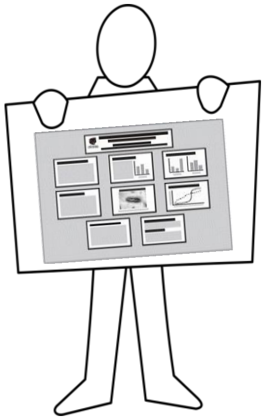
The Community Research Program at MGH Chelsea proudly presents the third annual

MGH Chelsea HealthCare Center
Community Research Day

Friday, October 5, 2018
8-11 am

MGH Chelsea HealthCare Center
151 Everett Ave.
Chelsea, MA 02150

MGH Chelsea
HealthCare Center



MASSACHUSETTS
GENERAL HOSPITAL
THE MONGAN INSTITUTE

MASSACHUSETTS
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DEPARTMENT OF MEDICINE

Program Guide

MGH Chelsea HealthCare Center 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 Department of Medicine Community Council.

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Schedule

Poster Sessions
8:00 – 8:35 am - Poster Session 1
8:45 – 9:20 am - Poster Session 2

Welcome and introduction 9:20 – 9:30 am

Community Research Networking (conversation over coffee organized by theme and population)**:** 9:30 – 10:00 am

Keynote Presentation: 10:00 – 11:00 am
10:00 – 10:45 am – Luana Marques, Ph.D.
10:45 – 11:00 am – Questions & Answers with Dr. Marques

Background on Community Research Program & Research Day

Background

In May 2013, a group of 6 people with interest in community-based research gathered at the MGH Chelsea HealthCare Center. This group of people evolved into a monthly research forum called the 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 the greater Boston area, increased interest and support for research, and has brought together 10 and 20 participants each month at Roundtable meetings and over 100 people to Research Day annually. The Community Research Program has been supported by MGH Chelsea HealthCare Center Administration, the MGH Division of General Internal Medicine and its Community Council, and the Mongan Institute.

> ***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 tremendously due to the input from our Research Council members who serve a 3-year term and Advisory Board members who represent a diverse range of programming that supports research throughout the Partners system.

Research Council Member	MGH Chelsea Department Representing
Chandra, Rohit	Behavioral Health
Chen Cheung, Hong	Adult Medicine
Devine, Sofia	Physical Therapy
Izen, Amy	Speech, Obstetrics (Susan Hernandez, contact)
Kasper, Jennifer	Pediatrics
Levison, Julie	Medical Specialties, Imaging (Patricia Daunais, contact)
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

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
Fava, Maurizio	MGH Division of Clinical Research
Tan-McGrory, Aswita	MGH Disparities Solutions Center
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 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 Revere, 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 we commonly consider as we deliver health care in the community of Chelsea. The themes encountered in this year's posters include the following:

- Population Health
- Mental Health and Neuroscience
- Clinical Innovation
- Collaborations for Health Improvement
- Youth and Adolescent Health

Today's Research Day is possible due to the energy, initiative, and input of those numerous colleagues who have participated in the Community Research Program. We are deeply grateful to our colleagues and the communities in which 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
Co-Chairs of the Community Research Program

Information about MGH Chelsea & Chelsea, MA

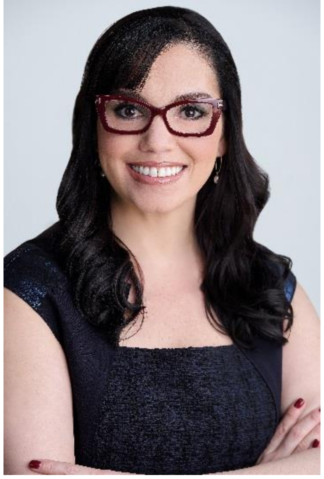
MGH began its work in Chelsea in 1971. At that time a small primary care practice was established in the basement of a local church in response to the community's concern that health care be more accessible. Since that time, the MGH Chelsea HealthCare Center has grown as the community and its population 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 responds to the medical and social needs of these populations. Today, the Center provides services to varied ethnic groups (US and non-US 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.

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 2016 Community Needs Assessment conducted by the MGH Center for Community Health Improvement (CCHI) include:

- Chelsea population is 37,084; median household income is $48,725, and 11% are unemployed.
    - 62% Hispanic or Latino, 25% White, 6% Black, 3% Asian, 4% Other
    - 36% did not complete high school, 31% completed high school, and 32% completed higher education,
    - Graduation rates are higher than state average
    - 20% of students “always” or “often” worry about their family having enough money
    - 23% families live in poverty

Keynote Speaker



Dr. Luana Marques

Dr. Luana Marques is an Associate Professor of Psychiatry at Harvard Medical School, director of Community Psychiatry PRIDE at the Massachusetts General Hospital (MGH), and president-elect of the Anxiety and Depression Association of America (ADAA). She completed her PhD in Clinical Psychology at the State University of New York (SUNY) at Buffalo and her clinical internship in the Cognitive Behavioral Track (CBT) at Massachusetts General Hospital/Harvard Medical School in 2007.

Recognized as a national and international expert in Cognitive Behavioral Therapies (CBTs) with over 10 years of experience conducting clinical research in health disparities and trauma-related disorders, Dr. Marques' major clinical and research interests include the dissemination and implementation of evidence-based practices for individuals suffering from a variety of behavioral health disorders in diverse communities. Upon beginning her work in community mental health clinics, Dr. Marques became increasingly aware of the substantial implementation gap in evidence-based psychotherapeutic treatments for anxiety and trauma-related disorders.

Dr. Marques has worked with community-based organizations and community health clinics to translate evidence-based research into programming and treatments tailored to serve diverse community settings, especially for populations that are Spanish speaking in the United States and in Mexico. Her work with community-based organizations and community health clinics to implement has resulted in sustainable, bidirectional community partnerships, that have helped address the gap between research and practice. Dr. Marques' goal is to continue working towards decreasing the disparities in care for individuals experiencing behavioral health difficulties, especially among low-income and ethnic minorities.

POSTER SESSION 1

8:00 am – 8:35 am

Population Health

1. *Clinical Characteristics and Utilization Patterns of Post-Incarcerated Patients at CCC-Chelsea*
   Ganeshan, Smitha; Cohen, Marya; Blanchfield, Bonnie

2. *Health Literacy and Health Outcomes in Persons Living with HIV Disease: A Systematic Review*
   Reynolds, Raquel; Smoller, Sara; Allen, Anna; Nicholas, Patrice

3. *Unmet Basic and Social Needs of Low-Income Fathers During Pregnancy*
   Neri Mini, Fernanda; Simione, Meg; Gerber, Monica; Roche, Brianna; Perkins, Meghan; Boudreau, Alexy; Blake-Lamb, Tiffany; Kotelchuck, Milton; Taveras, Elsie M.

4. *Check it. Change it. Control it.*
   Abuelo, Carolina; McAdams, Eileen; Waterhouse, Tracy

Mental Health and Neuroscience

5. *The Cancer and Mental Health Collaborative: Engaging Diverse Stakeholders to Increase Access to Patient-Centered Research for Patients with Serious Mental Illness*
   Callaway, Catherine A.; Ware, Cameron; Corveleyn, Amy; Park, Elyse R.; Greer, Joseph; Nierenberg, Andrew; Perez, Giselle; Akwe, Beriline; Irwin, Kelly E.

6. *Changes in emotion recognition following the Emotional Leadership Development Group: A pilot study of enhancing resilience and preventing psychopathology in children in Chelsea, Massachusetts*
   Clauss, Jacqueline; Han, Kelsey; Pimentel Diaz, Ylira; Burke, Anne; Namey, Leah; Lyons-Hunter, Mary; Lambert, Rebecca; Holt, Daphne

7. *Visualization of human brain cytoarchitecture: a comparison between Optical Coherence Tomography/Microscopy and Histology*
   Fogarty, Morgan; Magnain Caroline; Augustinack, Jean; Fischl, Bruce; Rockland, Kathleen S.

Clinical Innovation

8. *Case Study: Use of Patient Education Videos in Asthma Awareness Month Campaigns at Massachusetts General Hospital*
   Sisodia, Rachel C.; Sikora, Chrisanne; Beckvold, Briana; Hussain, Umar

9. *HIV testing in a large community health center serving a multi-cultural patient population: A qualitative study of providers*
   James, Anthony J.; Marable, Danelle; Cubbison, Caroline; Tarbox, Andrew; Mejia, Dianna; Oo, Sarah A.; Freedberg, Kenneth A.; Levison, Julie H.

10. *The Post-Acute Care Experience from the Patient's Perspective*
    Rusinak, Donna; Fonseca, Elizabeth; Ngo, Jacqueline; McKenzie, Rachel; Thompson, Ryan

11. *Falls Prevention - A Nursing Strategy*
    Waterhouse, Tracy

12. *Challenges in Recruitment and Retention of Spanish-Speaking Community Samples with Type 2 Diabetes for a Behavior Change Intervention*
    Chang, Trina E.; Dean, Taquesha; Roberg, Regina; Wexler, Deborah; Mischoulon, David; Cassano, Paolo; Trinh, Nhi-Ha; Chen, Justin; Safren, Steven; Yeung, Albert

Collaborations for Health Improvement

13. *Identifying nurse leader development needs in the primary care setting*
    Bernhardt, Jean

14. *A Retrospective Study Measuring the Impact of a Police-Behavioral health Partnership on Visibility of Children During Police Response to Violence in Chelsea, MA.*
    Green, Georgia; McGathey, Grace; Wasser, Rachel; Kyes, Chief Brian; Dunn, Captain Thomas

15. *Long Term Impact of a Culturally Tailored Patient Navigation Program on the Disparities in Breast Cancer Screening in Refugee Women After the Program's End*
    McCarthy, Anne Marie; Rodriguez-Torres, Sebastian; Ashburner, Jeffrey M.; Percac-Lima, Sanja

Youth and Adolescent Health

16. *Can BMI explain most of the Trait Anxiety Symptoms Reported in Adolescent and Young Adult Girls with Severe Obesity?*
    Torre Flores, Landy Paola; Singhal, Vibha; Mancuso, Christopher; Izquierdo, Alyssa; Stanford, Fatima C.; Bredella, Miriam; Eddy, Kamryn; Lawson, Elizabeth; Misra, Madhusmita

17. *Comparison of Measured and Calculated Resting Energy Expenditure in Adolescents with Severe Obesity and Follow-up One Year Post Bariatric Surgery*
    Singhal, Vibha; Torre Flores, Landy Paola; Cooper, Katherine; Stanford, Fatima C.; Tremblay, Julien; Bredella, Miriam; Misra, Madhusmita

18. *Literature Review to Inform a Collective Impact Approach to Improve the Developmental Health of Young Children*
    Washburn, Kelly; Izen, Amy; Wang Sara

POSTER SESSION 2
8:45 am – 9:20 am

Population Health

1. *The 2019 North Suffolk Community Health Needs Assessment and Implementation Plan*
   Marable, Danelle; Stone, Jeff

2. *Description of Resources Related to Social Determinants of Health for an Outpatient Medical Clinic Population*
   Miller, Pam; Lyons-Hunter, Mary; Barboza, Andrea; Serrano, Merlin

3. *Addressing Food Insecurity in Chelsea*
   Washburn, Kelly; Fishman, Ron

Mental Health and Neuroscience

4. *Discriminating between bipolar II disorder and depression in a community mental health clinic*
   Chandra, Rohit

5. *Post-traumatic phenomenology in Bhutanese-Nepali refugees*
   Chandra, Rohit; Chakkour, Anjana

6. *Mindfulness-Based Cognitive Therapy (MBCT) effects on brain mechanisms of interoceptive awareness and rumination in major depression*
   Desbordes, Gaelle; Shapero, Benjamin G.; Desel, Tenzin; Mischoulon, David

Clinical Innovation

7. *Can Videos Increase Attendance and Patient Preparedness for Speech-Language Evaluations?*
   Sylvia, Maria J.; Motroni, Emilia; Izen, Amy

8. *Patient Navigation to Improve Patient-Centered Cancer Care in Community Health Center Patients Diagnosed with Cancer*
   Benjamin, Carmen; Shahid, Naysha; Ivan, Sarah; Gorton, Emily; Ashburner, Jeffrey; Irwin, Kelly; Moy, Beverly; Percac-Lima, Sanja

9. *Nursing activities in relation to attainment of recovery in patients with opiate addictions*
   Bernhardt, Jean; Hooley, Lori

10. *Implementing a Social Determinants of Health Screening and Referral system for New Obstetrical Patients*
    Blake-Lamb, Tiffany; Bryant Mantha, Allison; Gates, Janika; Nadel, Hiyam; Neagle, Mary; Stewart, Nina; Faitel, Christine; Rushfirth, Katherine; Risley, Kristen

11. *Effectiveness of a group intervention to improve diabetes-related distress and blood sugar control in Spanish-speaking patients with Type 2 diabetes in the community*
    Roberg, Regina; Dean, Taquesha; Wexler, Deborah; Mischoulon, David; Cassano, Paolo; Chen, Justin; Trinh, Nhi-Ha; Safren, Steven; Chang, Trina E.

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12. *The All of Us Research Program in New England: Approaching Engagement and Communications for Communities Underrepresented in Biomedical Research (UBR) in Precision Medicine at Partners HealthCare System Hospitals*
    Hemley, Helen; Boutin, Natalie T.; Maloney, Heather; Jackson, Jonathan D.; Xerras, Dean C.; Karlson, Elizabeth W.; Smoller, Jordan W.; Clark, Cheryl R.; Edgman-Levitan, Susan M.

13. *Improving care transitions from Boston-area jails through an academic community health center and student-faculty clinic network*
    McGuire, Dan; Cohen, Marya; Williams, Rachael

14. *Partnering with North Suffolk Mental Health to Increase Access to Cancer Prevention, Early Detection, and Treatment*
    Macri, Benjamin; Callaway, Catherine; Akwe, Beriline; Percac-Lima, Sanja; Irwin, Kelly

15. *Improving Comprehensive Patient Care through Social Services at Student-Faculty Collaborative Clinic*
    Wang, Christine; Carbajal, Daniela; Chu, Jacqueline; Cohen, Marya

Youth and Adolescent Health

16. *A Tale of Two Epidemics: Characteristics of Young Adult Patients with Chronic Hepatitis C at an Urban Community Health Center*
    Morrill, James; Carr, Christina

17. *Youth-Perceived Assets and Challenges in Four Boston-Area Communities: Opportunities for Improving Adolescent Behavioral Health*
    NeMoyer, Amanda; Alvarez, Kiara; Mukthineni, Ravali; Rodriguez, Trinidad; Alegría, Margarita

18. *Unplanned pregnancy and other prenatal predictors of increased psychotic symptoms in a national cohort of 4,026 youths*
    Sipahi, Eren; Petrozzino, Gianni; Dowling, Kevin; Eryilaz, H. Hamdi; Roffman, Joshua

19. *MGH Youth Scholars Program: Promoting Opportunities for Educational Attainment and Employment*
    Tavaras, Cassandra

Presented abstracts will be eligible for The Department of Medicine Community Council's "Chelsea Research Day Abstract Award." A finalist from each thematic category will be nominated, and a winner from all the finalists will be selected in December 2018.

Authors

Listed by Last Name, First Name (Session #, Poster #)

1. Abuelo, Carolina (1,4)
2. Akwe, Beriline (1,5) (2,14)
3. Alegria, Margarita (2,17)
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Clinical Characteristics and Utilization Patterns of Post-Incarcerated Patients at CCC-Chelsea

Smitha Ganeshan, BS, Harvard Medical School
Marya Cohen, MD, MPH, Massachusetts General Hospital
Bonnie Blanchfield, CPA, SM, ScD, Brigham and Women's Hospital

Keywords: Healthcare utilization

Summary: The objective of this study is to compare the baseline clinical characteristics and healthcare utilization of individuals released from prison (IRP) receiving care at Crimson Care Collaborative (CCC) – Chelsea, a student-faculty collaborative clinic (SFCC), to all other patients receiving care at CCC-Chelsea. Understanding IRP's utilization patterns as they relate to patients with similar socioeconomic status and social factors may serve to identify opportunities for improved care delivery and coordination of care.

Background: IRP patients are more likely to suffer from chronic diseases, including HIV, substance use disorders, and diabetes than the general population. After release, these individuals often face barriers accessing basic primary care services, including insurance status, probation or parole requirements, stigma, and other social determinants. Patients are at a 12-fold increased risk of death in the first two weeks following release from prison. Substance use, unintentional drug overdose, and suicide attempts amplify this risk. Despite this knowledge, patterns of healthcare utilization among the IRP population remain poorly characterized.

Methods: A seven-year retrospective analysis of CCC-Chelsea patients identified 43 who had been released from state prison or jail prior to seeking care at CCC. Clinical characteristics and healthcare utilization were identified and compared with all other CCC-Chelsea patients. Data was obtained from the Partners Healthcare' Research Patient Data Registry (RPDR). Two-sided t-tests were used for comparisons.

Results: IRP had an average of 9.65 inpatient, 18.85, outpatient, and 4.011 emergency department (ED) visits annually. Average length of stay for inpatient hospitalizations was 3.53.

IRP had on average, 2.83 chronic conditions with 65% having 4+ chronic diseases. Almost half had 4+ mental health conditions, including 56% with opioid use disorder.

Average annual IRP ED visits of 4.01, exceeded the average, 3.10 of all other CCC-Chelsea ($p<0.05$); IRP outpatient visits,18.85, exceeded all other CCC-Chelsea of 13.34 ($p<0.05$); and IRP inpatient admissions of 9.65, exceeded all other CCC-Chelsea of 5.42, ($p<0.05$).

Conclusions: CCC-Chelsea IRPs utilize healthcare services at significantly higher rates than other CCC-Chelsea patients. Data suggests this may be multi-factorial due to higher burden of chronic disease and mental health morbidity. However, social factors and health-seeking behaviors may also play a causal role. Understanding these patterns of utilization offer CCC opportunities to redesign care to better serve these patients.

Health Literacy and Health Outcomes in Persons Living with HIV Disease: A Systematic Review

Raquel Reynolds, PhD, RN, MSN, PHCNS-BC, Assistant Professor MGH Institute of Health Professions School of Nursing
Sara Smoller, RN, MSN, ANP-BC, Assistant Professor MGH Institute of Health Professions School of Nursing
Anna Allen, MS, CCC-SLP, PhD(c), Doctoral Student MGH Institute of Health Professions School of Rehabilitation Sciences
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Keywords: HIV, health literacy, health outcomes

Summary: Health literacy affects HIV management and outcomes. This study systematically reviewed the literature to determine the association between health literacy and health outcomes in adults with HIV. Health literacy instruments varied. Definitions of health outcomes differed. Health literacy's effect on health outcomes was mixed.

Background: Low health literacy presents challenges for persons living with HIV, including poor medication adherence and poorer health outcomes. The aim of this study was to systematically review the literature to determine the association between health literacy and medication adherence and health outcomes in adults living with HIV.

Methods: The extended guidelines of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement were utilized to guide the approach to the review. A variety of electronic databases, e.g., PubMed, CINAHL, were searched using a selection of search terms and combinations, including HIV, health literacy, adherence, and health outcomes. Literature available on U.S. government websites was also included.

Results: Forty-seven studies examining health literacy and health outcomes in HIV disease were analyzed. Several instruments were used to measure health literacy. The Test of Functional Health Literacy in Adults (TOFHLA) (n=25) and the Rapid Estimate of Adult Literacy in Medicine (REALM) (n=9) were most common. Two studies modified the REALM. Some studies (n=3) measured health literacy by a single question and several studies (n=11) used a combination of other health literacy measures. Health outcomes measures included medication adherence, viral load, CD4 count, HIV knowledge, medication knowledge, substance use, and depression.

Conclusions: Measurement of health literacy and health outcomes has mixed approaches and instruments. Most studies used reliable and valid tools, such as TOFHLA and REALM despite availability of HIV-specific health literacy measures, such as the HIV Health Literacy Scale. Other studies used single-item measures or a combination of other instruments. Results indicated the relationship with health literacy and health outcomes vary or are unclear. Some studies found an association with health literacy and adherence or outcomes; others did not. It is possible that the use of an HIV-specific health literacy scale may yield more consistent results. Further exploration is needed.

Unmet Basic and Social Needs of Low-Income Fathers During Pregnancy

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Keywords: Fatherhood, pregnancy, social determinants of health

Summary: Understanding fathers' unmet basic and social needs, such as housing, employment and social-emotional support systems, is vital for effective family health interventions. This study assessed the prevalence of unmet basic and social needs among fathers participating in the First 1,000 Days Program during their partners' first trimester of pregnancy. Results indicated that low-income fathers have elevated housing and food security needs, insufficient financial support and full-time employment, and utilize primary care insufficiently.

Background: Paternal involvement has been shown to be vital to maternal well-being during pregnancy and child development. However, unmet basic and social needs can reduce a father's positive impact. By understanding these needs, we can better connect fathers to resources. The purpose of this study is to determine the prevalence of fathers' unmet basic and social needs during their partners' first trimester of pregnancy.

Methods: The First 1,000 Days Program is a systems-level initiative aimed to reduce obesity risk among low-income families by addressing individual, family, and socio-contextual factors. 127 fathers were surveyed at their partners' initial obstetrician nurse visit at MGH's Revere and Chelsea HealthCare Centers and DotHouse Health. Survey questions included information about participant and household characteristics, and unmet basic and social needs. Descriptive statistics were calculated.

Results: Over half of fathers in this study were Hispanic, Asian or African American and 54% were born outside of the United States. The majority of fathers (68%) reported a gross annual income under $50,000, and 27% reported an income under $20,000. Food insecurity (18%) was almost twice as prevalent as housing insecurity (10%). Support from formal support networks were also inadequate. 26% of fathers did not have full-time employment and 40% of fathers did not see a primary care physician in the past year. Informal networks that provided support via partners and family and friends offered social-emotional support more readily than financial. For example, 90% of fathers reported receiving "high support" from their partners, while fewer fathers (66%) knew an individual that could loan them $50. Fathers indicated needing more resources related to nutrition, exercise, and parenting.

Conclusions: Our findings indicate fathers in this study had several unmet basic and social needs. By providing paternal support and resources, fathers may be able to, in turn, better support their partners, children and themselves.

Check it. Change it. Control it.

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Keywords: Hypertension, control, education

Summary: We implemented and evaluated a hypertension program to improve hypertension control rates in this clinic population through staff and patient education. Patients with hypertension can be managed through a blood pressure lending library and group visit format.

Background: The Charlestown Heath Care Center treats a population of 16,000 patients in a 1.4 Square mile area, many of whom have hypertension and other complex care needs. We wanted to design a program to improve their care and implement a new process to that end.

Methods: Education Program developed for Patients/Staff to promote collaborative, multidisciplinary care of hypertensive patients. Development of process to increase education of patients for home blood pressure monitoring- to include a Blood Pressure Cuff Lending Library and RN-Patient Visits.

Results:

- Staff Presentation on the care of the hypertensive patient held
- Blood Pressure Workshops initiated and held quarterly
- Blood Pressure Cuff Lending Library initiated
- RN Blood Pressure Check visits initiated

Conclusions: The results of this project showed and continues to show the impact of staff and patient education via staff competencies; development of group visit format for patient education; RN blood pressure check visits and a blood pressure cuff lending program on improving goal blood pressure.

The Cancer and Mental Health Collaborative: Engaging Diverse Stakeholders to Increase Access to Patient-Centered Research for Patients with Serious Mental Illness

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Keywords: Serious mental illness, cancer, collaborative

Summary: The Cancer and Mental Health Collaborative is a community network that aims to engage diverse stakeholders, including patients, caregivers, clinicians, community partners, and researchers, to build the capacity to conduct patient-centered research focused on improving cancer outcomes for individuals with serious mental illness. Key areas of focus include conducting a needs assessment, hosting an annual symposium and strengthening channels to disseminate research findings.

Background: Individuals with serious mental illness (SMI) experience inequities in access to cancer care and research which contribute to increased cancer mortality. To increase access to research and improve cancer outcomes for people with SMI, stakeholders identified the need to collaborate across systems to build the capacity to conduct patient-centered research (PCOR).

Methods: We aim to (1) develop the Cancer and Mental Health Collaborative (a community network focused on engaging patients, caregivers, clinicians, community partners, and researchers), (2) increase the capacity for partners to engage in PCOR, and (3) strengthen channels to disseminate research findings. The collaborative includes a stakeholder advisory board, steering committee, and dissemination committee. Areas of focus include conducting a needs assessment, hosting an annual symposium, and creating a preliminary dissemination toolkit for PCOR.

Results: The steering committee and stakeholder board of the Cancer and Mental Health Collaborative have been established, with representation from Massachusetts Department of Mental Health, Beacon Health Options, National Alliance on Mental Illness - Massachusetts, MoodNetwork (PCORnet), North Suffolk Mental Health Association, American Cancer Society, and National Community Oncology Research Program. The collaborative hosted the second annual symposium in May 2018, gathering over 250 diverse stakeholders from more than 50 organizations dedicated to improving access to research and cancer care for individuals with SMI. The dialogue established priorities for the collaborative, which focused on four main areas: clinical care (engage community mental health centers), research (increase access to clinical trials and conduct PCOR), education (develop cross-disciplinary training modules), and advocacy (raise awareness and combat stigma).

Conclusions: The Cancer and Mental Health Collaborative is a community network that aims to engage diverse stakeholders to reduce the cancer mortality gap for individuals with SMI. Next steps include growing our membership and reach through social media and developing a sustainable system of partnerships to conduct and disseminate PCOR.

Changes in emotion recognition following the Emotional Leadership Development Group: A pilot study of enhancing resilience and preventing psychopathology in children in Chelsea, Massachusetts.

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Keywords: Resilience, pediatrics, mindfulness

Introduction: Most psychiatric illnesses have their roots in childhood. To have the most impact on psychiatric disorders, we must find ways to prevent disorders from beginning in the first place. Many risk factors are shared across different types of psychopathology, including exposure to trauma, parent psychopathology, sub-syndromal symptoms, and living in an urban environment. Children from Chelsea, Massachusetts are exposed to many of these risk factors, as well as other factors that increase daily stress levels, such as exposure to violence, uncertain immigration status and poverty. Thus, children living in Chelsea are at elevated risk for developing psychiatric illness. Studying such children can help us to understand how to prevent psychiatric illness and how these illnesses develop.

Methods: Children 11-14 years old were recruited from the Massachusetts General Hospital (MGH) Chelsea Health Center. Children were screened for sub-syndromal psychiatric symptoms using the Strengths and Difficulties Questionnaire (SDQ). Sub-syndromal symptoms were measured as symptoms below the threshold for a diagnosis, but above the normal range. Children participated in an intervention that included elements of cognitive behavior therapy (CBT), dialectical behavior therapy (DBT), and mindfulness. The group was comprised of 10 sessions. Topics discussed in the group included identifying your own and others' emotions, kindness and compassion, communication skills, and problem solving. The group intervention was led by an experienced community-based therapist and a psychology post-doctoral fellow. Pre-intervention and post-intervention measures were collected. These measures included measures of psychiatric symptoms: the parent-report Children's Behavior Checklist (CBCL), and child self-report Screen for Childhood Anxiety and Related Disorders (SCARED). Child self-report of emotion regulation strategies was also collected, including the Emotion Regulation Questionnaire (ERQ) and the Emotion Regulation Index for Children and Adolescents (ERICA). Finally, a computerized task measuring emotion recognition was collected. The task consisted of the presentation of images of emotional faces (fear, happy, angry, neutral). Faces were morphed to display different degrees of emotion intensity ranging from 50% emotion (e.g., 50% angry and 50% neutral) to 100% emotion (e.g., 100% angry). Children were asked to identify the emotion of each face using a button press. Number of emotions correctly identified, number of faces for which no button was pressed, and reaction times were recorded.

Results: Sixty children were screened. Thirty-six children were eligible for the intervention and 11 children were enrolled in the intervention (mean age 12 years). One child dropped out of the intervention, resulting in 10 children completing the intervention. Changes in symptom scores will be reported at a later time point. After the intervention, children were more likely to select the correct emotion for 100% happy faces ($t = 2.5$; $p = .04$). There was a trend towards children being more likely to select the correct emotion for 50% angry faces ($t = 1.9$; $p = .10$), 75% fearful faces ($t = 2.1$; $p = .07$), and 100% fearful faces ($t = 1.8$, $p =.10$).

Conclusions: Using an emotion recognition task as an objective measure of outcomes, we found that, following the intervention, children were better able to identify emotions, particularly fearful faces, which are often ambiguous and difficult to interpret. Thus, the intervention may have led to improvements in facial affect recognition, which may result in positive behavioral change over time. We plan to follow these children longitudinally to determine if these effects are sustained and whether symptom and behavioral improvements occur as any newly learned emotion recognition skills are implemented in the real world.

Visualization of human brain cytoarchitecture: a comparison between Optical Coherence Tomography/Microscopy and Histology

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Keywords: Optical coherence tomography, optical coherence microscopy, histology

Summary: Traditionally, histology is used for visualizing neurons. However, distortion artifacts like tears, shrinking and mispositioning negatively impact these results. Alternatively, optical coherence tomography (OCT) and microscopy (OCM) can reduce these distortions by imaging the tissue before sectioning. In this study, we quantitatively and qualitatively compared OCT, OCM, and Nissl data to demonstrate the benefits of OCT/OCM. Future studies using OCT/OCM can improve our understanding of neurological disease development and impact on the brain.

Background: Currently, 5.7 million Americans are living with Alzheimer's, and that number is projected to reach 14 million people by the year 2050 (https://www.alz.org/alzheimers-dementia/facts-figures). In defining diagnosis and understanding neurological diseases, such as Alzheimer's, it's essential to study the brain's cytoarchitecture (cell organization) postmortem. Histology is traditionally used to examine neurons and axons in the brain; however, this technique introduces distortion artifacts like tissue rips, shrinking, and mispositioning. Optical coherence tomography (OCT) and microscopy (OCM) reduce distortions by imaging the tissue prior to cutting. In this study, we compared OCT and OCM to Nissl staining to illustrate the differences between the techniques.

Methods: OCT/OCM measures the light backscattered by the tissue, in a similar way to that of ultrasound. The fibers and neurons in the tissue provide the contrast. The resolution, 3.5um (OCT) and 1.25um (OCM), makes it ideal for imaging cortical layers and neurons respectively. Registration (both linear and nonlinear), layer labeling, and neuron segmentation were used to qualitatively and quantitatively compare OCT/OCM to Nissl images.

Results: We show that imaging prior to sectioning reduces distortion, therefore increasing the colocalization of the blockface reference image to the OCT image. We also confirm that OCT detects the organization of the neurons in the cortex as seen with Nissl. For OCM, the neuron colocalization percentage was higher for OCT compared to Nissl in both BA 21 and BA 32.

Conclusions: Both results demonstrate that OCT/OCM are promising tools to the studies of cytoarchitecture, from the laminar structures to the individual neurons. Moreover, due to the limited distortions, OCT can be used to create undistorted 3D volumes of tissue without requiring between-slice registration. Future studies using OCT/OCM can improve our understanding of the development of neurological diseases and their impact on the brain.

Case Study: Use of Patient Education Videos in Asthma Awareness Month Campaigns at Massachusetts General Hospital

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Keywords: Asthma, patient engagement

Summary: Massachusetts General Hospital utilized the Vidscrip platform to create a series of videos about asthma as part of their 2017 and 2018 Asthma Awareness Month campaigns. Videos were posted on the MassGeneral Hospital for Children Facebook page.

Background: It's estimated patients forget 40-80% of what they are told by their provider during an office visit and turn to questionable sources of health information. The Vidscrip platform enables clinicians to create easily customizable videos on their desktop or mobile device which are then prescribed to patients before, during, or after a clinic visit/procedure by sharing the video URL.

Methods: Vidscrips were incorporated into two hospital-wide awareness campaigns for Asthma Awareness Month in May 2017 and May 2018. A total of eleven videos were created over the course of both campaigns (six in 2017 and five in 2018) by a multidisciplinary team that included an asthma coordinator at MGH Chelsea. Video links were distributed to the Pediatric Asthma Special Interest Group and other stakeholders through weekly email communications. Both campaigns also utilized the MassGeneral Hospital for Children Facebook page to share videos. Five videos were posted on the Facebook page during the first campaign, two during the second.

Results: As of March 2018, videos created for the first campaign had a combined 2,171 views (views are cumulative) and the Facebook posts had been seen by over 3,600 people (combined). As of June 2018, videos for the second campaign had a combined 4,631 views (cumulative) and the Facebook posts had been seen by 7,952 people (combined). Due to limitations in data available through the Vidscrip platform, it is not possible to separate which views were the result of the social media campaign and which came from a clinician prescribing the video(s) during an episode of care.

Conclusions: Patient education videos are a valuable tool for patient engagement and education. With more robust data reporting and more user-friendly distribution methods, Vidscrips could be a powerful component of targeted population health management interventions.

HIV testing in a large community health center serving a multi-cultural patient population: A qualitative study of providers

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Keywords: HIV testing, diagnosis and screening, clinical guidelines

Summary: HIV test delivery can be hindered by many factors in the health center setting, chiefly among them are challenges of culture and health center organization. Fully involving and leveraging the strengths of various clinical units as well as regularizing testing into provider workflow may improve routine HIV testing and move health center practices closer to current U.S. guidelines.

Background: In the United States, 15% of people with HIV do not know their HIV serostatus, leading to both individual morbidity and HIV transmission. While CDC guidelines recommend HIV screening for all individuals aged 13-64 years, racial and ethnic minorities in the US continue to present to care with advanced disease.

Methods: Our objective was to assess providers' perspectives on factors affecting the provision of HIV testing at an urban community health center serving a predominantly racial/ethnic minority population of low socio-economic status. We conducted 5 focus groups from January 2017 to November 2017 with 74 health center staff: 20 adult medicine/primary care providers, 34 community health workers (CHWs) and community health administrators, 6 urgent care physicians, and 14 behavioral health providers. Interviews were digitally recorded. Three study staff analyzed the transcripts using a grounded theory approach and open coding to develop themes.

Results: We identified five primary determinants affecting HIV testing in this setting: 1) provider perception of patient attitudes and beliefs; 2) interprofessional communication; 3) time and the prioritization of medical and social issues; 4) clinical indicators for testing; and 5) knowledge about the importance of routine HIV testing. Primary care physicians desired easier mechanisms to identify patients due for HIV testing and assistance with offering testing to non-English language speaking patients.

Conclusions: Training to improve provider comfort with HIV testing, integrating CHWs into medical practice, and a focus on patients' cultural beliefs may all increase HIV testing in a diverse community health center population.

The Post-Acute Care Experience from the Patient's Perspective

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Keywords: Post-acute care, transition of care, skilled nursing facilities

Summary: MGH and their SNF partners appear to be doing a great job managing the transition of care, but there are still opportunities to improve communication with primary care.

Background: In 2013, Partners HealthCare System (PHS) established the PHS Skilled Nursing Facility (SNF) Collaborative Network. This network was established to improve the post-acute care provided to our PHS patients by identifying high quality SNFs and developing stronger collaboration and accountability on both the acute and post-acute side of the patient experience. Six months later in April 2014, Partners joined Pioneer ACOs (Accountable Care Organization) across the country in launching the Medicare 3-Day Rule Waiver. This program was designed to give patients access to appropriate level of care, avoiding unnecessary hospitalizations. Subsequently in December 2015, the Massachusetts General Hospital (MGH) established the MGH SNF Collaborative Network. This smaller network had a more local focus and engaged our partnering SNFs more deeply in quality improvement activities. All of these initiatives represent the need for ACOs to remain involved in the care of their patients even when the care is delivered by other providers across the continuum. While all of these post-acute care programs had metrics to evaluate the work being done, none of these metrics included the patient perspective. Through a PHS SNF Collaborative seed grant, we proposed to conduct interviews with patients to learn about their experience. These interviews were designed to understand patient satisfaction and identify opportunities for improvement across the post-acute care continuum.

Methods: This project evaluates SNF transition of care for patient transfers to a SNF and then transferred to Home Care Services. This was not limited to just Partners Home Care. We developed the survey with input from key stakeholders, including case management, primary care, SNF providers, home care providers and patients. Survey domains include: communication, continuity of care, patient centered decision making, readiness, and satisfaction. We cognitive tested surveys prior to pilot-testing and used results from cognitive interviews to refine the final survey. After patients were discharged from SNF, letters were sent about the phone survey and provided a phone number to call to opt out. One week after sending the letter, patients were contacted by phone. The calls were semi-structured
surveys that lasted on average 15 minutes. The survey was designed to evaluate the transition of care from MGH to SNF, and subsequently from SNF to home with home care services. Data collection occurred from June 2016 to May 2017.

Results: Overall satisfaction was very favorable with 82% satisfaction with how the MGH medical team prepared the patient for SNF and 84% saying the transition to SNF went smoothly and 87% reporting their medical care continued smoothly to their visiting nurse.

MGH plans to resume surveying again to see the impact of the Transitions of Care Manager on care continuum communication particularly with Primary Care, and Home Care along with patient satisfaction.

Conclusions: It is important to remember this data reflects patient perspective. The study had a good response rate of 48% (n=79). For 51% of the participants, this was their first SNF admission. Greatest opportunities appear to be in communication. Connecting patient with home care earlier (before discharge) and better communication with primary care. However, despite these opportunities, overall satisfaction with care is high across the continuum. Follow up calls by PCP office were a very low rate 51%. Similarly, 51% said the visiting nurse updated their PCP about their SNF stay.

MGH plans to resume surveying again to see the impact of the Transitions of Care Manager on care continuum communication particularly with Primary Care, and Home Care along with patient satisfaction.

Falls Prevention – A Nursing Strategy

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Keywords: Falls prevention, risk for falls, falls risk assessment

Summary: I implemented and continue to evaluate the progress of nursing led Falls Prevention Strategy Sessions. Nursing led sessions lead to implementation of strategies and interventions to prevent falls. Follow up with patient on progress and follow thorough is done over the course of a

Background: The Charlestown HealthCare Center treats a population of 16,000 patients in a 1.4 square mile area. The Adult Medicine Unit initiated the Patient Reported Outcomes Measures Program (PROMS) in 2018. With this program patients are prompted with questions on predetermined subjects- one of these being Screening for Falls. The barriers presented for providers are, limited time with patients to address these risks, implement a plan, and have follow up for follow through on interventions.

Methods: RN Led Falls Prevention Strategy Session Pilot developed.
Referrals initiated by Patient or Provider.
Research based program utilizing CDC guidelines from the STEADI (Stopping Elderly Accidents, Deaths & Injuries) Program.
Each 45-minute session is a one on one assessment of falls risk and with agreed upon coordinated interventions and mutually agreed upon care plan for falls prevention.
Follow up of effectiveness of interventions over the course of 1 year via 3/9-month phone call/Gateway message; and 6/12-month face to face evaluations.

Results: 4 patients currently enrolled in the Falls Prevention Strategy Session Program.
Each patient with positive feedback regarding interventions/strategies put in place including traditional physical therapy; home safety evaluations; Aqua therapy; podiatry referrals; and literature. Documented care plans in EMR for easy collaboration of care regarding Falls Prevention

Conclusions: The preliminary results of these sessions are positive. The nursing led sessions affords a comprehensive evaluation with referrals for collaborative care. The patients are extremely receptive to these personalized strategies to decrease the risk for falls. The nurse led program affords the time for close follow up and follow through of interventions.

Challenges in Recruitment and Retention of Spanish-Speaking Community Samples with Type 2 Diabetes for a Behavior Change Intervention

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Keywords: Diabetes, recruitment, retention

Summary: We report on the recruitment and retention of a community-based study on a behavior change in an at Spanish-speaking populations with diabetes. We will examine the relationship between age, gender, and AIC and the likelihood of participating in a screening visit through logistic regression to examine recruitment. We will also examine the relationship between age, gender, A1C, employment status, disability status, and education level and the likelihood of completing the study and the behavior intervention.

Background: Spanish-speaking populations are often underrepresented in clinical research due to a lack of physical access, language barriers, and population specific recruitment methods. We report the results of the recruitment efforts and retention of a community-based study on a behavior change in an at Spanish-speaking populations with diabetes.

Methods: To measure recruitment, we characterized the sample based on the number of prospective participants contacted through mailings and calls, the outcomes of contact, and the reasons for declining study participation.

To examine retention, we characterized the sample by the number of people who attended the screening visit, signed consent, enrolled, how many intervention sessions each patient completed, whether they completed the study, and whether they completed the behavioral intervention.

We will examine the relationship between age, gender, and AIC and the likelihood of participating in a screening visit through logistic regression to examine recruitment. For retention, we will examine the relationship between age, gender, A1C, employment status, disability status, and education level and the likelihood of completing the study and the behavior intervention.

Results: Of 589 potential participants, 22% could not be reached. Of those who were contacted, 25% were not interested, 17% were lost to follow up, and 14% had issues with scheduling. 24% were scheduled for screens, accounting for 18% of the total sample. Of those scheduled, 50% attended the screen, 47% signed consent, and 37% enrolled. Of those enrolled, 78% completed the study.

Conclusions: Despite recruiting in a community with the help of trusted providers, it was extremely difficult to involve Spanish-speaking patients. Future interventions might be better aimed at patients with moderately controlled diabetes and should also address social barriers. To target patients with poorly controlled diabetes, raising interest through motivational or educational interventions at the individual provider level may be required to increase retention and engagement.

Identifying Nurse Leader Development Needs in the Primary Care Setting

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Keywords: Nurse manager, leadership development, primary care

Summary: Nurse managers feel they are working hard yet may not be projecting a positive model to attract future nurse leaders. A survey of nurse practitioners and registered nurses across 19 primary care practices found that upwards of 80 percent of NPs and RNs were not interested in becoming nurse managers. However, nurse managers have opportunities to attract future nurse managers by giving them time to attend meetings and develop leadership skills.

Background: Today, nurse leaders are expected to lead through innovation, evidence-based practice and rapid, efficient implementation of best practices while managing hiring, budgets, productivity, patient satisfaction and quality. Primary care nurse leaders feel overwhelmed by the demands of their dual roles as a manager and as a clinical nurse. Nurse managers feel they are working hard yet may not be projecting a positive model of an effective nurse leader so that others will aspire to be future nurse leaders.

Methods: An electronic survey administered through Survey Monkey was sent to 163 nurse managers, nurse practitioners (NPs) and registered nurses (RNs) across 19 primary care practices at MGH.

Results: Nurse managers, NPs and RNs agree that the characteristics and behaviors of a strong nurse leader include listening skills and approachability. Nurse managers and NPs agree that nurse managers need the ability to self-regulate their emotions and possess intelligence and strong organizational skills. Nurse managers perceived it was more important to protect staff and create a sense of urgency to get things done than either NPs or RNs perceived. Interestingly, only half of each group felt that it was important for nurse managers to demonstrate a balanced work/personal life. Only 20 percent of NPs and RNs responded that they were interested in becoming a nurse manager. Most RNs and NPs were interested in helping nurse managers orient new staff. Nurse managers responded the greatest resources needs for aspiring nurse leaders are time to attend meetings and leadership training where RNs responded that the greatest need was human resources training.

Conclusions: Current nurse managers have opportunities to attract future nurse managers and share the work of orienting new staff with aspiring nurse leaders. Further investigation is warranted to understand the responses of all three groups related to the importance of nurse managers demonstrating balanced work/personal life.

A Retrospective Study Measuring the Impact of a Police-Behavioral health Partnership on Visibility of Children During Police Responses to Violence in Chelsea, MA.

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Keywords: Child welfare, trauma, police

Summary: Pediatricians, researchers, child welfare workers and clinicians have long been aware of the adverse effects of child abuse and neglect.
Police officers have a unique opportunity as first responders to identify these children. A twenty-year-old Police-Behavioral Health Partnership in Chelsea, MA measures its effectiveness in the greater rate at which Chelsea officers file 51A's with the local Department of Children and Families office compared to officers in adjoining cities in the same DCF catchment area. The authors suggest that more standardized methods of collecting this data may improve agency collaboration, identify training needs and ultimately guide interagency efforts to improve the safety and well-being of

Background: Pediatricians, researchers, child welfare workers, and clinicians have long been aware of the adverse effects of abuse and neglect on children. Massachusetts courts now recognize that witnessing violence has a profound impact on the development and well-being of children and constitutes a "distinctly grievous form of harm." Children who witness violence are at greater risk for serious lifetime psychological and medical health outcomes.

PACT (Police Action Counseling Team) is a partnership between an MGH behavioral health clinician and the Chelsea Police Department. Police officers identify children at the scenes of violent incidents and refer these children and families to the PACT clinician. The purpose of the program is to provide a voluntary trauma informed intervention designed to mitigate against the negative effects of trauma. PACT interventions facilitate collaboration among the Chelsea Police Department, the Harbor Area office of the Department of Children and Families, and the MGH Chelsea HealthCare Center.

One measure of this partnership's effectiveness is officers' attention to children during police responses, as evidenced by the rates at which police officers file reports of child abuse and neglect (51A's).

Methods: The PACT clinician provides every officer in the Chelsea Police Department with training about trauma and its effects on children; about an officer's unique role in identifying and interacting with children; about involving a behavioral health clinician, DCF worker and other community partners who can help children and their families; and about how police interactions with children can improve officer safety.

DCF data were manually compiled to tabulate the number of 51A's filed by police officers on behalf of children in each city and neighborhood of the Harbor Office catchment area (including Chelsea, Winthrop, Revere, and the East Boston and Charlestown neighborhoods of the city of Boston) during the months of March and Sept for years 2009-2018. Additionally, DCF's central office provided data regarding the number of reports that Chelsea police officers filed on behalf of children across the state.

Results: The data indicate that while the number of 51-A's filed by Chelsea police officers fluctuates somewhat year to year, Chelsea officers file significantly more 51-A's than officers of adjoining cities and neighborhoods in the Harbor Office Catchment area.

Conclusions: PACT has been in place in Chelsea for over twenty years. Authors speculate that the cross training between clinicians and police officers has changed the culture of policing in Chelsea. This is evident in changing police practices, increased attention to children, and likely accounts for the higher rates at which Chelsea officers file 51A's compared to officers from surrounding communities.

Long Term Impact of a Culturally Tailored Patient Navigation Program on the Disparities in Breast Cancer Screening in Refugee Women After the Program's End

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Keywords: Patient navigation, mammography screening, refugee health

Summary: We assessed mammography screening rates among refugee women enrolled in the MGH Chelsea HealthCare Center Patient Navigation program after the program ended. We found that refugee women mammography screening rates remained similar to rates of English speaking patients at Chelsea five years after the patient navigation program, suggesting a persistent effect of the

Background: Patient navigation (PN) can improve breast cancer screening in refugees, however the lasting effect of PN program after its end has not been demonstrated.

Methods: We assessed screening rates during 2012-2016 for refugee women who were enrolled in Massachusetts General Hospital (MGH) Chelsea PN program. For each calendar year, we compared the proportion of patients completing mammography screening during the prior two years among refugee women to English-speaking and Spanish-speaking patients cared for at MGH Chelsea community health center during the same time, both overall and stratifying by age over and below 50 years. We tested the difference in adjusted screening completion proportion between the refugee group and the English-speaking and Spanish-speaking groups using logistic regression. We performed the general estimating equations procedure to account for clustering by primary care physician, adjusting for patient age, race, insurance status, and number of clinic visits.

Results: In 2012, the year when the funding for PN ceased, there were 126 refugee women eligible for breast cancer screening. In this baseline year, when participants stopped receiving PN, mammography screening proportions were significantly higher among refugee women (90.5%, 95% CI: 83.5%-94.7%) compared to English-speaking (81.9%, 95% CI: 76.2%-86.5%, p=0.006) and Spanish-speaking women (89.9%, 95% CI: 86.0%-92.8%, p=0.844). By 2016, screening proportions had decreased among refugee women (76.5%, 95% CI: 61.6%-86.9%) but were not statistically different from screening proportions among English-speaking women (80.5%, 95% CI: 74.4%- 85.3%, p=0.460) and were significantly lower than among Spanish-speaking women (89.2%, 95% CI: 84.3%-92.6%, p=0.002). Screening prevalence in all groups remained above the pre-PN program screening levels, especially in women under 50.

Conclusions: The culturally and language-tailored PN program designed to reduce disparities affecting refugees in breast cancer screening succeeded in maintaining increased prevalence of mammography completion in refugee women for five years after the program's completion.

Can BMI explain most of the Trait Anxiety Symptoms Reported in Adolescent and Young Adult Girls with Severe Obesity?

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Keywords: Trait anxiety, severe obesity, BMI

Summary: It is particularly concerning that the rates of severe obesity continue to rise. In addition to physical comorbidities, obesity in youth might be associated to mood and emotional alterations. Trait anxiety are those feelings of stress, or discomfort among day to day normal situations. Hence, we try to compare T-scores assessing trait anxiety across weight spectrum to see its correlation.

Background: Data exploring the effect of weight on trait anxiety in adolescence are lacking. We compared self-reported trait anxiety symptoms in girls aged 14-23 years across the weight spectrum.

Methods: 105 girls, 40 with low weight eating disorders (ED), 34 healthy normal-weight controls (C) and 31 with morbid obesity (OB) between the ages of 14-23 participated. 60 subjects (ED, C) received STAI-Trait and 45 (OB, C) received STAI-X2. Raw scores were converted to T-scores using the State-Trait Anxiety Inventory for Adults. Nonparametric analysis was used to compare groups.

Results: Average BMI was highest in OB and lowest in ED (44.9±7.3, 22.2±1.9 and 18.4±1.7 kg/m2 respectively, p=<0.0001). There was no difference between groups for average number of reported hours of sleep nor seasonal distribution of test administration. STAI Tscores were higher in OB (57.0±13.9) compared to C (44.1±8.3) but lower than in ED (70.4±11.8) ($p \leq .0001$ for both). Differences between groups persisted after controlling for age. BMI exhibited a U-shaped relationship with STAI T-scores, with a significant quadratic polynomial fit (p=0.004). Adding BMI to the regression model, differences between OB and C were no longer significant (least square means for OB 57.0±10.2 and for C 44.1±7.6), but ED , still differed from C (least square means for ED 70.7±11.2).

Conclusions: In adolescent girls, STAI T-scores exhibit a U-shaped relationship with BMI, and extremes of weight are associated with greater trait anxiety symptoms. Weight appears to be a significant contributor to trait anxiety symptoms in adolescent girls with severe obesity.

Comparison of Measured and Calculated Resting Energy Expenditure in Adolescents with Severe Obesity and Follow-Up One Year Post Bariatric Surgery

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Keywords: Resting energy expenditure, adolescents, bariatric surgery

Summary: Obesity is a major problem that continues to rise. It is essential to calculate caloric requirements to establish nutritional goals precisely in a clinical setting. The equations most commonly used are Mifflin-St Jeor (MS) and Harris Benedict (HB) however, the goal standard means of REE calculation is by indirect calorimetry which unfortunately is not always available in clinic. Various estimates of REE have been evaluated for adults, but data in adolescents are lacking.

Background: A method to determine the caloric goals of individuals with severe obesity in the clinical setting, where indirect calorimetry is typically not available, is essential for making dietary recommendations. Our aim was to evaluate the strength of correlation between estimated and measured REE in adolescents with severe obesity using commonly employed methods. Also, the effects of bariatric surgery on REE have not been evaluated in adolescents.

Methods Cross-sectional study included 44 adolescents (32 female, 12 male),14- 21 years old, with severe obesity (BMI>35). Nonparametric analysis was used to assess the relationship between measured REE using indirect calorimetry and estimated REE using four equations: Mifflin-St Jeor (MS), Harris Benedict (HB), World Health Organization (WHO), and the Institute of Medicine (IOM). In our longitudinal study, fourteen out of 44 subjects returned to repeat all components; 6 underwent bariatric surgery, and 8 had no intervention. We used a one-sided t-test to determine the significance of change in measured REE.

Results: Cross Sectional Study: Mean BMI was 46.2 ± 7.9 kg/m2, and participants were engaged in <250 minutes/week of physical activity. Measured REE in males and females was strongly associated with estimated REE using the MS, HB, WHO and IOM equations. Matched pair analysis showed an average overestimation of 300.7, 487.5, 727.3 and 1189.6 kCal for the MS, HB, WHO, and IOM methods respectively. Longitudinal Study: REE decreased significantly in the surgical group (p= 0.03) with a mean decline of 261 kCal ± 19 after surgery.

Conclusions: In adolescents with severe obesity, there is a strong correlation between measured REE using indirect calorimetry and estimated REE using the MS, HB, WHO, and IOM equations. However, there is consistent overestimation of REE using the calculated methods, particularly with the IOM equation. Measured REE decreases with weight loss following bariatric surgery.

Literature Review to Inform a Collective Impact Approach to Improve the Developmental Health of Young Children

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Keywords: Early childhood development, collective impact, community partnerships

Summary: An extensive literature review is a starting point for initiating collective impact approaches to addressing health issues. A literature review will be conducted to examine currently existing relevant early childhood collective impact models that will inform the newly forming Chelsea Early Childhood Network. The CECN aims to improve the developmental health of children 0-5 years of age via a systems alignment approach.

Background: Literature reviews are assessments of research to address a research question. Conducting literature reviews allows for a deeper understanding on what has already been developed around creating systems change using a collective impact model. The review will illuminate the organization of previous national and international collective impact approaches to improving comprehensive developmental health for children ages zero to five years of age. We will analyze these models in relation to the newly forming Chelsea Early Childhood Network, a collective impact approach focused on bringing systems and services together to best serve children before they enter kindergarten and are in a crucial neurobiological developmental stage.

Methods: The third author will conduct a literature review using the following databases: PubMed, Directory of Open Access Journals, Social Science Research Network, and Google Scholar. Search terms to be used include: collective impact, collective impact models, early childhood networks, early childhood partnerships, and early childhood development. We will collect and summarize at least 10 articles that provide examples of collective impact early childhood models.

Results: The results will be forthcoming and determine what components may be helpful to consider in building the Chelsea Early Childhood Network. We will also analyze the challenges and gaps in research available regarding collective impact models.

Conclusions: By understanding what other successful collective impact models have been implemented and how they have been analyzed, the Chelsea Early Childhood Network can best inform its strategic plan.

The 2019 North Suffolk Community Health Needs Assessment and Implementation Plan

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Keywords: Community Health Needs Assessment, community health improvement plan, affordable care act

Summary: Every 3 years, hospitals are required to conduct a community health needs assessment and implementation plan with the communities with which they work. In 2019, MGH will be partnering with the North Suffolk Public Health Collaborative, municipalities, other healthcare providers, community coalitions, and organizations to conduct the CHNA in Chelsea, Revere, and Winthrop and create a robust implementation plan to improve the health and wellbeing of our communities.

Background: The Affordable Care Act requires all non-profit private hospitals to conduct community health needs assessments (CHNA) and create community health implementation plans (CHIP) every 3 years. Although MGH Center for Community Health Improvement has regularly conducted CHNAs, in 2012 it conducted a truly community engaged process in Revere and Chelsea. In 2019, the CHNA will cover North Suffolk county and include Chelsea, Revere, and Winthrop.

Methods: A comprehensive steering committee will conduct and complete a joint, participatory CHNA for Revere, Chelsea and Winthrop by September 30, 2019 and develop a collaborative CHIP that addresses priorities and identifies opportunities for shared investment and programming by the partners for the period of 2019-2021. Steering committee members include MGH and the North Suffolk Public Health Collaborative, municipalities, other healthcare providers, community coalitions, and organizations who serve the residents of the 3 communities. Ad Hoc committees will focus on data collection, community engagement, and prioritization. We will conduct interviews, focus groups, host community forums, and distribute surveys to gather community input.

Results: The result will be a complete and comprehensive community health needs assessment and implementation plan in which all partners have buy-in and can use for their own reports and grant applications.

Conclusions: We envision using the upcoming CHNA and CHIP to work towards a North Suffolk region where individuals from all backgrounds and circumstances will have every opportunity to live a healthy life; and where local governments, health care providers, social service and community-based organizations, and community residents work in continuous partnership to improve health outcomes for all people in the region.

Description of Resources Related to Social Determinants of Health for an Outpatient Medical Clinic Population

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Keywords: Social determinants of health, resource specialist, environmental stressors

Summary: Safe, nurturing environments for children and stable, functional circumstances for adults are associated with improved behavioral health and medical outcomes. Understanding the most pressing Social Determinants of Health for patients and providing resources necessary to assist with these factors are essential in contributing positively to physical, behavioral, and developmental goals.

Background: While provision of medical care and behavioral health services are essential for prevention and treatment of physical and psychological conditions, many other factors effect medical and psychological outcomes. These environmental influences are now commonly referred to as the social determinants of health (SDOH), and include: access to social and economic opportunities; other resources and supports available in homes, neighborhoods, and communities; the quality of schools; the availability of healthy food; and the nature of social interactions and relationships.

Providing services to clinic patients in a diverse community where many refugees and immigrants also reside involves understanding and addressing the context within which adults and children are expected function. Available assistance should be developed to match recognized need. In order to better understand the environmental stressors faced by families utilizing clinic outpatient services, an analysis of referrals made for resource assistance and services offered was completed.

Methods: Using ETO (Efforts to Outcomes) Database analysis, descriptive statistics were used to summarize and categorize referrals made related to social determinants of health. These descriptive statistics will be further analyzed to explore tasks completed with patients and their families as these relate to health and well-being.

Results: Over 35% of referrals the resource specialists received were related to issues about housing stability (including potential homelessness and insufficient income for rent). Stable, safe housing is an essential component of care, for without it, there is a high likelihood of developing chronic stress. Disruptions in housing are also associated with inconsistency of care and minimization of behavioral health and medical needs while seeking stable shelter.

Other notable referrals were for emergency utility assistance and household items (18%) and food related resources (19%).

Conclusions: While affordable housing availability is a systemic issue that needs to be addressed via government initiative, in the short-term patients still require stable, safe housing. This study describes the demand for solutions regarding housing and how clinic resource specialists provide patients with advocacy and assistance. In addition, other imperative social determinants of health will also be examined.

Addressing Food Insecurity in Chelsea

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Keywords: Food insecurity, collaboration, healthy food, affordable food

Summary: Addressing an expansive problem, such as access to healthy and affordable foods, cannot be done in silos. Collaboration among different organizations, representing various sectors are needed to implement community-wide solutions. Creating the opportunity for all organizations interested in the issue to be under one roof brainstorming with each other what is needed in the community has provided Chelsea the push forward to strengthen and create partnerships and workgroups to tackle the issue.

Background: Access to healthy and affordable food has increasingly become an issue among Chelsea residents. High cost of living, limited income, culture, and limited awareness of the few available resources are just some of the reasons residents are unable to access healthy and affordable food.

Methods: The first Chelsea Healthy and Affordable Food (CHAF) Summit was held in March 2018 with multi-discipline representation including organizations that provide direct and indirect food assistance, religious groups, regional hunger agencies, regional food relief providers, state and federal agencies, Chelsea city governance, housing, food retail, and residents. The goals of the summit were to increase participants' understanding of the current situation in Chelsea, brainstorm possible solutions and action steps to address this issue and establish and strengthen partnerships.

Results: Over 70 participants attended the summit with discussions on possible solutions to address increasing consumption and availability of healthy and affordable food. The main solutions to focus included education on resources and healthy cooking/eating habits, increase funding for food programs, focus on businesses, and increase locations for healthier foods. For all participants who completed an evaluation survey, 100% reported gained information they will be able to take back to their organization, which included general information on Chelsea, innovative solutions, successful strategies implement by organizations, new resources for their clients, and ideas for collaborations. All participants are committed to continuing the work around this issue.

Conclusions: Since the first summit was held, work is continuing to move forward. The second summit is being planned for October 2018. Chelsea is already expanding its options to provide food relief. To keep the momentum of the first summit progressing, two groups have formed: (1) to develop a detailed profile of food insecure residents in Chelsea and (2) to understand the provider landscape and how to expand the capacity.

Discriminating between bipolar II disorder and major depression in a community mental health clinic

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Keywords: Bipolar disorder, major depression, mental health

Background: After 18 months of working at MGH Chelsea, I found I had a group of patients diagnosed with major depression, anxiety, insomnia and sometimes post-traumatic stress who were not improving on three of four psychiatric medications. Bipolar disorder is typically diagnosed if a patient has had manic episodes (bipolar I) or hypomanic and depressive episodes (bipolar II), as per DSM-V. However, I wondered whether these patients may have bipolar disorder despite not meeting strict criteria and tried them on a mood stabilizer empirically (lamotrigine or valproic acid). On the whole, they improved, experiencing fewer mood symptoms, less anxiety, higher quality sleep and thinking less negatively about the past, present and future. In most cases, a mood stabilizer was all they needed, and I was able to reduce polypharmacy. Some remained on an adjunct antidepressant, anxiolytic or a sleep aid in addition. I began to screen patients using new criteria.

Methods: This is a qualitative case series of 10 patients in which three criteria have been used to screen for and diagnose bipolar II in new patients, prior to routine screening for major depressive disorder. The criteria are mood instability (irritability alternating with depression or mixed states featuring irritability and depression running concurrently), racing thoughts ("like hamsters on a wheel"), and decreased need for sleep at baseline (3-5 hours on average, for years). Open-ended questions about mood, thought quality and sleep are employed and then, if patients endorse any of these, I ask specific questions about mood episodes, racing thoughts, and amount of sleep. Additional criteria used, more for confirmation, are family history of bipolar (a confirmed diagnosis or frequent irritability/anger), distractibility (from racing thoughts), an "empty" quality to their depression, crying without knowing why when depressed, and self-medicating anxiety, insomnia or mood. If mood stabilizers work to reduce symptoms, we optimize dosing and then I determine whether any residual symptoms remain. An adjunct antidepressant (at a low-dose), anxiolytic or sleep aid can be used to treat these.

Results: Patients with major depressive disorder typically benefit from antidepressants, but these medications can be harmful in someone with an underlying bipolar spectrum disorder. Using the three chief criteria above (all must be met) to rule out bipolar II disorder before screening for major depressive disorder has improved sensitivity through identifying patients who would benefit from mood stabilizers. Employing criteria has enabled me to diagnose and treat bipolar II disorder quickly, with patients reporting decreased mood symptoms, reduced anxiety as their thoughts stop racing, and increased duration and quality of sleep.

Conclusions: Screening for bipolar II disorder using three specific criteria can improve yield, picking up true positives while avoiding diagnosing these patients with major depressive disorder. Treatment differs for each, and antidepressants can be harmful to those with bipolar disorder while mood stabilizers can be beneficial.

Post-traumatic phenomenology in Bhutanese-Nepali refugees

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Keywords: Refugees, trauma, cross-cultural

Summary: Post-traumatic stress symptoms may present more somatically in non-Western patients.

Background: Post-traumatic stress disorder (PTSD) criteria in DSM-V include nightmares or flashbacks, avoidance of traumatic triggers, and physiologic hyperarousal. Each of these is required for a diagnosis and criteria were created through studying Western patients. We also know that Western cultures tend to 'psychologize' psychiatric symptoms while Eastern cultures 'somatize' mental health symptoms. Bhutanese refugees, initially resettled in Nepal, who have more recently come to the U.S. as refugees, have often experienced psychological trauma during their dispossession in Bhutan or via witnessing deadly fires or violent incidents in their Nepali refugee camps. Clinically, they present with a specific set of PTSD symptoms which seem culturally patterned. Over time, the authors have come to ask about this specific set of symptoms when treating these patients. Doing so has allowed for a more rapid diagnosis and assessment of improvement.

Methods: This descriptive case series examines similarities between the symptomatology of patients of a similar ethnic background (Bhutanese), who have had similar life experiences of dispossession in Bhutan, traveling to Nepal as refugees, experiencing fires and witnessing violence in their refugee camps, and then immigrating and resettling in the United States. A qualitative analysis of the description of the symptoms experienced by six patients with this background as a result of their psychological traumas reveals commonalities between them and some difference with Western-derived PTSD constructs.

Results: Symptoms resulting from psychological trauma in Bhutanese-Nepali refugees include nightmares and a combination of dizziness, head heaviness and neck pain the following day, during which post-traumatic memories are common. Sufferers typically stay in their homes during these periods to minimize triggers.

Conclusions: Post-traumatic stress disorder criteria may need to be modified for specific non-Western patient populations to fit their actual clinical presentations. Without adjustment to account for the somatization of psychiatric symptoms in non-Western populations, incorrect diagnoses may be made while correct diagnoses may be missed.

Mindfulness-Based Cognitive Therapy (MBCT) effects on brain mechanisms of interoceptive awareness and rumination in major depression

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Keywords: Depression, mindfulness, fMRI

Summary: Mindfulness-Based Cognitive Therapy (MBCT) is an 8-week program designed for the treatment of depression in which participants practice mindfulness with a trained therapist. MBCT was found to reduce depression and prevent relapse just as well as antidepressants. In this study, we are measuring the effects of MBCT on the brain in people with depression using fMRI. This study will increase our understanding of what happens in the brain during depression and how mindfulness may help.

Background: Depression is the leading cause of disability worldwide and a major contributor to the global burden of disease, with a 12-month prevalence of 6.7% in the US adult population. Mindfulness-Based Cognitive Therapy (MBCT) is a standardized group intervention specifically designed for the treatment of depression. MBCT has been shown across multiple randomized controlled studies to reduce depression relapse rates. In addition, MBCT can reduce symptoms in active depression, including in treatment-resistant patients. However, the mechanisms of action of MBCT remain unknown.

Methods: In this randomized-controlled study, we use functional magnetic resonance imaging (fMRI) to investigate the effects of MBCT on the brain in depression. Our overall hypothesis is that mindfulness meditation increases interoceptive awareness, which helps to reduce rumination. By practicing paying attention to the internal manifestation of emotions and feelings as they arise in the mind and body, participants learn to recognize sooner the unpleasant mind states and internal feelings that usually trigger rumination; they can then more easily disengage from the maladaptive cognitive elaborations which would usually spiral into negative moods. We are testing this hypothesis by assessing brain activity with fMRI during two tasks (interoceptive awareness and rumination disengagement) in major depression patients, both before and after the eight-week group intervention. Half of the participants are randomized to MBCT, and the other half to an active control intervention comprised of progressive muscle relaxation and psychoeducation. Both groups are led by experienced mental health providers.

Results: This study is still under way, with six cohorts completed to date. We will share what we've learned in terms of community outreach and participant retention, which are especially challenging when working with a population suffering from recurrent major depression.

Conclusions: We anticipate that this study will provide important knowledge on the brain mechanisms underlying mindfulness training and its application to major depression.

Can Videos Increase Attendance and Patient Preparedness for Speech-Language Evaluations?

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Keywords: No shows, attendance, videos

Summary: Non-attendance results in suboptimal use of staff and increases waiting time for patients. Additionally, vulnerable patient populations may not come prepared with necessary paperwork. A retrospective pre-post comparison study was conducted to examine the use of a clinician-developed informational video sent to families via text message to increase attendance rates and family preparedness for speech-language evaluations.

Background: At the Department of Speech, Language and Swallowing Disorders and Reading Disabilities at the Massachusetts General Hospital for Children, there has been an increasing concern regarding non-attendance and reduced family preparedness for evaluations. The use of telephone calls and SMS text messages has been associated with a positive effect on non-attendance rates (Perron et al, 2010; Chan and Chan, 2012); however, there is currently limited research regarding the use of informational videos sent via SMS text message that serve to remind the patient as well as prepare the family/patient for an upcoming appointment.

Methods: In collaboration with the MGH media development team, clinicians from the speech and language department developed a brief informational video using the VidScript online platform, with information regarding what to expect for their upcoming speech and language evaluation. In June 2018 support staff began disseminating the aforementioned informational videos to patients using the VidScript online platform at the time of booking appointments. Data regarding attendance as well as family preparedness based on an objective clinician-developed survey will be compared for a three-month period pre- and post- video dissemination.

Results: We hypothesize that there will be a statically significant decrease in the baseline non-attendance rates (i.e. pre-video dissemination) of speech and language evaluations, as compared to the non-attendance rates following video dissemination. Additionally, based on clinician surveys, we suspect that family preparedness as it relates to bringing necessary documentation including completed Case History Forms, and Individualized Education Plans (IEP) will show a significant increase as compared to pre – video dissemination data gathered retrospectively.

Conclusions: Implications of this study may suggest that dissemination of videos via SMS text with information regarding appointments can be an effective means of increasing attendance and patient preparedness for appointments.

Patient Navigation to Improve Patient-Centered Cancer Care in Community Health Center Patients Diagnosed with Cancer

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Keywords: Patient navigation, cancer, patient-centered care

Summary: Patients who have Medicaid or no insurance and are racial/ethnic minorities are at highest risk for non-adherence with cancer treatment appointments. Patient navigation has been shown to reduce rates of no-show visits. This patient navigation program identifies newly diagnosed cancer patients receiving care at Massachusetts General Hospital (MGH) Community Health Centers (CHCs) in Revere, Chelsea, and Charlestown who experience barriers to care and provides them navigation to receive timely, guideline-concordant treatment at MGH Cancer Center.

Background: Since the inception of MGH's Patient Navigation (PN) program at MGH Chelsea CHC, cancer screening rates for our most vulnerable patients have significantly improved and time to diagnosis has decreased. Multi-year support from the Merck Foundation has facilitated an expansion of existing PN programs to provide navigation for any cancer treatment for vulnerable patients from four MGH CHCs and surrounding communities.

Methods: Utilizing a population health registry, TopCare, newly diagnosed cancer patients from MGH CHCs in Chelsea, Revere, and Charlestown are identified and consented to participate in the study. Patients are randomized to receive either in-person PN or enhanced usual care, which consists of two reminder phone calls prior to each oncology appointment. We follow patients for one year and longitudinally assess adherence to treatment, patient satisfaction with cancer care and PN, patient engagement, financial burden, symptom burden, health-related quality of life, and psychosocial care.

Results:
As of June 25, 2018, we have screened 126 patients, identified 53 eligible patients, and enrolled 40 patients (19 Intervention, 21 Control) with 11 patients referred from Charlestown CHC, 15 from Chelsea, and 13 from Revere. 9 (23%) are non-English-speaking and 11 (28%) are non-white. 10 (25%) have documented severe mental illness and 28 (70%) have public insurance. In-person navigation helps patients overcome their barriers to care and navigates them within Cancer Center to receive timely treatment by facilitating referrals to social work, palliative care, and mental health, providing assistance with scheduling, and coordinating care across the cancer care team.

Conclusions: By offering these vulnerable individuals a patient-centered approach to treatment, we aim to promote patient engagement and increase access. This expansion of existing PN programs at MGH provides our patients with navigation throughout the cancer care continuum; including screening, diagnosis, treatment, clinical trials, and end of life care.

Nursing activities in relation to attainment of recovery in patients with opiate addictions

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Keywords: Nurse sensitive indicator, opioid addicted

Summary: Understanding the role of the nurse in addiction care is necessary. A retrospective chart review examined the presence of four nurse sensitive indicators-care coordination, harm reduction techniques, goal setting and patient education in 100 patients. Half the sample received four nurse sensitive interventions. Those who engaged in recovery coaching and/or mental health counseling were less likely to receive the nurse sensitive indicated care than those who did not have a recovery coach and/or mental health.

Background: The role of the nurse in caring for opiate-addicted patients is multi-faceted yet it is not clear which activities contribute to recovery. Recovery services may take the form of appointments for medication-assisted treatment, such as buprenorphine, referrals for a detox placement, or education about how to decrease cravings for their addictive substance. Understanding the activities of the nurse that influence the potential for recovery and sobriety is necessary to improving the health of persons with addictions.

Methods: A retrospective chart review of patients achieving three consecutive toxicology screenings without evidence of opioids at one MGH health center in 2017 who did and did not have recovery coaches and/or mental health counseling was conducted. Documentation of four nurse sensitive activities was identified-care coordination, harm reduction techniques, goal setting and patient education. Data from those who did and did not engage with a recovery coach and/or mental health counseling and those that did were examined, cross tabulated and correlated for interrelationships.

Results: A retrospective chart review of patients achieving three consecutive toxicology screenings without evidence of opioids at one MGH health center in 2017 who did and did not have recovery coaches and/or mental health counseling was conducted. Documentation of four nurse sensitive activities was identified-care coordination, harm reduction techniques, goal setting and patient education. Data from those who did and did not engage with a recovery coach and/or mental health counseling and those that did were examined, cross tabulated and correlated for interrelationships.

Conclusions: The care of patients with opioid addiction is complex and varied. Further examination of the care that nurses provided is necessary. A better understanding of how nurses operationalize care coordination, harm reduction techniques, goal setting and patient education as well as document these is warranted.

Implementing a Social Determinants of Health Screening and Referral system for New Obstetrical Patients

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Keywords: Social determinants of health, socio-economic inequities, continuity of care

Summary: Screening for Social Determinants of Health is a well- researched and proven strategy that healthcare institutions can use to identify both population needs as well as gaps in services to fulfill those needs. The goal of this project was to test both the feasibility of screening new patients within part of a specialty department's current workflows and also to understand the socioeconomic challenges that could impact perinatal outcomes.

Background: The American College of Obstetricians and Gynecologists recommends screening and resourcing Social Determinants of Health (SDH) needs in patients which can account for up to 70% of a patient's health outcomes. The Medicaid ACO contract mandated SDH screening for Primary Care but there is a clear opportunity to reach younger, generally healthy women and to impact childhood before birth.

Methods Our outreach team is staffed with a MAT provider, an outreach worker team, and few SUDs navigators that have earned trust within the community. The team carries narcan and basic equipment for simple wound care. The initial engagement by peer navigator or outreach worker is to determine the client's needs. The team assists and refers to appropriate detox services, medical insurance application or wrap around services. Together, the client is seen by the MAT provider to determine medical need and expedite clinical encounters within the health care guidelines. The goal is to start MAT as soon as possible and to build a permanent relationship of trust with the client and initiate primary care and clinical preventive services.

Results: Results: 733 screenings were completed at Yawkey, Chelsea, and Revere sites. There was a high rate of positive screens for the question, "Do you like having someone to help you read information from your health care provider or pharmacist?" The Chelsea practice did have twice the percentage of positive screens for questions about food and housing insecurity.

Conclusions: Conclusion: Screening at MGH in OB prenatal care aligns with the department mission to reduce socioeconomic, racial and ethnic inequities in obstetrical outcomes and care. This screening will help identify needs of our patient population and the gaps in care that they face. Longitudinally it is hoped that the screening will help improve birth and early childhood health outcomes.

Effectiveness of a group intervention to improve diabetes-related distress and blood sugar control in Spanish-speaking patients with Type 2 diabetes in the community

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Keywords: Diabetes, Hispanic, behavior change

Summary: This project studied the effectiveness of a behavior change intervention for Spanish-speaking patients with type 2 diabetes. Diabetes is a very widespread and costly chronic disease, and it often requires major lifestyle changes and complicated treatment plans. We predicted that a group intervention that promoted knowledge, skills, and motivation would help patients with type 2 diabetes make lifestyle changes to improve diabetes self-care behaviors, while reducing emotional distress.

Background: Diabetes is a highly prevalent and costly chronic illness, one that often entails major lifestyle changes and complicated treatment plans. Treatment adherence can be problematic, particularly among populations facing high levels of stress and socioeconomic disadvantage. We hypothesized that an intervention that boosts skills, knowledge and motivation could empower such patients to make changes to improve diabetes self-care behaviors while reducing emotional distress.

Methods: Spanish-speaking participants with poorly controlled Type 2 diabetes were randomized to intervention (n=22) or waitlist control (n=23). Subjects in the intervention arm attended 12 group visits using the Problem-solving, Information, Support and Motivation for Diabetes (PRISM-D) treatment model. Subjects in the control arm received informational material. Biological measures and questionnaires about diabetes behaviors, attitudes and control and depression were measured at baseline, 6 weeks and 12 weeks. We compared baseline and endpoint scores within subjects using paired-sample t tests and change between study arms using analysis of variance.

Results: The change in HbA1C from baseline to endpoint did approach significance in the intervention group (-.96, p=.063), but was not significantly different from the change in the control group after we controlled for age, gender, and baseline A1C (p=0.373). The results also indicate a trend toward significant change from baseline to endpoint in the intervention group in the Problem Areas in Diabetes scale (-9.2 points, p=0.072), and a significant difference between intervention and control after adjusting for age and gender (F=4.639, $p<0.05$).

Conclusions: Subjects who received the PRISM-D intervention showed a significant improvement on a measure of diabetes-related distress. Changes in blood sugar control, while not statistically significant, appear to be worth future investigation. Subsequent research will aim to replicate the findings in a larger sample and understand predictors of efficacy.

The All of Us Research Program in New England: Approaching Engagement and Communications for Communities Underrepresented in Biomedical Research (UBR) in Precision Medicine at Partners HealthCare System Hospitals

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Keywords: Precision medicine

Summary: The All of Us Research Program aims to recruit one million or more U.S. volunteers to advance precision medicine and gain insights into the biological, environmental, and behavioral influences on diseases. By enrolling a cohort of participants from communities underrepresented in biomedical research, All of Us New England will ensure bidirectional benefit in research and advance research that that successfully engages diverse groups.

Background: The All of Us Research Program (AoURP) aims to recruit one million or more U.S. volunteers to participate as partners in a longitudinal cohort biobank study.

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.

Results: Year 1 enrollment data for AoUNE shows 74.4% of AoUNE participants in the program's UBR categories, with many participants qualifying in more than one category. 41.4% 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; 29.9% identify income as below the Federal Poverty Level; 22.8% identify age at consent as 65 years or older; 12.6% identify sexual orientation as bisexual, gay, lesbian, or "none of these describe me"; 10.6% identify education level as less than a high school degree; 1.4% identify geography as living in a rural zip code; and 0.04% 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.

Improving care transitions from Boston-area jails through an academic community health center and student-faculty clinic network

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Keywords: Correctional healthcare, care transitions, jails

Summary: The United States has the highest incarceration rate in the world, and individuals released from US jails and prisons have a markedly increased risk of death, particularly in the first two weeks following their release. By leveraging a long-standing student-faculty collaborative care network, we seek sustainable strategies to improve the safety of transitions to the community for individuals who leave Boston's jails each year at high risk for poor health outcomes.

Background: The United States incarcerates a greater proportion of its population than any other nation on Earth, at a rate of 698 per 100,000 people.1 The criminal-legal involved population has a higher burden of chronic disease compared to the general population and over half of patients have a diagnosed mental health disorder, with local jails experiencing the highest rates. Despite criminal justice reform and Massachusetts' strong social safety net, individuals leaving short-term correctional facilities have limited support in accessing work, social services and health care. This is concerning, given that in the first two weeks following discharge from a prison or jail, the mortality rate of the criminal-legal involved population is 12.7 times that of the general population, with a markedly increased risk from overdose of 129 times.

Methods: This project will allow us to develop integrated approaches to post-release transitions utilizing our network of MGH faculty, Crimson Care Collaborative volunteers, and Suffolk County Sheriff's Department staff. We will a) develop improved systems to identify high-risk patients being released from incarceration; b) establish educational curricula for community clinics' staff and providers to improve the quality of care provided to patients with a history of incarceration; and c) strengthen our pilot program to navigate high-risk patients safely to community- based care after release.

Results: This project has been funded through a grant from the Massachusetts Medical Society and is in the implementation phase.

Conclusions: The vast majority of people leaving jails in the United States do not receive adequate care navigation, despite a heavy burden of disease and vastly increased mortality rates following their release. Our project will demonstrate how an academic health system can significantly impact this population and help to create a model for how medical transitional care should be provided to this vulnerable patient population.

Partnering with North Suffolk Mental Health to Increase Access to Cancer Prevention, Early Detection, and Treatment

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Keywords: Serious mental illness, cancer patients, community engagement

Summary: To increase access to high-quality cancer care for people with serious mental illness, MGH collaborated with North Suffolk to identify individuals at high risk for cancer and individuals with a recent/previous cancer diagnosis. We collaborated with group home staff to facilitate same-day diagnostic mammograms, coordinated follow-up visits with radiology for recommended procedures and conducted joint meetings with MGH oncology to guide end of life care discussions.

Background: Individuals with serious mental illness (SMI) experience markedly increased cancer mortality due to delays in diagnosis and inequities in treatment. People with SMI face unique barriers to cancer care, including uncontrolled psychiatric symptoms, fragmentation of mental health and cancer care, and stigma impacting healthcare delivery. These challenges are compounded by disproportionate poverty, limited health literacy, and cultural barriers to care in communities served by North Suffolk Mental Health and Massachusetts General Hospital (MGH) community health centers.

Methods: To increase access to high-quality cancer care for patients with SMI, MGH collaborated with North Suffolk to identify individuals at high risk for cancer and individuals with a recent/previous cancer diagnosis. We conducted educational sessions and outreach at multiple levels including mental health clinicians, administrations, residential, and community staff. Nursing staff on the medical services team met with residential staff leaders and collaborated with MGH to develop a population-based system to track referrals and increase access to cancer care and clinical trials.

Results: As of March 31, 2017, 57 participants have enrolled. At baseline, the median monthly income is $1,161 and 55% of families have at least 2 children. Sixty-eight percent spend more than half of their income on housing, 31.6% were homeless in the past year, 61.4% could not pay rent in the past year, and 26.3% moved >=two times for economic reasons in the past year. Fifty-three percent of caregivers are experiencing symptoms of anxiety. In the past six months, 45.6%, 36.8%, and 12.3% of children have had one or more urgent care visits, ED visits, or hospitalizations, respectively. Fifty percent of children are experiencing psychosocial impairments, as measured by the Pediatric Symptom Checklist.

Conclusions: By partnering to address a critical social determinant of health, we can build capacity to solve a need for our patients.

Improving Comprehensive Patient Care through Social Services at Student-Faculty Collaborative Clinic

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Keywords: Social determinants of health, multi-disciplinary care, resource referrals

Summary: At the CCC-Chelsea multidisciplinary student clinic, we are improving upon our innovative social services project to create a longstanding way to integrate social determinants screening into clinical practice. By interviewing patients, and establishing partnerships, we will promote the use of community resources.

Background: Research demonstrates lower socioeconomic status leads to worse health outcomes, and higher ratios of social services to health care spending result in better health outcomes, implying investment in social services is associated with improved health (Bradley 2016). Recognizing the importance of social determinants of health, student clinicians at Crimson Care Collaborative at Chelsea (CCC-Chelsea) are furthering an initiative to capture patient needs and improve the referral process for social services.

Methods: In 2016, CCC-Chelsea implemented an innovative screening form with questions in English/Spanish, categorizing resources including food pantries, ESL/GED classes, and others available for undocumented immigrants. We are reviewing our data and working with student clinicians to determine ways to improve our screening rate. We will conduct phone interviews with patients to determine the success rate of the referral process and major barriers encountered. By reviewing results and learning best practices from others at MGH-Chelsea, we hope to improve our process.

Results: Since the project's initiation, 54 patients were screened and 106 referrals made. Preliminary results show 34% of patients had social service needs and were given an appropriate referral. Food assistance (30% of referrals), utilities and employment assistance (17%, 13.2% respectively) represented the most requested resources. These results as well as future phone interviews will help us understand patient needs. This information can direct future partnerships with community organizations.

Conclusions: Through this project, we will create a multidisciplinary healthcare model. By improving the referral process for this program and creating partnerships with external organizations, CCC-Chelsea's efficient use of community resources could bolster health outcomes.

A Tale of Two Epidemics: Characteristics of Young Adult Patients with Chronic Hepatitis C at an Urban Community Health Center

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Keywords: Hepatitis C, injection drug use, Age distribution

Summary: The burden of Hepatitis C in our communities is borne not only by Baby Boomers, but also by a new, young cohort of patients who have become infected through injection drug use because of the current opioid epidemic. These younger patients have special needs and have not had access to Hepatitis C treatment, and they deserve outreach and recruitment into care.

Background: Chronic Hepatitis C is the most common blood-borne infection and the most frequent cause of cirrhosis and liver cancer in the US. Much is known about the population of "baby boomers' who have carried the greatest burden of disease due to chronic Hepatitis C. However, the current opioid crisis has fueled the development of a new rising population of young adults who have contracted Hepatitis C through injection drug use. Relatively little is known about this distinct population of patients with Hepatitis C.

Methods: We did a retrospective chart review of all patients with chronic Hepatitis C cared for at the MGH Charlestown HealthCare Center during the five years prior to the study date. Based on the age distribution of the Hepatitis C positive population, we divided the group into two age cohorts: young adult patients (age 18 - 39) and older adult patients (age 41+). Demographics, social history, and comorbid medical and psychiatric conditions were compared between the young adult and older adult cohorts.

Results: The age distribution of the Hepatitis C population at MGH Charlestown included two distinct peaks, corresponding to well-defined young adult and baby boomer cohorts, with average ages of 30-35 and 55-60, respectively. Young adults almost always (>90% of cases) contracted their Hepatitis C from injection drug use, while the older adults contracted Hepatitis C from a variety of sources (including hospital and occupational exposures. Compared with the older adults, the young adult cohort had lower levels of medical comorbidity except for chronic pain, which was prevalent (~70%) in both groups. The young adult and older adult cohorts both had high levels of psychosocial comorbidity, including a high prevalence of anxiety, depression, and a history of physical abuse. compared with older adult patients, the young adults had higher rates of current opioid use and higher rates of involvement in treatment for opioid use disorder. However, rates of referral for antiviral Hepatitis C treatment and initiation and completion of treatment were six-fold lower in young adult patients than in older adults compared with the older adults, the younger adult patients had lower rates of involvement in routine primary care.

Conclusions: There is a vulnerable rising cohort of young adult patients with Hepatitis C at our health center, fueled by the current opioid crisis, who have high levels of psychosocial comorbidity but have not yet achieved adequate access to available antiviral treatments, despite frequent involvement in substance use disorder treatment. This newer cohort of patients with Hepatitis C should be a target of active outreach and recruitment into psychiatric care, Hepatitis C treatment, and primary care.

Youth-Perceived Assets and Challenges of Four Boston-Area Communities

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Keywords: Community strengths, youth, community-based participatory research

Summary: To examine the ways in which youths' perceptions of their neighborhoods affect their wellbeing and inform potential intervention strategies, we gathered qualitative PhotoVoice data related to perceived community structural and social characteristics from 72 youth across four Boston-area communities. After engaging in thematic analysis, we identified several assets and challenges commonly expressed by youth participants in each community. We expect findings to inform the development of community-level programs focused on improving adolescent behavioral health.

Background: Many mental health disorders begin in childhood or adolescence, setting the stage for long-term impacts on well-being and quality of life. However, few studies have investigated how the ways in which youth perceive their communities can affect their wellbeing. Such an investigation can provide novel insights into potential intervention strategies.

Methods: In collaboration with the Center for Community Health Improvement and several community partners, we convened nine groups of adolescents ages 14-20 across four communities—Charlestown, Chelsea, East Boston, and Revere—to complete a Photovoice project. Seventy-two youth each took ten photographs based on specific prompts (e.g., social inclusion and exclusion in their community) and completed two individual interviews to elicit photo narratives. Additionally, participants attended four group meetings, during which they discussed structural and social characteristics of their communities and identified targets and strategies for community-level interventions. We reviewed interview and group discussion transcripts and engaged in thematic analysis to identify assets and challenges expressed by youth participants in each community. We then presented our initial lists of assets and challenges to participants to confirm their accuracy and incorporated any suggested changes.

Results: Across groups, common identified assets included existing youth-serving organizations, outdoor spaces for recreation, cultural diversity, and community-wide events. Common identified challenges included neglect and lack of upkeep in neighborhoods and schools (e.g., trash, broken sidewalks, poorly maintained recreational spaces), a lack of spaces and programs specifically for teenagers, concerns about gentrification and rising housing costs, and divisions within communities based on socioeconomic status, race/ethnicity, and housing.

Conclusions: Results highlight the characteristics of each Boston-area community that affect youths' community pride, sense of belonging, and overall wellbeing. In addition to sharing findings with youth and other community members, we plan to use findings to inform the development of community-level programs focused on improving adolescent behavioral health.

Unplanned pregnancy and other prenatal predictors of increased psychotic symptoms in a national cohort of 4,026 youths

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Keywords: Psychosis, pregnancy, youth

Introduction: Exposures in early development, even before birth, can affect brain health outcomes later in life. For example, pregnancy complications and reduced socioeconomic status have been associated with increased risk of psychosis later in life. There has been little research, however, into the effects of having an unplanned pregnancy and subsequent risk for psychosis. Since up to half of all pregnancies are unplanned, and psychotic spectrum symptoms in youth are now recognized as more common than previously thought, this question has wide potential relevance. Using newly released data from the Adolescent Brain Cognitive Development (ABCD) study, we compared psychosis scores from a large cohort of children ages 9-10 whose mothers reported having a planned versus unplanned pregnancy, correcting for demographic and other covariates related to pregnancy.

Methods: The Adolescent Brain Cognitive Development (ABCD) Study is a nationwide, community-based, prospective study of approximately 10,000 children. This analysis uses the initial ABCD release (January, 2018) of 4,524 children ages 9-10. To assess psychosis syndromes risk, we used the self-reported Prodromal Questionnaire (PB-Q). Specifically, we used scores of how distressed the children were from experiencing the items on the PB-Q, on a scale of 0-105. Distress scores have been shown to be sensitive in predicting psychosis syndrome diagnoses from the Structured Interview for Prodromal Syndromes (SIPS). Distress score sums were grouped into six categories by percentile: 0-50, 51-60, 61-70, 71-80, 81-90, and 91-99. We included as covariates of interest factors related to pregnancy, including parent/guardian highest education level, presence or absence of a partner, mode of birth, prematurity at birth, pregnancy status (planned/unplanned), complications at pregnancy and birth, and use of prenatal vitamins at any point during pregnancy. Study site, race, sex, ethnicity, and age at assessment were included as nuisance covariates. Ordinal regression was performed with psychosis group as the dependent variable. A total of 4,026 subjects with complete data were ultimately included.

Results: Included participants did not differ from those excluded for missing data, in either planned/unplanned pregnancy (p=.99) or psychosis scores (p=.22). Low parent/guardian education (p=.00005), low maternal age (p=.003), unplanned pregnancy (p=.004), c-section (p=.005), first-born status (p=.02), and pregnancy complications (p=.01) each independently predicted significantly higher prodromal psychosis scores, controlling for each of the other independent variables in the model. Of note, percentage of participants with unplanned pregnancy increased monotonically from 30.2% in the lowest psychosis score group (1-50th percentile) to 46.5% in the highest psychosis score group (91-99th percentile). Maternal income, single parent household, prematurity at birth, complications at birth, and prenatal vitamin use were not significantly associated with psychosis score.

Conclusions: This large cohort study finds for the first time a relationship between unplanned pregnancy and increased risk of psychotic symptoms in school-aged youths. We replicated previous associations with low socioeconomic status and pregnancy complications to subsequent risk for psychosis, although the finding involving unplanned pregnancy persists after correcting for these and other contributory factors. This new association is likely multifactorial but may reflect delay or absence in protective exposures during development immediately following conception. Of note, prenatal vitamin supplement use was not a significant predictor of psychosis score, but was present at some point in the vast majority (>95%) of pregnancies; future data releases from ABCD will have more detailed information about the timing of prenatal vitamin exposure, which has relevance to risk for autism and other serious mental illness in childhood. The ABCD study also includes genomic and structural/functional brain imaging data for all participants, and our group is currently analyzing these data to examine the effects of unplanned pregnancy and other prenatal factors on brain development. These studies may point to mechanisms underlying associations between prenatal health and subsequent risk for severe mental illness in youth, and new potential strategies for prevention.

MGH Youth Scholars Program: Promoting Opportunities for Educational Attainment and Employment

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Keywords: Youth development, education, employment

Summary: The Youth Scholars Program provides youth from the Greater Boston area with educational and career opportunities in the STEM and health care fields. With support from program staff, as well as MGH professionals who volunteer their time in various capacities, program participants are exploring career opportunities earlier, graduating from high school at higher rates, successfully matriculating on to post-secondary education at higher rates, and obtaining employment in their desired fields.

Background: The Youth Scholars Program out of the Center for Community Health Improvement at Massachusetts General Hospital was created to engage youth interested in STEM education and healthcare fields, provide youth with employment opportunities, and encourage postsecondary matriculation and completion, especially among girls and youth of color in STEM fields, to increase the number of diverse professionals in the workforce.

Methods: Youth from East Boston, Revere, and Chelsea high schools with an interest in STEM and health care careers apply to the program during 9th grade. Applicants are then interviewed and selected to participate for all four years of high school. During the program, youth shadow MGH professionals, visit MGH departments, visit colleges, and obtain support with their college applications. Once students complete the program, support from MGH does not end there; program alums receive scholarship funding and academic coaching while in college. Staff also continue to connect youth to employment opportunities at MGH and the Partners Healthcare System.

Results: Through internal and external evaluation (surveys, focus groups, secondary data), data show that youth are successfully graduating high school, and in most recent years graduating from college equipped with valuable knowledge and skills for employment. Youth report high levels of satisfaction with program content, staff, and the support they receive in the program. Currently, about 125 students participate in the Youth Scholars Program. About 85 Youth Scholars Alumni are enrolled in college, and 36 Youth Scholars Alumni have graduated from college. Youth Scholars have a 100% high school graduation rate, higher than that of their peers in the Boston area. Over 60% of Youth Scholars Alumni are pursuing college degrees in health and STEM fields.

Conclusions: Through comprehensive, hands-on experiences and support from staff in the Youth Scholars Program, educational attainment and employment opportunities have expanded for participants of this youth program.