WELCOME TO THE 12TH ANNUAL
CAMBRIDGE HEALTH ALLIANCE
ACADEMIC POSTER SESSION

Tuesday, April 10 / 5:30 – 7:30 PM
CHA Cambridge Hospital Healy Building

This signature CHA event is an opportunity for our community to share interests and accomplishments, and to forge new collaborations across departments and work sites. The session has grown over the years from a small Department of Medicine gathering to a CHA-wide event sponsored by the CHA Center for Professional and Academic Development. As you will see within these pages, the range of activity reflects a vibrant institutional commitment to research, innovation, continuous improvement and scholarship. We are grateful to the CHA Strategic Planning, Marketing & Communications Department and many others for their support of this event.

Elizabeth Gaufberg, MD, MPH
Director, Center for Professional and Academic Development

David Bor, MD
Chief Academic Officer

Maren Batalden, MD, MPH
Associate Chief Quality Officer

Ellen Hedstrom
Manager, Center for Professional and Academic Development
1. Use of Placental Grafts in Foot and Ankle Surgery
   Joel Ang, DPM, Surgery; David Liou, DPM, Surgery; Harry Schneider, DPM, Surgery

2. Goblet Cell Carcinoid of the Appendix: A high grade tumor in a 20-year-old
   Ameen Barghi, MPP, CIC Student, Harvard Medical School; John Grabbe, MD, Pathology; Arundhati Ghosh, MBBS, FRCS, FACS, Surgery

3. Collaborative Care: The Distress Thermometer as a Tool to Enhance Psychosocial Needs Assessment for CHA Cancer Patients
   Dana Bogan, LCSW, Medicine; Melanie Foxx, LCSW, Surgery; Heidi Rayala, MD, PhD, Surgery

4. The Role of Skin Biopsy in Calciphylaxis
   Allison Dobry, MD, Transitional Year

5. Big Five Personality Factors and Discordant Perceptions of the Working Alliance
   Robert Drinkwater, PhD, Program for Psychotherapy; Joseph Berlin, LCSW, Program for Psychotherapy; Julian Ernst, LCSW, Program for Psychotherapy; Shannon McIntyre, PhD, Program for Psychotherapy; Rebecca Drill, PhD, Program for Psychotherapy

6. Patients’ View of What is Most Helpful in Psychodynamic Treatment
   Annabel Gill, LCSW, Psychiatry; Patrick Hunnicutt, LCSW, Psychiatry; Hannah Richardson, PhD, Psychiatry; Laura Werner-Larsen, PhD, LICSW, Psychiatry; Jack Beinashowitz, PhD, Psychiatry; Rebecca Drill, PhD, Psychiatry

7. The Neurobiology of Mothering and Infant Stress
   Jennifer E. Khoury, PhD, Psychiatry; Grace Oh, BS, Psychiatry; Michelle Bosquet-Enlow, PhD, Psychiatry; Ellen Grant, MD, Psychiatry; Martin Teicher, PhD, MD, Psychiatry; Karlen Lyons-Ruth, PhD, Psychiatry

8. The Relationship Between Interpersonal Problems and Working Alliance in Psychodynamic Therapy
   Brandon Less; Ghita Jaouhari, Psychology; Katherine Chase, PsyD, Psychology; Elisa Lee, PhD; Meng-chun Chiang, PhD; Adam Conklin, PhD, Psychology

9. Personal Distress Empathy as a Component of Therapeutic Empathy
   Shannon McIntyre, PhD, Program for Psychotherapy; Lisa Wallner Samstag, PhD, Psychology, Long Island University; Sara C. Haden, PhD, Psychology, Long Island University; Joan W. Duncan, PhD, Psychology, Long Island University
10. A Hackathon to Target Missed Appointments in Child Psychiatry
Solomon Adelsky, MD, MPP, Psychiatry; Nicholas Carson, MD, FRCPC, Psychiatry

11. Family Medicine Resident Workspace
Danielle Antosh, MD, Family Medicine; Jessica Platt, MD; Jessica Early, MD; Lauren Hoogewerff, MD; Randi Sokol, MD; Courtney Scanlon, MD

12. Screening and Referral for Food Insecurity in a Child and Adolescent Psychiatry Outpatient Clinic
Shireen Cama, MD, Psychiatry; Lee Robinson, MD, Psychiatry

13. Caring for Our Communities: Improving Behavioral Health Care for LGBTQ+ Latino Populations
Daniel A. Gonzalez, MD, Psychiatry

14. Outmigration of CHA Patients for ED and Inpatient Care
Shirin Karimi, MD, Medicine

15. Understanding the Needs of the Latino Population in a Pediatric/Behavioral Health Integrated Care Service
Aileen Lorenzo, MD, Psychiatry

16. Promoting Resilience Among Women of Color in the CHA Residency Program with a Dinner Seminar Series
Patrice Mann, MD, MPH, Psychiatry

17. Social Justice Coalition’s Home Series: A forum for learning about the social determinants of health and organizing around health justice advocacy with trainees, faculty, and allies in the CHA community
James B. McKenzie, DO, MBA, Psychiatry; Carrie C. Wu, MD, Psychiatry

Chukwueloka Obionwu, MD, Family Medicine; Dominic Wu, MD, Family Medicine; Sarah Bickerstaff, BS, Family Medicine; Jessica Knapp, DO, CAQSM, Family Medicine

19. “A Vida Doce” Improving Self-Management Skills of Portuguese-Speaking Patients with Diabetes Mellitus
Krupa Parikh, MD, Internal Medicine; Sonja Skljaverski, MD, Internal Medicine; Nicole Mushero, MD, Internal Medicine; Yamini Saravanan, MD, Internal Medicine

20. Providing Point of Care Access to Community Resource Information in a Primary Care Clinic
Courtney Scanlon, MD, Family Medicine; Jennifer Panosian, MD, Family Medicine; Tia Tucker, MD, Family Medicine; Racheli Schoenbarg, MD, Family Medicine; Emilie Biondokin, MD, Family Medicine; Elzbieta Jacak, MD, Family Medicine; Sarah Bickerstaff, BS, Family Medicine

21. Impact and Perceptions of Teledermatology at CHA
Robert Stavert, MD, Dermatology; Tedi Begaj, MD, Internal Medicine; Allison Dobry, MD, Internal Medicine; Rebeca Droms, MD, Internal Medicine; Sumi Sinha, MD, Internal Medicine

22. Antimicrobial Susceptibility Among Uropathogens Causing Acute Uncomplicated Cystitis at Cambridge Health Alliance
Frances Ue, MD, MPH, Internal Medicine; Rebecca Osgood, MD, Pathology; Lou Ann Bruno-Murtha, DO, Infectious Diseases
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Lynn Anderson, MD, Medicine; Erica C. Dwyer, MD, PhD, Medicine; Megan LaPorte, MD, Medicine; Deborah Lee, MD, Medicine; Gregory Lines, MD, MPH, Medicine; Kira Mengistu, MD, Medicine; Daniel Novinson, MD, MPH, Medicine; Sonja Skljarevski, MD, Medicine; Gaurab Basu, MD, MPH, Medicine; Danny McCormick, MD, MPH, Medicine; Hugo Torres, MD, MPH, Medicine

Carolyn Ballard, MS, RD, Human Resources; Sharon Touw, MPH, Institute for Community Health; Elaine Zhang, BS, Institute for Community Health

25. The Impact of the Affordable Care Act on Coverage and Access on Americans with Cardiovascular Disease or Multiple Cardiovascular Risk Factors
Ameen Barghi, MPP, CIC Student, Harvard Medical School; Hugo Torres, MD, MPH, Medicine; Nancy R. Kressin, PhD, BU School of Medicine; Danny McCormick, MD, MPH, Medicine

26. The Power of Collaboration: Strengthening the CHA partnership with Malden Public Schools Title I program for community benefit
Devorah Donnell, MD, Family Medicine; Renée Cammarata Hamilton, MSW, MPA, CHA Health Improvement; Paul McCarthy, Malden Public Schools Title I Parent Coordinator

27. 2015-2017 CHA Cancer Community Needs Assessment: Comparing Demographics of CHA Panel Patients who are Screened vs Not Screened for Colorectal, Cervical, and Breast Cancer
Taisha Joseph; Sarah Primeau, MSW, MPA, Health Improvement; Rumel Mahmood, Quality and Patient Safety; Karen Finnegan, Institute for Community Health; Heidi Rayala, MD, PhD, Surgery

28. Changes in Psychiatric Emergency Room Visits Following the Boston Bombing
Gaddy Noy, DO, Psychiatry; Amber Frank, MD, Psychiatry
29. See, Test and Treat: A Program that Fulfills the Cambridge Health Alliance Mission
Rebecca Osgood, MD; Kate Harney, MD; Sarah Primeau, MSW, MPH, Community Health Improvement; Megan Meany, CHA Foundation; Bonnie Martin, Marketing; Alexis Ladd, Marketing; Mary Cassesso, CHA Foundation

30. ACE Assessment in Clinical Practice: A Pediatric Integrated Care Model
Priya Pathak, BSc, MD Candidate; Katherine E. Grimes, MD, MPH, Psychiatry

31. Differences in Rates of Suicidal Ideation and Potential Suicide Attempt Among Disabled and Gender Minority Medicare Beneficiaries from 2009-2014
Ana Progovac, PhD, Health Equity Research Lab; Brian Mullin, Health Equity Research Lab; Maria Jose Sanchez, MD, Health Equity Research Lab; Alex McDowell, MPH, MSN, Harvard University; Sari Reisner, ScD, Harvard Medical School; Emilia Dunham, MBA, MPP; Cynthia Telingator, MD; Benjamin Le Cook, PhD, MPH, Health Equity Research Lab

32. Inpatient Medicaid Cost and Utilization Patterns After Changes in Supplemental Nutrition Assistance Program Benefit Levels
Rajan Sonik, PhD, JD, MPH, Psychiatry

33. A Tale of Three Projects: Co-Production as an Approach to Health Systems Transformation
Martina Todaro, MPA, Institute for Community Health; Maren Batalden, MD, MPH, Performance Improvement; Ann Hwang, MD, Community Catalyst; Carolyn Fisher, PhD, Institute for Community Health

34. Acknowledging the Role of Fathers: The experience of a local parenting program
Sharon Touw, MPH, Institute for Community Health; Shawn Proctor, BS, City of Cambridge Center for Families; Abigail Tapper, MPH, Institute for Community Health
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35. Evaluation of CHA’s Complex Care Management Program
Greg Watt, MSW, Primary Care Complex Care Management; Sharon Touw, MPH, Institute for Community Health; Nicholas Cone, Primary Care Complex Care Management; Karen Finnegan, MPH, Institute for Community Health; Kristin King, MPPM, Institute for Community Health; Leah Zallman, MD, MPH, Institute for Community Health; Eleni Carr, MBA, LICSW, Accountable Care Organization

36. Reducing Childhood Obesity: Promoting Exercise and Healthy Eating
Dominic Wu, MD, Family Medicine; Chukwueloka Obionwu, MD, Family Medicine; Sarah Bickerstaff, BS, Family Medicine; Jessica Knapp, DO, CAQSM, Family Medicine

37. Immigrants Contributed $27.9B More to Private Insurers Than They Took Out in 2014
Leah Zallman, MD, MPH, Institute for Community Health; Steffie Woolhandler, MD, MPH, City University at Hunter College; Sharon Touw, MPH, Institute for Community Health; David Himmelstein, MD, City University at Hunter College; Karen Finnegan, MPH, Institute for Community Health
38. Teaching Medicine Interns Minimum Geriatrics Competencies within a “4 + 2” Schedule
Serena Chao, MD, MSc, Geriatrics Division; Anne Brouha, MD, Geriatrics Division; Rachel Stark, MD, Medicine

39. Diagnosing the Learner: An analysis of how our learners are clinically reasoning
Rachel Hathaway, MD, Medicine; Michael McShane, MD MEd, Medicine; Hugo Torres, MD, MPH, Medicine; David Scales, MD, PhD, Medicine; Priyank Jain, MD, Medicine; Joshua Onyango, MS, Harvard Graduate School of Education; David Cameron, BU School of Public Health; Richard Pels, MD, Medicine

40. Innovation in a Safety-Net Hospital: Building a point-of-care ultrasound curriculum through a resident-led, low-resource model
Kay Negishi, MD, Internal Medicine; John DeAngelis, MD, RDMS, Emergency Medicine; Jonathan Opraseuth, MD, Radiology; Priyank Jain, MD, Internal Medicine

41. Generating Best Precepting Practices through a Collaborative, Multi-Disciplinary Faculty Development Workshop
Tara Singh, MD, OBGYN; Bianca Shagrin, MD, Pediatrics; Yamini Saravanan, MD, Internal Medicine

42. Developing a “Wellness Space” to Enhance Our Culture of Wellness
Meera Sunder, MD, Kanthi Dhaduvai, MD, Andrea Gordon, MD, Family Medicine
43. Practice Improvement Teams: Fostering Leadership and Performance Improvement Training Within a Clinical Practice
Fa’iz Bayo-Awoyemi, MD, Family Medicine; Dominic Wu, MD, Family Medicine; Christina Norton, Family Medicine; Lucretia Fitzpatrick, Family Medicine; Stephen Dolat, BS, MBA, Primary Care; Susan Morrissey, BSN, MS, Family Medicine; Gouri Gupte, PhD, MHA, Performance Improvement; Paola Peynetti Velasquez, MPH, Performance Improvement; Judy Fleishman, PhD, Family Medicine; Nicole O’Connor, MD, Family Medicine

44. Cahill 4 Unit Based Council: Transforming Care With Relationship Based Care
Versa E. Belton, RN, MSN, NEC-BC

45. What are Families Looking for in an Integrated Mental Health Care Experience at CHA?
Nicholas Carson, MD, Psychiatry; Lee Robinson, MD, Psychiatry; Traci Brooks, MD, Pediatrics; Aileen Lorenzo, MD, Psychiatry; Brenda Marin-Rodriguez, BSc, Crimson Care Collaborative; Keval Vyas, BEng, Crimson Care Collaborative; Ifigenia Mougianis, PhD, Psychiatry

46. Reducing Avoidable ER Visits in CHA House Calls Patients with Dementia
Serena Chao, MD, MSc, Geriatrics Division; Karen Finnegan, MPH, Institute for Community Health; Deborah Lee, MD, Medicine; Carolyn Fisher, PhD, Institute for Community Health; Daphne Schneider, MD, Geriatrics Division

47. Meaningful Wait Times: Improving the Patient Perception of Care and Quality Outcomes
Gilberto Gamba, MS, BSN, RN, Primary Care Nursing

48. Decreasing Short Term Rehab Utilization in a PACE Program
Mary Ann Graham, MS, RD, LDN, Elder Service Plan; Janet Dunphy, RN, CCM, Elder Service Plan; Christopher Mauro, LICSW, Elder Service Plan; Jonathan Burns, MD, Elder Service Plan; Jed Geyerhahn, Elder Service Plan; Norma Malkiel, LSW, CCM, Elder Service Plan
49. Group Wellness Classes Among CHA’s Haitian Patients: Lessons Learned and Future Directions
Anand Habib, MPhil, Harvard Medical School; Shalini Chalana, MS, MEd, RD, LDN, CDE, Medicine; Arlene Katz, EdD, Department of Global Health and Social Medicine; Marie-Louise Jean-Baptiste, MD, Medicine

50. Impact of Multitiered Interventions to Decrease Routine Urine Cultures in Asymptomatic Patients Undergoing Hip and Knee Arthroplasty
Ebony Jackson, PharmD, Pharmacy; Amanda Barner, PharmD, BCPS, Pharmacy; Xia Thai, PharmD, Pharmacy; Lou Ann Bruno-Murtha, DO, Infectious Disease

51. Medication Reconciliation and Optimization by Clinical Pharmacists in the Primary Care Setting
Alexandra Kolwicz, PharmD, Pharmacy; Catrina Derderian PharmD, BCACP, Pharmacy; Emily Zouzas, PharmD, BCACP, Pharmacy; Monica Akus, PharmD, BCPS, DPLA, Pharmacy; Robin Heafey, PharmD, BCACP, Pharmacy

52. HFMEA Analysis of Medication Errors in a PACE Program
Lorraine Murphy, MS, RN, Quality & Risk Management; Mary Ann Graham, MS, RD, LDN, Elder Service Plan; Janet Dunphy, RN, CCM, Elder Service Plan; Jonathan Burns, MD, Elder Service Plan; Michelle Ortiz, RPh, Elder Service Plan Pharmacy; Emerenziana D’Alleva, RPh, BCGP

53. Solving the Mystery of Unsatisfactory PAP Smears
Rebecca Osgood, MD, Pathology and Clinical Laboratories; John Grabbe, MD

Ranjani Paradise, PhD, ICH; Megan Hatch, MPH, ICH; Avlot Quessa, BA, JD candidate, MAPS; Vonessa Costa, CoreCHI, MAPS; Fernando Gargano, MAPS
55. Improving Access to Adult Outpatient Psychiatry at Cambridge Health Alliance
Paola Peynetti Velazquez, MPH, Performance Improvement; Gouri Gupte, PhD, MHA, Performance Improvement; Edgardo Trejo, MD, Psychiatry; Lisa Foley, MPA, Psychiatry; Michael Williams, LICSW, Psychiatry; Mark Albanese, MD, Psychiatry; Page Carter, LICSW, Psychiatry; Julie Regner, Psychiatry; Emily Benedetto, MSW, LCSW, Primary Care; Ellie Grossman, MD, Primary Care; Colleen O’Brien, PhD; Assaad Sayah, MD, Chief Medical Officer; Renee Kessler, MHA, Chief Operating Officer

56. Improving Access to Child and Adolescent Outpatient Psychiatry at Cambridge Health Alliance
Paola Peynetti Velazquez, MPH, Performance Improvement; Gouri Gupte, PhD, MHA, Performance Improvement; Jacob Venter, MD, MBA, Psychiatry; Lisa Foley, MPA, Psychiatry; Michael Williams, LICSW, Psychiatry; Nicholas Carson, MD, Psychiatry; Dianna Lesanto, LICSW; Assaad Sayah, MD, Chief Medical Officer; Renee Kessler, MHA, Chief Operating Officer

57. Improving the Phone Menu Across Cambridge Health Alliance
Paola Peynetti Velazquez, MPH, Performance Improvement; Gouri Gupte, PhD, MHA, Performance Improvement; Fernando Gargano, Multicultural Affairs and Patient Services; MaryAnn Heuston, MA, Revenue Cycle Access Operations; Avlot Quessa, Multicultural Affairs and Patient Services; Vonessa Costa, Multicultural Affairs and Patient Services; Paola Held, MEd, Revenue Cycle Operations; Steven Dolat, MBA, Primary Care Operations; Patrick Wardell, MBA, Chief Executive Officer; Renee Kessler, MHA, Chief Operating Officer
58. Implementing Addiction Services Into Primary Care
Debralee Quinn, MSN, RN-BC, CNN, CH-GCN, CCM, Primary Care

59. Improving the Mammography Workflow in the Radiology Department at Cambridge Health Alliance
Aliysa Rajwani, BDS, MPH; Gouri Gupte, PhD, MHA; Mary Kearns, RN, Quality Management; Leah Harrington; Hetal Verma, MD; Doris Gentley; Carol Hulka, MD, Radiology

60. Colorectal Cancer at CHA: 10-Year Comparison of CHA with National Cancer DataBase (NCDB) and an In-Depth Review of 2016 CHA Colorectal Patients
Heidi Rayala, MD, PhD, Surgery; Mary Kearns, Quality & Patient Safety; Richard Swanson, MD, FACS, Surgery

61. A Quality Improvement Project: Better Substance Use Screening for Cambridge Students
Tali Schiller, MPH, Cambridge Public Health Department; Kristin Ward, MPH, Cambridge Public Health Department; Tracy Rose-Tynes, BSN, RN, Cambridge Public Health Department; Mary Kowalczuk, MSW, Cambridge Public Health Department

62. CHA Broadway Health Care Proxy Improvement Project: A Multi-Layered Approach
Arshiya Seth, Medicine; Maria Terra, Medicine; Priyanka Anand, Performance Improvement; Jesenia Bermudez, Broadway Care Center; Rina Bernardez, Broadway Care Center; Betsy Doucette, Broadway Care Center; Wilkerson Elysee, Broadway Care Center; Meredith Jones, Broadway Care Center; Dierdre Jordan, Broadway Care Center; Denise Leite Alves, Broadway Care Center; Mary Saginario; Robert Smith, LPN, Broadway Care Center; Maria Sousa

63. Planning Together: Care Planning to Improve Patient Activation and Health Outcomes
Miriam Tepper, Psychiatry; Ekta Taneja, Psychiatry; Alexander Cohen, Psychiatry; Martha Barbone

64. Cost-Savings of Long-Acting Antipsychotic Injections in a Transitional Outpatient Clinic Upon Hospital Discharge
Rebecca Tourtellotte, PharmD, Pharmacy; Jessica Goren, PharmD, BCPP, Pharmacy
65. An Interdisciplinary Practice Improvement Team: Clinic Workflow Design
Dominic Wu, MD, Family Medicine; Fa’iz Bayo-Awoyemi, MD, Family Medicine; Gouri Gupte, PhD, MHA, Performance Improvement; Paola Peynetti Velasquez, MPH, Performance Improvement; Christina Norton, Family Medicine; Lucretia Fitzpatrick, Family Medicine; Rumel Mahmood, MA, MS, Business Data Analysis; Susan Morrissey, BSN, MS, Family Medicine; Stephen Dolat, BS, MBA, Primary Care; Lora Council, MD, MPH, Primary Care; Jill Battry, BS, MHA, Finance; Jessica Knapp, DO, CAQSM, Family Medicine; Judy Fleishman, PhD, Family Medicine; Nicole O’Connor, MD, Family Medicine

66. Can We Improve Provider Engagement Through Co-Production?
Leah Zallman, Bree Dallinga, Joy Curtis, Marcy Lidman, David Porell, Assaad Sayah on behalf of the Provider Engagement Steering Committee

67. Impact of Medical Scribes on Productivity, Face-to-Face Time and Patient Comfort with Scribes in Primary Care
Leah Zallman, MD, MPH, Institute for Community Health; Karen Finnegan, MPH, Institute for Community Health; David Roll, MD, Medicine; Martina Todaro, MA, Institute for Community Health; Rawan Oneiz, MD; Assaad Sayah, MD, Chief Medical Officer
Use of Placental Grafts in Foot and Ankle Surgery

Author(s):
Joel Ang, DPM, Surgery;
David Liou, DPM, Surgery;
Harry Schneider, DPM, Surgery

POSTER 1

Introduction: Viable cryopreserved amniotic grafts have long been utilized in the realm of wound care. Recently, these grafts have started to be implanted within the foot and ankle to facilitate healing through decreasing inflammation, preventing adhesion, and promoting tissue growth. Currently, there is limited literature regarding complications of graft application in foot and ankle surgery. This case series examines patients who have received viable cryopreserved grafts and surveys for any post-operative complications.

Case Description: A chart review at Cambridge Health Alliance was performed for patients who received viable cryopreserved amniotic grafts for surgical rearfoot and ankle procedures since 2015. Ten patients fit the inclusion criteria. A wide variety of surgical interventions were performed—three primary tendon repairs, three tarsal tunnel releases, one calcaneonavicular coalition resection, one peroneal tendon tenolysis, one scar tissue resection, and one excision of multiple plantar fibromas. Of the ten patients, only one had a notable post-operative complication. This patient underwent an extensive excision of multiple plantar fibromas on the left foot, with subsequent cellulitis. Through local wound care, and oral antibiotics, surgical site healed without sequelae.

Discussion: The one post-operative complication noted was likely secondary to the size and location of the initial incision. Based on this small case series, the implantation of viable cryopreserved amniotic tissue in the foot and ankle seems safe. Though the current literature regarding viable grafts is scarce, the findings are consistent with the available published case reports.
**Introduction:** The goblet cell carcinoid (GCC) is a rare appendiceal tumor of the appendix that typically presents in the fifth or sixth decade of life. The age-adjusted annual incidence of all appendiceal tumors is 0.12 cases per 1,000,000. The histologic hallmark of this entity is the presence of clusters of goblet cells in the lamina propria or submucosa stain for various neuroendocrine markers. Due to its grave prognosis, GCC is surgically treated as an adenocarcinoma, with right hemicolectomy as the mainstay of treatment.

**Presentation of Case:** We report a case of a 20-year-old male who presented with acute lower quadrant pain symptoms seemingly consistent with acute appendicitis. He was diagnosed with a high grade GCC that encompassed his entire appendix post uncomplicated laparoscopic appendectomy.

**Discussion:** GCC is a rare tumor of the appendix with unique histological features. It is often retroactively diagnosed with histology after a majority of patients present with acute appendicitis symptoms. The behavior of this tumor in pediatric-young adults is very poorly understood. Still the exact biological behavior of this tumor is uncertain.

**Conclusion:** We review the literature for GCC of the appendix and illustrate a case report of a young, otherwise healthy 20-year-old who presented as appendicitis. We conclude that when offering non-operative management of acute appendicitis, incidental malignancy must be kept in mind.
Collaborative Care: The Distress Thermometer as a Tool to Enhance Psychosocial Needs Assessment for CHA Cancer Patients

Author(s): Dana Bogan, LCSW, Medicine; Melanie Foxx, LCSW, Surgery; Heidi Rayala, MD, PhD, Surgery

POSTER 3

Introduction: For patients diagnosed with cancer, there can be significant psychosocial stressors that are not directly associated with their medical care. In 2015, CHA adopted the use of the well validated “Distress Thermometer” (DT) to evaluate the psychosocial needs of our cancer patients. All patients undergoing cancer care at CHA complete the DT, which includes a self-reported overall stress score on a 0-10 scale, as well as a problem checklist with 35 individual issues. Patients scoring four or more are referred to our social work team for further assessment and intervention.

Summary of Findings: We reviewed all DT responses from its inception at CHA in 2015 until November 2017. There were a total of 418 surveys completed. The average DT overall score was 4.39. 56.8% of CHA patients reported a score of four or more, significantly more than the 43% previously published in US literature. The most commonly endorsed categories were Emotional Problems, Physical Problems, and Practical Problems, endorsed by 33.6%, 17.5%, and 9.2% of patients, respectively.

Discussion and Future Direction: Following the data analysis, we identified Financial Distress as one that poses a significant challenge to patients undergoing cancer care and also has limited resources. To address this, we have created the CHAmpion fund to help with living expenses for our patients undergoing cancer care. We also found the current DT to have limitations on evaluating the impact of financial burden. Future goals are to develop a more refined DT for financial and practical concerns.
Calciphylaxis is an ulcerative skin disease with high mortality that typically requires multidisciplinary management. Although calciphylaxis can be histopathologically confirmed by skin biopsy, the necessity of a biopsy as a prerequisite for diagnosis is debated. A positive biopsy helps exclude mimics of calciphylaxis and avoids unnecessary treatment. However, it is thought that skin biopsy carries low sensitivity and may lead to further areas of necrosis or superimposed infection in this patient cohort. To further examine these concerns, retrospective chart review was performed on 68 patients with biopsy-proven calciphylaxis. Initial biopsy was positive in 35 patients, conferring a sensitivity of 52.2%. Forty-two patients (62.7%) required multiple biopsies until a positive diagnosis (median number 2, range 1-9). Median time from onset of calciphylaxis lesions to positive biopsy was 71 days (range 2-496). The percentage of patients started empirically on IV sodium thiosulfate prior to positive biopsy was 22.7%. A positive biopsy led to change in therapy in 60.0% of patients. Of those that were biopsied, 28.6% of patients suffered from complications, including further necrosis, poor healing, or infection. Overall, biopsies led to therapy change in a majority of patients, but have a low sensitivity and led to complications in almost one-quarter of patients. Interestingly, empiric therapy was often recommended by dermatologists but held due to requests for positive biopsy from nephrology or from patients’ insurance. Providers should think carefully about the health status of a patient prior to decision to biopsy and more frequently consider empiric treatment based on clinical diagnosis alone.
The clinical utility of the construct of the working alliance is well established in psychotherapy literature, but little research exists examining the relationships between patient and therapist views of the alliance (concordance/discordance), and the factors that may lead to discordant views of the alliance. The present study aims to examine the influence of the “Big 5” personality factors on discordance between therapist and patient ratings of the working alliance. The study’s sample is drawn from patients and therapists meeting in a two-year psychodynamic psychotherapy training program. Participant responses to the Combined Alliance-Short Form (CASF) (both the Patient Version and Therapist Version) and the Ten Item Personality Inventory were used to measure working alliance and patient personality factors, respectively. The present study hypothesizes that where there is not concordance (i.e., there is discordance) between therapists’ and patients’ ratings, patients’ personality traits will be a contributing factor; in other words, personality factors of the patient will influence concordance of perception of working alliance between patient and therapist (with personality trait being the mediator). Specifically, this study hypothesizes that patients who are rated low on openness to experience, low in agreeableness, high in neuroticism, high in conscientiousness, and low in extroversion will be associated with greater discordance in patient and therapist ratings of the working alliance. This study would make a significant contribution to therapists’ capacity to make ongoing assessments of the working alliance, as mutually constituted by the perceptions of both participants in the therapeutic dyad.
Introduction: In meta-analyses, psychodynamic psychotherapy is shown to be at least as effective as CBT in symptom relief (Barber et al., 2013; Shedler, 2010), with some evidence of longer-lasting gains. There are theories about what makes psychodynamic therapy effective, but little is known empirically.

Objectives: This mixed methods study examines the treatment factors that patients identify in their own words as most helpful. It draws from a sample of diverse patients, many with comorbidities, who receive psychodynamic therapy in a public hospital.

Methods: This project is a naturalistic, longitudinal study conducted at a public hospital. Participants were seen weekly for up to two years and are were asked to complete surveys every 3-6 months. The current study examines 99 responses to an open-ended question at the three-month follow-up: “What do you find most helpful about the treatment you are currently receiving?” The authors use modified grounded theory methods (Glazer & Strauss, 1967) to develop a customized coding scheme based on participants’ responses to this question, and analyze the data according to this scheme.

Results: Due to inadequate reliability in the first iteration of our coding scheme, we have restructured the code book and modified or discarded codes with poor reliability. Results based on this scheme will be forthcoming.

Discussion: The study’s goal is to better understand what works in psychodynamic therapy to improve interventions. It broadens the scope of early research by examining the perspectives of a diverse group of patients. Obstacles encountered during this project as well as directions for future research will be discussed.
The Neurobiology of Mothering and Infant Stress

Author(s): Jennifer E. Khoury, PhD, Psychiatry; Grace Oh, BS, Psychiatry; Michelle Bosquet-Enlow, PhD, Psychiatry; Ellen Grant, MD, Psychiatry; Martin Teicher, PhD, MD, Psychiatry; Karlen Lyons-Ruth, PhD, Psychiatry

POSTER 7

Background: Childhood maltreatment has adverse effects on neurobiology and later parenting. No studies have explored how adversity-related changes in the human parental brain are involved in pathways to parental stress and disrupted parent-infant interaction, with associated impact on the infant’s stress response and neurobiology. This multi-site NICHD-funded study will evaluate these pathways.

Methods: The study will include 120 mother-infant dyads, 50 assessed in pregnancy, and all assessed at infant ages four and 15 months. We assess maternal psychopathology and maltreatment history via questionnaires/interviews. Maternal stress functioning is assessed via cortisol collected from hair. At four and 15 months, mothers and infants complete standardized stressor protocols (Still-Face Procedure, Strange Situation), during which maternal behaviors are coded and maternal and infant cortisol reactivity are assessed (Dr. Lyons-Ruth, Cambridge Hospital). Mothers and infants complete MRI procedures (Dr. Teicher, McLean Hospital; Dr. Grant, Boston Children’s Hospital).

Results: To date, 36/50 mothers have completed the prenatal visit, 72/120 mother-infant dyads the four-month visit, and 24/120 mother-infant dyads the 15-month visit; 21 infants and 47 mothers have completed the MRI procedures. This sample includes 45% male infants; maternal age M=31.67 (SD=4.2) years. Among mothers, 47.5% reported experiencing childhood maltreatment, 5.7% endorsed clinical symptoms of depression, and 8.3% clinical symptoms of PTSD. Hair cortisol during pregnancy is correlated with physical domestic assault (r =.43, p <.05), and shows medium effect sizes in association with childhood physical abuse (r = .28, p =.13) and physical neglect (r = .25, p =.18).

Conclusions: By combining developmental science and neurobiology, this research will provide novel insights into the neurobiological factors mediating links between early maltreatment and subsequent disturbances in the parent-infant relationship.
Aim: As part of an effort to evaluate patient treatment outcomes within the Psychodynamic Research Clinic (PRC), empirically validated measures were administered to patients at specific time points throughout the psychotherapy process to investigate two separate questions: (1) are patient reported interpersonal problems at the beginning of therapy predictive of stronger working alliance, and (2) are stronger patient reported post-treatment working alliance predictive of greater symptom reduction at the end of therapy.

Measures: The Inventory of Interpersonal Problems (IIP-32) is a 32-item self-report measure of interpersonal problems. The Brief Symptoms Inventory (BSI) is a 53-item self-report symptom scale. The Working Alliance Inventory-Patient (WAI-P) is a 36-item, self-report patient measure of therapeutic alliance.

Procedure: The current study will include data from patients who participated in the PRC between 2014 and 2017 (N = 47), receiving a range of two to 11 months of treatment. The relationship between IIP-32 total scores, collected at intake, and total WAI-P scores, obtained at the end of treatment, will be examined through regression analyses. ANOVA analyses will be used to examine the relationship between WAI-P alliance assessed at the end of the treatment and change in Global Severity (mean item-score) on the BSI over the course of treatment.

Findings: Our research team is in the process of analyzing the data collected.
Personal Distress Empathy as a Component of Therapeutic Empathy

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POSTER 9

Research suggests that therapeutic empathy is the key determinant of outcome in psychotherapy (e.g., Greenberg et al., 2001), yet there does not appear to be one standardized definition. Relational theories offer an integrated construct, called the empathic process, which consists of both “feeling into” states of emotional resonance with the patient’s experience, and “feeling out of” such states by regaining one’s emotional balance (Beuchler, 2008). Yet, researchers have tended to dismiss forms of interpersonal reactivity that Batson et al. (2005) found to be “self-oriented” (i.e., personal distress empathy, or the tendency toward discomfort upon hearing another’s plight), in favor of those that Batson et al. found to be “other oriented” (i.e., warmth and compassion) (e.g., Hassenstab et al., 2007; Hatcher et al., 2005). To test the hypothesis that personal distress empathy serves an adaptive function for therapists, self-report measures were administered to a sample of 135 therapists and 147 non-therapists. Results indicated that the fear of invalidity (i.e., self-doubt) explained the relationship between preoccupied attachment and personal distress empathy among those with less therapist experience, though not among those with more. Higher therapist experience level was also associated with lower personal distress empathy among those with two years of weekly therapy or less. Alternatively, among those with many years of therapy, higher therapist experience level was associated with higher personal distress empathy. These results suggest that personal distress empathy—when felt by experienced, well-analyzed therapists—serves as a mechanism of change, within a larger empathic process.
2018 Academic Poster Session by the Numbers

- Community Health and Health Policy (15)
- CEO CLER Awardees (13)
- Case Study and Clinical Research (9)
- Quality and Systems Improvement (25)
- Health Professions Education (5)
A Hackathon to Target Missed Appointments in Child Psychiatry

Author(s): Solomon Adelsky, MD, MPP, Psychiatry; Nicholas Carson, MD, FRCPC, Psychiatry

Background: From July-December of 2016, 67.9% of 2,995 visits to the child psychiatry outpatient department at Cambridge Health Alliance were completed. A one-day trainee-led hackathon (rapid-design improvement event) utilizing principles from human-centered design, was planned and executed.

Description of the problem in context at CHA: 25% of visits were no-shows or cancelled by patient. Missed appointments result in decreased access to care, reduced quality of care, lost revenue, and inferior quality of education for trainees.

Change ideas and implementation: To hold a rapid-design improvement event to spark innovative approaches to reducing missed appointments.

Results/outcomes: A multidisciplinary team was assembled including patients, referral coordinators, an interpreter, and clinicians. Over 100 unique ideas were generated, many of which are being implemented or engaged in PDSA (Plan-Do-Study-Act) cycles. Hackathon participants reported an increase in a variety of self-efficacy measures including empowerment to suggest improvements, confidence regarding analyzing institutional challenges, inspiration to create change, and likeliness to suggest changes to reduce missed appointments.

Implications/lessons learned: A one-day, rapid-design improvement event can be an effective approach to tackling a difficult institutional challenge. Challenges involved in such an approach include maintaining momentum, executing plan-do-study-act cycles, and continuing to incorporate the perspective of patients throughout the improvement process.
The Residency Improvement Team at the Tufts University Family Medicine Residency at Cambridge Health Alliance is proposing to create a Family Medicine Resident Wards Workspace. Our aim is to provide a safe and secure space for residents to work together to provide team-based care for patients in the inpatient setting. Having a dedicated space on the West 1 floor of CHA Everett Hospital will increase collaboration with other care providers including nursing staff, increase patient safety with providers being closer to patient rooms, and create a sense of community amongst residents while providing a functional workspace with adequate computer access. This space will provide a location to more easily discuss patient plans with the team, help with task completion, increase timeliness of communication, and increase direct supervision of residents. We plan to measure change as an improvement by collecting feedback from residents, attendings and nursing staff on the following measures: access to computers, teamwork and communication, and how often the space is used.
Screening and Referral for Food Insecurity in a Child and Adolescent Psychiatry Outpatient Clinic

Author(s):
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POSTER 12

Research has shown that over one-third of yearly deaths in the United States can be accounted for by societal factors including poverty, poor education and social supports. Screening for social determinants of health is becoming increasingly emphasized in both adult and pediatric medical settings. As psychiatrists, we are taught to think about the social factors that affect our patients, yet we often struggle to know how best to address them. My project is a QI initiative designed to increase screening for food insecurity at the Child Psychiatry OPD and refer positive screens to a community food organization. Data including the number of positive screens and referral outcomes will be shared.
Caring for Our Communities: Improving Behavioral Health Care for LGBTQ+ Latino Populations

Author(s):
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POSTER 13

Individuals with stigmatized identities experience minority stress, which refers to the health effects of stigma and prejudice on marginalized communities. Research has shown that minority stress contributes to the development and severity of the following health conditions: depression, anxiety, asthma, heart disease, physical and psychological disability, and suicide risk. Resilience among vulnerable patient populations experiencing minority stress has been connected with favorable health outcomes and has the potential to inform effective, directed interventions in clinical care. Given that there is a lack of information regarding resilience research among LGBTQ+ Latino communities, CHA behavioral health sites provide opportunities to investigate and create significant clinical interventions to improve clinical care and treatment outcomes of these patient populations. Inspired by research surrounding strength-based approaches that utilize the conceptual framework of resilience, this quality improvement initiative gathered providers from interdisciplinary professions to draw off their clinical experiences in working with LGBTQ+ Latino patients to design protective interventions for enhanced patient resilience. This intervention focuses on accomplishing the following goals: 1.) To improve clinical recommendations by making them more culturally competent and inclusive; 2.) To develop resource materials for strengthening treatment plans; 3.) To improve the quality of behavioral health care for LGBTQ+ self-identified Latino patient populations, and 4.) To improve patient behavioral health outcomes. Future steps will draw from LGBTQ+ Latino patients for feasibility and acceptability of such an initiative.

Outmigration of CHA Patients for ED and Inpatient Care

Author(s):
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POSTER 14

We will select a large sample of patients who are Primary Care patients of CHA providers and design a questionnaire to ascertain the factors that led them to present to outside hospitals, and interview the CHA providers.
Understanding the Needs of the Latino Population in a Pediatric/Behavioral Health Integrated Care Service

Author(s): Aileen Lorenzo, MD, Psychiatry

POSTER 15

Background: Latino youth in the United States endure disparities in access to quality mental health services. Integrated mental health care not only reduces barriers for Latinos but also improves retention, satisfaction, and outcomes. However, Latino families are rarely engaged in the co-production of integrated care services.

Problem: At Cambridge Pediatrics there is a mental health integrated care service that has a large Latino population. The problem identified at CHA is that there are many no shows for initial consultation and follow up consultation in this population.

Change/Implementation: Change ideas include identifying the needs of Latino youth and their families to culturally tailor the design of our integrated care service to improve mental health outcomes in this population.

Culture-specific items were adapted from the DSM 5 cultural formulation and included attitudes towards mental health, past help seeking, family involvement in decisions, clinician patient cultural match, and cultural identity.

Results/outcomes: Attitudes towards mental health were generally positive among Latino patients, and few engaged in past non-clinical help seeking. Parents wanted help to prepare for the visit and to be involved in shared decision making. Stigma was connected to shame and feeling pressured into long term treatment.

Implications: Latino families generally reported a positive experience with integrated care, which seemed to be a function of prior treatment experience and receiving care in a familiar pediatrics setting. The link between stigma and a fear of being expected to commit to long term treatment presents opportunities to better prepare Latino families for integrated care.
Promoting Resilience Among Women of Color in the CHA Residency Program with a Dinner Seminar Series

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POSTER 16

Burnout is a well-recognized problem affecting individuals at every level of training, and residency is a time of particularly high stress and important transitions. In addition, many women of color face unique challenges to wellness and maintaining positive mental health while navigating workplace, patient, and social encounters. Burnout is associated with many negative outcomes for both providers and patients. This poster will evaluate a four-part seminar series focusing on key, research-supported elements of resilience, tailored to women of color in the CHA residency program. The series consist of four seminars which combine presentation, activities, and discussion. After each dinner, participants receive a survey where they rate how well they felt the objectives of the dinner were met.

Objectives for the series were: 1) Participants will be able to define resilience and wellness for themselves, and identify factors that promote and challenge their resilience. 2) Participants will become more aware of their own personal narratives and cognitive styles, and understand how these factors influence resilience and wellness. 3) Participants will implement one new coping strategy, and will identify another strategy to try in the future. 4) Participants will endorse increased sense of community with other black women in the residency program. Participants were also asked to provide qualitative feedback on the strengths of the seminar and areas for improvement. We hope that seminar attendees will report high levels of satisfaction with the quality of the meetings, and report that they feel the proposed objectives were met. Feedback will be used to improve the curriculum so that it may be formalized and repeated with other groups of minority women trainees.
Social Justice Coalition’s Home Series: A forum for learning about the social determinants of health and organizing around health justice advocacy with trainees, faculty, and allies in the CHA community

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Introduction: Many individuals in the CHA community are passionate about advocating for patients’ rights without the afforded resources. Members of the Social Justice Coalition (SJC) designed a monthly house meeting series to provide a chance for members across disciplines to work together, discuss socio-political issues, and create plans of action.

Objectives: The goal is to provide the space for SJC members to engage in a longitudinal conversation about current health justice issues. We expect that this space will fill a deficit in our medical education regarding advocacy, that members will feel a greater sense of fulfillment, and that members will execute initiatives to promote social justice within the CHA community.

Methods: SJC members hosted monthly house meetings with dinner provided. An agenda was created, minutes and attendance were recorded, and plans were set into action.

Results: As a result of successfully held monthly meetings, there has been a forum for SJC members to maintain a consistent dialogue about pertinent health justice issues affecting our patient population. In addition, SJC coordinating members held a Grand Rounds presentation on immigration and created a larger forum for all SJC members to exchange ideas about future initiatives.

Discussion: SJC members have found these meetings to be an invaluable space. Planning consistent meetings dedicated to health advocacy allows for richer discussions, improved morale and more effective initiatives. Continuing the monthly meeting series is a vital part of our clinical education and supports the CHA mission.
Introduction: Childhood obesity is prevalent in our community, and there are low rates of participation in sports by female youth. Participation in sports has many benefits, including reduction in obesity, decreased rates of depression, decreased risky sexual behaviors, improved self-esteem, higher future education levels, and increased earning potential. Family Medicine residents have held annual Sports Skills Days to address this issue since 2016.

Objectives: To reduce childhood obesity by engaging female youth, and empowering role models, in exercise and healthy eating. To bring together community stakeholders (Malden Family Medicine, Farmer Dave’s, SNAP, Malden High School, Salemwood Elementary School) to achieve this goal.

Methods/Materials: Previous Sports Skills Days were evaluated by residents and faculty. For future iterations, we want to improve on attendance and nutrition teaching. High school athletes from the community will volunteer as role models for recruited elementary-age girls. We will recruit through EPIC (i.e. female children ages 6-12 with a BMI >90th percentile at Malden Family Medicine Center), link participants’ families with locally-grown produce while providing education about the CSA process, and involve resident physicians to promote the process of community engagement. We will book two venues to accommodate for inclement weather and send reminder communications to improve show rates.

Results: Key outcome measures include participant’s weight, BMI, participation in sports, and healthy eating habits. Healthy Eating Habits will be assessed using the CDC Youth Risk Behavior Survey. The outcome measures will be collected at two three-month intervals after the event to assess for change.
Often patients who are diagnosed with diabetes find that recommended diabetic diets do not include traditional, ethnic foods. Doctors are used to telling patients to stop eating “junk food” and prepare homemade meals, but often are unable to provide details as to how to prepare them. This can lead to confusion and poor dietary adherence.

Current supports at CHA for patients with DM includes visits with primary care providers, access to nutrition, pharmacotherapy, and nurse education services. Limitations noted include: (1) Providers prescribe healthy eating without concrete recommendations (2) Limited access & high no-show rate to nutritionists, and (3) Lack of standardized nursing care plans for patients with Limited English Proficiency.

Our goal is to improve self-management skills of Brazilian Portuguese-speaking patients with DM, through SMAs, by providing hands-on dietary education through cooking demos, and co-creating linguistically tailored self-management tools.

These patients and their families will be empowered and have practical skills about how they can prepare meals to improve their health and control their DM. Short-term outcomes include dietary changes, improved medication adherence, & increased patient engagement. There are pre and post-tests to identify changes in attitudes, knowledge, self-management behavior.

We collect personal narratives from SMA participants with quotes that will be incorporated into nursing care plans. We will co-create a recipe book for culturally appropriate DM friendly recipes that can be shared across clinics.

There is institutional benefit in developing more self-management tools as we move towards the ACO model, which will include 60-65% of patients at CHA.
Providing Point of Care Access to Community Resource Information in a Primary Care Clinic

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POSTER 20

Introduction: According to the 2015 Wellbeing of Malden Report, programs within the Malden community that address social determinants of health are greatly underutilized. Only 45% of eligible Malden residents have received benefits from the supplemental nutrition assistance program while 30% of residents spend half of their income on housing alone. These statistics raise questions about access to community resource information. Social and environmental factors have a significant impact on health outcomes and addressing these issues is important for achieving greater health equity.

Objective: This project aims to increase patient access to community resource information, provide education to patients and assist them with participation in local community programs.

Intervention: We have built an electronic Community Resource Library that provides user-friendly click-through information for patients seen in clinic. The Community Resource Library will be available on iPads in a designed space within the clinic. Trained volunteers will provide patients with the information they need to start community program enrollment or application processes.

Next Steps: The success of the Community Resource Library will be measured by monitoring the volume of patients utilizing the library space and eliciting patient feedback to assess the value of website content.

Future Discussion: It is hoped that this intervention is proven to be a successful way to improve patient access and increase participation in community resource programs. Providing point of care access to community resource information is the future of primary care and there should be more research dedicated to this area.
Impact and Perceptions of Teledermatology at CHA

Currently, primary care physicians (PCPs) are the leading referral point for dermatology, as they triage acuity and urgency of patients’ dermatologic concerns. Unfortunately, this conventional model creates long appointment wait times due to a mixture of high and low quality referrals. In addition, access to dermatologists is unequally distributed, even though underserved urban patients have higher rates of chronic dermatologic disease. In 2013, Cambridge Health Alliance (CHA) implemented the Teledermatology Service, which allows PCPs to place virtual dermatologic consults by uploading photos to EPIC, and in return receive diagnostic and triage support from dermatologists. We reviewed data from over 3,000 consults placed since the program’s inception to evaluate its impact on CHA patients and providers. Preliminary data from 734 patients shows an average age of 44.2±17.4 years with a predominance of female patients (63.2% vs 36.8%). Photos were adequate for diagnosis in 86.2% of encounters. Teledermatology consultation results in recommendation of topical, systemic or both treatments in 44.1%, 4.5% and 9.9% of encounters, respectively. In addition, 36.6% of teledermatology encounters recommended dermatologic follow-up, of which 92.2% were scheduled, and 78.9% were attended by patients. Of the 21.1% of missed visits, 71.2% were due to no-shows while 28.8% due to cancellations. Thus far, the teledermatology service has increased access to high-quality dermatologic care. Preliminary data shows that virtual patient triage provides PCPs with recommendations for appropriate treatment options and limits low acuity dermatology appointments. Further investigation can elucidate the true cost effectiveness and health benefits of teledermatology implementation at CHA.
**Background:** National studies have shown that antimicrobial resistance among uropathogens have increased over time, in particular, among Escherichia coli. With resistance patterns varying geographically and by community, it is imperative to evaluate for local antimicrobial susceptibility. At Cambridge Health Alliance (CHA), empiric treatment of acute uncomplicated cystitis (AUC) varies by provider and site. There is a need for a systematic evaluation of antimicrobial susceptibility among uropathogens to provide optimal antibiotic treatment.

**Objectives:**

1. Determine the prevalence of antimicrobial resistance among uropathogens causing AUC in the primary care setting at CHA,

2. Characterize risk factors that may predispose patients to resistance, and

3. Develop optimal management practices for AUC based on the antimicrobial resistance data obtained.

**Methods:** 200 clean catch urine specimens from adult female patients who met criteria for AUC were collected prior to antibiotic initiation from the Primary Care Center at Cambridge Hospital and Malden Family Medicine. These urine cultures were evaluated for antimicrobial susceptibility via standard laboratory protocol. Minimal inhibitory concentrations (MIC) were reported for each antimicrobial tested.

**Results:** Data collection and analysis in process.

**Implications/Lessons Learned:** Our results will inform best practices for treatment of AUC, including the development of an updated AUC treatment algorithm for our specific, local catchment population at CHA. In collaboration with nurses and physicians, these findings will be disseminated to the ambulatory settings.

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Introduction: The Affordable Care Act (ACA) reduced the number of uninsured adults by nearly 40%. State governments had substantial discretion in implementing the reform but little is known about how coverage gains varied across the United States states for black, Hispanic and lower-income Americans.

Objective: To quantify state-level improvements in coverage after the ACA for black, Hispanic and low income Americans.

Methods: We analyzed data from the Behavioral Risk Factor Surveillance System (BRFSS), representative statewide cross-sectional surveys in the pre-ACA period (2012 - 2013) and the post-ACA period (2015 - 2016). For black (non-Hispanic), Hispanic and low-income (<$35,000/year) adults (age 18-64), we estimated pre- to post- ACA changes in insurance coverage for each state using logistic regression models.

Results: The uninsurance rate declined for black people in 39 states with the largest decline (relative) in Kentucky (72.2% [44.1 to 110.6]; absolute reduction, 39.2% [4.4 to 74.1]). In North Dakota, there was an increase in the uninsured rate (29.9% [-62.7 to 91.0]; absolute increase of 6.6% [-23.8 to 10.6]). Among Hispanic and lower-income Americans, similar patterns of variation were observed. The proportion remaining uninsured three years after ACA implementation varied widely across states: For black people the range was 7.3% (DC) to 25.3% (Nebraska); for Hispanic people the range was 8.1% (Hawaii) to 61.8% (North Carolina).

Conclusions: Post-ACA improvement of insurance coverage for black, Hispanic and lower-income Americans varied greatly among U.S. states. Our findings raise concerns about proposed legislation that would provide states with greater discretion in implementing federal health programs.
Assessing the Impact of a Worksite Wellness Initiative on Employee Engagement

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Background: Worksite wellness programs are designed to support employees in developing and maintaining healthy habits, and have historically been developed with return-on-investment (e.g. reduced employee health care costs) as the primary motivation. However, there has been a recent change in motivation towards value-on-investment which encompasses a range of benefits including employee engagement. Recognizing this trend, the Cambridge Health Alliance (CHA) Wellness Initiative has incorporated strategies to increase both its reach and employees’ engagement levels.

Methods: Reach and effectiveness of Initiative activities, such as the Walking Challenge, were evaluated using surveys. Additionally, a survey was conducted with Wellness Ambassadors, employees who volunteer to represent the Initiative within their departments.

Results: In 2017, the Walking Challenge, the Initiative’s most popular activity, included 957 participants, a 349% increase since the initial Challenge in 2013. 46% were first-time participants. 66% of participants reported that the Challenge contributed to building stronger department relationships, and 68% felt more connected to the wider CHA community. Additionally, 91% of Wellness Ambassadors reported that this role has helped them to improve the work culture of their department, and 100% felt that they were able to make a positive difference in their co-workers’ health.

Conclusion: The Wellness Initiative is effectively engaging employees in its programs and has documented its contribution to CHA’s goal of having an engaged workforce.
Cardiovascular disease (CVD) is the leading cause of morbidity and mortality in the United States. While CVD and cardiovascular risk factors (CVRF) are more prevalent among racial minorities and low-income Americans, these groups are more likely to lack health insurance coverage and access to care. We assessed: 1) whether the ACA was associated with improvements in insurance coverage and access to care; 2) whether the ACA’s optional Medicaid expansion resulted in better coverage and access; and 3) whether racial/ethnic disparities in outcomes improved.

We analyzed nationally representative data from the Behavioral Risk Factor Surveillance Survey (BRFSS) in the two years (2012-2013) prior to ACA’s implementation and two years of the post-implementation period (2015-2016). We compared changes in health insurance coverage as well as access to care using three measures: 1) not foregoing a doctor visit due to cost in the last year (affording physician visits); 2) having a personal doctor; and 3) having a check-up in the past year.

We found pre- to post-ACA increases in the proportion of all Americans with CVD/CDRF in all health outcomes measures. Finally, many continue to lack coverage: 17.5% overall, 33.2% of those with lower incomes, 12.9% of black and 28.7% of Hispanic people.

The ACA was associated with a moderate improvement in insurance coverage and small improvements in access to care overall and larger improvements among lower-income, black, Hispanic Americans and those residing in Medicaid expansion states. High proportions of Americans with CVD and CVRF continue to face access barriers and lack insurance coverage.
Introduction: Malden, Massachusetts is an ethnically and economically diverse community with a large underserved population. As CHA Malden Family Medicine Center strives to meet the needs of the community, one essential alliance is with Malden Public Schools’ Title I program. Title I is a federally funded program that is part of “No Child Left Behind,” designed to support students and families affected by poverty. Malden Public Schools’ (MPS) Title I program is actively engaged with students’ parents, with enriched programming including parent literacy and math education (“Parent Academy”), to enhance student success. Yet there remain many unmet student and family needs, which MPS Title I program hopes can be alleviated through increased collaboration with CHA and Family Medicine Residents.

Objectives: By continuing CHA Family Medicine involvement in MPS Title I’s Parent Academy presentations, we aim to aid this historically marginalized community while strengthening the CHA and MPS Title I relationship for ongoing collaboration.

Methods: I presented at the January 2017 and January 2018 Title I Parent Academy sessions, teaching requested topics—nutrition for the whole family, and understanding child development for appropriate limit setting and bullying intervention. CHA’s annual involvement for this health topic Parent Academy led to further discussion with MPS Title I leaders to better understand the community’s needs and social determinants of health.

Results: For the January 2018 CHA/Title I collaborative Parent Academy, there were 26 parents in attendance, with primary languages including Arabic, Brazilian Portuguese, Haitian Creole, Chinese, Spanish, and English. When asked via survey, the event was rated as a positive experience by 26 out of 26 parents. Parents requested that there be more of these health-oriented presentations.

Discussion/Recommendations: CHA involvement with the MPS Title I project has great potential for ongoing community benefit. Parents found the CHA presentations at the Parent Academy helpful, which will continue annually. Though extensive discussion with MPS Title I leaders, we identified two additional needs of the Malden Title I students and families—multilingual parent services and resource awareness. The MPS Title I program presently is without interpreter services for parents, limiting non-English speaking families’ benefit from these programs. Students and families struggling with poverty have great needs, with reports of students not coming to school because they did not have winter coats or boots. There are many community resources from which these families would benefit, but they need help finding them. The future of this project will include partnering with existing community resources and coalitions, such as Malden’s Promise, to bring resources from the hospital network to benefit the public school’s underserved families. This project deepened the CHA and MPS Title I program partnership, with great potential for continued community benefit.
**Introduction:** Every three years, the CHA Cancer Committee conducts a Community Needs Assessment (CNA) to study cancer trends in our service population. We focused the current analysis on Ambulatory Quality Goal (AQG) patients tracked by the CHA PCP dashboard for breast, colorectal, and cervical cancer. Our objective was to identify specific patient populations that might be less likely to be screened for these cancers.

**Methods:** We examined association of cancer screening and patient characteristics on patients from the CHA AQG dashboard (7/1/2015–6/30/2017). Using multivariate logistic regression, we estimated the odds of being screened for breast, colorectal, and cervical cancer, adjusting for demographics, socioeconomics, and pertinent medical history.

**Results:** Screening rates for breast, cervical, and colorectal cancer, were 72%, 81%, and 71%, respectively. Patients with a documented history of substance abuse (56%, 74%, and 65% respectively) or smoking (68%, 80%, 70% respectively) were less likely to be screened (p<0.001 for all). Patients with a PCP at Malden and Revere (p<0.001 for both) as well as people with public insurance/Medicaid were also less likely to be screened (p<0.001). Ethnic minority groups were more likely to be screened than our White/European patients; with the exception of North African/Middle Eastern, with rates of 65% (p<0.01), 78% (p<0.0001), and 66% (p<0.001) for breast, cervical and colorectal, respectively.

**Discussion:** This study identifies at-risk CHA patient populations that we can target for future cancer screening outreach.
See, Test and Treat: A Program That Fulfills the Cambridge Health Alliance Mission

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See, Test & Treat is a College of American Pathologist Foundation initiative that delivers free, pathologist-led cervical and breast cancer screening, same day results, and education to vulnerable women in US communities. The goal of See, Test & Treat is to engage underserved patients in community health care services by offering same-day screening results and access to follow-up care in a culturally appropriate setting.

In a single-day, culturally appropriate program, women receive a pelvic and breast exam, a Pap test with same-day results, a mammogram with same-day or prompt results, connection to follow-up care plans, interpretive services, translated educational sessions and materials, and a healthy meal. In partnership with the CHA Foundation, CHA offered the first program after identifying a target population and registered 60 patients for visits for PAP and mammograms on March 3, 2018. Volunteer Health Advisors recruited the churches, schools and other places of gathering to recruit patients in need of these preventable cancers. In 2016, See, Test & Treat programs’ abnormal Pap results ranged from 10% to 20%, and abnormal mammogram results ranged from 6% to 23%, far above national averages. The poster will detail our findings and the outcome of the CHA event.

Changes in Psychiatric Emergency Room Visits Following the Boston Bombing

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Introduction: The week of the 2013 Boston Marathon brought a series of unique traumatic events to the greater Boston area.

Objectives: This study examines the characteristics of patients seen by Psychiatric Emergency Services (PES) at a Boston-area community hospital following the 2013 Boston Marathon bombings.

Methods: Demographics, prior diagnoses, trauma history, and presenting problems of patients evaluated by the Cambridge Hospital PES in the two months following the bombings were compared to those seen in the two months preceding the bombing. A subset of cases in which the bombing was explicitly mentioned was also examined in greater detail.

Results: Post-bombing PES visits demonstrated a broad range of demographics, prior diagnoses and presenting problems. Only 36 evaluations (8.2%) out of 440 directly mentioned the bombings, of which only 13 presented with symptoms of PTSD or acute stress disorder (n=13, 36.1%). New-onset PTSD symptoms directly related to the bombing were rare (n=4 evaluations), 11.1% of the 36.

Discussion: PES patients seen after a local terrorist event are likely to have a broad range of presenting problems and prior diagnoses. While presenting problems can include symptoms of PTSD or acute stress disorder related to the traumatic event, this may be a minority of the total population seen. While a PES plays a critical role in aiding those with mental health crises, it may not be the primary site where new cases of PTSD or Acute Stress Disorder are likely to be seen in the immediate aftermath of a terrorist attack.
Introduction: The research on long-term physical and mental health effects of adverse childhood experiences (ACEs) demonstrates the need to screen for, prevent, and intercept child trauma exposure. However, best practices regarding ACE assessment in pediatric clinical contexts, including integrated models of care, have not been studied.

Objectives: Our objective is to identify challenges and opportunities of screening for ACEs within primary care to inform clinical practice in an integrated care model.

Methods: This is a qualitative pilot study nested within a SAMHSA-funded integrated care initiative “Enhancing Systems of Care” (ESOC). Baseline assessment by the E-SOC team includes ACE screening using the CYW Adverse Childhood Experiences Questionnaire (ACE-Q). Unlike research applications that rely only on cumulative ACE score, our assessment addresses each individual ACE item. Responses to ACE items are used to guide therapeutic dialogue and clinical follow-up. In-depth interviews and focus groups were conducted with clinicians to explore provider perspectives on the value and feasibility of integrating ACE assessment into the clinical environment.

Results: Preliminary data suggests that ACE assessment is acceptable to families, does not burden providers, and helps to foster therapeutic dialogue and inform care recommendations.

Discussion/Recommendations: Our findings support an emerging evidence-based approach within prior literature suggesting that screening for ACEs can be therapeutic in fostering dialogue and providing supportive acknowledgement for families. Further research is needed to assess the longitudinal impact of ACE-guided clinical service delivery on outcomes, such as patient functioning, services utilization, and expense.
Differences in Rates of Suicidal Ideation and Potential Suicide Attempt Among Disabled and Gender Minority Medicare Beneficiaries from 2009-2014

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Introduction: Gender minority individuals (transgender or nonbinary) have higher rates of mental health disorders than the general population. Around 40% of gender minority persons have reported attempted suicide and is more frequent in youth, with mental illness and with no support.

Objectives/hypothesis: We studied rates of suicide ideation and potential suicide attempt in Medicare claims between 2009-2014, expecting to confirm the high rates.

Methods: We identified gender minority beneficiaries using a diagnosis-code algorithm developed by the Centers for Medicare and Medicaid Services, and compared them to a 5% random sample of beneficiaries from 2009-2014 within disabled or age ≥65 cohorts. The presence of diagnosis codes on claims related to suicidal ideation and attempt were observed. Logistic regression models were used for binary outcome variables (any attempt or ideation), adjusting for age only and age and mental health conditions.

Results: Adjusting for age only, disabled gender minority beneficiaries had higher rates of potential suicide attempt/ideation (9.2%) compared to non-gender minority disabled beneficiaries (2.5%). Predicted means fell to 2.7% vs. 1.4% respectively after adjusting for mental health conditions (both p<0.0001). Aged gender minority beneficiaries had higher rates of potential suicide (2.5%) than non-gender minority aged beneficiaries (0.9%) after adjusting for age only, and the difference was not attenuated after adjusting for mental health conditions (1.5% vs. 0.8%, respectively, both p<0.0001).

Recommendations: These claims-based findings add to existing literature showing higher rates of suicidality for gender minorities and calls-out for immediate suicide prevention promotion.
**Introduction:** Food insecurity worsens health and increases healthcare utilization and costs. The Supplemental Nutrition Assistance Program (SNAP) reduces food insecurity among recipients but does not eliminate it.

**Objectives and Hypothesis:** Changes in SNAP benefits may affect healthcare utilization and costs via effects on food insecurity. SNAP allotments increased in April 2009 under the American Recovery and Reinvestment Act (ARRA) and decreased in November 2013, yielding an opportunity to test this hypothesis. I examined trends in inpatient Medicaid costs and utilization in response to the 2009 and 2013 changes. I compared responses to those among Medicare recipients and among those with varying likelihoods of having a disability.

**Methods:** Interrupted time series models estimated and compared inpatient utilization and cost responses to the 2009 and 2013 SNAP changes. Analyses used 2006-2014 Healthcare Cost and Utilization Project National (Nationwide) Inpatient Sample data. Models adjusted for inflation, enrollment and other covariates.

**Results:** After the 2009 SNAP increase, Medicaid cost growth fell nationally from +0.85 to +0.36 percentage points per month (–0.49, 95% CI: –0.73, –0.25). After the 2013 SNAP decrease, cost growth rose to +2.09 percentage points per month (+1.73, 95% CI: +0.37, +3.09). Monthly admissions followed similar patterns. Effects were elevated among people with a high disability likelihood and for Medicaid as compared to Medicare recipients.

**Discussion:** Changes in SNAP benefit levels were associated with changes in inpatient Medicaid cost and utilization patterns. Increasing food aid may reduce inpatient Medicaid costs.
A Tale of Three Projects: Co-Production as an Approach to Health Systems Transformation

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POSTER 33

Introduction: Health system transformation (HST) efforts are being undertaken across the healthcare industry in different modalities and involving stakeholders at all levels. In this context, co-production as an approach to HST is gaining traction, but its impact remains unclear.

Methods: We compared and contrasted the evaluations of three initiatives that adopted co-productive methods to promote HST to see the effect of these approaches on the project participants. The initiatives were: from clinicians’ perspective (CHA-Gold Innovation Fellowship (Gold)); and from healthcare consumers’ perspectives (Family Voices (FV), and Community Catalyst’s Consumer Voices in Innovation grant program (CVI)).

For CVI and FV, we assessed impact on participants by administering surveys at multiple timepoints, conducted qualitative interviews and analyzed secondary data. For Gold, we conducted four cycles of qualitative interviews and analyzed secondary data.

Results: Across the three initiatives, participants reported increased involvement in HST. 43% of FV participants reported that they are involved in improving healthcare systems and services. 56% of CVI consumers have increased their involvement in HST advocacy in the last year. All Gold fellows (N=11) are promoting institutional change through their projects.

Discussion: Co-productive methods, rather than top-down approaches, are widely appreciated by participants in these initiatives. Gold clinicians report change projects require the engagement of more people than expected and appreciate guidance provided around this. CVI and FV consumers report feeling empowered by the opportunities to participate in decision-making groups. Coproduction is a fruitful approach to the HST process, and further study may reveal its impact on outcomes.
Acknowledging the Role of Fathers: The experience of a local parenting program

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POSTER 34

Background: Engaging fathers in raising their young children is associated with numerous benefits for children including decreased behavioral problems in adolescence and young adulthood, better than average social functioning as children and adults, better health outcomes and improved economic status. Since 2010, Baby U, a Cambridge-based parenting program, has provided education and support to predominantly low-income parents of young children. In 2013, they intensified efforts to engage fathers by updating recruitment strategies and modifying program and staffing structures.

Methods: Baby U used surveys and interviews to understand parents’ experience, as well as their knowledge of child development and parenting strategies and their engagement in behaviors that foster children’s social, emotional, and cognitive development. Paired t-tests were used to determine changes from before to after program participation within gender sub-groups. Interviews were analyzed for common themes.

Results: Fathers appreciated the acknowledgement of their role as an equal parent and emphasized the value of having a safe space to discuss parenting challenges and the relationships developed with other fathers. In a cohort of 47 fathers, there were significant gains in knowledge of the importance of talking and playing with young children (p<.0001) and knowledge and use of different tools and strategies for parenting (p<.0001 for knowledge and use) from before to after program involvement. Fathers reported dedicating more quality time for their children and incorporating positive discipline strategies.

Conclusions: Baby U is successfully engaging fathers in raising their young children. Further evaluation is needed to determine the impact on Baby U children.
Evaluation of CHA’s Complex Care Management Program

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POSTER 35

Introduction: CHA’s Complex Care Management (CCM) program engages high-risk patients to improve health outcomes, reduce avoidable medical expenses, and strengthen primary care team interventions. We evaluate the impact of CCM and explore stakeholder perceptions of the program.

Methods: We examined CHA utilization during baseline (12 months before CCM enrollment) and follow-up (12 months after CCM enrollment) for 1,090 patients enrolled in CCM between 2014 and 2016. We interviewed 15 patients and six Care Managers participated in a focus group to provide program context.

Results: Patients with acute care utilization (one inpatient stay and/or two or more Emergency Department visits in a 12-month period) decreased by 9% after CCM enrollment (pre-CCM: 57%, post-CCM: 48%, p<0.001). Mean ED visits decreased from 3.0 to 1.9 per year; mean inpatient stays decreased from 0.9 to 0.7 per person per year. Patients felt that they were better able to manage their health and appreciated their Care Managers’ support and assistance with care coordination. Care Managers defined success as establishing trusting relationships with patients, improving patients’ experience of care and alleviating the workload for primary care teams.

Discussion: Additional research is needed to understand acute care utilization outside of CHA and to confirm findings in a matched comparison study. The CCM program is identifying rising risk patients for whom CCM could avert avoidable medical expenses. Care Managers and interviewed patients defined success in terms beyond utilization patterns.
Reducing Childhood Obesity: Promoting Exercise and Healthy Eating

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POSTER 36

Introduction: In 2015, approximately 28-45% of Malden High School students were overweight or obese with <50% performing recommended pediatric exercise goals. Female sports participation lags behind males. Sports participation offers numerous benefits including reductions in obesity.

Objectives: This project aimed to increase childhood female sports participation, reinforce healthy nutrition habits, and introduce families to community-supported nutrition resources.

Methods/Materials: A chart review identified female patients at CHA Malden between 6-12 years old with a BMI >90th percentile who were recruited to attend the expanded second annual “Sports Skills Day.” The participants were taught various sports skills by female high school athlete role models while physicians taught healthy eating and social workers signed families up for SNAP. Participants and parents completed de-identified pre- and post-intervention qualitative and quantitative surveys.

Results: 23 participants aged 6-12 years old participated. A majority of participants reported eating sugary treats multiple times a week. 69.6% ate vegetables less than once a day. 100% of participants would recommend the event to their family or friends. 69.6% reported they would be “very likely” to increase their vegetable intake after the intervention. All participants indicated they felt more confident about participating in sports.

Discussion/Recommendations: Early exposure to sports and healthy eating habits may increase future sports participation and reinforce improved nutrition in youth populations. Due to inclement weather, however, only 23/100 participants were present. Our goal is to increase the number of participants and improve the nutrition teaching portion for the next annual event.
Immigrants Contributed $27.9B More to Private Insurers Than They Took Out in 2014

Author(s): Leah Zallman, MD, MPH, Institute for Community Health, Steffie Woolhandler, MD, MPH, City University at Hunter College, Sharon Touw, MPH, Institute for Community Health, David Himmelstein, MD, City University at Hunter College, Karen Finnegan, MPH, Institute for Community Health

Background: Immigrants in the United States utilize less care than U.S.-born individuals, and contribute more to Medicare than the value of Medicare-funded services that they receive. With high workforce participation rates, many are privately insured. We aimed to understand the contributions by and on behalf of immigrants and U.S.-born individuals to private insurance and insurers’ expenditures for their care.

Methods: We analyzed data from the Medical Expenditure Panel Survey to determine private health insurance expenditures and individual premiums. We extracted employer contributions to private insurance premiums from the Annual Social and Economic Supplement to the Current Population Survey. We tabulated private health insurance contributions and insurers’ expenditure for immigrants and U.S.-born individuals.

Results: In 2014, immigrants accounted for 12.0% of private insurance contributions, or $81.2 billion, but only 7.9% of private insurer’s expenditures, or $53.3 billion. This resulted in a net contribution of $27.8 billion, or $1,226 per immigrant. In contrast, U.S.-born individuals contributed $597.5 billion to private insurance and accounted for $625.3 billion in expenditures, an average net deficit of -$174 per person (p <0.0001 for comparison with immigrants). Between 2008 and 2014, immigrants generated a surplus ranging from $20.3B to $31.6B, resulting in a cumulative surplus of $192.5B.

Conclusions: Immigrants cross-subsidize the care of privately insured native-born persons, mirroring immigrants’ previously documented subsidy to the Medicare Trust Fund. Our findings quantify the contribution of immigrants to the solvency of the U.S. healthcare market and contradict the widespread assumption that immigrants are a drain on health care resources.
Introduction: A set of 26 SGIM-endorsed “minimum geriatric competencies for IM-FM residents” (MGC) was published in 2010. Providing residents geriatrics training can be challenging in programs with an “X + Y” (“inpatient + ambulatory”) schedule due to faculty availability and spacing of sessions across time.

Objectives: We describe our experience in teaching MGC within the longitudinal geriatrics curriculum embedded in CHA medicine interns’ “4 + 2” schedule.

Methods: During the two-week ambulatory block, interns spend one day in a geriatrics ambulatory site (house calls, PACE, nursing home). Geriatrics division faculty give core lectures during these clinical sessions. For AY16-17, we revamped lectures to address MGC related to medication management, cognitive health, complex chronic illnesses, palliative care and ambulatory care. Interns voluntarily completed anonymous self-assessment surveys pre- (7/16) and post-rotation (6/17), rating their level of confidence on MGC addressed by the curriculum using a five-point Likert scale.

Results: On pre- and post-surveys, interns (total=eight) reported improvement in confidence ratings on all items, with the greatest average point gains seen in practice of optimal geriatric pharmacotherapy (2), initiation of treatment for dementia patients (1.37), capacity determination (1.5), individualization of screening recommendations (1.63), and identification of older patients eligible for certified home health agency (CHHA; 2.13) and non-CHHA community services (1.5).

Discussion: We developed a longitudinal geriatrics curriculum within the context of our “4+2” immersion schedule which is easily reproducible by other programs. Aligning curricular content with the MGC has resulted in interns’ improved confidence in several important geriatrics skills.
**Diagnosing the Learner: An analysis of how our learners are clinically reasoning**

Author(s):

**POSTER 39**

**Needs and objectives:** Clinical reasoning is an important yet complex process that has been increasingly recognized for its importance over the past few decades. However, the exact characteristics that define it remain subject to debate. It is integrated into medical school curricular competencies and accreditation bodies' standards. As educators we are challenged to help learners develop expertise in this topic that has many expert recommendations of how to teach it, but without evidence based assessment tools. Therefore we set out to describe how clinical reasoning changes across the educational continuum from undergraduate medical education to graduate medical education to expert. Our focus is on how problem representation, a specific skill in clinical reasoning, is developed. This is a critical skill for physicians as it quickly conveys how one is interpreting a case and is vital for efficient and accurate communication.

**Setting and participants:** We collected one-liners (a.k.a. problem representation statements) from our learners after reviewing real cases. Our learners range from 20 Harvard Medical School students in their clinical year to 15 PGY1-3 Internal Medicine residents at Cambridge Health Alliance. We also included faculty one-liners for comparison.

**Description:** We aim to describe how problem representation changes across the educational continuum from undergraduate medical education to graduate medical education to expert. We are performing a mixed methods analysis of one-liners (problem representation statements) to describe factors that influence quality and sophistication.

**Evaluation:** We are using a grading rubric that accounts for complexity of the case and accuracy of the components of problem representation. We have several evaluators, ranging from senior to junior Internal Medicine faculty and a medical student, in order to ensure inter-observer reliability. Through our analysis of this data, we hope to identify concrete factors critical for the accurate assessment of one-liners.

**Discussion:** Through teaching clinical reasoning to learners at various stages, we have identified that problem representation is an important yet challenging skill to develop. However, we have limited ability to assess our learners’ clinical reasoning. By focusing on a core skill, problem representation, we hope to identify key factors that make up a one-liner as well as discrete stages of problem representation development. We expect learners with more medical education will score consistently higher. We hope that by better understanding how learners progress in developing the skill of problem representation, we will be able to develop a useful formative and summative assessment tool. Furthermore, such a tool would be useful for educators as it would map milestone achievement in the development of clinical reasoning competence. In addition to being useful for diagnosing learners’ developmental progress, it would help educators to better target educational interventions.

**Impact:** By focusing on a core skill, problem representation, we hope to identify key factors that make up a one-liner as well as discrete stages of problem representation development. This will contribute to the currently limited literature about problem representation and its assessment.
Innovation in a Safety-Net Hospital: Building a point-of-care ultrasound curriculum through a resident-led, low-resource model

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POSTER 40

Introduction: We stand on the verge of a revolution in bedside clinical care. The evidence supporting point-of-care ultrasonography (POCUS) shows improved patient outcomes and satisfaction, faster and more accurate diagnoses, and fewer complications. Newer technology is making ultrasounds cheaper and more portable. There is high interest among internists to adopt this technology but lack of relevant and easily available training is a big barrier.

Objectives: The goal of our project is to address this barrier by building a POCUS curriculum for internal medicine (IM) faculty and residents at CHA, a safety-net hospital with limited financial, infrastructural, and human resources.

Methods: With a “training the trainer” model, we identified four motivated hospitalists and residents to receive training from a radiology and an emergency medicine attending Physician. The curriculum combines formal teaching sessions, image review sessions, and learner-driven scanning sessions. Pre- and post-intervention surveys will be conducted. The four new trainers are expected to train other IM learners in the future.

Results: While this project is ongoing, several key components to building a curriculum have become evident: Buy-in from traditional funding sources is difficult, necessitating grants and donations to serve as “seed money.” Cross-departmental collaboration plays a critical component, especially without pre-existing expertise within IM. Tapping into resources outside of the institution is important.

Discussion: It is possible to establish a POCUS curriculum in a low-resource community hospital setting. Resources for internist-focused POCUS training programs are still sparse. We envision sharing our curriculum and educational infrastructure to other IM programs across the country.
Generating Best Precepting Practices through a Collaborative, Multi-Disciplinary Faculty Development Workshop

Author(s):
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Introduction: Physician educators often rely on personal experiences to develop their teaching styles, with minimal formal education about learning theories and best practices of teaching. Additionally, most training programs do not offer physician educators regular, continual training opportunities to improve their clinical teaching skills.

The Harvard Medical School (HMS) Cambridge Integrated Clerkship (CIC), is a transformative longitudinal integrated clerkship (LIC) at Cambridge Health Alliance (CHA). Over the past 15 years, there have been limited faculty development sessions.

Objectives and/or Hypothesis: We created a faculty development workshop to establish a community of educators in the CIC at CHA, to honor and renew enthusiasm in preceptors, and provide opportunities for knowledge and skill improvement in clinical teaching.

Methods/Materials: We conducted an educational needs assessment of the CIC students and a faculty needs assessment survey. This data was used to design the inaugural, multi-disciplinary, faculty development workshop. Faculty from different disciplines convened for one of two evening sessions to discuss and develop best practices for teaching in a longitudinal clerkship.

Results: Thirty-four of 70 faculty attended the workshop. Faculty participated in small and large group discussions, sharing best practices of clinical teaching for longitudinal preceptors. A summary of practices was emailed to all faculty attendees to edit. The organizers collated this collaborative work of best precepting practices for the CIC.

Discussion/Recommendations: Collaborative faculty development programs from multi-disciplinary faculty in LICs can lead to rich discussion and development of best practices which may be used to inform teaching and faculty development across institutions.
Background: Stress and the resulting risk of burnout is a concern in residency training. Our wellness space initiative originated from observations that several Muslim colleagues lacked a place to pray and colleagues who wished to pump breastmilk were unable to find private space to do so.

Objectives:

- Appreciate the necessity and urgency of strengthening a culture of wellness within residency training programs

- Describe the impact that a dedicated wellness space can have on clinic and residency employee attitudes

- Consider developing a wellness space in your residency program

Methods/Evaluation: A working group representing staff and residents was created and a small conference room was furnished and decorated for this purpose. Qualitative data was collected over the next several months regarding use of the space. 72 surveys were distributed with 77.7% response rate. Most (77%) of the respondents were aware of the space and of these 30% used the space for their wellness. 23% of the 77% of users reported to be satisfied/very satisfied with the wellness space. The space was primarily used for breastmilk pumping, praying, meditation; other less frequent purposes of use included rest, yoga and to access a box of remedies (cough drops, herbal remedies and ginger and herbal teas) located there.

Conclusion: Having a wellness space in the workplace builds morale, sense of community among its people and offers an opportunity to its users to nurture specific wellness needs. A continuous cycle of feedback driven change helps optimize the space to suit all users. This initiative definitely helped build a happier and more satisfied workforce and hopefully over time will help reduce rates of burnout among staff and residents.
The topics are as broad and varied as always, including case reports, formal research studies and reports on individual and population health, medical education, innovations in patient care at CHA and quality improvement. Some are impressively artistic, others are graphic, still others almost poetic. All tell memorable stories."

- DAVID BOR, MD, CHIEF ACADEMIC OFFICER
Introduction: There is a significant shift in the way health systems are being reimbursed, with emphasis on efficiency and clinical outcomes. Understanding and properly implementing performance improvement (PI) is essential. The Malden Practice Improvement Team (PIT) is a multidisciplinary team with representation from all staff members and is uniquely suited to learn and disseminate PI principles throughout the clinic.

Objectives: The purpose of the Malden PIT is to foster leadership skills and further knowledge of PI within the clinic.

Methods/Materials: Malden PIT is coached regarding facilitating effective team dynamics, collecting feedback and engaging staff. They also gain hands-on experience learning about PI methodologies and implementing processes using these principles.

Results: Since the implementation of Malden PIT there has been an increase in PI projects that have been generated by clinic teams. Staff report a better understanding of change process and have reported improved team dynamics and work satisfaction through monthly ‘How’s it going’ surveys. Malden PIT members have also gained leadership experiences and have taken on more leadership roles within their clinical teams and within the clinic as a whole.

Discussion/Recommendations: A multidisciplinary team that receives ongoing coaching is an effective way to teach PI methodology to the clinic in general. Central leadership is limited in its ability to communicate with the entire organization, but developing leaders within different roles and coaching them to continue PI work within their teams fosters an innovative environment where staff are engaged and feel that they are the primary drivers of change.
Cahill 4 Unit Based Council: Transforming Care With Relationship Based Care

Author(s):
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Cahill 4 is an inpatient, hospital-based psychiatric unit at Cambridge Health Alliance. Over the past year, we have been on a journey to improve systems, maintain safety, and promote employee engagement. We decided to implement Relationship Based Care as a theoretical model focusing on three basic tenets including Care of Patient/Families, Care of Self/Co-workers and illness management/recovery. The most comprehensive way to approach all the components effectively was to create a unit based council of inter-disciplinary members to approach performance improvement from the most patient focused levels. We started the council and have several performance improvement projects in action that include the general categories of Safety, Patient/Family Engagement, Staff Engagement, Clinical Excellence and Education.

What Are Families Looking for in an Integrated Mental Health Care Experience at CHA?

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Background/Problem at CHA: Primary care behavioral health integration (PCBHI) in pediatrics is a vital population health component of Accountable Care Organizations in Massachusetts, though families are rarely involved in service design. We describe a performance improvement initiative in child psychiatry using “co-production” to improve the patient/family experience of integrated mental health consultation in a CHA pediatrics clinic. The service has a missed appointment rate of ~70%.

Change Ideas/Implementation: Our multidisciplinary team (child psychiatry, psychology, and pediatrics) consulted with parent partners and used performance improvement methods to identify the contributing factors, intervention, and implementation affecting the patient experience. In-depth interviews with patients who received PCBHI consultation helped generate ideas for PDSA cycles.

Results: Interviews were conducted with seven caregivers and three young adults who received consultation. Caregivers desired more information: about the consultation service, medication responses, how to support their children, and more background information about the consultants. Some described difficulties finding mental health providers in the community and were frustrated with the short-term nature of integrated care. Young adult patients agreed that trusting the provider led to better treatment, even on sensitive topics like drug use. Both groups complained about billing and insurance difficulties.

Implications/Plan: Caregivers place a premium on receiving useful information about PCBHI even before treatment begins, while young adults value clinician behaviors that build trust. Next steps involve piloting multilingual flyers in exam rooms with practical information about integrated care and the consultants. We will measure attendance rates and satisfaction with the flyers in future PDSA cycles.
Reducing Avoidable ER Visits in CHA House Calls Patients with Dementia

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Background/Problem Statement: Patients with dementia use the ED twice as often as patients without dementia. 46% of CHA’s House Calls Program (HC) patients have dementia. Our QI project aimed to reduce ED visits by these patients.

Change Implementation: Our multidisciplinary working group, including HC and geriatric psychiatry clinicians, representatives from Somerville Cambridge Elder Services and VNA of EM, and a volunteer whose spouse had dementia, carried out serial PDSA cycles, including:

- Performing chart abstractions of ED visits by HC patients with dementia.
- Conducting phone interviews of family members to better understand the circumstances driving recent ED visits. We found that patients and/or their families were inconsistently contacting our HC team prior to ED visits.
- Designing a “House Calls is On Call” flyer for mass distribution.
- Referring family members to the Alzheimer’s Association (AA) to receive a targeted phone consultation from an AA memory specialist.

Outcomes: 79 HC participants had information on hospital visits from before (December 2016) and after (December 2017) the QI project. Among these patients, hospital visits declined by an average of 0.2 visits (p=0.39). Nearly one-third (31.7%) of patients had two or more hospital visits in the 12 months preceding December 2016, compared to 22.8% of patients in the 12 months preceding December 2017 (p=0.01).

Lessons Learned: Obtaining patient and family input shaped our project in ways that we did not originally anticipate. We realized that our patients and families needed more education about HC and community services that could help them manage their issues at home.
Meaningful Wait Times: Improving the Patient Perception of Care and Quality Outcomes

Author(s):
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POSTER 47

Data shows that informing patients about delays decreases the perception of wait time, increases the perception of quality of care, patient satisfaction, and willingness to recommend the practice, and perhaps improves colleague satisfaction.

Decreasing Short Term Rehab Utilization in a PACE Program

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POSTER 48

Problem: A review of short term rehab utilization revealed that the Elder Service Plan’s rate of short term rehab for the previous two years was above the 75th percentile for all reporting PACE organizations. The rate had been gradually rising, reaching a peak of 1.35 days per member per month (PMPM) by quarter three of 2016.

Objective: Decrease the number of days participants spend in short term rehab to less than the 75th percentile for all reporting PACE organizations.

Tactic: A Utilization Review Committee was formed to look at reasons participants were having extended stays in short term rehab. Guidelines were established for the team to use in monitoring participants in short term rehab. Interventions included goal setting, family meetings, frequent rehab and/or medical updates. A decision tool was developed to assist team members’ decision making in sending a participant to short term rehab.

Results: The committee began to see results immediately. To date, short term utilization has been reduced by 47% in one year with an average of 0.64 days PMPM. Estimated cost savings to the program is $121,000 per month.
Massachusetts is home to the third largest Haitian population in the U.S., of whom one-third live in the Boston area. Data suggest that prevalence of chronic diseases among Haitian immigrants are significant. At CHA, Haitian patients comprise 11% of the diabetes registry despite constituting 5% of the primary care population. For over ten years, monthly wellness classes for CHA’s Haitian patients have been offered with an emphasis on self-management of chronic diseases (e.g. diabetes, hypertension, hyperlipidemia, overweight/obesity). These classes provide a forum for participants to individually check in with medical staff regarding worrisome symptoms, to become better informed about their illnesses through brief health education presentations and nutritional counseling, and to engage in group exercise. These classes have yielded two critical insights. First, group classes provide an invaluable space for peer-to-peer teaching. Participants often share impromptu narratives of their illness experiences and both seek advice and provide encouragement to fellow participants. We have found that providing these perspectives and promoting this type of near-peer solidarity is more effective in spurring patients’ lifestyle changes than medical staff’s simply ‘telling’ patients to modify their diet or exercise practices. Second, in response to patients’ requests and building upon a pilot conducted in 2015, we have begun to offer culturally tailored cooking classes aimed at offering more healthful ways of preparing traditional Haitian cuisine. These well-received sessions underscore the concept that “food is medicine” and highlight the importance of collaboration with patients in designing innovations that complement traditional biomedical approaches to disease management.
Impact of Multitiered Interventions to Decrease Routine Urine Cultures in Asymptomatic Patients Undergoing Hip and Knee Arthroplasty

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POSTER 50

In many institutions, preoperative screening and treatment of asymptomatic bacteriuria (ASB) prior to joint replacement is a common practice based on limited data. Recent studies have shown no benefit in treating ASB to decrease the rate of postoperative joint infection (PJI). The use of unnecessary antibiotics can lead to increased rates of C. difficile infections, resistance, higher costs, and adverse reactions. In April 2016, the antimicrobial stewardship team (AST) at Cambridge Health Alliance provided education to the orthopedic surgery department to stop this practice. In March 2017, the AST successfully removed routine urine cultures (UCx) from the elective procedure order set.

The purpose of this project is to evaluate the impact of education and the removal of UCx’s from the preoperative order set on the routine practice of screening and treatment of ASB prior to elective joint arthroplasty.

This is a retrospective study of patients undergoing elective total knee or hip replacement over approximately three years, divided into three phases. Adult patients undergoing elective total hip or knee replacements were included, as well as patients undergoing elective revisions. Patients were excluded if they had documented symptoms of a urinary tract infection during the preoperative visit. The primary outcome is the number of UCx’s processed between phases two and three, compared to baseline.

Expected results include observing a decrease in the number of non-indicated UCx’s processed and a reduction in therapy for ASB. Consequently, less patients will be exposed to inappropriate antibiotic therapy and no increase in PJI’s is anticipated.
Clinical pharmacists in the primary care setting work closely with providers and patients to reconcile and optimize medication regimens. Medication errors may occur with every transition of care or new medication. This risk is heightened with polypharmacy. Medication reconciliation seeks to improve accuracy and safety of medication regimens and promote continuity of care. Pharmacists are trained in medication management and can identify and correct discrepancies. With collaboration and resources, pharmacists may provide tailored recommendations to optimize regimens. In addition to ensuring accuracy, pharmacists ensure appropriate indications, effectiveness, safety, accessibility, affordability, and proper use by patients.

At the CHA Cambridge Family Health and CHA Cambridge Family Health North centers, medication reconciliation visits are an existing, although underutilized, service. Pharmacists correct discrepancies and provide tailored recommendations to providers. Through retrospective chart review, this study seeks to identify the percentage of clinical recommendations accepted by providers. Secondary outcomes include the number of discrepancies identified per patient, the number of patients transferring prescriptions to CHA pharmacies, pharmacist interventions, and provider satisfaction assessed through a survey. Prescription transfers generate revenue for CHA, may save patients money, curb polypharmacy, and improve transitions of care. The study has been approved by CHA's Institutional Review Board. Data collection is ongoing and expected to be completed by July 1, 2018.

By magnifying the value of this service, these visits may be more frequently utilized at all CHA clinics. Also, once results are available to other institutions, this may expand pharmacist led medication reconciliation visits beyond CHA.
HFMEA Analysis of Medication Errors in a PACE Program

Introduction: The excellent care coordination provided by PACE organizations can certainly mitigate the effects of medication mismanagement so often seen in frail elders. Use of a single pharmacy and taking advantage of blister packs can improve patient safety by:

- Reducing the chance of missed or double doses.
- Helping patients know whether they have taken or missed a dose.
- Providing a convenient alternative to opening multiple medication bottles.

Problem: Despite the efforts of the Elder Service Plan, an increase in the number of medication errors reported through the Cambridge Health Alliance Safety Event Reporting System (SERS) was noted.

Tactic: CHA Risk and Patient Safety Manager, CHA pharmacy staff, and ESP staff (medical director, quality manager, pharmacist, clinical manager) worked through the Healthcare Failure Modes and Effects Analysis (HFMEA) process to determine causes of medication errors (process diagram to be included in poster).

Outcome: As a result of the HFMEA analysis, two new protocols were implemented at ESP: Medication Delivery in Supportive Housing and Medication Delivery to Participants at the Cambridge Day Center. Other noted issues have been passed to CHA's Associate Chief Pharmacy Officer for consideration.
Unsatisfactory PAP smears may be reported due to low cellularity, excessive blood or mucus. A repeat PAP smear is required to have an optimal PAP smear interpretation. Unsatisfactory PAP smears are a source of patient anxiety and dissatisfaction, provider inefficiency, and high laboratory costs. The Cambridge Health Alliance (CHA) Pathology Department has worked to improve the high unsatisfactory PAP smear rate at CHA which in the past has peaked at 4-5%. Nationally, the College of American Pathologists has reported a 1.1% unsatisfactory PAP smear rate (50th percentile).

- In 2010, the laboratory began reprocessing and the unsatisfactory rate was reduced in the laboratory by 50%. Overall the unsatisfactory rate remained high at 3% or higher.

- In June of 2016, review of the provider specific PAP unsatisfactory rate was reviewed. Initial statistics were distributed to medical leaders to share with their providers.

- In December 2016, poor preparations were reviewed with a scientific advisor from Hologic and it was discovered that the lubricant in use was one associated with high unsatisfactory PAP smear rate.

- In April 2017 the old lubricant was removed and the approved new lubricant was in place in the CHA clinics.

Unsatisfactory PAP smears rates have plummeted from a high of 4.49% (>95th percentile) in the first half of 2016 to 1.3% (approximately 58th percentile) in the second half of 2017. Unsatisfactory PAP smear rates have been high for many years. The intervention of switching to an approved lubricant has dramatically lowered the unsatisfactory PAP smear rate to an acceptable level.
Reducing Utilization of Unsafe Practices for Communicating with Limited English Proficient Patients

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43% of CHA’s primary care patients prefer to receive care in a non-English language. It is well documented that communication barriers can adversely affect safety and quality of care for limited English proficient (LEP) patients, and that certain communication practices present more risks than others. The Institute for Community Health (ICH) and Multicultural Affairs and Patient Services (MAPS) department collaborate on QI projects focused on minimizing unsafe communication practices, with emphasis on reducing utilization of patients’ family members and friends as interpreters, and promoting language testing for bilingual providers.

Project 1: Many CHA ambulatory sites utilize patients’ family members and friends for more than 10% of LEP patient encounters. ICH and MAPS have worked with sites to discuss best practices and collaboratively identify opportunities for improvement. This presentation will highlight two sites where utilization of family/friends as interpreters decreased from 15-20% of LEP encounters to <10%. Successful practices at these sites could be replicated across CHA.

Project 2: CHA’s language testing program allows bilingual providers to be credentialed to communicate directly with LEP patients without an interpreter. In 2016, there were 3,370 LEP patient encounters/month for which a provider spoke with the patient in a non-English language, and 25% of those encounters were with credentialed providers. MAPS has done intensive outreach and promotion around language testing, and the percentage of encounters with credentialed providers increased to 34% in 2017. Moving forward, MAPS and ICH will disseminate successful approaches and try new strategies to continue improving this metric.
Improving Access to Adult Outpatient Psychiatry at Cambridge Health Alliance

Author(s): Paola Peynetti Velazquez, MPH, Performance Improvement; Gouri Gupte, PhD, MHA, Performance Improvement; Edgardo Trejo, MD, Psychiatry; Lisa Foley, MPA, Psychiatry; Michael Williams, LICSW, Psychiatry; Mark Albanese, MD, Psychiatry; Page Carter, LICSW, Psychiatry; Julie Regner, Psychiatry; Emily Benedetto, MSW, LCSW, Primary Care; Ellie Grossman, MD, Primary Care; Colleen O'Brien, PhD; Assaad Sayah, MD, Chief Medical Officer; Renee Kessler, MHA, Chief Operating Officer

POSTER 55

Background and Scope: The Psychiatry Department identified problems with access for patients seeking mental health services. Within the MassHealth ACO, CHA will have many metrics that it must meet, including seeing inpatient discharges in an outpatient setting within seven days of discharge, and scheduling referrals to outpatient psychiatry within 14 days for an appointment.

Description of the Problem: Gemba walks and data showed lack of data for tracking patients, duplicated referrals for different services, flexible processes for assignment to specialty clinics, a complex triage/scheduling process and low levels of transparency or standardization of schedules.

Change Ideas and Implementation: Through the involvement and participation of over 90 clinical and non-clinical staff in Primary Care, PCBHI, and the Department of Psychiatry, several high-level recommendations were made, including a single point of entry flowing into an enhanced central intake & scheduling office with access to standard provider templates for the soonest appointment.

Results/Outcomes: The referral order forms and Intake Form will provide easy and accurate tracking of patients in the system. All referrals are expected to be scheduled and seen promptly to meet appropriate metrics. With standardized appointment types, templates in “sessions” and transparency of schedules, capacity should increase.

Implications/Lessons Learned/Plan for Scale Up and Spread and Sustainability: The team is working with providers and leadership to implement changes to templates and scheduling, as well as with the CRO and IT to streamline patient tracking and reports for easy monitoring of clinical practices, caseload and panel management. Providers will receive training and support from the department to adjust to the new workflow. Recommendations will be piloted through a project plan for one primary care site at first in order to adjust solutions as appropriate when cascading across the system.
Background and Scope: The Psychiatry Department identified problems with access for patients seeking mental health services. Within the MassHealth ACO, CHA will have many metrics that it must meet, including seeing inpatient discharges in an outpatient setting within seven days of discharge, and scheduling referrals to outpatient psychiatry within 14 days for an appointment.

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Change Ideas and Implementation: Through the involvement and participation of over 90 clinical and non-clinical staff in Primary Care, the Department of Pediatrics and the Department of Psychiatry, several high-level recommendations were made, including a single point of entry flowing into an enhanced central intake & scheduling office with access to standard provider templates for the soonest appointment.

Results/Outcomes: The referral order forms and Intake Form will provide easy and accurate tracking of patients in the system. All referrals are expected to be scheduled and seen promptly to meet appropriate metrics. With standardized appointment types, templates in “sessions” and transparency of schedules, capacity should increase.

Implications/Lessons Learned/Plan for Scale Up and Spread, and Sustainability: The team is working with providers and practice managers to implement changes to templates and scheduling, as well as with the CRO and IT to streamline patient tracking and reports for easy monitoring of clinical practices, caseload, and panel management. Providers will receive training and support from the department to adjust to the new workflow. Recommendations will be piloted through a project plan for one primary care site at first in order to adjust these solutions as appropriate when cascading across the system.
Improving the Phone Menu Across Cambridge Health Alliance

Author(s):

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**Background:** A problem of patients accessing primary care and various specialties over the phone was identified.

**Description of the Problem in Context at CHA:** Gemba walks and data showed long phone tree, 90% of the callers selected English, patient satisfaction with the phone system were low, and there was variability in abandonment rate. Our review of the inefficiencies included no option to return to the menu, line getting disconnected, and invalid options selected.

**Change Ideas and Implementation:** The script was reviewed and redesigned to be simple, standardized, and patient friendly.

**Results/Outcomes:** The options reduced (including languages), resulting in lower abandonment rates and wait times, and improved patient feedback. Calls not appropriate for the clinic option were reduced, opening lines for those patients in need of scheduling appointments.

**Implications/Lessons Learned/Plan for Scale Up and Spread and Sustainability:** Pilot tests were performed in primary care and then confirmed with specialties. From early March 2018, all phone menus across most specialties and all primary care sites at CHA will be changed consistently.

Implementing Addiction Services Into Primary Care

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POSTER 58

According to the CDC, opioids both prescribed and illicit are the main drivers of overdose deaths. Opioid overdoses have quadrupled since 1999. 91 Americans die daily from opioid overdoses, and Massachusetts is part of those numbers. MA Department of Public Health reported in 2016, 2,190 patients died of opioid related overdoses in MA.

According to CDC, Drug overdose is the leading cause of accidental death in the US, with 64,000 lethal drug overdoses in 2016. It has almost doubled in a decade.

Opioid use is a chronic illness and often difficult to treat. Since there is a lack of treatment centers to meet the crisis CHA has taken a holistic approach to meet patients needs and incorporate in primary care. This has required making new positions, meeting grant needs and continued adjustments as this new paradigm is implemented.
Improving the Mammography Workflow in the Radiology Department at Cambridge Health Alliance

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POSTER 59

Background: The Radiology Department identified problems with getting patients through the unit and delays in completing mammograms during the appointment time. A multidisciplinary team was created with radiologists, technologists and administrative staff.

Problem Statement: Gemba walks showed that ultrasounds took longer than the scheduled time and caused backlogs that affected workflow for screening mammograms and also led to increased patient wait times. Patient delays also affected the schedule and workflow. Quantitative data collected during observational studies and analyzing the current schedule demonstrated that the room utilization of the ultrasound room was equal to that of the mammography screening rooms in spite of fewer appointments. Data showed a high variation in patient wait times and cycle time.

Change Ideas: The team identified inefficiencies such as short ultrasound appointment slots, schedule not including quality check (QC) time and lack of patient delay policies that affected daily workflow. The team focused efforts on increasing the ultrasound appointment time slot to prevent future backlogs and also included QC time as part of the current schedule. Additionally, some patient delay policies were implemented in order to ensure that the patient arrived in advance of their scheduled appointment.

Results: Success metrics include patient and staff satisfaction, reduced lead time (includes wait time and other non value added time) per patient and increase in number of screening mammograms.

Implications: The optimization of the workflow and schedule improved patient access in the unit. Next steps could be to ensure that the unit is utilized to its complete capacity.
Colorectal Cancer at CHA: 10-Year Comparison of CHA with National Cancer Database (NCDB) and an In-Depth Review of 2016 CHA Colorectal Patients

Author(s):
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Introduction: Given the socioeconomic, substance abuse, and mental health disparities in CHA’s patient population, we queried whether Colorectal Cancer patients at CHA may present at advanced stage or have delays in their cancer diagnosis and treatment.

Methods: Using the NCDB from 2006-2015, we compared the stage at presentation for CHA patients with all other colorectal patients in the United States. In addition, a retrospective review of all patients diagnosed with colorectal cancer at CHA in 2016 was performed, collecting information on presenting symptom, colonoscopy history, treatment history, and barriers to care. We defined delay in care as more than a 30-day lapse between decision points.

Results: 20.2% of CHA patients presented with Stage IV colon cancer, compared to 21.9% in the remaining US. Of the 36 patients diagnosed with colorectal cancer at CHA in 2016, 23% of patients at CHA were captured by screening colonoscopy, compared with 10.7% of US patients reported in the literature. Of the 25% of our patients that had a barrier to care, only two patients actually had a delay to treatment, and both were due to physical comorbidities rather than social barriers. Delay in treatment occurred in 11/31 (35%) of patients, with median delay of 42 days. Delays were more common between GI consult visit and diagnostic colonoscopy, which likely reflects an effort at continuity of care.

Discussion: When compared to national data, CHA patients are more likely to be diagnosed by screening, do not present at advanced stage, and have minimal delays in care.
A Quality Improvement Project: Better Substance Use Screening for Cambridge Students

Author(s):
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Screening, Brief Intervention, and Referral to Treatment (SBIRT) is newly mandated by the state of Massachusetts. In early 2017, the Cambridge Public Health Department screened all 9th grade students at Cambridge Rindge and Latin High School (CRLS) for the first time. Although the screening was completed successfully, improvements could be made to the process that would lessen strain on staff, improve the quality of the intervention, and ensure a smooth hand-off between implementation teams.

Using the five categories defined by root cause analysis, the quality improvement team came up with 13 potential actions. These were winnowed down using an Impact/Effort Plot to eight strategies for improving SBIRT screening. Theoretically, focusing on process improvements (such as logistics and standardization) would lessen strain on staff, improve the quality of the intervention, and ensure a higher percentage of completion.

In 2018, the screening process was overseen by CRLS school administration for the first time. Due to the change in leadership of the screening, four out of eight proposed strategies were implemented for the screening. After evaluation, performance metrics did not reach the previously defined goal for success. However, the systemic improvement strategies that were implemented led to a smoother hand-off to school administration, who will be conducting all future screenings.

This creates an opportunity for continuous quality improvement in years to come. We hope to build in 2019 by implementing all eight improvement strategies, collecting performance metrics, and completing a PDCA cycle in partnership with school administration.
CHA Broadway Health Care Proxy Improvement Project: A Multi-Layered Approach

Author(s): Arshiya Seth, Medicine; Maria Terra, Medicine; Priyanka Anand, Performance Improvement; Jesenia Bermudez, Broadway Care Center; Rina Bernardez, Broadway Care Center; Betsy Doucette, Broadway Care Center; Wilkerson Elysee, Broadway Care Center; Meredith Jones, Broadway Care Center; Dierdre Jordan, Broadway Care Center; Denise Leite Alves, Broadway Care Center; Mary Saginario; Robert Smith, LPN, Broadway Care Center; Maria Sousa

Background: Health Care Proxy (HCP) is an important metric in maintaining NCQA Level 3 recognition as a Patient Centered Medical Home. In November 2016, only 24.91% of patients at Somerville Adult Medicine had a HCP on file, by far the lowest percentage of all the CHA sites. A project was undertaken at that time by the Practice Improvement Team at the CHA Broadway Care Center to increase the percentage of completed HCP’s to 75% by June 2018 to become more in line with the CHA-wide average.

Methods:

1. Gemba walks—Mapped current workflow and identified inconsistencies and areas for improvement. New workflow designed to overcome inconsistencies.

2. Reviewed sample of completed HCP forms: revealed that the form’s layout resulted in errors.

3. Consulted with CHA attorney to improve user friendliness of HCP form; led to drafting of a new form.

4. Plan-Do-Study-Act cycle with revised form: concluded that it was easier to complete, introducing less errors.

5. Introduced updated HCP workflow and new form at all-staff meeting. MA coaching and role-playing to highlight best practices.

6. Compared scanned HCP in medical records vs. orders signed in EPIC; corrected errors.

Outcomes:

1. New HCP form adopted across CHA network.

2. Established a new workflow, allowing MA’s to sign HCP orders.

3. Increased awareness and comfort level among staff at site in dealing with HCP.

4. Increased completed HCP’s from 24.91% (November 2016) to 52.44% (March 2018).

Lessons learned:

1. Layered involvement of staff and patients led to opportunities for all-around contribution to increase HCP numbers.

2. Importance of MA being able to sign HCP orders.
Health disparities faced by adults with serious mental illnesses (SMI) are well-documented and widely accepted estimates are that Americans with schizophrenia die 20-30 years younger than the general population. Efforts to address this disparity have thus far tended to focus at the level of the health system, including improving care access, providing care management, and improving care quality. Despite these efforts, the mortality gap for adults with SMI appears to be increasing with time.

Behavior change literature suggests patients will be unable to utilize health promotion interventions if they lack a sense of self-efficacy about making behavior changes. Patient activation, defined as having the knowledge, skills, and confidence to make a change, provides a critical link between what health systems offer and patient responsiveness to these interventions. Improving patient activation has the potential to increase the efficacy of ongoing efforts to address the health disparities faced by adults with SMI.

This quality improvement initiative investigated whether use of the patient-centered care plan, which is a tool embedded in the EHR in which patients articulate their health goals, could increase patient activation. In addition to quantitative data on care plan completion, qualitative data was obtained from interviews with five patient-provider dyads. Key elements of the intervention included sequential discussions with clinical team, involvement of a peer provider, use of design tools, and bringing qualitative findings back to team. The care plan tool shows promise as a means of helping clinician/patient dyads focus on activation as a step toward improving health outcomes.
Cost-Savings of Long-Acting Antipsychotic Injections in a Transitional Outpatient Clinic Upon Hospital Discharge

Author(s):
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POSTER 64

Long acting antipsychotic injections (LAIs) play an important role in improving patient adherence, but are expensive medications and not reimbursed in a hospital setting. The cost of LAIs at Cambridge Health Alliance (CHA) during fiscal year 2017 on the inpatient psychiatry units was greater than $150,000. The purpose of this project is to provide patient access to these important medications while remaining fiscally responsible as an organization.

The primary objective of this project is to analyze the cost savings associated with administering LAIs at an outpatient transitional clinic on the day of discharge. Revenue created for the outpatient pharmacy and the net income for the organization will also be evaluated. Additional outcomes include the percentage of patients that receive LAIs in the transitional clinic at discharge, the rate of follow up for second injections, and adherence to clinic visits within 7 days of discharge in the patients followed by CHA’s outpatient psychiatry clinics.

Transitional clinics are currently established at both CHA Cambridge and Everett Hospitals. A new workflow for the discharge process is in development. Patients will be escorted to the transitional clinic upon discharge from the psychiatric unit and the LAI supplied by the CHA’s outpatient pharmacy will be administered. Medications from the pharmacy will be billed and reimbursed through the patient’s insurance as an outpatient medication which will increase revenue for the pharmacy. This workflow will help lower costs for the inpatient pharmacy, increase revenue for the outpatient pharmacy, and potentially increase profit for the organization.
An Interdisciplinary Practice Improvement Team: Clinic Workflow Design

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Background: Efficient clinic flow is essential in a clinic serving a diverse, underserved patient population which frequently requires multidisciplinary care and care coordination. An interdisciplinary Practice Improvement Team (PIT) creates a collaborative atmosphere with interdisciplinary representation from the healthcare team to address issues in clinic flow.

Description of the problem in context at CHA: Mean clinic times for CHA Malden patients were collected from January - May 2017 (n=632). The data was collected by manual “time-in” and “time-out” of providers during de-identified patient visits. This baseline data revealed that many inefficiencies in workflow were due to delays in transitions of care between members of the care team from front desk staff to providers.

Change Ideas and Implementation: With input from the clinic staff, ideas for increasing efficiency were gathered to design a clinic workflow, focusing first on patient rooming.

Outcomes: A 42-item workflow for patient rooming was designed by the PIT with support from CHA central leadership. The workflow included pathways for visit preparation, rooming process, and after visit steps with the patient (including complex care management/social work, behavioral health, nursing care).

Implications: This workflow was piloted over a two-month process including shadowing and ongoing bidirectional feedback. Data collection is ongoing regarding post-intervention clinic times for patients to compare to the baseline data. Future interventions include front desk workflow design & implementation. Through this project, the clinic staff and particularly the PIT have developed practice improvement and leadership skills they can use to inform their future work and improve clinical practice.
Can We Improve Provider Engagement Through Co-Production?

Author(s):
Leah Zallman, Bree Dallinga, Joy Curtis, Marcy Lidman, David Porell, Assaad Sayah on behalf of the Provider Engagement Steering Committee

POSTER 66

Background: Provider disengagement increases costs, decreases patient satisfaction, and reduces quality of care. Cambridge Health Alliance’s strategic priority is to make CHA a great place to work.

Problem: In a 2016 survey, provider engagement at CHA was in the 6th percentile nationwide.

Change Ideas and Implementation: Using a co-productive lens, CHA implemented a series of changes with iterative plan-do-study-act cycles. First, it created the Provider Engagement Steering Committee (PESC), an interdisciplinary and cross-departmental team of providers and leaders charged with advising the organization on a strategy for provider engagement. This committee works with operational leaders, the Chief’s Council, and the Medical Executive Committee to develop strategies for change. Second, CHA appointed two provider leads for provider engagement to lead the committee. Third, CHA implemented a series of pilots including executive leader rounds, virtual office hours, stay interviews, peer mentoring and the Providers’ Corner quarterly newsletter.

Outcomes: The PESC has met monthly with operational leaders and provided input on operational issues that affect provider engagement. Executive leader rounds were positively rated by providers. Voluntary CHA Providers Organization 12-month rolling turnover decreased from a median of 10% to 7%.

Lessons Learned: A group of providers and leaders can support provider engagement strategies. Pilots and the structure of the PESC are undergoing continual evaluation to maximally support the ongoing need for provider engagement strategies at CHA.
Introduction: Medical scribes are a clinical innovation increasingly being used in primary care, but their impact remains unclear.

Objectives: To examine the impact of medical scribes on productivity, time spent facing the patient during the visit, and patient comfort with scribes in primary care.

Methods: Prospective observational pre-post study of five family and internal medicine physicians and their patients at an urban safety net health clinic. We examined productivity using EMR data on the number of patients seen and relative value units (RVUs) per hour. We directly observed clinical encounters to measure the amount of time providers spent facing patients and other cycle components. We queried patient comfort with scribes using surveys administered after the visit.

Results: RVUs/hour increased by 10.5% from 2.59 pre-scribe to 2.86 post-scribe (p <0.001). Patients/hour increased by 8.8% from 1.82 to 1.98 (p <0.001). RVUs/patient did not change. After scribe implementation, time spent facing the patient increased by 57% (p<0.001) and time spent facing the computer decreased by 27% (p=0.003). The proportion of the visit time that was spent face to face increased by 39% (p<0.001). Most (69%) patients reported feeling very comfortable with the scribe in the room, while the proportion feeling very comfortable with the number of people in the room decreased from 93% to 66% (p<0.001).

Conclusions: While the full implications of medical scribe implementation remain to be seen, this initial study highlights the promising opportunity of medical scribe implementation in primary care.