1. **Dementia Capable Community Based Caregiver Supports for People with IDD and Dementia**

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People with intellectual or developmental disability (IDD) experience complex age-related issues, including dementia-related disorders, at higher rates and at earlier ages than the general population. These increased needs can strain existing community support systems. The project team comprised of IDD and aging experts, and funded through a federal grant, conducted a needs assessment consisting of a series of interviews and home visits with caregivers of people with IDD and dementia.

The needs assessment measured community-based caregiver supports and allowed for distribution of resources related to the supports. Questions included whether the caregiver had received any formal training on dementia or caregiving, care confidence levels, and perceived barriers and/or concerns to care provision. Finally, each caregiver was asked if they knew of or used a variety of currently available community-based aging resources. Caregiver’s most frequent concerns included lack of suitable day programming, planning for the person’s future, and caregiver burnout and stress. Most caregivers were currently aware of local community resources such as senior centers, Alzheimer’s Association Counseling and the MA DDS’ on-line training series on aging but used the resources infrequently. 78% reported feeling confident providing care currently and 68% were confident about providing care in the future. Four trainings were delivered to both aging advocates and caregivers for people with IDD and dementia, and a series of one-page resources were also developed. Results will continue to guide resource and training development to improve community supports and collaboration between the aging and IDD communities.

2. **Assessing potential for success: A content analysis of US community health improvement plans containing healthy eating and physical activity strategies**

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Introduction: Policy, systems and environmental (PSE) changes are recommended to support healthy eating (HE) and physical activity (PA) but adoption is challenging for local jurisdictions. An established obesity prevention framework identifies six key activities to facilitate PSE-change: assessing social and political environment; engaging and educating key people; identifying and framing the problem; utilizing available evidence; identifying policy solutions; building support and political will. Community Health Improvement Plans (CHIPs) are a promising tool that drive collaboration and selection of strategies. To our knowledge, no study has evaluated HE and PA PSE strategies in CHIPs for alignment with activities that support PSE-change.

Methods: Ninety-three US local health departments reported participating in the development of a CHIP with HE and/or PA strategies in a 2017 national probability survey (response rate 30%). We located 75 of those CHIP documents developed between 2012 and 2017 through internet searches, e-mails and telephone calls. A standardized data collection tool was developed from literature and expert feedback. Multilevel latent class analyses were conducted by topic area to identify classes of CHIPs based on alignment with key activities.

Results: For each topic area, two classes of CHIPs were identified. Most CHIPs (HE: 71%; PA 79%) were characterized by PSE strategies that primarily focused on identifying policy solutions and fewer (HE: 29%; PA 21%) contained strategies that aligned with multiple activities.

Conclusions: The alignment of PSE strategies with key activities to support change can be improved during the CHIP development process.

3. **Bridging Medication Addiction Treatment for Opioid Addicted Individuals Leaving Jail**

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The Bridge program served 295 newly released inmates with a history of opiate and/or alcohol addiction, who are at high risk or are diagnosed with HIV or HCV. A final analysis of baseline data and service data collected at 30 and 60 days post release, and at 6-month follow-up. We compare differences between inmates who choose MAT prior to release from jail and those who reject/are not offered MAT prior to release. While many do start MAT once back in the community, we are interested in understanding whether initiation of MAT while in jail significantly improves outcomes. The analysis includes basic descriptive statistics of participants' demographics psychosocial characteristics and service use Statistical tests of significance (t-test, chi-square, Pearson's coefficient) are conducted to assess the degree of participant change on service outcomes between those initiated with MAT and those who either started once released into the community or who opted not to receive MAT. McNemar testing is used to assess 6-month follow-up data 85% follow-up rate to evaluate differences between MAT treatment and drug and alcohol use, injection drug use, sharing paraphernalia, housing, and treatment. The poster will include an analysis of clinical charts extracted on 125 inmates who received MAT post release. The analysis includes clinic attendance and results of urine toxicology tests. Readers of this poster will come away with a better understanding of the characteristics of inmates who choose to be on MAT and how MAT may affect drug use and follow-up to referrals and services post release.

4. Low back pain is associated with sleep of nursing staff
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Introduction: Nursing staff are suffering low back pain (LBP) and short and disturbed sleep. Although there is a known relationship between pain and sleep, the specific associations between different aspects of LBP and sleep have not been studied, which will be examined in this study. Methods: Online Qualtrics surveys were distributed among nurses and nursing assistants at a community hospital in the U.S. LBP was assessed in terms of duration, frequency, intensity, and intensity change from before to after the work shift. Results: Among the 541 participants (94% female; age 43±13y), more than a third reported short sleep duration (≤6hrs/day; 38%) or sleep disturbances (38%), and 60% reported LBP in the past 6 months. Among those with LBP, 82% had ongoing pain for at least 6 months; 44% had ongoing pain for at least half the days in the past 6 months; 39% had LBP intensity ≥4 out of 10; and 79% reported post-shift LBP intensity increased of at least 1 level. Short sleep duration was associated with ongoing LBP for at least half the days in the past 6 months, intensity ≥4, and post-shift LBP intensity increase. Sleep disturbances were associated with prevalent LBP and intensity ≥4. Conclusion: Nursing staff reported a high prevalence of LBP and short and disturbed sleep. Overall, poor sleep was associated with higher LBP prevalence, frequency, intensity, and post-shift increase. Workplace interventions should address the widespread problems of LBP and sleep deficiency of nursing staff.

5. Interested workplace yoga program features by nursing staff and its associations with shift work and sleep
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Introduction: Nursing staff are at risk for impaired sleep. Yoga has demonstrated beneficial effects on sleep. However, yoga interventions are generally offered as 60-75-minute session; not suitable as a workplace program for nursing staff working irregular/long hours. This study is to examine interested workplace yoga program features and associations with shift work and sleep. Methods: Online Qualtrics surveys were distributed among nurses and nursing assistants at a community hospital.
Interested workplace yoga program features were assessed including general interest, duration, frequency, timing with respect to work shift, and interest in home practice. Results: Among the 541 participants (94% female; age 43±13y), over a third reported sleep ≤6hrs/day (38%) and sleep disturbances (38%), and 79% reported interest in workplace yoga. Among those reporting interest, after work (61%), 30min/session (73%), 3 sessions/week (56%), and interests in home practice (64%) were features endorsed by nursing staff. Night or ≥12hr shift was associated with less interest in workplace yoga. Evening or ≥12hr shift was associated with less interest in yoga after work, while day or night shift was associated with less interest in yoga before work. Mild sleep disturbances were associated with more interest while severe disturbances were associated with less interest in yoga after work. Nursing staff with sleeps≤6hrs/day reported less interest in yoga before work, but more interest in home practice. Conclusion: Nursing staff reported a high interest in workplace yoga. Workplace yoga programs need to be designed according to nursing staff’s interest while considering the effect of shift work and sleep.

6. Hearing Healthcare
Sarah Farnham, Aviya Singer, Marissa Merrifield, Worcester State University

A devastating portion of the world population suffers from a progressive degenerative disease known as hearing loss. In America, the CDC estimates that nearly 48 million people suffer from hearing loss and only 8 million of these people are currently receiving treatment. This disease is inevitable for many individuals. This is due to the combination of genetic and environmental factors; many of the risk factors and consequences of hearing loss can be prevented or treated to lessen the handicap. There are dozens of contributing factors to hearing loss, including, but not limited to, age, noise exposure, cardiovascular disease, history of chemotherapy, kidney disease, thyroid dysfunction, and diabetes. The impact of hearing loss varies in severity and frequency. The impact consists of several co-occurring conditions or comorbidities including falls, cognitive decline, social isolation, depression, dementia, and premature death. It is the goal of this report to assemble data and compose an Advocacy Statement to advance education, access, and affordability for the medical treatment of hearing loss.

7. Substance Use Disorder Treatment Outcome Predictions for Decision Support: A Holistic Data Analytics Approach
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Substance use disorder treatment has been an increasingly important issue in the last few decades, and with the recent opioid epidemic, it is getting more critical to better understand and tackle the problem. Each day, 130 people in the US die due to complications from substance use. In this work, we propose a novel data analytics approach to devise decision support tools for care providers using machine-learning models. We combine a dataset collected by SAMHSA with a crime reporting dataset maintained by the FBI to train our prediction models. Our best model has a macro-AUC of 86.39% and a micro-AUC of 91.55% based on the k-fold training metrics, and 86.62% and 91.64% macro- and micro-AUCs respectively for the holdout set. Our model can be used for decision support by physicians or counselors to plan timely interventions for patients with a high potential for negative outcomes. Our framework can provide one single outcome prediction as well as a group of the highest likelihood outcomes, which can further augment the decision-making process. We also use the models to perform sensitivity analysis to find the most important predictors for each outcome, as well as the nature of the relationship between each predictor, the outcome and any moderating effects.

8. Adapting Motivational Enhancement Therapy for Deaf and Hard of Hearing Clients with Alcohol Use Disorder and Substance Use Disorder
Alexander Wilkins, PhD, Melissa L. Anderson, PhD, University of Massachusetts Medical School

Deaf and hard of hearing (DHH) people, a population of more than 500,000 U.S. individuals who use American Sign Language (ASL), exhibit higher rates of alcohol use disorder (AUD) and substance use disorder (SUD) compared to the general population, yet are one of the most underserved populations in the behavioral healthcare system. Barriers include a lack of ASL-fluent providers, limited provision of interpreters, and the absence of evidence-based treatments for use with DHH clients. DHH mental health providers utilize various techniques to try to adapt existing evidence-based treatments (e.g., CBT) developed for hearing clients, but often fail to meet DHH clients’ unique linguistic and cultural needs. For example, many DHH clients are not ready to participate in treatment due to limited understanding of the schema of therapy, low behavioral health literacy, and/or mistrust of the behavioral healthcare system. Also, many individuals in treatment for AUD/SUD, whether hearing or DHH, are ambivalent about change. DHH clients would, therefore, benefit from pre-treatment interventions designed to motivate and prepare them to participate in collaborative treatment. To address these challenges and increase access to therapy, one potential option is Motivational Enhancement Therapy (MET). MET is a brief, evidence-based AUD/SUD pre-treatment that leverages Motivational Interviewing principles and the Stages of Change to increase a person’s readiness to make changes. Utilizing a community-based participatory research approach, we will collaborate with DHH individuals who have participated in AUD/SUD treatment and Deaf behavioral health providers to develop and pilot test an adaption of MET for the DHH community.
9. **The Challenges of Introducing a Multifaceted Fall Prevention Program into Massachusetts**  
A. Michele Ricard, MD, FACP, Rose Veith.MSN FNP-BC, Ruth Remington, PhD, RN, Ellen Rearick, PhD, RN, Framingham State University

Falls are the leading cause of fatal and non-fatal injuries individuals over 65 years of age in the United States and Massachusetts. It is estimated that more than one in four older adults will fall each year. These falls can result in outpatient care, Emergency Department visits, hospitalization, and death, with a projected lifetime cost of $1.9 billion among Massachusetts residents. Despite the ongoing fall prevention programs in the area, there is still a high rate of falls with injury. Stepping On is an innovative, multidisciplinary, multifaceted, evidence-based fall prevention program not currently provided. The program was developed in Australia and has shown a 50% reduction in falls and a 70% reduction in ED visits due to a fall, when implemented by the Wisconsin Institute of Healthy Aging in 2006. After investigating current fall prevention efforts, a grass roots group of healthcare professionals, unified in the desire to ensure the quality of life for community residing elders, was formed to introduce this new program into this existing field. Challenges included forming a working group, developing community partnerships, collaborating with the Wisconsin Institute of Healthy Aging, and identifying and submitting for funding opportunities. We continue to promote the Stepping On program, expand our search for community partnerships, and explore funding resources. Our ultimate goal is to provide the Stepping On program to older adults in central Massachusetts.

10. **Bridges to Elders: Outcomes From A Community Health Worker/Nurse Practitioner Led Program for Older Homeless Women**  
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Roseanna H. Means, MD, Health Care Without Walls  
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Adelina Vega BSN, Health Care Without Walls  
Linda M Cundiff, RN, MSN, Health Care Without Walls  
Ling Shi, PhD, University of Massachusetts Boston  
Laura Hayman, PhD, MSN, FAAN, University of Massachusetts Boston

Background: Community health worker (CHW) and nurse practitioner (NP) dyads have shown promising outcomes in the care of vulnerable populations, but no data yet exists on their effect on health outcomes of older homeless women. This study evaluated the program outcomes from Bridges to Elders (BTE), a program designed and implemented by Health Care Without Walls, for women over 55 experiencing or at risk for homelessness to improve access to health care and outcomes through the social determinants of health (SDOH). Methods: Data were analyzed from BTE participants enrolled from January 2017-December 2018. Population characteristics were analyzed with descriptive statistics. BTE program outcomes were evaluated with McNemar’s test: housing status, enrollment with a primary care provider, and diagnosis of unstable chronic conditions. Results: n=96 participants were included in the analysis. The 4 most common conditions were mental health (57.9%), hypertension (53.7%), chronic pain (47.4%) and diabetes (24.2%). 94% of the participants had at least one chronic condition and 61% had two or more co-morbidities. Pre/post Program analysis showed significant improvements in all three outcomes measured: an 11.4% increase in participants who were housed, a 35% increase in PCP enrollment and a 44% decrease in the diagnosis of an unstable chronic disease. Conclusions: The results indicated a NP and CHW dyad improved housing status, primary care access, and targeted health outcomes for older women who are experiencing or at risk for homelessness. Future studies examining the impact of CHW/NP dyads on additional SDOH and their impact on health outcomes are recommended.

11. **LGBTQ+ Worcester For The Record: Building Archives and Community**  
Stephanie E. Yuhl, College of the Holy Cross/Worcester Historical Museum  
David Conner, Director of Community Engagement, Worcester Historical Museum

LGBTQ+ Worcester For The Record is a collaboration between a long-established local institution, Worcester Historical Museum, Worcester-area scholars, and LGBTQ+ communities to collect, archive, and exhibit histories from the margin. This poster session hopes to spark a conversation about how pushing beyond "traditional" content and engaging with new ideas, methods, and audiences, has helped enliven the museum’s institutional mission, challenge staff understanding of their work, increased institutional collaboration, and, most importantly, helped empower a local community toward increased and more organized political action. We will share team approaches and challenges as we reimagine radical histories and community partnerships as agents of transformation.

12. **The extent of knowledge about breast cancer risks and screening methods among college-aged students: a scoping review.**  
Olga Gorea, University of Massachusetts Boston  
Laura L. Hayman, University of Massachusetts Boston
Breast cancer is the most common type of cancer among females. In 2018 it affected 2.1 million women worldwide. Although national breast cancer incidence among women younger than 34 is 1.9%, this rate increases with age. The cause of breast cancer is multifactorial, where modifiable risk factors play a crucial role. This review aimed to explore the literature on general knowledge about breast cancer risks and screening methods among college-aged students nationally and internationally. Eight databases were used with search terms "breast cancer prevention" and "breast cancer awareness" with "health promotion", "young women", and "college students". To be included in this scoping review, studies had to be published in English between 2014 and 2019 in peer-reviewed journals. Ten studies were eligible for this research. The literature indicates that college students have inadequate knowledge of breast cancer modifiable risk factors, symptoms, and detection methods. The providers, Internet, and friends were predominantly used for sources of information by college students. Some studies suggest that Breast Cancer Awareness Campaigns often portray an inappropriate image of the social determinants of breast health. Multiple studies demonstrate that lack of education is a barrier to engage in regular self-breast examinations. Breast health of populations rests on the adoption of multilevel lifelong health promotion and disease prevention interventions. This goal could be achieved through adequate communication of evidence, presenting benefits of lifestyle modification, and developing culturally sensitive community nursing education interventions. The college setting is the perfect community site for empowering young females for self-care and self-management.

13. Stakeholder Engagement through Participatory Action Research at iSPARC  
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Deirdre Logan, Department of Emergency Medicine, UMass Medical School  
Celine Larkin, Department of Emergency Medicine, UMass Medical School  

The UMMS Implementation Science & Practice Advances Research Center (iSPARC) is a DMH-funded collaborative effort that includes the UMMS Department of Population and Quantitative Health Sciences and Boston University's Center for Psychiatric Rehabilitation. With 51 core and affiliate investigators, iSPARC features four interacting programs: Stakeholder Engagement, Public Mental Health and Implementation Research, Technical Assistance/Consultation and External Funding, and Workforce Development. The Stakeholder Engagement Program's (SEP) mission is to lead the mental health research community in working in partnership with individuals with lived mental health experience, their families, and the agencies that serve them. The Program includes three active, well-established advisory groups with more than 20 members representing youth, individuals with lived mental health experience, and family members. These advisory groups adopt a participatory action research (PAR) approach, seeking to engage community stakeholders at every stage of research. The SEP also seeks to increase engagement and diversity through several newer initiatives. We use a structured assessment tool annually to measure and facilitate PAR across all iSPARC's research projects. We disseminate products to assist organizations in engaging stakeholders. We regularly assess and address diversity across iSPARC's existing advisory groups and are initiating a new "community provider advisory group": this group will be consulted by DMH to ensure clinician stakeholders are involved and represented. In 2019, the SEP assessed and enhanced advisory group diversity, assessed PAR and coached investigators in applying the approach, published a tip-sheet on engaging frontline providers, and developed advertising materials for the provider advisory group.

14. Gender-Specific Patterns and Transitions of Adolescent Risk Involvement: A Latent Transition Analysis with Socio-ecological Covariate  
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Yinmei Yang, University of Massachusetts Medical School, Wuhan University  
Carly Herbert, University of Massachusetts Medical School  
Bonita Stanton, University of Massachusetts Medical School  

Background: Little is known to date about how substance use, delinquency, and sexual behaviors cluster over time among adolescence. Moreover, mechanisms accounting for risk involvement are not clear. Therefore, we explore the patterns of risk involvement and transitions among high school students from a socioecological perspective. Methods: Data were obtained from adolescents at baseline (n=2464, 43.4% male, grade 10) and Year 1 and 2 follow-ups in The Bahamas. Latent class analysis and latent transition model were performed. Results: Latent transition analysis identified four distinct statuses among male adolescents ("no/low risk", “delinquency and substance use”, “sexual risk”, and “multiple risk”) and three statuses among female adolescents ("no/low risk", “delinquency and substance use”, and “sexual risk”). While the prevalence of latent statuses changed substantially over time for both genders, females' risk behaviors were relatively stable than males. Male and female adolescents were more likely to transition from the “delinquency and substance use” or “multiple risk” to the “sexual risk” status. Multinomial logistic regressions revealed that neighborhood risk, peer risk involvement, and parental monitoring significantly predicted latent statuses for males and females, and that only neighborhood risk and peer risk involvement were associated with latent transitions. Conclusions: There are considerable changes in risk involvement over time during mid-to-late adolescence. Our findings highlight the importance of socio-ecological covariates on the gender-specific trajectories, which has significant implications for targeted interventions.
15. Barriers and facilitators to connecting cancer survivors to a community-based physical activity program: LIVESTRONG at the Y

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Catherine S. Nagawa, University of Massachusetts Medical School
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Background: Physical activity (PA) rates in cancer survivors are low despite the known benefits. We explored barriers and facilitators to referrals and participation in a community-based PA program, LIVESTRONG at the Y, in staff and survivors.

Methods: Participants were recruited using a snowballing sampling method in collaboration with the YMCA’s national office. Program Directors (n=16), Instructors (n=4) and survivors (n=8) from 8 US states completed semi-structured phone interviews. Interviews were digitally recorded, transcribed and evaluated using thematic analysis. Results: Program Directors and Instructors barriers included awareness about the program, relationships with and referrals from cancer clinic staff and recruiting a greater number and more diverse population of participants. Directors stated, “The best way to reach more survivors would be using an electronic referral system directly from providers”. Programs with high enrollment reported, “We have a positive relationship with providers, a referral process in place, and we send feedback on patient participation”. One program used a referral embedded in an electronic medical record and was successful at enrolling a high number of participants and a diverse population, which others struggled to do. Survivors emphasized the importance of someone in their clinic providing PA program referrals because they would be more likely to listen to these trusted sources. For ease, survivors preferred electronic referrals. Conclusions: Survivors suggest the need for physical activity education, referrals and follow-up from providers, while program staff report the need for a better referral system. Provider electronic referrals may expedite and increase participation in this community-based program.

16. Age dependent associations between patient characteristics and NAFLD, with and without fibrosis, using NHANES data

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Anthony Nunes, University of Massachusetts Medical School

The prevalence of non-alcoholic fatty liver disease (NAFLD) in the US is projected to increase to over 100 million patients within 10 years and costs nearly $300 billion annually. The spectrum of NAFLD ranges from steatosis only to non-alcoholic steatohepatitis (NASH), NASH may progress to cirrhosis, hepatocellular carcinoma, or death. Research goal is to describe characteristics of NAFLD patients within stratum of age and to report age specific NAFLD prevalence and prevalence ratios by demographic and clinical characteristics. We hypothesize that age dependent associations between demographic/clinical characteristics and NAFLD can provide epidemiological insight to inform the development of diagnostic and treatment guidelines. Distributions of patient characteristics are reported by NAFLD, and within the following age groups: 18 and younger, 19-49, 50-64, 65-74, and 75+. Prevalence estimates and prevalence ratios of NAFLD are provided separately for each age group within strata of demographic and clinical characteristics of the NHANES participants. The study population included 16,655 participants with data available from Mobile Examination Center (MEC) component of NHANES. Of this, 14,623 participants had sufficient data to determine NAFLD status. Prevalence of NAFLD generally increased with age; however, we observed a slight decline in prevalence among those over the age of 74. Prevalence ratios were calculated for various demographic and clinical factors and notable heterogeneity was observed across age groups. This descriptive hypothesis generating study should be followed-up with confirmatory analysis.

17. ANA Staffing Legislation Comparison

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Background: Unsafe staffing has negative impacts on the nursing profession as well as on patient outcomes. The American Nurses Association (ANA) has proposed legislation requiring hospitals to use staffing committees to address unsafe staffing. Seven states have implemented their legislation to address nurse staffing starting in 2002. Problem: There are no reports that provide evidence that bedside nurses have seen in improvement in staffing in states that have the staffing legislation proposed by the ANA. Nurses may or may not be aware of their states safe staffing legislation. Aims: The purpose of this study is to examine staff nurses' a) knowledge of their state staffing law, b) implementation of staffing committees at their work site and if present, their participation on staffing committees, c) their perceptions of safe staffing on their units. Methodology: A 28 item survey was developed to collect staff nurses' knowledge of their states staffing laws, participation in committees, and perspectives of their assignments being safe or unsafe. An online survey was shared on multiple online nursing website sites and social media forums including: Allnurses.com, Facebook nursing communities, Medscape Nurses, Show Me Your
Stethoscope, and Twitter. The states examined in this article include Connecticut, Nevada, Texas, Oregon, Washington, Ohio, and Illinois. Results: A total of 1988 surveys were completed representing staff nurses. Only 23% know their state has safe staffing legislation, 35% report staffing committees are implemented, and 22% reported their nurse to patient ratio as safe. Conclusion: Study results will be submitted to peer-reviewed journals.

18. Addressing the Need for Self-management Transition Skills for Adolescents and Young Adult with Chronic Illness in Urban Schools
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Background: An estimated 30% of US adolescents leave with chronic health conditions. These adolescents attend schools and interact with their school nurses for years. This study explored the extent to which school nurses promoted self-management skills in schools and examined their perspectives about using a tool to promote self-management skills for middle and high school students with chronic illness. Methods: This study used a cross-sectional design with self-reporting survey adapted from the UNC TRxANSITION Index for Adolescents and Young Adults self-management concepts. A purposive sampling of 79 middle and high school nurses from three different public urban school districts in a northeastern region of the United States participated in the study. Participants had broad experiences in the field of school nursing with 32% having been a school nurse for over 20 years. Results: Results revealed that majority of school nurses rarely assess students' knowledge about key concepts of self-management skills. When it comes to assessing students' knowledge about reproductive health, health insurance, calling for a clinic appointment or medication refill, and how to choose a new health provider, 64% to 70% of school nurses reported that they never or rarely asked about these skills. Conclusion: School nurses care for adolescents with chronic illness and they rarely address self-management skills. School nurses acknowledged the importance of those skills, yet obstacles hindered their ability to engage in interventions. One important indicator was that the majority of respondents favored the use of a tool to promote self-management transition skills for students.

19. Outer Cape Health Services: Community-Based Care Immersion, Analysis, and Enhancement for Rural Populations Facing Health Disparities
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Brianne Smith, SW, Outer Cape Health Services CHW/Navigator

Background: Massachusetts' Outer and Lower Cape Cod communities are challenged with social disparities that impede the optimal delivery of healthcare to patients. Community-based integrated health programs, such as Outer Cape Health Services' (OCHS) Navigator Program, bridge vulnerable patients to community resources and provide short-term support, potentially leading to self-sufficiency and improved quality of life. Community health workers, termed navigators, are members of OCHS' healthcare team with multifaceted roles in patient screening, support, outreach, and education. The outcomes of this type of outreach system in healthcare settings remain to be thoroughly examined. Purpose: This study used mixed-methods to explore the overall success of the Navigator Program on the OCHS patient population. Methods: We obtained patient scores on the Self-Sufficiency Matrix (SSM), an emerging measure used to assess patient progress longitudinally throughout the program, collected at baseline and at approximately 90-day intervals. Patients were categorized as low-, medium-, or high-risk based on their SSM scores. Qualitative data from patient health records and staff feedback provided context. Results: Of the 110 patients included in the 2017-2019 sample, 71% had improved SSM scores; 7% showed no change, and 22% declined. Improvements in the categories of employment, income, life skills, housing, transportation, mental health, disability, community involvement, and family/social relationships were the most reliable indicators of overall SSM score changes. Conclusions: Cape Cod's OCHS Navigator Program measurably enhances patient self-sufficiency and improves SDOH-related challenges. Thus, integrating community-based interventions into primary care models via navigators can improve health-related quality of life for rural, underserved communities.
20. **Heart Healthy Community Supported Agriculture Pilot Study**

Mary Hammar, Michelly P. Santos, Lydia Sisson, Giuliana Cappucci, Janice Paulsen, Stacey Cayer, and Sabrina E. Noel PhD, RD, , University of Massachusetts Lowell

Cardiovascular disease (CVD) is the second leading cause of death and accounted for over 12,000 deaths in Massachusetts in 2017. Greater fruit and vegetable intake is key for prevention of CVD. Lowell residents experience higher prevalence of CVD than the state average and more than 85% do not meet national dietary recommendations for fruit and vegetable intake. Several studies have shown that nutrition education, as part of cardiac rehabilitation programs, does not result in sustained increases in fruit and vegetable consumption. Vegetable prescription programs, however, have shown modest success in increasing intake and decreasing body mass index (BMI). Thus, a combined approach may be more successful. Cardiac rehabilitation programs are designed to promote healthy lifestyle changes following a cardiac procedure or event and may be strategically positioned to encourage greater fruit and vegetable consumption among patients. Mill City Grows, in collaboration with Lowell General Hospital (LGH) and the University of Massachusetts Lowell, implemented a Community Supported Agriculture pilot program for patients enrolled in the LGH Cardiac Rehabilitation Program (n=20 intervention, 11 control). The program aimed to increase fruit and vegetable consumption. Intervention participants received a weekly vegetable provision, nutrition education and recipe demonstrations. Control participants received standard of care. Fruit and vegetable intake, height, weight, blood pressure, quality of life, handgrip strength, and a six-minute walk test were assessed at baseline, 12 weeks, and 20 weeks. Results from this pilot will inform future interventions focused on food as medicine and highlight the successful collaboration of multiple organizations within the community.

21. **The impact of a pre-arraignment diversion pilot program on substance use and recidivism: a mixed methods approach**


Pre-arraignment diversion programs aim to increase access to substance use treatment and reduce recidivism among adults at their first intersection with the community justice system. A pre-arraignment adult diversion and treatment program was developed to provide crucial treatment to individuals who committed non-violent crimes as an alternative to incarceration. This study aimed to (1) estimate the impact of a diversion program on behavioral health and community justice outcomes; and (2) evaluate facilitators and barriers for the implementation of future pre-arraignment diversion programs. A pre-post analysis of participation in the program was done using McNemar’s test and Paired t-test. Interviews and focus groups were conducted with program participants and staff members. Study participants significantly reduce their alcohol or any drug use in the past 30 days (p-value<0.001), and increase their number of days worked in the past 30 days (p-value=0.005). Non-statistically significant improvements included an increase in attendance to self-help programs in the past 30 days (p-value=0.375), an increase in employed status (p-value=0.109), and a reduction in the number of cigarettes smoked per day (p-value=0.272). None of the participants reported any criminal arrests within 30 days of program completion. Participants identified the program as informative, non-judgmental, and a unique opportunity to dismiss their charges. Staff members reported feeling hopeful that program completers can make positive lifestyle changes to avoid future involvement in the community justice system. This study supports the development of pre-arraignment diversion programs and their positive impact on the substance use of their participants.

22. **Physiologic Effects of Chronic Stress Among African American Sexual Minority Women**

Tubanji Walubita, Sarah N. Forrester, William M. Jesdale, PhD Population and Quantitative Health Sciences, University of Massachusetts Medical School, Worcester, Massachusetts

African American sexual minority women face a unique combination of chronic stressors due to their multiple marginalized identities. Allostatic load is a measure of the physiologic effects of chronic exposure to stress. High allostatic load indicates body system dysregulation, which often leads to poor health outcomes. The association between sexual orientation and allostatic load among African American women has not been explored previously. We hypothesize that lesbian and bisexual African American women will have higher average allostatic load than heterosexual African American women, while bisexual African American women will have higher average allostatic load than lesbian African American women. We use data from the National Health and Nutrition Examination Survey, a cross-sectional, population-based survey. The participants are African American women who self-identify as lesbian, bisexual, or heterosexual. Allostatic load is measured using nine biomarkers. Any biomarker value that falls outside clinical ranges equates to a positive count for that biomarker, meaning that the potential range for allostatic load is 0-9. In the first (2015-2016) of eight data waves to be analyzed (2001-2016), 9 African American women identified as lesbian, 17 as bisexual, and 346 as heterosexual. Of the heterosexual women, 321 had data available for all nine biomarkers, while all of the lesbian and bisexual women had data for all nine biomarkers. The findings from this study will reveal
the association between sexual orientation and allostatic load among African American women and will provide insight into the possible relationships between identification with multiple marginalized identities, chronic stress, and poor health.

23. Effect of E-cigarette Use on Smoking Cessation in Low Motivation Smokers
Nancy Anoruo MD MPH, Thomas K Houston MD, Julie Flahive MS, Jinying Chen PhD, Rajani S. Sadasivam PhD
University of Massachusetts Department of Medicine, University of Massachusetts Department of Population & Quantitative Health Sciences

Many smokers believe e-cigarettes are an effective smoking cessation aid. However, prior studies are mixed regarding the impact of e-cigarette use on combustible cigarette use. Among a cohort of low motivation smokers (active smokers who express low or no intention of quitting smoking), we compared cessation outcomes of traditional smokers (reported use of combustible cigarettes alone) versus dual smokers (reported use of combustible cigarettes + ever use of e-cigarettes) using t-tests for continuous variables and chi-square tests for dichotomous variables. Dual smokers were on average younger than traditional smokers (p=0.02). At baseline, dual smokers smoked an average 16 cigarettes/day, compared with 14 cigarettes/day in traditional smokers (p=0.03). At three weeks, dual smokers were able to abstain from smoking approximately half as long as traditional smokers, reporting an average 0.93 day abstinence interval compared to 1.8 days for traditional smokers (p=0.01). 6.3% of dual smokers were successfully able to quit smoking completely at 3 weeks, versus 13% of traditional smokers (p=0.02). At six months, dual smokers smoked more cigarettes daily than traditional smokers, with an average daily number of 12 versus 9.4 for traditional smokers (p=0.04). Dual smokers also had a smaller percent reduction in baseline cigarette use at six months: 21% percent reduction compared to 33% reduction in traditional smokers (p=0.04). In low motivation smokers, e-cigarette use was not associated with lower combustible cigarette use. When compared to traditional smokers, dual smokers smoked more cigarettes daily on average, had shorter smoking abstinence intervals, and less success at quitting smoking completely.

24. SDOH (Social Determinants of Health) Updates to EPIC System Regarding Veterans Health
Katherine Sadaniantz, MS3, BS Janet F Hale PhD, RN, FNP Lauren Nguyen, MS2, MS, BS
University of Massachusetts Medical School

A more nuanced approach is needed for optimal civilian health care for veterans. Recent data reveal more than seventy-five percent of veterans and their families receive care through non-VA settings - most never being identified as such. Veterans face many service-related exposures as well as reintegration issues that increase their risk for medical and mental health conditions. Healthcare providers must take adequate histories to appropriately diagnose and treat issues related to reintegration and exposures and determine the best medical treatment and/or supports/ and resources for management of service-related issues. Since some former service members do not consider themselves to be veterans, the question "have you or a loved one ever served in the military" is preferred to understand the entirety of our patients' backgrounds, as knowledge of military history can lead to new differential diagnoses and appropriate support for our veterans. The objectives of this project include 1. surveying a select patient and provider population at UMMHC Memorial campus regarding veterans' health, 2. implementing determinants of health questions related to military service into EPIC, and 3. expanding upon this identification in EPIC to include unique exposures and risks faced by veterans/former service members.

25. Common medical concerns delivered by pediatricians to caregivers in the community
Shauna Ejtehadi, D.O. Pediatric Resident PGY2, Brienna Miller, M.D. Pediatric Resident PGY2, Cansu Tokat, M.D. Research Associate, Baystate Children's Hospital, UMMS- Baystate, Springfield, MA, Esra Caylan, M.D. Division of Pediatric Pulmonology, Baystate Children's Hospital, UMMS- Baystate, Springfield, MA

The Whitetulip Health Foundation (WHF) is nonprofit organization that connects healthcare professionals who want to give back to society. Its aim is to create a platform, where they can share ideas and experiences, provide mutual support and collaborate, channel their own personal passions and skills in community projects both locally and abroad. In conjunction with the WHF, Baystate Pediatric Residents are working towards connecting with and educating local community members on common medical concerns. Residents and attendings decide on a topic/theme of the season such as "Summer Safety" or "How to avoid winter infections" and coordinate with local community agencies including the public library systems, shelters, churches, etc. This topic is then advertised through Baystate clinics via handouts, posters to school systems and libraries and social media. Surveys are collected at the end to evaluate what they learned, what can be improved upon and what the community is interested in learning for the future. The goal is to establish a relationship with the community and educate on common medical concerns. Empowering caregivers with the tools they need to create a healthy happy childhood. Doctor’s visits are often time-restricted and infrequent, which does not allow for in-depth medical questions and topics to be discussed. Our hope is that by going out into the community and presenting topics that they feel are important, we can raise awareness and ultimately promote healthier lives.
26. Preliminary Findings from the Age-Friendly Lawrence Community Survey
Julia Mirochnick, Liam Fouhy, David J. Cornell, Martha Velez, Danetza Yachachin, Elecia Miller, Lesly Melendez, Michelly Santos, Vilma Martinez-Dominguez, Sabrina Noel, RD, PhD, University of Massachusetts Lowell

The Mayor’s Health Task Force, the City Council on Aging, Groundwork Lawrence, and UMass Lowell are leading an Age-Friendly Initiative in the city of Lawrence. The initiative aims to develop and implement an action plan to advance age-friendly policies, programs and systems to promote high quality aging among residents in the city of Lawrence. Major concerns for older adults in Lawrence include limited transportation, affordable housing and social isolation; however, additional data are needed to identify priority areas. An ongoing comprehensive assessment of 9 domains adapted from the WHO’s livability domains includes a Community Survey designed to obtain data on perceived strengths and areas for improvement on aging within the city. Surveys were administered by a bilingual community health specialist in English or Spanish or self-administered on paper or online. A total of 454 surveys were completed. Participants were on average 66.3 ± 10.0 years, 69.5% were female and 75.7% had an income of <$20,000. While the majority of participants felt it was “very important” to remain in their community as they age, 50% reported poor sidewalk conditions and 12.8% cited physical limitations as a barrier for traveling around Lawrence. Approximately 25% reported mobility or health issues that limit their socialization and 43.4% self-rated their quality of life as fair or poor. These preliminary findings suggest that transportation, healthy living, and housing domains may be particularly important areas for prioritization within the City of Lawrence.

27. Demographic and Usage Data for the Free Bus Service in Lawrence, MA
Liam Fouhy, David J. Cornell, Martha Velez, Julia Mirochnick, Danetza Yachachin, Betsy Goodrich, Sabrina Noel, RD, PhD
University of Massachusetts Lowell

In the city of Lawrence, more than 60% of adults ≥65 years had an annual income of less than $20,000 compared with an average of 24% for Massachusetts. Access to a motor vehicle was also 22% lower than the state average for older adults.1 Increasing access to transportation, particularly for lower income older adults, has been shown to improve access to healthcare and subsequent health outcomes.2 Transportation is a critical public health concern for the estimated 11,342 (14.3%) adults aged ≥60 years living in Lawrence.

In 2019, The Mayor with the vote of the city council of the City of Lawrence eliminated bus fares for three bus routes: 1) Route 85, covering downtown Lawrence into northwest residential areas; 2) Route 34, covering northeast Lawrence, Lawrence General Hospital and the Community Health Center and; 3) Route 37, covering south Lawrence and Lawrence High School. The overall objective of this research was to describe the demographic data and reasons for use of the free bus lines among individuals using the service. A total of 352 participants completed surveys administered by community health workers. The majority of participants were aged >50 years (60%) and had incomes ≤$20,000/y (88%). The top two reasons for using service included travel to work (90.4%) and/or medical appointments (5%). 52.5% participants self-reported a taxi as they’re only alternative for transportation prior to availability of this free service. This highlights the need for future long-term strategies to improve access to transportation for older, lower income adults.

28. One Year In - An Update on the All of Us Research Program: Engaging the Community for the Future of Health
Mara Meyer Epstein, ScD, Kathleen M. Mazor, EdD, Joann L. Wagner, MSW, Department of Medicine and the Meyers Primary Care Institute, University of Massachusetts Medical School
Peggy Preusse, RN - Reliant Medical Group Department of Research
Morgan Green, BS, - Meyers Primary Care Institute, University of Massachusetts Medical School
Brenda Valenti, BSN, Kyle Quitadamo, BA - Reliant Medical Group Department of Research
Lawrence Garber, MD - Reliant Medical Group and the Meyers Primary Care Institute

The All of Us Research Program (AoURP) is an ambitious ten-year effort to enroll over 1,000,000 participants across the country. The AoURP is a key part of the Precision Medicine Initiative and seeks to build a national cohort collecting self-reported health data, medical record data, biospecimen samples and physical measurements to accelerate precision medicine. Precision Medicine is an emerging approach for healthcare treatment and prevention that takes into account individual variability in genes, environment, and lifestyle. Researchers at the Meyers Primary Care Institute (at UMass Medical School) have partnered with Reliant Medical Group to enroll over 10,000 participants in central Massachusetts. To date we have enrolled over 1,500 core participants. The Meyers/Reliant team is actively working to engage the local community with a focus on populations previously underrepresented in biomedical research (e.g. older adults, racial/ethnic minority group members). We have held/attended over 100 engagement events in the past year. We have engaged at community events (e.g. India Day, Annual MLK Breakfast, Worcester Pride Festival, Health Fairs, Farmer’s Markets), local sporting events (e.g. Bravehearts and Railers Games) and charitable walks/runs (e.g. Boston Marathon, Worcester Firefighters 6k, Cancer and Alzheimer’s walks). We have
also conducted informational presentations to community organizations/groups (e.g. Refugee and Immigrant Assistance Center, Coalition Against Bias and Hate, Worcester JCC, Senior Centers). We hope to continue building strong community partnerships to help us achieve our enrollment goals and communicate the great potential of the AoURP to change the future of medical research with a focus on precision medicine.

29. UMass Worcester Prevention Research Center UMass Worcester Prevention Research Center
Stephanie C. Lemon, PhD Milagros C. Rosal, PhD; Amy Borg, MPH, MEd, Judy Ockene, PhD, MEd, MA; Lori Pbert, PhD; Karen Clements, MPH, ScD; Sharina Person, PhD; Christine Frisard, MS, Karin Valentine Goins, MPH; Karen Ronayne, University of Massachusetts Medical School

The UMass Worcester PRC, located at the University of Massachusetts Medical School, has been funded by the Centers for Disease Control and Prevention since 2009. Our mission is to promote health and prevent disease and disability through real-world community engaged research, evidence-based practice and education. Our research focus areas are: 1) Healthy eating 2) Physical activity 3) Tobacco cessation, and 4) Chronic disease risk reduction and management. Our work is focused on: 1) Intervention and implementation research 2) Policy, systems and environment research and evaluation, 3) Public health practice, collaboration and technical assistance, and 4) Academic training. The UMass Worcester PRC is implementing our Core Research Project called BP Control, which is an economic analysis of a community health worker-delivered intervention to enhance anti-hypertensive medication adherence in a Federally Qualified Community Health Center (FCHC)-based Accountable Care Organization. The UMass Worcester PRC is the coordinating center of the PAPREN (Physical Activity Policy Research and Evaluation Network) funded by the CDC as a Special Interest Project.

30. Reducing Obesity and Improving Lifestyle Behaviors Among Socioeconomically Disadvantaged Children in the United States (USA): Findings from the Healthy Kids & Families Study
Milagros C. Rosal, MS, Ph.D., Stephenie Lemon, Ph.D., Amy Borg, MPH, MEd., Lori Pbert, Ph.D., Kevin Kane, MA., Wenjun Li, Ph.D., Tom Land, Ph.D., Department of Population and Quantitative Health Sciences, Division of Preventive and Behavioral Medicine, University of Massachusetts Medical School

Purpose: Childhood obesity continues to increase among socioeconomically disadvantaged communities in the USA. Low-cost interventions that can be implemented in these communities are needed. Methods: Using a quasi-experimental design, this study tested the impact of the Healthy Kids & Families intervention, a theory-based, low-intensity, parent-focused, community health worker-delivered intervention to improve children’s weight, healthy eating and physical activity. The intervention targeted the child’s social and physical home environment through parental knowledge, beliefs and skills for managing child obesogenic behaviors and use of supportive community resources. Its delivery format consisted of 4 home-based behavioral counseling sessions, 4 telephone follow ups and quarterly newsletters, over 24 months. The control condition was a positive parenting intervention with a similar delivery format. Parent and child (K-4th grade) dyads (n=247) were recruited through schools in socioeconomically disadvantaged neighborhoods in Worcester, MA. The primary outcome was change in child BMI z-score at 24 months. Secondary outcomes included parent BMI and parent and child diet and physical activity, measured via surveys (adapted scales from the Beverage Intake Questionnaire, the Youth Risk Behavioral Survey, the Beverage and Snack Questionnaire2, the Physical Activity Questionnaire Elementary School, selected items from the Massachusetts Parent Child Longitudinal Cohort Survey; and investigator-developed surveys). Ten individual behaviors and number of positive behavior changes made were assessed. Intent-to-treat analysis included descriptive statistics and generalized linear mixed models, with adjustments for age, gender, race/ethnicity and parental education. Results: The retention rate at 24 months was 74%. Compared to the control condition, the Healthy Kids & Families intervention had a greater reduction in children’s BMI z-score at 24 months (β=-0.18, 95%CI: -1.92 - -0.36; p=0.057) and a greater number of positive behavioral changes among children (β=0.57, 95%CI: 0.08 – 1.06; p=0.02). There were no significant findings for parents. Conclusion: A low-intensity community-based intervention targeting childhood obesity shows promise for facilitating lifestyle changes among elementary school children living in socioeconomically disadvantaged communities.

31. A Roadmap for Community-Based Research in Worcester
Kelsey Hopkins, City of Worcester
Amy Borg, UMass Medical School
Casey Burns, Coalition for a Healthy Greater Worcester
Mary Conley, the College of the Holy Cross
Katherine Espanzer, City of Worcester
Barbara Estabrook, UMass Medical School
Ellen Foley, Clark University
Tina Grosowsky, UMass Medical School
Cheryl Hersperger, Worcester State University
A Roadmap for Community-Based Research in Greater Worcester is under development along with a set of related templates, to guide academics and community organizations in forming partnerships for shared research endeavors. These are being developed by the Community-Based Research Working Group, part of the Worcester DPH’s Academic Health Collaborative. The Working Group and other stakeholders identified areas for growth in collaborative research. The Roadmap and its associated tools and resources will allow universities and community groups to partner differently to improve research outcomes and promote lasting partnerships.

32. A Community-Engaged Approach to Understanding Factors Impacting Health Care Providers and the Exercise Prescription Referrals
Gifty Deborde-Jackson, MA(1), Julianna Andrews, MA(1), Julie Wright, PhD(2), Ana C. Lindsay, DrPH(2), Philip J. Troped, PhD(2), Gibbs Saunders MA(3), Laura L. Hayman PhD, RN(4), Sarah M. Camhi, PhD(2)
(1)Department of Sociology, University of Massachusetts, Boston
(2)Department of Exercise and Health Sciences, University of Massachusetts, Boston
(3)Healthworks Community Fitness, Dorchester, MA
(4) Department of Nursing, University of Massachusetts, Boston

Introduction: The U.S. Preventive Services Task Force and the American College of Sports Medicine recommend that Health Care Providers (HCP) give patients who are identified as obese with cardiovascular disease risk factors an exercise prescription to a fitness facility to improve physical activity and health. Purpose: Employing a community-engaged approach, investigators explored factors impacting HCPs during the exercise prescription referral process to understand barriers, facilitators, and impact of exercise prescription experience. Methods: Investigators utilized qualitative methods and a socio-ecological framework to design and implement an in-depth phone interview with 8 HCPs who give exercise prescriptions and 4 key informants from an exercise facility. HCPs are from one community health care center in Boston, Massachusetts. Interviews were recorded, transcribed, and de-identified to maintain privacy. Transcripts were coded and analyzed using a 'lumping' approach for initial coding and codebook development. Researchers organized coded excerpts into broader themes. Results: HCPs were physicians (n=6), nurse practitioner (n=1) and a nutritionist (n=1) while participants from the exercise facility were fitness director (n=1), personal trainer (n=1), and managers (n=2). Common themes indicate time constraints during patient-doctor visits, lack of follow-up opportunities, and lack of communication between provider and fitness centers negatively impact the use of exercise prescription. HCPs also believe improving communication between health clinics and fitness centers could improve the use of exercise prescription, possibly through connecting with the electronic medical record. Conclusion: Findings could inform potential infrastructure, implementation, and policy changes to improve use of exercise prescriptions, which could ultimately increase patient physical activity and health.

33. The Effects of An Adolescent’s Environment on Impulsive Behavior: An Integrative Review
J.McNeil RN, MSN, PhD candidate, UConn School of Nursing, UConn, Storrs

Aim: To synthesize findings from the published literature on the relationship between a neighborhood context and adolescent impulsivity. Background: The elevated number of juvenile delinquents with a mental illness suggests that more research in this area is needed. To date, there has not been a review of impulsive behavior among adolescents and how it relates to their neighborhood setting. Design: Integrative review guided by the work of Whittemore and Knafl (2005). Data Sources: Electronic databases including PubMed, CINAHL, PsycINFO, ERIC, EconLit, Scopus, Sociological Abstracts, Social Work Abstracts, and Proquest were searched for related research published from 1925 through January 2018. The reference lists of all studies were also reviewed to locate other eligible studies. Review methods: A systematic process was used to assess for methodological quality, data extraction, coding, theme development and synthesis of conclusions. Results: A total of 19 articles were included in this review. Analysis revealed 3 overall themes predominately focusing on neighborhood context: (1) neighborhood quality; (2) collective efficacy; and (3) neighborhood disadvantage. Conclusions: The majority of research on this topic focuses on the presumption that an adolescent coming from a poor, disadvantaged neighborhood is more apt to have a negative outcome. This review shows conflicting evidence which indicates that further research is needed to clarify the effects of an adolescent’s environment on impulsivity using an unbiased sample.
34. **El Camino al Norte (The Path North): Intermediary Qualitative Methodologies with Transnational Migrants**  
Andriana Foiles Sifuentes, German Chiriboga, UMass Medical School, Department of Population and Quantitative Health Sciences

Aim: Develop qualitative methodological approaches with migrating populations that allows for variability in persons and places in the context of cross-collaborative health research. Background: The conditions under which persons migrate affects health outcomes. In order to better assess the health status of migrating populations, qualitative methods must be adapted to the evolving conditions that surround the migration, including the communities from which persons derive, cultural understandings of health, and events that occur during migration. Unraveling the interlocking of numerous factors requires a re-articulation of qualitative methodological approaches that allow for myriad intersecting phenomena that envelop migrating populations.

Methods: We analyzed a qualitative research team for social and behavioral patterns. Four primary researchers were examined as they collected data among persons from Cañar, Ecuador, using semi-structured, open-end interviews. Interviews were conducted in Massachusetts, USA (N=6) and Cañar, Ecuador (N=11) by two people. Two additional persons influenced aim and cultural context of research. The project was multi-sited and captured the sending and receiving communities for migrating populations, and researchers from both locations were represented. Results: Interviewers were adapted in real time depending upon the participants’ needs. The cultural context and individual participant’s willingness to respond to scripted questions varied, and interviewers adapted methods in real-time. Real-time responses included deviation from scripted questions and inclusion of community-member led interviews. Results of real-time changes created key findings that might have been otherwise lost. Conclusions: Real-time adaptations of interviewers closely resembled ethnographic methodologies seen among social scientist, specifically anthropologists, specialized in reading cultural contexts. Further research is needed to bridge ethnographic social scientists and qualitative methodologists in the realm of health research.

35. **Enhancing Hepatitis C Virus Screening and Treatment of Young Injection Drug Users: Implementation and Evaluation**

**Overview**

Laura Sefton, Public & Private Health Solutions, Commonwealth Medicine, University of Massachusetts Medical School  
Karen M. Clements, Public & Private Health Solutions, Commonwealth Medicine, University of Massachusetts Medical School  
Judy Hsu, Barre Family Health Center, UMass Memorial Medical Center  
Alexis Henry, Public & Private Health Solutions, Commonwealth Medicine, University of Massachusetts Medical School  
Bernadette Shaw, Public & Private Health Solutions, Commonwealth Medicine, University of Massachusetts Medical School  
Amy Leary, Public & Private Health Solutions, Commonwealth Medicine, University of Massachusetts Medical School

Introduction: Young injection drug users, 18-29 years old, (YIDUs) are at increased risk for hepatitis C virus (HCV) but are difficult to engage in screening and treatment for HCV. The Massachusetts Department of Public Health contracted with the University of Massachusetts Medical School (UMMS) to provide implementation technical assistance and evaluate clinical care delivery models to enhance HCV screening and treatment for YIDUs in primary care settings. The five community health centers (CHCs) recruited to participate were required to develop, implement, and report on interventions in the areas of 1) HCV screening of YIDUs, 2) provider education about screening and treatment practices, and 3) treatment uptake/retention among YIDUs. Overview: Each CHC’s current practice and specific needs resulted in varied interventions across sites. Screening interventions aimed to increase assessment of risk and HCV testing. CHCs focused clinical education efforts on expanding treatment capacity or building staff awareness of HCV. Treatment uptake/adherence was addressed by building treatment capacity, improving patient engagement, treatment coordination, and implementing supplemental laboratory testing. The mixed methods evaluation will assess care processes and patient outcomes at baseline and follow-up. Medical chart and/or electronic medical record data will summarize outcomes. Interviews with provider staff aim to understand the current standard of care, post-implementation changes, and what works well and less well about the interventions. Summary: With UMMS support, the CHCs developed HCV screening and treatment customized interventions targeting YIDUs. Evaluation of these interventions may provide guidance for efforts of other healthcare providers interested in helping this population.

36. **Enhancing Hepatitis C Virus Screening and Treatment of Young Injection Drug Users: Facilitators and Barriers to Care**

Laura Sefton, Public & Private Health Solutions, Commonwealth Medicine, University of Massachusetts Medical School  
Alexis Henry, Public & Private Health Solutions, Commonwealth Medicine, University of Massachusetts Medical School  
Judy Hsu, Barre Family Health Center, UMass Memorial Medical Center  
Bernadette Shaw, Public & Private Health Solutions, Commonwealth Medicine, University of Massachusetts Medical School  
Amy Leary, Public & Private Health Solutions, Commonwealth Medicine, University of Massachusetts Medical School  
Karen M. Clements, Public & Private Health Solutions, Commonwealth Medicine, University of Massachusetts Medical School
Introduction: The Massachusetts Department of Public Health contracted with the University of Massachusetts Medical School to develop and evaluate a clinical care delivery model to enhance HCV screening and treatment for young injection drug users, 18-29 years old, in primary care settings. This population is at risk for HCV infection but are challenging to engage in HCV screening and treatment. Methods Baseline telephone interviews with 3 staff at each of five Massachusetts community health centers (CHCs) were conducted in Spring 2019. Calls assessed pre-intervention HCV care practices, including assessing patients for injection drug use and other HCV risks, laboratory testing for screening and treatment evaluation, HCV treatment/follow-up, provider knowledge/training needs and practices, and facilitators/challenges to treating YIDUs with HCV. Results CHCs lacked formal protocols for HCV screening. Treatment was provided by infectious disease specialists, rather than by primary care clinicians. Clinical treatment information is shared among staff via formal/informal methods. Treatment facilitators included: a culture of acceptance/openness among CHC staff, existing screening and laboratory testing practices, and access to HCV clinical treatment experts. Barriers included: social stigma regarding drug use, patient-level addiction-related challenges, a lack of protocols regarding screening, linkage to care, and clinical management, and low provider treatment expertise/capacity. Conclusions Participating CHCs developed planned enhancements to their care models for treating HCV in the YIDU population. At baseline, they identified facilitators/barriers to HCV care that they hoped to address through interventions around testing/screening, provider education, and patient treatment uptake/retention. Post-intervention interviews will assess implementation progress.

37. Enhancing Hepatitis C Virus Screening and Treatment of Young Injection Drug Users: Baseline Clinical Findings
Karen M. Clements, Public & Private Health Solutions, Commonwealth Medicine, University of Massachusetts Medical School Judy Hsu, Barre Family Health Center, UMass Memorial Medical Center Bernadette Shaw, Public & Private Health Solutions, Commonwealth Medicine, University of Massachusetts Medical School Amy Leary, Public & Private Health Solutions, Commonwealth Medicine, University of Massachusetts Medical School Laura Sefton, Public & Private Health Solutions, Commonwealth Medicine, University of Massachusetts Medical School Alexis Henry, Public & Private Health Solutions, Commonwealth Medicine, University of Massachusetts Medical School

Introduction: Young injection drug users ages 18-29 years, (YIDUs) are at risk for hepatitis C (HCV) infection but are challenging to engage in treatment. The Massachusetts Department of Public Health contracted with the University of Massachusetts Medical School to develop and evaluate primary care delivery model interventions to enhance HCV screening and treatment for YIDUs. We evaluated HCV screening and treatment prior to intervention start. Methods We analyzed medical records data from primary care settings in three of five Massachusetts Community Health Centers from 12/1/17-11/30/18. As no ICD code for injection drug use exists, we first identified records with an ICD-10 code for opioid use disorder and then reviewed those records for evidence of injection drug use (IDU). The percentage of individuals screened for HCV, percentage confirmed positive, percentage treated and time from diagnosis to treatment were assessed. Results Of the 192 YIDUs identified across the sites, 96 (50%) were screened, and 38 (40%) of those screened were confirmed HCV+. Among HCV+ individuals, 5 (13%) were treated for HCV during the study period. Time from diagnosis to treatment ranged from 0 to 125 days. Screening and treatment rates were similar across sites. Conclusions IDU identification from medical records is challenging; it is unknown whether all YIDUs' screening opportunities were identified. While half of identified YIDUs were screened, a low percentage of HCV+ were treated. Interventions to enhance care in this population are currently underway. The post-intervention evaluation will examine changes in the percentage screened and treated after intervention implementation.

38. Patient-Centric Development of DM-BOOST: a Diabetes Mellitus program using Behavioral economics to Optimize Outreach and Self-management support training with Technology.
Daniel J. Amante, PhD, MPH Health Informatics and Implementation Science Population and Quantitative Health Sciences UMass Medical School

Background: Diabetes Self-Management Training (DSMT) interventions have consistently demonstrated positive effects, including improved hemoglobin A1c, diabetes knowledge, self-management skills, and self-efficacy. DSMT has shown to be efficient, reduce hospitalizations and lower costs of care. Despite an established body of evidence and being recognized as a standard of diabetes care, DSMT is underutilized, especially among disadvantaged populations. To maximize impact of DSMT, attention should be dedicated towards reaching patients in need of additional support and understanding the barriers they commonly face. Electronic Health Record (EHR) data can be used to longitudinally monitor a population of patients to identify those with gaps in their care. Engaging these patients to better understand the barriers they experience, and involving them in the design of intervention support, can serve as a critical step in increasing the reach of DSMT. Methods: The specific aims of DM-BOOST are to 1.) analyze EHR and claims data to identify sociodemographic determinants of gaps in diabetes care, 2.) deploy a patient-centered design of an intervention to increase the adoption, engagement, and completion of DSMT, and 3.) pilot test the feasibility. Implications: DM-BOOST builds upon previous work utilizing an Epic Reporting Workbench to identify patients with gaps in care and proactive outreach approaches to direct patients towards existing and underutilized resources. The population health monitoring tools and proactive outreach approaches established are foundational components of DM-
BOOOST. We will use a novel, patient-centric, multiphase optimization strategy to design, usability test, and feasibility pilot the DM-BOOST program.

Thidinalei Tshiguvho, PhD., The Healing Garden Institute

The Healing Garden Institute, based in Worcester, Massachusetts, supports communities, families, and individuals to take action towards healing their physical and emotional bodies. We work with communities that face health disparities due to poor access to health care, behavioral risk factors, family history and other socio-economic determinants. We provide them with tools that would help them prevent and manage diseases. Our work is based on the values of respecting human dignity and recognizing people's intrinsic ability to restore their health and overall wellbeing. HGI uses a multi-perspective, research-based approach which recognizes the healing powers of the physical space, medicinal food, and human connection. HGI provides healing services through a medicinal garden, health workshops, healing circles, and herbal medicine research. The physical garden, located at 4 King Street, Worcester, demonstrates the healing powers of plants, and is also used as a food and medicinal garden. We plant dandelion, milk thistle and adaptogens, whose ecology demonstrates the mechanisms of healing the body and the mind. We share this information through tags attached to the plants and at workshops. The other half of the garden demonstrates affordable ways to grow food medicines. HGI offers workshops on gardening, medicinal food preparations, and alternative healing modalities. We focus on emerging health issues. The Institute conducts botanical/medicinal research in the greenhouse which is attached to the garden. HGI participates in local and international health initiatives, and is seeking volunteers and partnerships with universities, health providers, and alternative medicine practitioners as indicated in this poster.

40. The 'ID PLUS Care' program: Preliminary results from a population health management approach to "nudge" patients towards improved guideline-concordant diabetes care.
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Background: Patients with diabetes have substantial treatment demands. Poor adherence to treatment guidelines contributes to negative effects and high costs. Electronic Health Record (EHR) systems enable monitoring of patient populations to identify gaps in care delivery. Innovative engagement approaches inspired by behavioral economics can "nudge" patients towards recommended services. Methods: The Identifying Diabetes Patients and Linking with Underutilized Support to improve Care (ID PLUS Care) program aims to 1.) identify UMass Memorial Medicare Accountable Care Organization (UMMACO) patients with gaps in diabetes care, 2.) proactively engage patients to assess barriers and facilitate guideline-concordant care and 3.) monitor patient population longitudinally. To accomplish these aims, the following were developed: an Epic Reporting Workbench to identify patients, a REDCap-facilitated, patient outreach protocol rooted in behavioral economics, and a Tableau report to monitor target outcomes. Results: 213 patients from 2 primary care clinics were identified as having gaps in recommended diabetes care and were screened for outreach. Of these, contact was made with 130 patients. Primary barriers identified included diet, medication, finance, and transportation-related barriers. Support provided included rescheduling appointments, ordering labs, referring to diabetes-self-management training, and sending diabetes-related educational information. Implications: Preliminary lessons learned include the necessity to verify EHR-based gaps with chart review and patient verification and the ability to tailor outreach protocols to meet the needs of partnering clinics and patients. Next steps include continuing patient outreach over the phone and extending outreach with patient portal messaging. This is an ongoing project. It would be great to have the opportunity to update results prior to the abstract being shared in the symposium materials, if possible.

41. mHealth Platform for Self-Management of Hypertension: A Feasibility Trial
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Background: Hypertension affects millions of Americans. OWL-H (Our Whole Lives for Hypertension) is a mobile health (mHealth) web-based platform that teaches mindfulness and evidence-based strategies to improve self-management of hypertension. Objective: The primary goal of this pilot was to evaluate the feasibility of OWL-H and cooking classes in the self-management of hypertension. Methods: We conducted a pre-post intervention study with 2 cohorts to assess the feasibility of a
9-module lifestyle modification program, accompanied by 3 cooking classes over 8 weeks among patients with hypertension. Outcome data, collected at baseline and 8 weeks, included demographics, usage and attendance, self-efficacy in home measurement of blood pressure, and satisfaction in using OWL-H for hypertension self-management. In the statistical analysis, we used descriptive statistics and qualitative methods. Results: Among the enrolled 24 participants, the median age was 58 years, 88% were female, and 54% reported a household income of less than $30,000. Participants who were not confident in taking their blood pressure reduced from 8.3% at baseline to 4.8% on follow-up at 8 weeks. Out of 9 modules, the average number of modules accessed was 4 (min = 0; max = 9). Out of 24 participants, 11 attended all 3 cooking classes, while 3 attended only 1 class. Eighty-three percent of participants reported that they were “Very Satisfied” with using OWL-H to help manage their hypertension. Conclusions: The mHealth platform for hypertension self-management, OWL-H, and accompanying cooking classes are a potential tool to educate patients on factors that can help reduce their hypertension.

42. **An iterative participatory action model for health disparities research increases community relevance: Research in progress**


Background: COmmuNity-engaged SimULation Training for Blood Pressure Control (CONSULT-BP) is an NIH-funded clinical trial that evaluates the impact of a novel educational intervention that aims to improve graduate medical and nursing trainees' interaction skills with racial, ethnic, and socioeconomically diverse populations. The overarching aim is to assess the impact of a multi-component "knowledge, awareness, practice" educational model on patient outcomes and clinician skills. Methods: The educational content and training were designed using a Participatory Action Research (PAR) model in collaboration with relevant stakeholders: learners, faculty, and racially and socioeconomically diverse community members who were hired as standardized patients in the simulation center. The main clinical outcome is blood pressure of trainee patients' from the electronic medical record. Findings: Year one interim results identified challenges with study and educational intervention design that were addressed using a PAR approach that did not compromise essential elements of educational design, community involvement or data collection. Investigators streamlined content in educational modules, included more in-person education and amended the study to include only one iCELS session and one iAT per participant. As a result, year two preliminary stakeholder feedback is positive, including empowerment reported by participating standardized patients. Further, there were successful institutional changes in speed of HR onboarding of community participants. Conclusion/Implication: The need for better patient-centered engagement skills and ways to mitigate the effects of implicit bias in clinical encounters are well described. Our findings suggest that iterative stakeholder review and engagement can improve acceptability of educational study delivery and, potentially, improve impact on patient outcomes.

43. **Improving serious illness care conversation, documentation, and retrieval to support goal concordant care through EHR optimization**

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"Background- 2016 survey half of Massachusetts residents had not discussed their care wishes with loved ones, and even fewer had mentioned to their doctor. One-third of residents who had a loved one die in the past year said patient preferences were not fully followed. High-quality discussions about serious illness, its documentation in medical record have demonstrated better patient experience, improved quality, and reduced readmissions and inpatient mortality. Intervention- We sought to improve serious illness conversation with patients, its documentation in electronic medical record (EHR), and its retrieval through improvements EHR to support clinicians in line with their work flow. 1. Standardized documentation adopting Serious Illness Communication Guide, an evidence-based tool developed by Ariadne Labs' Serious Illness Care Program 2. Development of EHR tool that supports collection of standardized serious illness conversation and detailed data analysis 3. Integration of the developed tool within clinician documentation workflow 4. Creation of repository with ability to collect all clinical notes containing serious illness conversation documentation. Results Early results since the implementation of the serious illness documentation tool shows clinician interest in use of the tool for documentation of serious illness conversation with their patients in inpatient and outpatient setting. Implications Development of EHR tools that is in line with clinician workflow can lead to its successful adoption. Next steps include analysis of rates of retrieval of collected information, frequency of update of the serious illness conversation documentation, and its impact of patient care."

44. **Asthma LinkTM: A Real-World Application of School-Supervised Asthma Therapy**

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Previous randomized controlled trials have demonstrated the efficacy of school-supervised inhaled corticosteroid therapy (ICS) in reducing the morbidity of pediatric asthma. Asthma Link™ is a real-world application of this school-supervised asthma therapy in partnership with Worcester Public Schools. Designed with a pragmatic approach in mind, Asthma Link™ connects providers in the clinic with those established in the community. First, a pediatric provider identifies a child with poorly controlled asthma and communicates with the nurse at the child’s school to set up daily ICS administration. The pediatric provider also provides the child’s family with a prescription for a second inhaler. The child’s family obtains the second inhaler from a pharmacy and brings it to the school. Then, the school nurse administers the ICS medication to the child during the school day. Prior studies have demonstrated that the implementation of Asthma Link™ has led to improvement in health outcomes and decreased healthcare utilization in children with poorly controlled asthma. However, despite these positive outcomes, school-supervised asthma therapy is not yet part of routine practice. Therefore, our research has aimed to understand the barriers and facilitators to the real-world implementation and dissemination of school-supervised asthma therapy by directly engaging with the stakeholders involved: pediatric providers, school nurses, parents, and children. We conducted semi-structured qualitative interviews with these stakeholder groups to understand how to optimally refine Asthma Link™ such that it is acceptable to the participants.

45. Improving active transportation opportunity: using a customer discovery process to adapt research products for public health stakeholders
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Background and Purpose: Active transportation can be an important part of daily physical activity, but travel without a vehicle is difficult in many communities. Local health departments can help make communities more walkable and bikeable by participating in decision-making that shapes the built environment. A guide for local health departments to use in strategic planning was developed using a modified Delphi process. Objectives: To describe lessons learned from the SPRINT (SPeeding Research-tested INTerventions) program of the National Cancer Institute about adapting research products to meet users’ needs, getting tools to users cost-effectively, and partnering with other organizations in dissemination. Methods: At the start of SPRINT we developed hypotheses about customers; value; communication, distribution and sales channels; revenue and costs; and key activities, partners and resources. We tested these hypotheses by conducting over 50 “customer discovery” interviews with state and local health departments; national and local advocacy organizations in public health, active transportation and environment; federal transportation and health officials; public health professional societies; and others. We iteratively revised our business model based on these interviews. Results: We now see our key customer segment as staff responsible for physical activity or health equity at a midsize health department committed to improving walking and biking opportunity. National advocacy organizations working on active transportation will be strong allies. Conclusions: Researchers can improve translation and dissemination of research products using a customer discovery approach to map and explore their beliefs about customers, value, channels, revenue and costs, and key activities, partners and resources.