faith-base initiative, quality improvement, community based participatory research

Background: WHO estimates that 30% of women >15 suffered physical and/or sexual intimate partner violence (IPV). Many victims are reluctant to seek care, only 1-15% of women get screening. Access to information about resources is proven to mobilize social support for healing. Community based intervention has a better potential to improve care to this population given that 84% of the female victims disclosed IPV to one friend or family, compared to 21% to a health care provider. When we empower the community with resources, treatment could be more available and effective.

Methods: The Seminario Teológico La Luz de Cristo, is a faith based initiative to address community needs in Chelsea. Members brainstormed to identify the common and important issues. Issues identified included IPV, substance use, bullying, obesity, depression and other conditions relating to mental health. We are using a quality improvement approach to document our efforts.

Results: Despite many survivors of IPV, there has been no cases of IPV in the church. To understand how victims seek care, we prepared a process map. We visited 4 different health care facilities to seek IPV (or other topics) education materials. The materials found were limited, not clear, attractive or portable. Members then seek out from their network of friends and families to access information about IPV. The collected information were used to prepare a poster that were displayed in the church to provide information to over 200 members as well as other visitors. We are using XmRT chart (number of months in X axis and counts of cases in Y axis) to track number of cases that will come forward to seek help in our congregation.

Conclusion: Using a quality improvement approach, we are piloting a community based initiative to improve awareness and decrease barriers to access care for victims of IPV.

Summary: Grassroots organizations such as faith based agencies through capacity building can provide appropriate care for issues of domestic violence. A better collaboration pathway between health care facilities and local agencies can improve care access.

Understanding Suicide Risk Among Immigrant-Origin Latinx Adolescents: Parent and Youth Perspectives on Precipitating Factors

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Keywords: Suicide prevention, immigrant, adolescents

Background: This study emphasizes key risk factors for suicidal behavior affecting Latinx immigrant-origin youth, who are underrepresented in suicide research. Latinxs are both the largest ethnic minority group and immigrant group in the U.S. (ChildTrends, 2014; US Census, 2013) and Latina adolescents have elevated suicide attempt rates compared to White and Black youth (Langhinrichsen-Rohling et al., 2009). Suicidal behavior is impacted by psychological vulnerability as well as the ecological context. An increasingly restrictive and punitive immigration policy environment is a substantial stressor for immigrant-origin youth with effects on mental health (Gandara & Fe, 2018; Gulbas et al., 2016).

Methods: The goal of the study was to understand immigrant-origin youth and parent perceptions of factors contributing to and protecting from suicidal behavior. Five focus groups were conducted with immigrant parents of adolescents (n=41) and seven with immigrant-origin adolescents (14 and up; n=56) in Baltimore, MD and in Chelsea and East Boston, MA. Transcripts were coded in an iterative process of open and closed descriptive coding by a six-person team and analyzed using thematic analysis (Braun & Clarke, 2006).

Results: Our study integrates an ecodevelopmental perspective on immigrant-origin youth adjustment (Suarez-Orozco et al., 2018) and Latinx youth suicide risk (Zayas, 2011) with the interpersonal-psychological theory of suicide (Van Orden et al., 2010). Participants identified stressors related to the immigrant experience specifically and typical adolescent experiences generally. Parents and youth often endorsed similar themes but with different interpretations (i.e. parents identified lack of communication as a parenting issue, whereas youth worried about adding to parental stress). An ecodevelopmental model specific to immigrant-origin youth was developed, highlighting macro-system (e.g., immigration policy, access to resources, trauma exposure) and micro-system influences (e.g., family financial stress, social exclusion and bullying, and perceived parental expectations).

Conclusions: To advance suicide prevention and intervention strategies for Latinx immigrant-origin youth, it will be critical to increase attention to the impact of factors such as migration under adverse conditions, lack of documentation status, social exclusion, and discrimination on the health and well-being of youth and families.

Summary: We conducted focus groups with 41 parents and 56 adolescents in Baltimore, MD and in Chelsea and East Boston, MA to understand how parents and adolescents in Latinx immigrant families view adolescent suicide risk. We learned about challenges at the community and family levels that may impact risk for suicide, as well as pathways by which immigration policies impact adolescent and family well-being. These findings can inform prevention strategies and community efforts to prevent suicide.

Health Program Development/Evaluation

Evaluating the Implementation of a Before-School Physical Activity Program

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Keywords: Schools, physical activity, children

Background: Recent evidence supports a role for school-based obesity prevention efforts, including those with an emphasis on increasing physical activity. Despite this, there is limited evidence on how successful programs may translate into real-world settings.

Methods: Three public schools in Revere, MA, implemented a before-school physical activity program (“BOKS”) through a community health improvement grant. Implementation was guided by individual school needs. Program implementation was evaluated over a 1-year period using the RE-AIM framework (Reach, Effectiveness, Adoption, Implementation, Maintenance). Outcomes were assessed through a mixed methods approach, including baseline and follow-up assessments of students participating in the intervention, parent qualitative interviews, and program-level data.

Results: A total of 188 students participated in the BOKS programs, out of total program capacity of 230 students (82%capacity). Of participating students, 128(68%) consented for study participation and 41% of study participants(n=52) identified as Hispanic/Latino. BMI z-score was stable across study participants from baseline to follow-up. Administrative data and semi-structured interviews with parents demonstrated program adoption at both the family-and school-level. As implemented, the program delivered mean 13.2 minutes (range 10.5-15.6, SD 3.1) of moderate-vigorous physical activity (MPVA) per session, with session duration varying by school (25-60 minutes). Participating students attended mean 75% (SD 29%) of sessions. With respect to maintenance, two of three participating schools reached capacity for the second session of programming; the third school reach 38% capacity. Parent interviews and stakeholder conversations supported program continuation.

Conclusions: Evaluation of a structured before school physical activity program in a low-resource setting demonstrated substantial initial reach and adoption, while ability to maintain the program long term varied by school. As implemented, the program provided time in MVPA for participants that may significantly increase their overall physical activity levels. Despite variation in program duration, time in MVPA was relatively constant across schools. Strategies to increase time spent in MVPA as well as program attendance may increase program impact and adoption.

Summary: This study evaluated how a before-school physical activity program was carried out in three public schools in Revere. We found that the program was able to be implemented and sustained within the schools. We

also identified potential targets to improve the program. These findings are important as community health organizations work to find opportunities to increase physical activity levels among children.

A Randomized Trial of a Community Health Worker Intervention to Improve Retention in HIV Care for HIV-Positive Latino Migrants and Immigrants

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Keywords: Foreign Born Latinx/Hispanic; retention in care; HIV/AIDS

Background: HIV-positive Latino immigrants and migrants experience multi-level barriers to HIV care that predispose them to non-retention in HIV care, a risk factor for HIV transmission. Our goal was to conduct a pilot randomized trial comparing a newly-developed community health worker intervention for retention in HIV care to a treatment-as-usual (TAU) condition in this population.

Methods: 67 Participants were randomized to a treatment as usual (TAU) (n=32) or community health worker intervention (ADELANTE) arm (n=35). Participants in the treatment as usual (TAU) condition received usual HIV care and were offered information on HIV treatment and care. Participants in the ADELANTE arm received a 5-session intervention using a problem-solving approach guided by a HIV-focused telenovela. The intervention addressed patient-level factors (e.g. self-efficacy, patient activation, quality of life, AIDS-related stigma) and structural factors by linking patients to resources. The primary data elements included: retention in care; viral suppression; mediating factors such as increased patient activation and self-efficacy, improvement in mental health, and reduction of depression, alcohol use, and AIDS-related stigma; and feasibility and acceptability of the intervention. Data were collected through patient and CHW-delivered questionnaires and participant medical records.

Results: The intervention was feasible (91% retained at week-24 and 63% received all 5 CHW sessions) and acceptable (participants felt greater self-confidence for achieving a healthier life and format provided the role-modeling and opportunity for deep reflection). Furthermore, the intervention demonstrated improvements for some health mediating outcomes. The intent-to-treat analysis did not show statistically significant differences in retention in care.

Conclusions: ADELANTE may have promise as a strategy for improving self-management behaviors in HIV+ Latinos. Intensive case management focused on transportation may be an important adjunct to improve completion of

study visits and retention in HIV care. Expanding peer outreach and recruitment from substance use treatment facilities could enrich the cohort with participants not connected to HIV services.

Summary: The United Nations “90–90–90” target to identify, treat, and achieve viral suppression in 90% of HIV-infected persons requires engagement in all steps of the HIV care continuum. Latino immigrants in the United States are disproportionately affected by HIV. Barriers to retention in HIV primary care constrain opportunities for HIV treatment success but have not been specifically assessed in Latinos.

Analysis of A Patient-Centered Ridesharing Program to Overcome Transportation Barriers in Access to Advanced Imaging Care

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Keywords: Transportation, imaging, barriers to care

Background: Transportation difficulties are a known barrier to receiving appropriate, timely care for many patients. These barriers tend to burden patients from low socioeconomic status (SES) and underrepresented racial/ethnic minority communities. Patient-centered interventions can help overcome this barrier to care. Our purpose was to evaluate a rideshare program developed to address transportation barriers to MRI appointments at the MGH Chelsea outpatient imaging center.

Methods: During a 9-month period (June 2018-February 2019), we evaluated a rideshare program, through Circulation © and Lyft ©, at MGH Chelsea outpatient imaging site. Any patient who spontaneously expressed a desire to cancel their MRI appointment due to transportation difficulties was offered this program. Primary outcomes included 1) proportion of patient-related appointment cancellations and 2) exam timeliness. Logistic and linear regression analyses were used to compare outcomes in patients who used the rideshare program with patients who did not use the program, adjusted for potential confounders.

Results: During the study period, 318 out of 11,581 total MRI encounters utilized rideshares (2.67%). Female patients ($p = 0.042$), Medicare ($p = 0.008$) and Medicaid ($p = 0.042$) patients were more likely to use the ridesharing service while employed ($p < 0.001$) and Hispanic ($p = 0.001$) patients were less likely to use the ridesharing service. No statistically significant differences were found in appointment cancellations comparing patients using the rideshare service compared with patients who did not use the rideshare service (Adjusted OR 0.86, 95% CI 0.66, 1.13, $p = 0.286$). Patients using the ridesharing service were more likely to be on time for their appointment compared with patients who did not use the rideshare service (Adjusted Coefficient 8.53, 95% CI 3.19, 13.86, $p = 0.002$).

Conclusions: A patient-centered ridesharing program assisted older patients and patients with low SES in overcoming transportation barriers to MRI appointments while improving exam timeliness.

Summary: Transportation difficulties are a known barrier to receiving appropriate, timely care for many patients. We evaluated a rideshare program, through Circulation © and Lyft ©, that was offered to patients who

spontaneously expressed a desire to cancel their MRI appointment due to transportation issues. The patient-centered ridesharing program assisted older patients and patients with low socioeconomic status in overcoming transportation barriers to MRI appointments while improving timeliness to their appointments.

Pilot Study of a Resilience-Building Program for Latinx Adolescents and their Parents/Caregivers: Preliminary Evidence for Feasibility and Acceptability

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Keywords: Resilience, community research, youth

Background: Adolescent mental health is a significant area of unmet need, particularly in underserved populations. Suboptimal mental health outcomes in vulnerable populations can be influenced by several factors, including limited language proficiency and inadequate screening. Early intervention could help prevent the development of psychiatric illness in at-risk youth. The primary aim of the Community-Based Resilience Training for Adolescents Program was to evaluate the feasibility of an emotional resilience intervention among this population.

Methods: Recruitment took place at the MGH Chelsea HealthCare Center with the Pediatric Symptom Checklist (PSC-35). Eligible participants were English-speaking, aged 11-14, and had a PSC-35 total score between 17 and 28 or an Internalizing subscale score ≥ 1 . The intervention was an 8-session, group that focused on emotional awareness, distress tolerance, mindfulness and self-compassion. Participants receiving current psychological/psychiatric treatment were not eligible. Parents/caregivers were also enrolled and participated in two group sessions (led in Spanish), which introduced the concepts their children were learning. Pre and post-intervention measures were administered to both parents/caregivers and youth.

Results: Nine Latinx adolescents, 4 females and 5 males (mean age 12), participated in the intervention. Eight completed post-intervention evaluations. Seven participants agreed that the group material was interesting. Six agreed that they learned better coping skills. Nine parents/caregivers, 7 females and 2 males, completed the caregiver intervention (7 attended both sessions). Eight completed post-intervention surveys and evaluations. Eight of the respondents agreed the group material was interesting, said that they were happy they participated in the groups, and said they would recommend these groups to their family and friends. Qualitative feedback from adolescents and parents was overwhelmingly positive.

Conclusions: Overall, the groups were well-attended and received. These preliminary data suggest that both adolescents and parents/caregivers found the program to be beneficial and that the program is feasible and acceptable in this community setting.

Summary: The Community-Based Resilience Training for Adolescents Program is an 8-session youth and 2-session parent/caregiver, group intervention based in Chelsea, MA. The intervention is for young adolescents and their parents/caregivers, and it aims to promote well-being by increasing emotional resilience through educational and experiential sessions. The immediate goal of the study is to determine whether the program is feasible and acceptable in the Chelsea community.

Engaging Pediatric Clinicians to Optimize the Connect for Health Pediatric Weight Management Program

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Keywords: Childhood obesity, clinician engagement, qualitative

Background: Prevalence of childhood obesity remains at high levels and disproportionately affects low income and racial/ethnic minority children. The Connect for Health pediatric weight management program addresses this through electronic health record (EHR) enhancements, family educational materials, and text messages. Prior to program implementation in three healthcare systems, we assessed clinicians' perspectives to ensure the program meets stakeholders' needs.

Methods: We conducted semi-structured interviews with pediatric primary care clinicians from Massachusetts General Hospital, Denver Health, and Prisma Health (n=50). Using the Consolidated Framework for Implementation Research to guide the interviews, we asked questions regarding general impressions of the program, preferences of program components, barriers to adoption, and organizational readiness for change. A content analysis was performed utilizing the principles of immersion-crystallization.

Results: Our findings revealed that clinicians acknowledge the importance of childhood obesity, but do not have adequate resources for addressing weight management. Clinicians preferred tools to enhance patient care without disrupting workflow or adding more time to visits. Other findings related to clinician- and patient-facing components, clinician training, and organizational readiness for change. Clinicians wanted alerts to be early in the visit and actionable, and to have evidence-based guidelines for labs, referrals, and follow-ups. Patient educational materials and text messages should be culturally relevant and responsive to family's needs. Text messaging enrollment barriers included cost, changing phone numbers, and privacy concerns. Clinicians wanted ongoing support during implementation and for trainings to be concise, interactive, and offer incentives. Clinicians felt their practices would embrace program adoption, but foresaw potential barriers including the time involved with adopting the new EHR tools, competing demands during a well-child visit, and family's readiness for change.

Conclusions: By engaging pediatric clinicians, we can optimize the Connect for Health program to be responsive to needs and preferences resulting in improved program adoption and child health outcomes.

Summary: Connect for Health is a weight management program that aims to improve screening and management of childhood obesity through provider- and patient-facing tools. Prior to implementation, we assessed clinicians' perspectives of the proposed program components. Results indicated that clinicians want evidence-based guidance for weight management as long as the tools are not disruptive to workflow and materials are responsive to family's needs. These findings will inform program adaptation to increase uptake and improve health outcomes.

Improving Adherence with Cancer Treatment for MGH Community Health Center Patients Newly Diagnosed with Cancer

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Keywords: Patient Navigation, cancer treatment, treatment adherence

Background: Disadvantaged cancer patients receiving care in community health centers (CHCs) experience multiple barriers to accessing quality cancer treatment. Patient navigation has been shown to improve cancer screening and diagnostic work up, yet the impact on cancer treatment is unknown. The goal of our study is to determine whether patient navigation can improve adherence with cancer treatment among disadvantaged patients and improve health outcomes.

Methods: Utilizing a population health registry, TopCare, newly diagnosed cancer patients from MGH CHCs in Chelsea, Revere, and Charlestown referred to the MGH Cancer Center are identified and consented to participate. Patients are randomized to receive either in-person patient navigation or enhanced usual care, which consists of two reminder phone calls prior to oncology appointments. Patients are followed for one year and are assessed for adherence to treatment, patient satisfaction with cancer care and patient navigation, health-related quality of life, and psychosocial care. Our primary outcome is the missed oncology appointment rate.

Results: The recruitment began in November 2017 and as of July 2, 2019, we screened 454 patients, 164 were eligible and 122 are enrolled. Charlestown health center referred 27 patients, Chelsea 61 and Revere 34. The most frequent cancers were genitourinary (n=32), thoracic (n=25) and breast (n=20). The 122 patients enrolled had 2526 appointments and 89 were missed. The missed appointment rate is 3.5%.

Conclusions: Patient navigation during cancer treatment is feasible regardless of cancer type. The majority of patients agreed to participate. Preliminary data shows that patient navigation can improve adherence with cancer treatment in CHC's patients (3.5% vs 17% historical rate for disadvantaged MGH Cancer Center patients). The trial will last 3.5 years and we anticipate providing patient navigation to 400 MGH CHC cancer patients.

Summary: Low-income, underinsured, racial/ethnic minority patients have the highest missed appointment rate at the Massachusetts General Hospital (MGH) Cancer Center. Our previous work revealed a 17% missed appointment rate in this population. This study identifies newly diagnosed cancer patients from MGH Community Health

Centers in Revere, Chelsea, and Charlestown and uses patient navigation to address barriers to adherence with cancer treatment.

Social Determinants of Health

WIC Participants Utilization of Food Benefits

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Keywords: WIC, benefits, utilization

Background: To figure out why some WIC participants were not using their benefits for entire month or more.

Methods: Quantitative

Results: Found top reasons why WIC benefits were not being utilized: time, transportation, forgot, not full understanding their options

Conclusions: The WIC families that were identified as not using their food benefits for more than 1 consecutive month benefited from having someone from WIC call them to troubleshoot the challenges they were having.

Summary: WIC is a supplemental nutrition program that provides nutrition counseling, breastfeeding education, immunization screening, and referrals to other community agencies to Women (pregnancy & breastfeeding), Infants and Children up to the age of 5 years old. WIC offers healthy foods to help improve the lives of the families we serve. It's important to understand the barriers as to why our WIC participants go more than a month without using any of their WIC food benefits for their family. Our intervention helped improve the number of WIC participants who did not redeem their WIC benefits for an entire month by 1%. In addition, it helped us determine additional support our families need in order to maximize their WIC food benefits to help them save money and improve their health.

Supporting MHG Chelsea Healthy Families with Economical Mobility Tools

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Keywords: Social-Determinants-of-Health, strengths, goals

Background: We know that individual and family health outcomes are much more impacted by the social determinants of health (poverty, food insecurity, living environment, education, employment, etc.), than by genetics or direct interventions by health care professionals. When interactions between service providers and families are established on supporting strengths to develop concrete plans and achieve goals; it results in improvement of family functioning, enhancement of parent's self-regulation and can ultimately promote positive parent-child relationships and healthy attachment.

Methods: As part of a Population Health pilot program, the evidence-based Mobility Mentoring® model, developed by Economic Mobility Pathways (EMPath) was applied to the services provided to 45 Healthy Families America program participants at MGH Chelsea. The Bridge tool was used to identify goals along six pillars and progress was measured by the number of goals accomplished.

Results: When families accomplished goals, they got hopeful and confident about their capabilities to pursue what they wanted themselves and felt empowered to create more goals.

Conclusions: When tools like the ones created by Economic Mobility Pathways are used to address concrete the needs of the families to target effects that chronic stress and poverty create, families build on strengths, self-sufficiency, feel more hopeful and identify more goals to work on.

Summary: To reduce the effects that chronic stress and poverty create, The MGH Chelsea Health Care Center's Healthy Families America Program, has been partnering with MGH's Population Health Management Division, to pilot the innovative evidence-based Mobility Mentoring® model, developed by Economic Mobility Pathways (EMPath) to bring family economic empowerment tools to HFA families. The specific tools used build on the strengths families have and address concrete the needs by creating goals and improving family functioning.

Establishing an Immigrant-Focused Medical Legal Partnership in a Community Health Center to Address Unmet Legal Needs

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Keywords: Medical-legal-partnership, immigration status, unmet need

Background: The extent to which immigration concerns impact physical and mental health and health-seeking behavior is unknown. We partnered with local law schools to facilitate patient access to timely and appropriate immigration-focused legal services and educate healthcare providers about screening for legal needs and connecting patients to immigration resources. In this study, we aim to describe our model and the characteristics of patients referred.

Methods: The medical-legal partnership developed through two phases. A pilot phase of consultation calls between healthcare providers and immigration attorneys from a local law school raised concerns that supported the need for on-site immigration legal assistance. This led to the current phase in which we partner with another law school to provide advice and counsel to patients within our community health center, where all healthcare personnel are trained to identify patients' immigration concerns and place referrals through the electronic medical record. Referred patients are scheduled for free consultation with a legal team comprised of student attorneys and immigration law professors, who identify patients' need for representation and connect patients to immigration legal aid organizations if needed.

Results: From February 2018 through May 2019, 96 referrals were made: 85 of these patients were scheduled for an appointment, and 64 (75%) arrived at their appointments. To increase capacity, a second immigration attorney was added.

Conclusions: Through collaboration with law school clinics, we show it is possible to embed advice and counsel sessions into a community health center to facilitate access to timely and appropriate immigration-focused legal services for a patient population with high health needs.

Summary: Partnering with local law schools and bringing immigration lawyers into the community health center twice a month is a successful model for a medical-legal partnership. Healthcare providers have found that screening for immigration concerns is simple and referral is easy. They have learned more about how to connect patients to appropriate resources. Patients with multiple mental and physical health co-morbidities have benefited from this service. Addressing immigration concerns can impact patients' relationships with their physicians and their health and wellbeing.

Supporting Primary Care Access and Use Among Homeless Persons

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Keywords: Homeless persons, patient protection and Affordable Care Act, primary health care

Background: The growing number of homeless persons in the United States demonstrate higher rates of morbidity and premature mortality compared to their non-homeless counterparts. Homeless persons are often without a regular primary care source, contributing to emergency department use and preventable hospitalizations. In 2010, the enactment of the Affordable Care Act (ACA) expanded access to primary care services, intending to shift these trends. The purpose of this project is to explore the experiences of, and recommendations to improve access to and use of primary care services among homeless persons, post-implementation of the ACA.

Methods: Twenty-six semi-structured interviews were completed with adult homeless persons and primary care providers/staff (nurse practitioners, nurses, medical assistants, physicians). A six-stage thematic analysis approach was employed.

Results: Themes and sub-themes emerged, categorized by factors which influence primary care access and use patterns, and strategies to promote consistent and effective primary care use. Unstable residence and employment, unaddressed mental health conditions, substance use, self-care and self-management limitations, and perceived discrimination and healthcare system distrust were noted to contribute to prolonged absences from primary care. Strategies to promote use of a regular source of primary care include care coordination (shared decision-making, and medication access and management), supportive housing and recuperative care, and consistent availability of outreach services.

Conclusions: Since the implementation of the ACA expansion, several previously uninsured homeless persons have been able to access and use primary care services in new ways. However, many factors that have historically influenced access to and use of primary care among homeless persons continue to negatively influence use patterns. Effective strategies to address modifiable factors—such as care coordination, supportive housing and recuperative care, and outreach services—are essential to promote sustainable health systems change that enables consistent primary care use.

Summary: Recognizing the continued role of entrenched barriers to regular primary care source use is imperative to designing effective community-based interventions. Offering supportive care coordination that emphasizes shared decisions and medication access and management, supportive housing and recuperative care, and outreach-based services may better facilitate the consistent use of primary care among homeless persons. In so doing, researchers, clinicians, and policy makers may promote and sustain health equity among homeless persons.

Insurance Challenges for Childhood Cancer Survivors: Themes of Financial Distress in Qualitative Expert Interviews

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Keywords: Health insurance, cancer survivorship, financial distress

Background: With complex health care needs throughout the lifespan, childhood survivors are often vulnerable to underinsurance and insurance-related financial distress. A psychoeducational health insurance navigation intervention for childhood cancer survivors is being developed to reduce survivors' insurance-related financial distress. To guide intervention development, qualitative interviews are being conducted with content experts (oncologists, nurses, social workers, health policy researchers, etc.) to solicit feedback on the 4-session telehealth-delivered navigation program. When asked about the insurance barriers that childhood cancer survivors face, experts drew attention to unique financial challenges that arise at the intersection of health insurance and cancer survivorship.

Methods: A semi-structured interview guide was developed to assess experts' feedback across domains of cancer survivorship and insurance, with the first domain focusing specifically on barriers to insurance access and use. Experts took part in 30-60-minute interviews, which were recorded. Notes were taken on interviews immediately following their conclusion, and feedback was organized into domains to detect similarities across experts. Rapid data analyses are underway.

Results: To date, we have conducted 18 individuals, dyadic, and focus group interviews with social workers, advocates, physicians, researchers, and navigators. Experts noted that childhood survivors face barriers to access and use of quality health insurance, and that these barriers often have financial implications. Salient financial challenges for survivors included high out of pocket medical costs due to complex needs, lower likelihood of carrying employer-sponsored insurance due to lack of secure employment, and survivors choosing lower premium but higher deductible insurance plans if they are not currently experiencing symptoms. Experts suggested that social workers with financial training should deliver this intervention.

Conclusions: Feedback suggests that an insurance navigation program for childhood survivors should be targeted at exploring and alleviating issues of financial distress. Such a program could empower survivors to better navigate issues of cost related to health insurance and medical care.

Summary: This study focuses on issues of insurance-related financial distress among childhood cancer survivors. While in the pilot-trial stage of development, we hope to deliver a feasible intervention for childhood survivors and to eventually expand the program to serve vulnerable cancer survivor populations.

Women and Children's Health

Intervention evaluation of a Structured Nature and Physical Activity Prescription Program for Children

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Keywords: Prescription nature program, children's wellbeing, nature exposure

Background: High prevalence rates of obesity among U.S. children are related to decreased physical activity and increased sedentary behaviors associated with decreased time spent outdoors. Outdoors Rx seeks to combat these behavioral trends through nature-based outdoor physical activity prescription programming. The program's short- and long-term effects have not been evaluated, however, thus providing the opportunity to observe potential changes in participant physical and emotional health.

Methods: This pilot study utilizes data collected from caregiver-administered surveys completed prior to and after a 4-week Outdoor Rx seasonal series in Boston's Chelsea and Revere communities. The age range of children indexed in the study is 3-13. Survey questions pertain to a child's typical physical activity, sleep, screen time and attitudes towards and opportunities for outdoor play. The study endpoints are to evaluate short-term change in physical and emotional well-being.

Results: A challenge with study implementation has been enrollment of a sufficient sample size given variable outdoor weather conditions. Additionally, while pediatricians and other community partners refer families to Outdoors Rx, program participants are self-selecting, thus limiting community representation within the study sample.

Conclusions: Survey analyses from this observational pilot study of guided physical activity in nature-based settings may inform on prospective benefits to children's physical and emotional well-being. Expansion of this program into differing seasonal conditions may yield additional information regarding longer-term health-related benefits as well.

Summary: Research shows that exposure to nature and the outdoors has numerous benefits on children's well-being. Outdoors Rx, a physical activity prescription program created by the Appalachian Mountain Club, provides structured outdoor play activities for children within the Greater Boston area. Evidence is needed to show both the health efficacy of the Outdoor Rx program and to increase scientific understanding of the role of nature exposure on children.

Leveraging Access and Resources for Contraception (LARC) in Primary Care

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Keywords: Family planning, quality improvement, contraception

Background: Updated data, along with new options for long-acting reversible contraceptive (LARC) methods have led the American College of Obstetricians and Gynecologists (ACOG) to recommend LARCs as the most effective and safest forms of reversible contraception. We know that there is a burden on primary care providers to acquire new knowledge, clinical skills and resources for the provision of an expanded menu of contraceptive options. This project focused on setting up the infrastructure to provide advanced family planning services at the MGH Charlestown Adult Medicine clinic. The objective was to implement a quality improvement (QI) project at the practice designed to: (1) integrate advanced family planning services in an academic primary care practice; (2) to train providers including internal medicine residents who have expressed interest in learning advanced family planning techniques; and (3) to assess LARC uptake in the aforementioned delivery model.

Methods: A pathway was created for primary care providers, trained in LARC placement to be credentialed to provide LARCs at the MGH Charlestown HealthCare Center. Infrastructure for provision of LARCs was implemented. Referrals, appointments and contraceptive method choice and receipt were tabulated.

Results: In year one, approximately 102 different procedures were completed (including IUD insertion, IUD removal, Nexplanon insertion, Nexplanon removal). Patients were aged 18 to 52 years old, approximately 80% of patients were primary care patients of MGH Charlestown clinic, approximately 20% of patients were referrals from the other MGH primary care practices.

Conclusions: In conclusion, provider training and service integration of LARC services within an academic Internal Medicine practice is feasible, acceptable and increases access to provision of advanced family planning methods.

Summary: This project implemented a clinic dedicated to the provision of reproductive services (the LARC Clinic) at the Massachusetts General Hospital Charlestown HealthCare Center, a large, urban, academic, general medicine practice. This was new territory for MGH Charlestown Adult Medicine and for MGH Primary Care, in general. The MGH Charlestown HealthCare center serves as a major site where Charlestown residents receive their health care. This work is relevant given the shifts in the health care system and the reduction in resources for family planning identifying the need for new models of care that reshape the medical home.

Exploring Dose Frequency for Speech Sound Therapy in the Outpatient Setting

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Keywords: Speech, articulation, therapy

Background: Most children with speech sound disorders receive outpatient speech therapy once weekly. Given that two important principles of experience-dependent neuroplasticity are intensity and repetition (Kleim & Jones, 2008), exploration of increasing dose frequency (number of sessions per week) in the outpatient setting was judged prudent. The high dose frequency model of speech sound therapy (3 times weekly for 4 weeks) was initiated at MGH to determine 1) the feasibility of a high dose frequency treatment model in the outpatient setting and 2) potential benefits and drawbacks to this model.

Methods: Average and range of number of sessions, average and range of number of days enrolled in treatment, and average attendance rate were collected for two groups of children - one group of children was seen traditionally (once weekly) while the other group was seen three times weekly for one month (with additional booster sessions as necessary).

Results: Attendance rates were higher for the children who were seen at a higher dose frequency. Children enrolled in both models of treatment required a similar average number of sessions to reach discharge criteria. The children who were seen at a higher dose frequency were discharged in a shorter timespan (average of 2.1 months) than those seen once weekly. Other benefits included improved after school appointment access and reduced opportunity for manifestation of negative social/emotional effects of the speech sound disorder.

Conclusions: High dose frequency speech sound therapy is possible in the outpatient setting. High time commitment, transportation, and multiple co-pays per week were limiting factors for enrollment for some families. Further investigation with consideration of patient randomization and dosage data (trials per session) is necessary to make conclusions directly comparing the two models.

Summary: Speech sound disorders can negatively affect children's social/emotional health (Hall, 1991; Overby et al., 2007), as well as their literacy development (Nathan et al., 2004; Raitanoe et al., 2004). By offering a variety of models of speech sound treatment (traditional frequency, high dose frequency), we can provide therapy in a way that works best for our patients and their families and mitigate these potentially negative effects.

A Four-Year Case Review of Police-identified Mothers in Chelsea, MA Who Sustained Strangulation Injuries

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Keywords: Strangulation, interpersonal violence, women

Background: Authors noted a seeming increase in strangulation injuries in cases which victims were mothers of minor children. Because strangulation is considered a red flag for lethality and a factor in long term morbidity authors chose to review cases identified by Chelsea police officers which were referred to PACT (Police Action Counseling Team) and to the Department of Children and Families.

Methods: Authors reviewed twenty nine cases of mothers who sustained strangulation injuries during a four year period between 2015 through 2018 to document demographics and to ascertain whether these women received appropriate medical care. Authors discuss barriers to care for these women."

Results: An increase in strangulation cases may be in part attributed to a change in the Massachusetts General Laws acknowledging the lethality of strangulation injuries and the more frequent use of this charge by police officer in compliance with the law. Victims of this crime are generally unaware of the lethality of strangulating injuries and of the long term health consequences that make them more vulnerable to further abuse, long term disability and early death. Victims of strangulation most often refuse immediate medical attention. These women and their children represent vulnerable and underserved populations.

Conclusions: Further education about the lethality of strangulation injuries is mandatory for all first responders, and for medical and mental health professionals who interface with these women and their children. Many barriers to immediate and follow up care prevent these women from receiving life-saving and post-strangulation care. There is a need for protocols to optimize immediate medical assessment and diagnostic imaging to facilitate treatment of these injuries.

Summary: PACT (Police Action Counseling Team) is a partnership between the MGH Behavioral Health department and the Chelsea Police Department. Law enforcement, a PACT clinician and a DCF clinician collaborate weekly around police cases involving children, a large percentage of which involve domestic violence. An increase in cases of strangulation injuries was noted among domestic violence cases. A review of strangulation cases referred by CPD officers to PACT and DCF revealed that most of these women, either pregnant or mothers of minor children, did not receive immediate care for these injuries. Authors discuss barriers to the care of these women.

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