COMMUNITY ENGAGEMENT
POSTER SESSION

Thursday, November 3, 2022
9:30 – 11:30 A.M.

Medical College of Wisconsin - Milwaukee
Alumni Center
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Welcome to the 8th Annual MCW Community Engagement Poster Session

As the acting Senior Associate Dean for Community Engagement at the Medical College of Wisconsin, it gives me great pleasure to welcome you to our 8th Annual Community Engagement Poster Session.

The last year has highlighted how we can prioritize the needs of community and work towards health equity. We had the opportunity to grow our programming to provide immersion experiences for learners and scholars, and spotlight individuals and organizations that exemplify community engagement. We are grateful that we can continue to gather with this poster session to showcase the important work of our students, staff, faculty, and community partners.

Community engagement, one of the four missions at the Medical College of Wisconsin (MCW), is richly embedded in our programs and throughout our centers, institutes, and departments. The Office of Community Engagement is proud of the many ways in which the “art and science” of community engagement is demonstrated across all MCW campuses and throughout Wisconsin, as well as the expertise and commitment by our faculty, staff, students, and community partners. We are fostering future leaders by leveraging the expertise, deep work, and mentorship offered by these practitioners. It is only through genuine partnerships, and mutual, longstanding commitments to the communities we serve, that MCW can impact lives and play a role in improving health in Wisconsin.

We hope this event will provide insight on how we can be better partners, improve our programs, and have a greater impact on health. We hope these exemplars of engaged work that are displayed throughout this event will nurture partnerships and catalyze new projects and partner opportunities.

We continue to encourage people to innovate in how we engage each other, for the overall health and benefit of the communities we serve.

Thank you for contributing to leadership and excellence in community engagement and promoting the health of the community through education, research, and patient care!

Sincerely,

Staci Young, PhD
Senior Associate Dean for Community Engagement (interim)
Professor, Department of Family and Community Medicine
Professor, Institute for Health & Equity
Director, Center for Healthy Communities and Research
Abstracts
Background/Objective: Racial disparities, alongside access to healthcare and lifestyle challenges for underprivileged populations, are a marker of disproportional oncologic outcomes despite advancements to cancer care. In this study, the impact of differing socioeconomic statuses (SES) was analyzed based on metropolitan county zip codes and survival rates of female cancers in the disadvantaged patient population.

Methods: Data was analyzed from TriNetX, a data warehouse associated with a large health center. Demographic data included female patients with gynecological or breast cancers who were white, African American, American Indian, or Pacific Islander. A patient's zip code was used to determine the SES of the individual by referencing the metropolitan county's health report. Survival was assessed from the date of diagnosis until the date of last contact or date of death. Overall survival data was computed using biostatistical analyses.

Results: A total of 608 female patients were included in the study. In white patients, both high SES (hazard ratio defined as the estimate of the hazard rate in two compared groups, HR = 0.12; p-score defined as the probability of obtaining the observed results, p<0.001) and medium SES (HR = 0.17; p=0.008) had better survival outcomes than low SES, but no difference was found between high and medium SES (p=0.772). In contrast, high SES in minority patients was not different from medium (p=0.976) and low (p=0.561) SES. Interestingly, race was not a factor in survival outcomes when controlling for SES. White and minority patients did not differ in survival in the high (p=0.905), medium (p=1.000), and low (p=0.056) SES.

Conclusion: Inequities in health outcomes continue to exist due to SES differences. However, our analysis raised questions on whether race is truly an independent predictor of cancer survival and if more efforts should be directed at health care inequalities.
ABSTRACT:
Introduction: Altrusa House is a healthcare hospitality service that provides affordable housing to patients accessing healthcare in the Green Bay area. Familiar or patient proximity to their place of care has shown benefits for patient satisfaction and psychosocial outcomes. Larger healthcare hospitality organizations have shown improvement in patient perception of their healthcare experience. The goal of this study is to assess the impact of Altrusa House (a healthcare hospitality organization) on the perceptions of guest healthcare experience and outcomes.

Methods: Guests of the Altrusa House were emailed surveys 2 days after the completion of their stay at Altrusa House. Surveys had 11 statements that asked patients to respond on a scale of 1-5 with 1=poor and 5=very good.

Results: Overall, 42 surveys were collected, and 37 guests came from out of state (WI). The results showed an overall positive experience and perception of outcomes in people who stayed at Altrusa House. The response to 8/11 questions was significantly above a neutral response, demonstrating that guests realized the importance of Altrusa House on their overall care.

Conclusions: This study demonstrated that guests understood the importance of access to Altrusa House on their care based on the overall positive response to the questionnaire. This study was limited by the number of participants as well as the lack of a "non-guest" group to compare to. Future studies can look at hospital outcomes of patients staying at Altrusa House compared to a control group.
A newly implemented buprenorphine consult service at Ascension St Joseph's Hospital attempts to combat the barriers to accessing medications for opioid use disorder (MOUD) in a low-income community of color in Milwaukee. The objective of this investigation is to evaluate which patient outcome variables have changed after implementation of the consult service. A patient data report was created by the EMR team at Ascension, containing de-identified data from all patients admitted into the ED or inpatient unit during the 2020 and 2021 calendar years that screened positive for an OUD. This data was then organized into several metrics, including percentage of consults resulting in an ordered MOUD, change in number of ED/inpatient buprenorphine prescriptions, and change in the number of consults discharging patients with OUDs on naloxone. Percent change and 2-tailed T tests were conducted for each patient outcome metric using Excel. The Excel T test formula allowed for p value calculation for each metric. Results showed a significant increase in the number of consults with new naloxone prescriptions post buprenorphine team initiation, indicating an improvement in prevention strategies, with an insignificant increase in the percentage of consults resulting in ordered/given OUD medications (buprenorphine, methadone, naltrexone). The team's initiation also coincided with a statistically significant increase in the number of OUD medications prescribed in the ED and inpatient floors, indicating a culture change in prescription patterns with the buprenorphine team. Overall, there is room for improvement in buprenorphine prescription rates within the team itself, yet there have been significant gains in hospital-wide buprenorphine prescription patterns due to the team. The current gaps in consult service-specific MOUD prescriptions have prompted another investigation into the high volume of patients with OUDs that returned to the ED several times in the past year, with hopes of better supporting and understanding these vulnerable patients.
Students Understanding Principles of Research Education through Medicine, Engineering, and Science (SUPREMES)

Dusanka Djoric, PhD, MCW-Milwaukee, Microbiology and Immunology; Denise Perea, MCW-Milwaukee, Biomedical Engineering; Jim Hokanson, PhD, MCW-Milwaukee, Biomedical Engineering

ABSTRACT: Students Understanding Principles of Research Education through Medicine, Engineering, and Science (SUPREMES) is an academic-year program that provides high school junior and senior students (ages 16-18) with experience in biomedical research and technology development in laboratories of established faculty at the Medical College of Wisconsin, Marquette University, Children's Wisconsin Research Institute, Versiti and Milwaukee Veterans Affairs Medical Center in the Milwaukee metro area. The program aims to shape well-rounded students through exposure to reading scientific journal articles, practicing scientific literacy and rigor through writing and presentations, hands-on research, collaboration, and innovation that will promote their success in a health-science related field. The program involves lectures, workshops, and hands-on training sessions during the fall semester, and participation in a hypothesis-based research project during the spring semester, that culminates in a poster presentation at the SUPREMES Symposium. Since the program inception in 2016, there has been a continued interest in SUPREMES as evidenced by numbers of both applications (50-70 per year) and high schools (25-30 per year) encouraging students to apply. Each year, the student pool is comprised of approximately equal number of juniors and seniors, but female applicants dominate overall. E-mail advertisements and in-person presentations are offered to schools in an effort to promote the program and recruit students from local high schools. The SUPREMES team recently started to offer application support to ensure that students from marginalized backgrounds have the support they may need to be/feel successful when applying to a competitive program. With active interactions, the program has been able to recruit students from under-represented backgrounds. However, the diversity index (probability that two individuals chosen at random, come from different ethnic and racial backgrounds; greater index indicates higher diversity) for the program (37%) indicates that there is work to be done to recruit more students from under-represented groups.

SUBMITTER: Dusanka Djoric
Racial Disparities in Sacral Neuromodulation for Idiopathic Fecal Incontinence

Vienne Seitz, MCW-Milwaukee; Jed Calata, MD, MCW-Milwaukee, Colorectal Surgery; Ling Mei, MD, MCW-Milwaukee, Gastroenterology; Emily R W. Davidson, MD, MCW-Milwaukee, Obstetrics and Gynecology

Sacral neuromodulation (SNM) is a treatment that can greatly improve quality of life for women with urinary incontinence (UI) and fecal incontinence (FI). Previous studies have found that Black women undergo SNM for UI less often than White women, but there is less known about racial disparities in FI. We hypothesized that Black patients with FI would be offered SNM less frequently than White patients. This finding could lead to specific attempts to increase accessibility to SNM for non-White patients in Milwaukee and surrounding communities. This was a retrospective cohort study of non-Hispanic Black or non-Hispanic White adult female patients who presented to an academic health system for treatment of idiopathic FI from 2010 to 2021. Medical records were queried to collect clinical variables including surgical and non-surgical treatments offered, diagnostic tests ordered, and referring provider specialties. For statistical significance, 2 White patients were identified for every Black patient in order to detect a 10% difference in SNM treatment between groups. 152 Black patients met inclusion criteria. 304 age-matched White patients were identified, approaching our desired sample size of 465 patients. Overall, 24.3% (111) of patients with FI had documented counseling about SNM which was significantly less frequent in Black patients (14.5% vs 29.3%, p<0.001). 5% of all patients underwent SNM which also was less common in Black patients (2.6% vs 6.3%, p=0.002). However, among only patients with a documented discussion about SNM, there was no difference based on race (18.2% vs 21.3%, p=0.74). There are differences in SNM referrals to treat FI between Black and White patients. Multidisciplinary work is needed to provide equitable education about SNM for this life-altering condition.
Background: Partnering with community organizations facilitates the publicity and delivery of culturally sensitive medicine. Community-engaged research (CEnR) can provide efficient, high quality, and sustainable care for underserved populations. This report evaluates the lessons learned from a community-based dermatology screening.

Objective: To use lessons learned from a community-academic partnership to enhance future dermatology skin screening events.

Methods: The Dermatology Department at the Medical College of Wisconsin partnered with a local Milwaukee barbershop, Gee’s Clippers, to host a screening event with a focus on skin, hair, and nail conditions that impact individuals of color. Services were offered to 66 individuals in English or Spanish and to all age groups. A total of 25 board certified dermatologists, medical volunteers, and outreach staff participated.

Results: Seven action oriented guiding principles were identified: Events should begin earlier to catch crowds; Layout needs to be considered for interpreters and accompanying patient family members; Consent forms should have ample space for provider notes; The number of language interpreters needed should reflect participant needs; Have an established follow-up process; Evaluate outreach methods; Develop promotional video to spread awareness and improve marketing. The lessons learned were based on participant feedback on the day of the event, as well as informal and formal debrief sessions with providers and community partners.

Conclusion: In order to have meaningful participation in a medically oriented event, various articles support the benefits of community engagement. Dermatology health disparities within marginalized groups can be reduced through the development of effective community-based partnerships. It is important to continue striving for accessibility and inclusivity within dermatology.
ABSTRACT:
Overview: Death by suicide is the tenth leading cause of death among Wisconsin residents. This rate is even higher for veteran and active-duty military service members. Veteran suicides are impacted by unique circumstances, including specific risk and protective factors that include access to behavioral health services through the Veterans Administration and community health providers.

Objective: This project, Remembering the Lost, engages community-based veteran peer advocates to examine psychosocial factors that impacted the lives of Wisconsin veterans who died by suicide. This information will be used to inform veteran suicide prevention activities at the state level. Veteran peers are trained in key informant interview techniques and data analysis and provide guidance to all project activities.

Method: We recruited veterans through Dryhootch and the Captain John D Mason Project to participate as peer interviewers for our psychosocial autopsy interviews with loved ones of veterans who died by suicide. These veterans are suicide attempt survivors and/or suicide loss survivors who possess a deep understanding of both military culture and suicide.

Results: Three veteran peers have been trained and onboarded to this project, and are actively conducting psychosocial interviews with survivors of veteran suicide loss. Additionally, veteran peers meet with the academic and community partner team monthly to provide insight and guidance on all project activities. Interview data will be used to target veteran suicide prevention activities.

Conclusion: The involvement of community-based veteran peer advocates in this work has been critical to the success of this work. Active involvement of peers with lived experience ensures not only that project activities are successful, but also that research participants have an opportunity to interact with peers who understand their experience and can provide additional peer support.

SUBMITTER: Sara Kohlbeck
Development of an Internal Medicine Resident Continuity Clinic focused on underserved medicine, HIV, and LGBT Care at the Sixteenth Street Community Health Centers

Brian Hilgeman, MD, MCW-Milwaukee, Medicine; Amalia Lyons, MD, MCW-Milwaukee, Medicine

Background: Providing opportunities for Internal Medicine residents in community health centers (CHCs) and care of people living with HIV is an area of growing interest but opportunities are limited around the U.S. Currently, the MCW Internal Medicine Residency offers limited opportunities in community-based sites. The Sixteenth Street Community Health Centers (SSCHC) is a large CHC that provides a rich opportunity for multicultural and underserved medicine with 87% of the clinic population identifying as Hispanic and 74% living under the federal poverty level and cares for approximately 250 patients in the Ryan White/HIV Program. Objective: To develop an Internal Medicine Resident continuity clinic site at SSCHC for a cohort of residents, develop didactic and quality improvement curricula to support the clinical experience of the residents, and develop a robust mechanism to evaluate outcomes of this experience.

Methods: Starting in July 2022, the program will host 6 Internal Medicine residents caring for a panel of patients with the full spectrum of primary care needs including individuals served by the clinic’s Ryan White HIV/AIDS program. Analysis will study the outcomes of this clinic on multiple areas including overall recruitment of students, especially underrepresented in medicine (URM) students to the Internal Medicine Residency program, satisfaction with the learning and clinical environment, interest in underserved and community-based medicine, and comfort in caring for underserved, HIV, and LGBTQ populations.

Results: Results are pending. The poster will present the process of collaboration, structure, and plans for outcomes analysis.

Conclusion: This expansion serves an important need for the internal medicine GME community given significant gaps in educational opportunities that exist.

SUBMITTER: Brian Hilgeman
Purpose: Adverse Childhood Experiences (ACE) are defined as experiencing or witnessing violence, abuse, neglect, and other adverse events through childhood. ACE scores are calculated based on the total number of these experiences. As a child’s score increases, their school performance declines and are at an increased risk of poor future health outcomes. To mitigate effects of ACEs, intervention at an early age is hypothesized to be beneficial. One attempted intervention is a near-peer mentoring program for K-12 students with elevated ACEs at Enrich Excel Achieve Learning Academy (EEA) in Wausau, WI.

Methods: A medical student-led initiative was developed to mentor fourteen EEA students with significant ACE scores. The goal of the mentoring program is to establish a positive relationship, with the intention the mentoring program will increase student engagement and mitigate future effects of high ACE scores. Mentoring sessions are a minimum of 30 minutes in duration at least once per month for the school year.

Results: Surveys show significantly high ACEs among EEA students, with evidence of successful creation of positive longitudinal relationships with implementation of the mentoring program. 62% of students at EEA have 4 or more ACEs, compared to 16% in the state of Wisconsin. With implementation of the near-peer mentoring, 78% of students reported they had someone to reach out to for support, with 100% stating they felt their mentor was a reliable person in their life.

Conclusions: The mentoring initiative has been successful in fostering positive relationships in students with high ACE scores. As the project continues, we continue to refine the program, asking for feedback from mentored EEA students and mentoring MCW students. We hope the program will improve school attendance, performance, and behavioral discipline among mentored students. With increased school engagement, we hope future complications of high ACE scores can be mitigated.
Introduction: Adverse childhood experiences (ACEs), including abuse, neglect, and household dysfunction, can affect brain development and how the body responds to stress. ACEs correlate with increased risk of diabetes, asthma, cancer, depression and decreased educational attainment. Mind-body methods attenuate negative symptoms while promoting self-regulation and positive health, social, and academic behaviors.

Objective: To assess the effect of a mindful coloring intervention on hope, resilience, and mood in children who have experienced ACEs. Methods: Six children ages 7-13 residing at Golden House Domestic Abuse Shelter, a local social services organization, participated in weekly mindfulness coloring sessions over two months as availability allowed. Medical students conducting the study guided the children in how to complete the activity. During the activity, participants colored what they visualized during a self-affirming meditation reading. Identical pre- and post-tests were administered each session to assess resilience and hope using standardized children's scales and mood using a novel scale.

Results: The hope, resilience, and mood scores were compared before and after each session, and also over time between the first and second half of sessions to explore the effect of the intervention and changes over time. There were no statistically significant changes between overall pre- and post-test scores for resilience (p=0.95), hope (p=0.52), or mood (p=0.54), nor over time for hope (p=0.14) or mood (p=0.71). There was a statistically significant negative change in resilience scores over time between the first half of sessions and the second half (p=0.0058), corresponding to the first and second months participants resided at the shelter.

Conclusions: This decline in resilience scores may be a consequence of ACEs and shelter inhabitance during this transitional period, demonstrating the necessity of further support for children experiencing ACEs. Identification of this effect may inform future intervention design to precisely target the mechanisms of ACE-associated ramifications.
Assessment of Opioid Overdose Risk and Response Readiness Among Patients at a Clinic for Uninsured Patients

Benjamin Wrucke, MCW-Milwaukee; Stephen Stevanovic, MCW-Milwaukee; Naisarg Vanani, MCW-Milwaukee; Ryan Klauck, MCW-Milwaukee; Bryan Johnston, MD, MCW-Milwaukee, Family and Community Medicine

Background: The opioid epidemic is worsening (Understanding the Epidemic | Drug Overdose | CDC Injury Center, 2021). Studies have shown that bystanders can effectively administer naloxone to reverse opioid overdose and that overdose education programs result in improved ability to recognize and respond to opioid overdose (Clark et al., 2014; Giglio et al., 2015; Mueller et al., 2015; Razaghizad et al., 2021). However, there is limited research investigating opioid overdose risk and response readiness among uninsured patients. Medical student researchers partnered with a student-run free clinic for uninsured patients to conduct this study.

Objectives: This study aims to assess the risk of opioid overdose among uninsured patients and their family members and close contacts and assess whether these patients are prepared to respond to opioid overdose.

Methods: Patients completed an anonymous survey while at the clinic for in-person appointments. Data was collected for eight months from 2021-2022. Logistic regression determined predictors of overdose response readiness. One proportion Z test compared study population rates of opioid use with overall statewide community rates reported by the Wisconsin Department of Health Services.

Results: The past-year rate of medically prescribed opioid use in the study population (12.5%) did not differ from the rate statewide (15.8%; p=0.44). Family or close contact opioid use significantly predicted being trained to respond to opioid overdose (p=0.01, OR=29.8), but it did not predict carrying naloxone (p=0.97). Among responders with family or close contacts who use opioids, 75% of those who are not trained on how to respond to overdose would like to be, and 50% of those who do not carry naloxone do not know where to get it.

Conclusions: Uninsured patients at student-run free clinics, especially those with family members or close contacts who use opioids, likely represent a target population for opioid overdose education and naloxone distribution.

Benjamin Wrucke
**TITLE:** Live Today - Put it Away: A suicide prevention program to reduce lethal means and firearm access for individuals in crisis.

**AUTHORS:** Bertrand D. Berger, PhD, MCW-Milwaukee, Psychiatry; Susan Smykal, MCW-Milwaukee, Psychiatry; Mark Flower, MCW-Milwaukee, Psychiatry; Jean Papalia, Wisconsin Dept. of Health Services, Violent Death Reporting System

**ABSTRACT:**

Background: Suicide is a major concern as the 10th most frequent way that people die in the United States. Empirically based strategies have been shown to substantially reduce the number of suicide deaths by restricting a person's access to the method (i.e., firearm, medications, etc.) they plan to kill themselves. Firearms are the most common method that people die from suicide (50% non-veterans and 70% of veterans). As a suicide prevention intervention, Colorado, Washington, and other states have developed suicide prevention programs to provide the voluntary safe storage of firearms for individuals in crisis.

Problem Statement: Like the rest of the U.S, Wisconsin has high rates of suicide due to firearms especially by veterans and needs suicide prevention interventions to specifically address ways to decrease the rate of suicide via firearms.

Method: The Live Today - Put it Away (LT-PIA) program was implemented in Wisconsin in 2021. This program provides a map and program materials on REACHOUTWIS.COM (a website by the Southeastern Wis. Task Force on Veteran Suicide Prevention). The map provides locations of participating firearm owners where people can store their firearms outside their home. The Medical College of Wisconsin (MCW) Capt. John Mason Veteran Peer Outreach program helps to build and promote the LT-PIA program.

Results: The program began with 3 firearm retailers from a program based in Dane Co, Wisconsin through their Safer Communities program. Retailers are located throughout Wisconsin including about 7 within Southeastern WI including Milwaukee County. Collaborations between this original program and agencies participating in the Southeastern Wis. Task Force on Veteran Suicide Prevention resulted in the development of the LT-PIA program. The program now has 36 firearm retailers and has been consulting in expanding the program to police and sheriff departments as well as to Indiana, Illinois, Minnesota, and Wyoming.

Conclusion: The LT-PIA program is an excellent example of community collaborations and a valuable state-wide resource for suicide prevention.

**SUBMITTER:** Bertrand Berger
COVID-19 Impact on Emergency Front Line Responders in Northeastern Wisconsin

Joshua L. Christensen, MCW-Green Bay; Riley J. Coon, MCW-Green Bay

COVID-19 took the United States by storm in 2020 and has resulted in over 90 million cases and nearly 1,000,000 deaths as of September 9, 2022. Even before an infectious disease pandemic, emergency medical responders (EMR) were more likely than the general population to suffer from depression, anxiety, and general psychological distress. A survey with questions regarding mental health and well-being, including the Patient Health Questionnaire 9 (PHQ-9) and General Anxiety Disorder 7 (GAD-7), was distributed to several Northeastern Wisconsin EMR departments. Participants were asked to answer questions about three different time periods: Pre-COVID, during COVID, and following widespread availability of the vaccine. PHQ-9 and GAD-7 data showed increases in the levels of depression and anxiety, respectively, from pre-COVID to COVID time periods, and failed to normalize even after the vaccine rollout. There were also increases in a number of well-being parameters, including fear for personal safety at work, fear for family well-being, and apprehensions towards going to work. The COVID-19 pandemic has had profound effects on emergency front line responders. Following widespread availability of the vaccine, many measures of well-being and mental health have failed to decline back to their pre-pandemic baseline. There may be many contributing factors to this increase and subsequent failure to normalize but continued research is needed to narrow down the exact cause. The finalized data will be shared with participating departments to provide insight on the impact of the pandemic and to elicit discussion regarding next steps in research and in possible solutions.

Riley Coon
**TITLE:** Effect of Mass Communication on Veteran Suicide Prevention: Help Seeking & Firearm Safety Behaviors

**AUTHORS:** Bertrand Berger, PhD, MCW-Milwaukee, Psychiatry; Sara Kohlbeck, MPH, MCW-Milwaukee, Comprehensive Injury Center; Dan Buttery, War Memorial Center, President; Stephen Hargarten, MD, MCW-Milwaukee, Comprehensive Injury Center

**ABSTRACT:**

Background: In the State of Wisconsin, the suicide rate increased by 40% from 2000 to 2017 and has been higher than the national rate. The suicide rate among Wisconsin Veterans has also been increasing over the past 20 years. Veterans who die by suicide are more likely to use a firearm, to have physical health problems, and have experienced a recent death of a friend or family. A suicide prevention strategy is to promote, educate, and encourage people to seek help when in a crisis and to decrease their access to lethal means (e.g., to safely store firearms and ideally store them outside of the home during a crisis).

Methods: The study was developed through the collaboration between the MCWs’ Psychiatry and Comprehensive Injury Center, UWM Marketing Department, War Memorial Center and the Milwaukee Veterans Health Administration. The study was designed measure the effectiveness of 4 advertising campaigns over the course of a year using Veteran focused, statewide mass media public health messaging designed to increase help seeking behavior and decrease the incidence of firearm suicides. Veterans provided input to the research team through focus groups and were the “messengers” in the advertising. Message effectiveness was measured by tracking website traffic to the study’s website (ReachOutWis.Org) and surveying a representative subject pool of Wisconsin residents at baseline (prior to advertising) and after each advertising campaign.

Results: Preliminary survey results indicate the advertising message was seen by 95% of surveyed Wisconsin Veterans and may have influenced these subjects to improve their safe storage of firearms and seek help if they are in crisis.

Conclusions: Digital, video and audio advertising drew people to the study's website. Survey data shows an association across time for increased help seeking behavior and intent to improve the safe storage of firearms.

**SUBMITTER:** Bertrand Berger
Hypertension is a major risk factor for heart disease and stroke, which are leading causes of death in the United States. Just a 5 mmHg reduction in blood pressure (BP) reduces the risk of a major cardiovascular event by 10%. The 2017 ACC/AHA guidelines recommend using a home BP monitor in combination with other interventions to help lower BP. Little is known if this intervention is effective in managing hypertension for under/uninsured adults who face significant barriers in healthcare. Bread of Healing Clinics are a network of safety net clinics in Milwaukee, WI and received a grant from Wisconsin's Free and Charitable Clinics Collaboration in March 2021 to loan patients a BP cuff. This was coupled with a Self-Monitoring BP (SMBP) program, educating patients how to correctly use their BP cuff. To determine the impact of home BP monitoring for under/uninsured individuals at a safety net clinic in Milwaukee, WI. A retrospective pre-post analysis for patients enrolled in the SMBP program from April 2021 through May 2022. The primary outcome was the change in average blood pressure before and after starting the SMBP program. These were compared using a paired t-test to assess statistical significance. The secondary outcomes were the number of incidences when medications were added, or a dose adjusted to lower BP. Of the 44 participants, an average decrease of 4.89 mmHg in systolic blood pressure (SBP) was demonstrated (p=0.04). Fourteen patients (31.8%) had a new medication added and 15 (34.1%) had a medication dose optimized within the three clinic visits after receiving the cuff. Post-hoc analysis found that English-speakers decreased 10.8 mmHg in SBP compared to non-English-speakers who decreased 1.5 mmHg. Implementation of the SMBP program demonstrated a statistically significant decrease in SBP supporting its use for under/uninsured English-speaking individuals at the Bread of Healing Clinic.
Advocates in Medicine Pathways (AMP): A Pipeline Program to Address Provider Shortages of Central Wisconsin Rural & Hmong Populations

Chloe Lang, MPH, MCW-Central Wisconsin; Sheng Khang, North Central Area Health and Education Center; Nicole Thill, North Central Area Health and Education Center; Amy Prunuske, PhD, MCW-Central Wisconsin

The MCW-Central Wisconsin (MCW-CW) campus and North Central WI Area Health Education Center (AHEC) aim to address the health care provider shortage in the area, by training community-focused physicians that will serve the health care needs of Central Wisconsin. MCW-CW is located in Marathon County, which is home to a predominantly Hmong and rural population, both of whom are greatly underrepresented in medicine. We developed a pipeline program called the Advocates in Medicine Pathway (AMP), which is focused on helping to support these individuals transition into medical school. The program required establishing partnerships with health systems, institutions of higher education, and local community partners. The program has graduated two student cohorts and has funding to support two additional cohorts. Interviews with the participants have helped us to identify barriers and allowed us to continue to optimize the opportunities offered through the AMP program.

Amy Prunuske
TITLE: Utilization Rates of Dermatology-Screening Certification Services in Nail Technicians within the Wauwatosa Area

AUTHORS: Jacqueline Tran, BS, BA, MCW-Milwaukee; Jenna T. Le, BS, MCW-Milwaukee; Nicole T. Xia, BS, MCW-Milwaukee; Melanie Clark, MD, MCW-Milwaukee, Dermatology

ABSTRACT: Background: According to the WHO, 1 in 5 Americans will likely develop a form of skin cancer in their lifetime. Skin cancer screening by a dermatologist is one of the best ways for earlier detection of possibly cancerous lesions. Not everyone is aware of how to identify concerning skin lesions. However, many visit beauty salons for the care of their hair and nails. A recent study showed that cosmetologists and other beauty professionals have a positive impact on pro-health initiatives in their place of work.

Problem: Despite the availability of skin/nail cancer certification platforms that provide training to employ nail technicians as skin and nail cancer advocates directly in the community, we are unsure if nail technicians in the Froedtert/MCW area are utilizing this resource.

Method: Google search of salons in Wauwatosa zip-codes was performed. Salons in appropriate zip-codes and employing licensed nail technicians were recruited. Phone calls were conducted in an interval manner. Salons were excluded after 3 attempts or if directly declined. Surveys were delivered either in-person, over the phone, text, or email. Questions pertain to awareness of certification resources and reasons for lack of use.

Results: Of 65 salons contacted, 14(21.5%) agreed to participate, 12(18.5%) were not interested, and 23(35.3%) could not be reached. Eleven nail technicians completed our survey in-person(64%), over the phone(9%), or via email(27%). No surveys were completed over text. Data analysis has been postponed due to low participant turnout.

Conclusion: We found that when we offered the option to take the survey in-person with the assistance of medical students, there was a greater response rate with more than one nail technician available/interested in taking the survey per location. We present the importance of in-person and face-to-face contact when partnering with the community to conduct research.

SUBMITTER: Jacqueline Tran
Accessibility of Urgent Care Centers in Milwaukee County: A Socioeconomic and Geospatial Evaluation

Authors: Parnika Telagi, MCW-Milwaukee; Praval Telagi, University of Illinois at Urbana-Champaign, Computer Science; Kevin McGurk, MD, MCW-Milwaukee, Emergency Medicine

Abstract: Background: Urgent cares (UC) play an important role in healthcare delivery for patients with non-emergent concerns. They are often utilized for low-acuity complaints as a convenient or cheaper alternative to primary care and emergency department (ED) visits. There are 13 UCs across Milwaukee County. Transportation is an important social determinant of health and public transit access varies across Milwaukee County.

Objective: We hypothesize that UCs in Milwaukee County are asymmetrically distributed and less accessible to more vulnerable communities. This study seeks to quantify UC accessibility by private and public transit and to find associations between accessibility and the social vulnerability of communities.

Methods: The Centers for Disease Control and Prevention quantified the social vulnerability index (SVI) based on several social factors. SVI ranges from 0 to 1 with 0 corresponding to the least vulnerable community and 1 corresponding to the most. A Google Maps application programming interface was employed to compute transit times between each census tract and its nearest UC and ED. Statistical analyses were performed using RStudio.

Results: Using public transit to reach UCs takes longer than private transit (mean 26 vs 8 minutes). Public transit on average requires an unideal walking time of 13 minutes. Furthermore, UCs are located in less vulnerable areas than EDs. The average SVI of a UC is 0.44 and ED is 0.66. There is a weak, yet statistically significant positive correlation between SVI and private transit times to UCs, meaning more vulnerable communities have longer private commute times to UCs.

Conclusion: UCs in Milwaukee County are generally located in more affluent locations than EDs and are less accessible to residents from more vulnerable areas. Longer travel times and lengthy walking distances make UCs less accessible for those who rely upon public transit. These findings have implications for healthcare costs and utilization patterns.

Submitter: Parnika Telagi
TITLE: Patients without health insurance and experiencing food insecurity are more likely to suffer from anxiety and depression - a cross-sectional study at a Milwaukee student-run free clinic

AUTHORS: Suma K. Thareja, PhD, MCW-Milwaukee, Kern Institute; Spenser Marting, BS, MCW-Milwaukee; William Davies, BS, MCW-Milwaukee; Santhosi Samudrala, BS, California University of Science and Medicine; Ramsey Rayes, BS, MCW-Milwaukee; Marie Balfour, BA, MCW-Milwaukee; Ana Mia Corujo-Ramirez, BS, MCW-Milwaukee; Frances Carter, BA, MCW-Milwaukee; Benjamin Liu, MD, Case Western Reserve University MetroHealth; Dylan Trinh, BS, MCW-Milwaukee; Thomas Ritter, MD, MCW-Milwaukee; Jessica Miller, BS, MCW-Milwaukee; Rebecca Lundh, MD, MCW-Milwaukee, Family and Community Medicine; Staci A. Young, PhD, MCW-Milwaukee, Family and Community Medicine

ABSTRACT: Background: Although patients experiencing food insecurity commonly screen positive for a myriad of social determinants of health (SDOH) needs and chronic medical conditions influenced by diet, few studies have investigated associations within both uninsured and food insecure populations.

Methods: We used a cross-sectional study design and assessed characteristics within one point in time (October 2021-April 2022). We screened patients at the Saturday Clinic for the Uninsured in Milwaukee, Wisconsin for food insecurity using the USDA six-item short form. We then evaluated associations of food security status with 1) nine separate SDOH needs and 2) eight chronic medical conditions. We conducted descriptive statistics on demographics and measured associations using both Kendall's tau correlation and odds ratios from binomial regression.

Results: Of 157 adult patients (mean age = 49.38 years ±14.48 years) who completed the SDOH screening, 22 patients (16%) screened as food insecure and these patients had greater medication financing (OR = 7.28, τ = 0.33), housing (OR = 9.99, τ = 0.28), energy assistance (OR = 3.94, τ = 0.2), mental health (OR = 4.54, τ = 0.28), insurance (OR = 2.86, τ = 0.18), and dental care (OR = 3.65, τ = 0.28) needs, but not legal concerns, education/work opportunities, or substance use. They were more likely to have anxiety (OR = 3.26, τ = 0.23) or depression (OR = 2.88, τ = 0.19), but not obesity, hypertension, diabetes, dyslipidemia, chronic kidney disease, or gastroesophageal reflux disease.

Conclusions: Patients without health insurance and experiencing food insecurity displayed multiple SDOH needs as well as mental health diagnoses. Interventions targeting risk factors separate from food insecurity may be beneficial to address chronic health needs, including uninsured status, socioeconomic status, eating behaviors, or healthy food inaccessibility. A follow-up study on SDOH needs and resource usefulness will also permit deeper assessment into trends over time.

SUBMITTER: Suma Thareja
<table>
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<tr>
<th>TITLE:</th>
<th>Building a community-academic partnership to improve screening for intimate partner violence: Integrating advocates in healthcare clinic settings.</th>
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<tr>
<td>AUTHORS:</td>
<td>Erin Schubert, PhD, Sojourner Family Peace; Colleen Galambos, PhD, University of Wisconsin Milwaukee; Teresa Jerofke-Owen, PhD, Marquette University; Erica Arrington, MD, MCW-Milwaukee, Psychiatry; Greer Jordan, PhD, MCW-Milwaukee, Institute for Health and Equity; Nilanjan Lodh, PhD, Marquette University; Heidi Paquette, PhD, Marquette University; Gisela Chelimsky, MD, Virginia Commonwealth University; Linda Piacentine, PhD, Marquette University; Kimberly Gecsi, MD, MCW-Milwaukee, Obstetrics and Gynecology</td>
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| ABSTRACT: | Background: Intimate partner violence (IPV) impacts over 12.5 million adults in the United States annually with over a third of women experiencing physical violence, rape or stalking by an intimate partner in their lifetime (Smith, 2018). IPV is linked to a host of negative outcomes (Campbell et al., 2009), is regularly underreported (Gwinn, 2015), and carries an estimated annual cost in the U.S. of $594 billion (Peterson et al., 2018). The economic cost of IPV has likely risen during the COVID-19 pandemic as the incidence of violence has risen (Gosangi et al., 2021). Effective services that offer safety and healing for IPV survivors exist in many communities through IPV service providers and key community partners (Hackett et al., 2016). The challenge is identifying those experiencing IPV and connecting them with existing community resources. 

Aim: The aim is to develop an innovative community-academic partnership to advance, test and promote IPV screening and referral protocols by comparing the effect of integrating IPV advocates versus enhancing medical training in medical clinic settings serving women from vulnerable populations. 

Methods: Mixed methodology for the three-phase project will help in understanding current practices and effects of interventions. 

Results: Retrospective chart reviews and targeted focus group results are still pending. Discussions with community providers, leaders, and advocates suggest that current standardized IPV screening practices are limited. From input provided by community stakeholders, an area of focus for our research and methodological approach was developed. 

Conclusion: This study will identify the best approach to sustain, perpetuate IPV screening and referrals in a healthcare clinic setting. Ultimately, through community collaboration with IPV survivors, providers and academic researchers, the team will establish a model for addressing a multifaceted health disparity through a team whose make-up is diverse enough to tackle a complex public health challenge. |
| SUBMITTER: | Heidi Paquette |
Comparing acceptability of home- versus clinic-based anal swabbing among men who have sex with men: The Prevent Anal Cancer Study

Jenna Nitkowski, PhD, MCW-Milwaukee, Center for AIDS Intervention Research (CAIR); Anna R. Giuliani, PhD, Moffitt Cancer Center and Research Institute, Center for Immunization and Infection Research in Cancer; Tim Ridolfi, MD, MCW-Milwaukee, Clinical Cancer Center; Elizabeth Chiao, MD, MPH, The University of Texas, MD Anderson Cancer Center; Maria Fernandez, PhD, The University of Texas Health Science Center at Houston School of Public Health, Health Promotion and Behavioral Sciences; Vanessa Schick, PhD, The University of Texas Health Science Center at Houston School of Public Health, Management, Policy and Community Health; Michael D. Swartz, PhD, The University of Texas Health Science Center at Houston School of Public Health, Biostatistics and Data Science; Jennifer S. Smith, PhD, University of North Carolina at Chapel Hill, Gillings School of Global Public Health; Alan G. Nyitray, PhD, MCW-Milwaukee, Center for AIDS Intervention Research (CAIR)

Background: Men who have sex with men (MSM) are at a disproportionately high risk for anal cancer. Since anal cancer screening guidelines are anticipated soon, research is needed to assess the acceptability of different screening modalities among MSM.

Objective: To compare acceptability of home versus clinic anal canal swabbing.

Methods: Individuals 25 years and older identifying as MSM were recruited to participate in the Prevent Anal Cancer Self-Swab Study in Milwaukee, Wisconsin through social media, clinics, community events, and promotional materials distributed in local businesses. A community advisory board of MSM provided guidance on study design, recruitment, and interpretation of results. Eligible participants were randomized to either a home- or clinic-based arm. Home-based participants received a mailed anal self-swabbing kit with instructions. Clinic-based participants scheduled and attended one of five community partner clinics where they received a clinician-collected anal swabbing. All participants were asked to complete a baseline and post-swabbing survey. This analysis examined acceptability (overall thoughts, pain, and willingness to swab in the future) among the first 75 participants in each study arm to complete a post-swab survey.

Results: Randomized participants in the home- and clinic-based arms reported being comfortable receiving the kit in the mail (100.0%) and getting the anal swabbing in the clinic (96.0%). Overall thoughts about the kit and clinician swabbing were mostly positive (73.3% and 68.0%, respectively). Participants in the home- and clinic-based arms indicated they were willing to do a self-swabbing (98.7%) and have a health care provider swab their anal canal (97.3%), respectively. Age, race/ethnicity, education, gender identity, sexual orientation, HIV status, and study arm were not significantly associated with home or clinic acceptability.

Conclusions: Acceptability was high and similar for home- and clinic-based anal swabbing and did not differ significantly by participant demographic characteristics.

Jenna Nitkowski
<table>
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<tr>
<th>TITLE:</th>
<th>Continuing Community Engagement through Expanded Powered Mobility for Young Children with Special Needs: Go Baby Go! Milwaukee Improvements and modifications</th>
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<tr>
<td>AUTHORS:</td>
<td>Molly Erickson, BS, Marquette University, Biomedical Engineering; Elizabeth Conrath, PT, DPT, PCS, Children’s Hospital of Wisconsin, Physical and Occupational Therapy; Allison Friel, MOT, OTR/L, C/NDT, Children’s Wisconsin, Physical and Occupational Therapy; Lauren Tyson, PT, DPT, Children’s Wisconsin, Physical and Occupational Therapy; Zachary Krueger, University of Wisconsin Milwaukee, Mechanical Engineering; Gerald F. Harris, PhD, Marquette University, Biomedical Engineering</td>
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<td>ABSTRACT:</td>
<td>The GBG! MKE team works to improve powered mobility options available to GBG! Car recipients. Modifications are informed by family satisfaction surveys which have identified several challenges: A) 60% of children had difficulties driving a self-steer car, B) 27% of children were startled by the initial start-up motion, and C) 27% of families had difficulties transporting the car. The GBG! MKE team created an annual Caregiver Survey via email to assess family experiences with the cars. Survey responses were addressed through technical advances and program changes to increase family engagement. In 2019 the GBG! MKE team started producing remote control vehicles requiring that both the child and parent activate controls simultaneously for the car to move to addresses difficulties with the self-steer car design. In 2020 the team started producing a microprocessor-based acceleration controller to slowly ramp the speed of the car up from zero to address initial startle reactions. The team is currently investigating a joystick-driven controller in a lighter and smaller vehicle. The new controller is similar to an electric-powered wheelchair, thus providing early exposure to joystick control in very young children. The GBG! MKE team has also established several new programs beyond the family satisfaction survey. A family picnic has been started which includes games, activities, a racetrack, and a podium where the children can display their cars while families meet and share experiences. In 2021 the team began offering open gym time to families three days a week for families to use their cars indoors during the winter. This year the team worked with a GBG! MKE parent to start a Facebook group where the families can post information on their experiences, ask questions and provide feedback on the program. In just a few months the group has grown to almost 40 members.</td>
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<td>SUBMITTER:</td>
<td>Gerald Harris</td>
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Background: The Food Doctors (TFD) is a community-engaged medical student-led education program that provides nutrition curriculum to Milwaukee elementary school students since its establishment in 2013 at the Medical College of Wisconsin.

Objective: This study sought to assess the impact of this longitudinal community engagement project on past and present program leaders and volunteers.

Methods: Individual reflections on personal and professional development through TFD were captured through guided interviews, and common concepts from the reflections were identified and analyzed for overarching themes.

Results: Common themes from the interviews included navigating unfamiliar environments, building capacity, navigating perfectionism, and navigating vulnerability. The authors discuss how the unique opportunities provided to students in TFD yield significant learning outcomes as part of the "unspoken curriculum," a novel concept that promotes the informal socialization experiences that connect students with the community and its patients.

Conclusion: The authors offer suggestions to student leaders and those interested in enhancing community connection at their institutions on how to develop a program that will prepare medical students to become community-engaged physicians who feel equipped to deliver patient-centered care.
ABSTRACT: Background: Patients experience racial and socioeconomic-based disparities during healthcare encounters1. These disparities manifest in many aspects of care, including activation of the hospital security team2. Engaging with hospital security during health care encounters carries complex psychosocial implications that can negatively affect patient and family experience, especially within communities of color.

Problem Statement: This study evaluates associations between hospital security activations, security assessment outcomes, and demographic data of patients at Children's Wisconsin (CW). Methods: Retrospective chart review of CW security activations occurring October through December from 2014-2019 (n=1314). Extracted data included patient demographics, reasons for security activation, and outcomes of each security assessment.

Results: The race/ethnicity distribution of the overall CW patient population is 19% Black, 14% Hispanic, and 55% White. Of the total security activations, 51.7% were for Black patients, 8.3% for Hispanic, and 30.8% for White. Similarly, of security activations for perceived aggression, 51.4% were for Black patients, 7.8% for Hispanic, and 31.5% for White. In cases of perceived aggression, visitor restrictions were initiated in 44% of assessment for Black patients, 31% of Hispanic patients, and 30% of White patients.

Conclusion: While the goal of hospital security systems is to ensure safety within the hospital environment, implicit biases may influence whom hospital staff perceive as a safety threat. Although Black patients only composed one-fifth of the CW patient population, they accounted for the majority of security activations. Furthermore, visitor restrictions were imposed on Black patients more often, indicating disparate application of safety interventions following hospital security assessments. Trauma-informed care principles require consideration of how these inequities may negatively impact patient and family experience for Black patients. Our next steps include developing decision support tools for staff regarding security activation that will include guidelines for incorporate trauma-informed care delivery and recommendations for alternative interventions, such as Social Work consultation for patient and family support.
Title: Assessment of baseline heart function in thoracic cancer patients undergoing radiation therapy

Authors: El-Sayed H. Ibrahim, MCW-Milwaukee, Radiology; Elizabeth Gore, MCW-Milwaukee, Radiation Oncology; Lindsay Puckett, MCW-Milwaukee, Radiation Oncology; Carmen Bergom, MCW-Milwaukee, Radiation Oncology

Abstract: Background: Radiation therapy (RT) plays a key role in treating lung cancer, although the incidence of RT-induced heart complications could be as high as 33%. Nevertheless, characterization of baseline heart function in this patient population is not well elucidated, which was investigated in this study.

Methods: A total of eight lung cancer patients (males; age = 65±4 y.o.) scheduled for RT underwent a comprehensive heart magnetic resonance imaging (MRI) exam. The exam included techniques for evaluating the heart function and structure. The results were compared to normal ranges from the literature.

Results: Global heart function, as measured by the amount of blood ejected by the heart, was slightly above normal in all subjects. However, the heart muscle pumping efficiency was suboptimal. The results revealed buildup of undesired components, for example fibrosis and fluid contents, in the heart tissue. This change in heart tissue composition affects not only the heart pumping efficiency, but also the capability of the heart muscle to relax after ejecting the blood during every heartbeat.

Discussion and Conclusion: The study findings indicate opportunities for translation to physicians and community settings. MRI is a valuable technique for comprehensive assessment of baseline heart health in lung cancer patients undergoing RT. Based on the study results, the condition of the cardiovascular system at baseline should be taken into consideration as a contributing factor in the development of RT-induced heart diseases, which would help improve outcomes. Our next step is to identify how this can be translated in community settings, through review of the protocol and collecting feedback on participants' experiences.

Submitter: El-Sayed Ibrahim
Background: Chemotherapy is a key cancer treatment in both common and rare cancers. Chemotherapy is known to have adverse effect on the heart function in the long term. However, short-term effects of chemotherapy on heart function are not well elucidated. In this study, we use advanced magnetic resonance imaging (MRI) to assess changes in heart function immediately post chemotherapy treatment.

Methods: Five (3 female / 2 male) cancer patients (three sarcoma and two breast cancer) scheduled for chemotherapy were included in the study. The patients underwent pre-treatment MRI exam, and three of them underwent repeated post-treatment (within 2-weeks) exam to evaluate acute changes in heart function. Statistical analysis was conducted to evaluate the differences between pre- and post-treatment measurements.

Results: The heart pumping efficiency slightly increased post-treatment. However, the amount of blood ejected by the heart every heartbeat decreased, while the heart size and mass slightly increased, post-treatment. Furthermore, the results revealed a buildup of undesirable contents (for example fibrosis or fluid) in the heart tissue post-treatment. This change in the heart tissue composition may adversely affect the heart function.

Discussion and Conclusion: The study findings indicate opportunities for translation to physicians and community settings. MRI is a valuable technique for evaluation of acute changes in heart function and structure post chemotherapy treatment in cancer patients. Sharing the results of this study with the community would increase awareness of patients, their families, and the community in general about available advanced techniques for early detection of cancer treatment effect on the heart, allowing more engagement of the community toward improving treatment outcomes. Our next step is to identify how this protocol can be translated in community settings, through review of the protocol and collecting feedback on participants‘ experiences.
# Community Outreach as a Core Component of Professional Development in Resident Education: A Descriptive Abstract

## Authors:
Jessica L. De Santis, PhD, MCW-Milwaukee, Anesthesiology; Anne L. Castro, MD, MCW-Milwaukee, Anesthesiology; M. Tracy Zundel, MD, MCW-Milwaukee, Anesthesiology; Chelsea A. Willie, MD, MCW-Milwaukee, Anesthesiology; David A. Nelson, PhD, MS, MCW-Milwaukee, Family and Community Medicine; Michael Malinowski, MD, MCW-Milwaukee, Surgery; Stacy L. Fairbanks, MD, MCW-Milwaukee, Anesthesiology

## Abstract:
**Background:** Milwaukee has a profound history of segregation that impacts education, poverty, disproportionate prison populations, lack of access to housing, and lack of accessible healthcare. Medical residents can learn to better serve our Milwaukee communities through education. In 2021, we created the Professional Development Week (PDW) for the Post-Graduate Year 1 (PGY1) residents in the Department of Anesthesiology to help residents better understand Milwaukee and develop skills that are traditionally not emphasized in the clinical setting. In 2022, we received an AHW award to extend professional training in community engagement and professional development to PGY1 residents in Anesthesiology, Surgery, Neurology, Obstetrics, and Radiation Oncology.

**Research Question:** We propose that all PGY1 residents employed by The Medical College of Wisconsin and Associated Hospitals have a PDW, and this will directly impact the quality of care provided to SE Wisconsin by increasing trainee involvement in community service, addressing health disparities, and advocating for underserved patients.

**Methods & Strategies:** This year’s PDW curriculum serves as our pilot for the envisioned project. We anticipate enrolling 175 trainees over 2022 and 2023. Residents enrolled will participate in a pretest/posttest study with surveys examining resident wellness, biases, and health disparity perceptions. Participants will engage in 2.5 days of curriculum including community outreach with Streetlife Communities Milwaukee and All Saints Community Garden. Participants will be interviewed by our research team and keep a journal to be collected for thematic analysis.

**Conclusion:** We propose the following specific aims will be met. 1) Educate early physicians in Milwaukee’s health disparities, 2) partner with organizations in SE Wisconsin to create a mutually beneficial relationship to improve the overall health of Wisconsin, 3) engage early physicians in cultural competencies such that they ultimately choose to practice in Wisconsin, thus decreasing health disparities and improving the health of the population.

## Submitter:
Jessica De Santis
Overview: Historically, health, physical education, and wellness teachers (HPEW) focus on physical activity. With growing understanding of wellness and trauma among youth, teachers are challenged to expand their instruction and support. The CDC reports "more than 1 in 3 high school students in 2019" experienced hopelessness. Research demonstrates that teachers feel ill-equipped to deal with student mental health issues leading to teacher burnout.

Objective: Conduct a quality improvement study to investigate the practicality of a professional development resource to support HPEW teachers around issues related to mental health.

Methods: We interviewed 6 participants from a national HPEW sample to obtain perspectives regarding mental health among students and teachers. Interviews were conducted via Zoom for 20-40 minutes and audio recorded. Interviews were transcribed using Otter.AI. Data from the interviews was analyzed using inductive open coding strategies. We used a qualitative software program called Dedoose to assist in data analysis. MPS was involved in the recruitment of participants, and the lead partner to use findings to inform development of the workforce development support system for teachers.

Results: HPEW teachers revealed themes including health promotion, stress, supporting students, and strategies to address teacher burnout. All themes were further refined to identify sub level themes. We will extend initial findings to a national sample to build a more robust understanding of the challenges that HPEW teachers have with trauma and burnout.

Conclusion: As the scope of practice widens for high school HPEW teachers, the workforce needs to innovate professional development systems to support teachers to manage their personal wellness needs and of their students. The findings of this research will be translated to community through the practical identification of strategies that will inform the development of a local model of teacher support. This research can serve as a driver to improve teacher satisfaction.
Research has demonstrated the impact of employing community healthcare workers (CHW) increases health services productivity, increases clinical efficiency, reduces missed appointments, and has a return on investment (ROI) of 1:3 for every dollar invested. As medical costs continue to escalate, the demand for CHWs will also continue to rise to teach the public about healthy habits to avoid costly chronic conditions or medical procedures. Currently, Milwaukee Area Health Education Center (MAHEC) anticipates an increased demand for CHW training statewide as we continue to grapple with health care workforce shortages in urban and rural communities and health disparities among specific populations. We believe exploring CHW perspectives will lead to a robust understanding of the training needs a CHW should acquire to be successful in their role. To do this, we conducted 19 one-time interviews with two groups of CHW workers: 1) Currently employed CHWs; and 2) Individuals interested in pursuing CHW certification. From open coding analysis, we identified 17 primary codes to describe the CHW training and employment experience. Each of the primary codes also encompasses associated sub codes. We have identified several key themes including: 1) Several training strengths such as the appreciation for the MAHEC Staff and the speakers at each session; 2) The need for more training on Mental Health services and more information on the legal boundaries of what CHWs can and cannot do; and 3) The roles, values, and subsequent challenges faced by CHWs. CHWs currently serve diverse community members across many sectors of primary care. This, coupled with demand to increase the CHW workforce, builds a compelling case to create rigorous and responsive CHW training programs that align with the needs of CHWs and CHW supervisors. We plan to share the themes discovered with MAHEC to support positive changes to their current CHW training curriculum.
Background: World Health Organization research affiliates determined that social determinants of health (SDOH) are significant drivers of diseases risk and susceptibility over a decade ago. Among other SDOH, health insurance coverage is integral to healthcare access and overall health, and uninsured patient populations in the United States are historically understudied. The social needs of this population must be better understood to provide comprehensive care. In Milwaukee, WI, the Saturday Clinic for the Uninsured (SCU) is a free clinic that addresses these needs.

Objectives: Assess the demographics of the SCU patient population; Assess the most prominent SDOH needs of SCU's patient population; Assess patient-reported community resource utilization for prominent SDOH needs; Assess the reasons why patients refused resources

Methods: Patient data is collected using REDCap surveys administered during SCU clinic visits. The survey data was analyzed in R studio for descriptive testing and figure generation. The inclusion criteria for the study were: over 18 years old and had at least one completed SDOH survey. Data analysis identified the population's demographics, most prominent SDOH needs, resource frequency, and resource refusals. This study has an exempt IRB.

Results: This study identified the most prominent SDOH needs of SCU patients as: dental care, insurance options, mental health needs, utility affordability, and education and work opportunities. Dental care and mental health services are frequently needed concurrently. For each of the five most prominent SDOH needs, frequency of resources provided was identified. Additionally, reasons patients refused resources for each SDOH need were identified.

Conclusion: The ERC team at SCU uniquely addresses patients' SDOH needs, and this study identified which SDOH needs are most prominent. This study’s next steps are investigating the usefulness of the provided community resources reported by patients after multiple clinic visits to evaluate the impact provided resources make in addressing SDOH needs.
**TITLE:** Captain John D. Mason Veteran Peer Outreach Program: A veteran-engaged program to connect veterans in Wisconsin to VA health care services and community resources to decrease veteran suicide.

**AUTHORS:** Susan Smykal, MCW-Milwaukee, Psychiatry; Mark Flower, MCW-Milwaukee, Psychiatry; Bertrand Berger, PhD, VA Milwaukee, Mental Health

**ABSTRACT:**

**Background:** US suicide deaths for Veterans are disproportionate to the non-veteran population. Approximately 70% of veterans who die by suicide do not utilize VA healthcare. Many veterans are unsure if they qualify for VA healthcare benefits, or how to apply.

**Problem Statement:** The VA does not focus on outreach or advertising, so the need is there to have veteran peers' outreach in the community to locate veterans and assist them in connecting to VA services and community resources.

**Method:** The Captain John D. Mason Veteran Peer Outreach Program was implemented in 2018. This program engages veterans though attending both veteran-centered events and non-veteran community outreach events where veterans who may not self-identify can be located. The program builds relationships with veteran organizations and community partners to move forward suicide prevention. Due to the Covid pandemic, social media utilization increased to assist in virtual outreach to veterans and their families by highlighting veteran events and resource information.

**Results:** As a result of attending 231 community outreach events, participating in 234 community discussions, and connecting with over 700 business and organization contacts, the program has had 222 veterans engage in the program to learn about VA healthcare services and community resources, as well as 33 family members engaging with the program to assist their veteran in connecting to services. Social media presence was re-evaluated to engage more veterans. As a result, we have over 1275 followers who are veterans and family members.

**Conclusion:** The Captain Mason Program has thrived through the Covid pandemic and increased veteran contact by 84% since March 2020. This confirms this program is beneficial to locating veterans in the community and assisting them in connecting to VA healthcare or community resources to help prevent veteran suicide.

**SUBMITTER:** Susan Smykal
**ABSTRACT:**

Background: Although Wisconsin led the way nationally in improving health care quality, we have widespread disparities in health outcomes and care. An initial partnership between the University of Wisconsin-Madison (UW) and the Wisconsin Collaborative for Healthcare Quality (WCHQ) produced reports in 2019 and 2020 detailing Wisconsin’s health disparities by race and ethnicity, insurance, and geography. Healthy Metric is an expanded partnership between UW, WCHQ, MCW, Marshfield Clinic Research Institute, and the Wisconsin Health Information Organization connecting health systems, payers, and communities with academic institutions to build sustainable systems that measure, monitor, and reduce disparities through best practices and evidence-based innovations.

Objective: This project used a participatory design process with community partners to gain feedback on prior disparity reports and identify future topics of interest.

Methods: We conducted seven interactive sessions with 26 attendees representing community organizations, health systems, health insurers, health departments, and policy organizations. Participants represented rural and urban areas from all regions of Wisconsin. Participants provided feedback on the previous disparity reports and what they would like to see in future reports. Session feedback was grouped and analyzed by category, theme, and feasibility.

Results: We learned what metrics, populations, and geographies Healthy Metric should consider for future reports; received feedback on data visualizations and content; and how the reports could be more actionable. Stakeholders requested clear, actionable goals for each report; information on potential partners currently working on report topics; and incorporating best practices to address disparities. Conclusion: Stakeholder engagement was critical to identifying topics for future reports, incorporating action into the reports and tools, raising the need for a project website as a central resource for community members, and developing a format that was user-friendly. We have since launched the Healthy Metric website and five brief disparity reports and will continue to engage stakeholders throughout the project.
Overview: Patients with severe COVID-19 face dyspnea, anxiety, and isolation. Music thanatology is a specialized field of music therapy where a musician performs "prescriptive" harp sessions by improvising and responding to changes in behavior in the patient. During the COVID-19 pandemic, Harps of Comfort (HOC) was started to provide live virtual harp sessions for patients in the ICU to help alleviate some of their symptoms. There have been over 250 sessions.

Objective: Assess if nurses notice improvements in stress and anxiety in patients who take part in harp sessions. Also, determine if musicians are satisfied with the tele-music platform compared to in-person sessions.

Study Methods: An online survey of 8 questions was distributed to nursing staff in the CVICU at Froedtert Hospital who have used HOC for at least one patient. Questions using a Likert scale were used to determine changes in restlessness, anxiety, respiratory distress, and tachycardia. Open questions were asked to note any unique observations or areas for improvement for this new service. A separate survey was distributed to musicians.

Results: 20 nurses responded to the survey. On a scale of 1-5, with 1 being no improvement noticed and 5 being a large improvement noticed, the average improvement in restlessness noticed by nurses was 3.3. Nurses also saw improvements in anxiety and respiratory distress. Musicians reported overall satisfaction with using the iPad although highlighted there were disadvantages to online vs. in-person.

Conclusion: Nurses wrote that they felt the music sessions were calming and beneficial for their patients. In the future, HOC will continue expanding this program to a wide variety of sites where people might feel isolated or anxious such as nursing homes. HOC offers a new approach to connecting people who have not had access before to live therapeutic music in an effort to improve overall well-being.
Television Interviews to Increase Health Literacy in Underserved Populations: Assessing Health Segments Broadcasted on Hmong TV

Justin Chu, MA, MCW-Milwaukee; Phoebe Lim, BS, MCW-Milwaukee; Malika Siker, MD, MCW-Milwaukee, Radiation Oncology

Background: Nyob Zoo Milwaukee TV (NZ) is a Hmong-language television program broadcasted monthly in southeastern Wisconsin and distributed nationally through social media. In addition to news and culture broadcasts, NZ engages with community nonprofits to provide educational enrichment and health awareness. Since 2018, the Asian Pacific American Medical Student Association (APAMSA) at the Medical College of Wisconsin has partnered with NZ to identify health topics of interest and record segments within NZ’s normal broadcast that address health concerns in the Hmong community, a medically underserved population. This partnership utilizes a unique medium of medical student engagement with the goal of increasing health literacy in the Hmong community.

Objective: To evaluate the increased reach of broadcasted health segments when shared via social media.

Method: NZ and APAMSA records were surveyed to quantify the reach of shows and embedded health segments broadcasted through TV and social media. The difference in the number of views recorded for the same segment from TV broadcast versus social media was calculated.

Results: Four segments were broadcasted during 2018-2019 and showed consistent TV viewership at ~5000 views. Resharing content on social media increased viewership but by variable amounts. Between 2018-2019, the social media increase in viewership of a single broadcasted show demonstrated a maximum increase from 4853 TV views to 26.1k internet views and a minimum increase of 4537 TV views to ~4800 internet views. Viewership also varied between consecutive broadcasts, with a ~10000 view decrease between January and February of 2019 and a ~16000 view decrease between March and April of 2022.

Conclusion: The reach of TV-broadcasted health segments may be increased by social media sharing. Viewership trends were inconsistent between NZ monthly broadcasts. Future evaluations will be made to determine how APAMSA and NZ can influence variables to reach more community members.

Justin Chu
**TITLE:** D.R.I.V.E. Together: An Investigation of Structural Discrimination and Health Outcomes at the Individual and Community Level

**AUTHORS:** Jordan Janusiak, MCW-Milwaukee, Institute for Health and Equity; Terri deRoo-Cassini, MS, PhD, MCW-Milwaukee, Surgery; Jennifer Harris, M.Ed., Social Development Commission; Rina Ghose, MA, PhD, University of Wisconsin Milwaukee; John Mantsch, PhD, MCW-Milwaukee, Pharmacology & Toxicology; Sydney Timmer-Murillo, PhD, MCW-Milwaukee, Surgery; Carissa Tomas, PhD, MCW-Milwaukee, Institute for Health and Equity; Lucas Torres, PhD, Marquette University; Jessica Krukowski, Marquette University; Amir M. Forati, University of Wisconsin Milwaukee; Fahimeh Mohebbi, University of Wisconsin Milwaukee; Kaylen Vine, Marquette University

**ABSTRACT:** Structural racism and discrimination (SRD) encapsulates the societal structures and policies that systematically limit opportunities and resources for traditionally marginalized groups. Research demonstrates SRD impacts health and well-being of communities and individuals. In Milwaukee, the Social Development Commission (SDC) is the largest community action agency, focusing on upward mobility from poverty through the resourceful empowerment of individuals. As an effective community advocate, the SDC is an invaluable partner to other institutions in pioneering empirically-based, community-engaged research to address SRD. Previous research links components of SRD with adverse health outcomes, yet the intersecting impact of community- and individual-level SRD factors on wellness in traditionally marginalized groups is unknown. For over three years SDC leadership and researchers from multiple Milwaukee Institutions have collaborated in the creation of the SDC Institute on Poverty and Systemic Racism to house and facilitate community-engaged research. This led to funding for this collaborative's first research project, which aims to determine the compounding impact of SRD factors, at both the neighborhood and individual level, on health and well-being of Black Americans living in Milwaukee. This project combines the expertise of interdisciplinary researchers from the Medical College of Wisconsin, University of Wisconsin-Milwaukee, Marquette University, and the SDC. Utilizing the National Institute of Minority Health and Health Disparities (NIMHD) research framework and the socioecological model of health, a multifaceted geospatial analysis will evaluate the geographical heterogeneity of community-level SRD and its impact on mental and physical health (AIM 1). Additionally, to assess individual-level experiences, participants (N = 200) recruited through the SDC will complete validated self-report measures on the impact of SRD and physical and mental health outcomes (AIM 2). We anticipate our findings will shape future SRD research methodologies and directly inform SDC programs addressing education, housing, career, and health status to more effectively empower Milwaukeeans to move beyond poverty.

**SUBMITTER:** Jordan Janusiak
**TITLE:** Enhancing mammography quality in Wisconsin: Barriers and facilitators in developing a shared measurement system

**AUTHORS:** Kelly Hackett, MPH, Wisconsin Women's Health Foundation; Laura Pinsoneault, PhD, Evaluation Plus; Tobi Cawthra, MPH, MCW-Milwaukee, Community & Cancer Science Network; Beth Brunner, Wisconsin Cancer Collaborative; Tommi Thompson, MBA, Wisconsin Women's Health Foundation; Melinda Stolley, PhD, MCW-Milwaukee, Cancer Center; Joan Neuner, MD, MPH, MCW-Milwaukee, Center for Advancing Population Science

**ABSTRACT:** While breast cancer mortality rates have decreased over several decades, it is not the same for all. In Wisconsin, Black women experience higher breast cancer mortality rates compared to women of other races/ethnicities, and higher mortality rates are also evidenced in certain regions of the state. The Mammographic Quality Initiative (MQI) will examine the role of mammography quality and develop a sustainable statewide shared measurement system (SMS) to support a standard model for monitoring mammography quality and statewide quality improvement to promote equity of early-stage breast cancer diagnoses and survival. Building on a collaborative statewide initiative in Illinois (Equal Hope) that led to disparity reductions after documenting and addressing variability in mammographic quality, MQI uses a transdisciplinary collaborative approach that includes researchers, community-based organizations, and radiologists to adapt their tools for Wisconsin and build learning collaboratives in multiple Wisconsin regions. Learning collaboratives can improve patient outcomes through shared learning and practice improvement, and the MQI learning collaboratives will contribute to developing a common set of measures and the shared measurement system to monitor and improve outcomes. In its first year, MQI engaged large health systems, and high and low-resourced mammography centers in Southeastern Wisconsin as an early-stage learning collaborative. Analysis of qualitative data collected identified barriers and facilitators to the development of a shared measurement system. Barriers included significant variation in mammogram data reporting, difficulty tracking follow-up data, and strains on system resources. Significant facilitators of engagement include identifying a dedicated “champion”, evidence of past success, seeking input on measures, and clear communication. The initial analysis supports a front-loaded focus on development of partnerships and collaborative infrastructure. These findings give context and insight into a transdisciplinary approach that has the potential to be adapted and applied to other research and collaborative initiatives working to impact population level disparity outcomes.

**SUBMITTER:** Kelly Hackett
Partnering with an Urban Public Recreation System to Implement Total Wellness, a Cancer Prevention Intervention

Devon Riegel, MCW-Milwaukee; Jamila Kwarteng, MCW-Milwaukee, Institute for Health and Equity; Laura Pinsoneault, Evaluation Plus; Ana Manriquez Prado, MCW-Milwaukee, Research; Sandra Contreras, MCW-Milwaukee, Cancer Center; Sophia Aboagye, MCW-Milwaukee; Erica Wasserman, Milwaukee Recreation; Derek Donlevy, Milwaukee Recreation; Alexis Visotcky, MCW-Milwaukee, Institute for Health and Equity; Patricia Sheean, Loyola University Chicago; Margaret Tovar, MCW-Milwaukee; Kathleen Jensik, MCW-Milwaukee; Regina Vidaver, Wisconsin Dept. of Health Services; Melinda Stolley, MCW-Milwaukee, Medicine

Introduction: Cancer is a leading cause of death in Wisconsin, with higher mortality rates in Black/African American (Bl/AA) and Hispanic/Latino (H/L) populations. Focus groups with community members highlighted interest in programming to increase cancer awareness and support healthy behaviors. With this goal in mind and in partnership with the Milwaukee Recreation (MKE Rec), Total Wellness (TW) was created to provide programming to Milwaukee communities. We present a program description and preliminary results for implementation of TW.

Methods: TW program content was informed by the American Cancer Society Guidelines and community feedback through surveys and discussion sessions. TW is a 16-week program implemented over two 8-week sessions (TW 1.0, 2.0) led by instructors trained in cancer prevention and lifestyle change. The program meets 2x weekly and includes lifestyle education sessions (once weekly, +2 cooking demos) and exercise sessions (twice weekly). TW is listed in the MKE Rec program guide. Once registered, participants were invited to complete an evaluation to assess program impact.

Results: 4 instructors were trained (2 bilingual English/Spanish, 2 English only) and 2 facilities offered programming. A total of 51 participants registered for classes over 3 seasons, and 28 enrollees consented to participate in the evaluation. The majority or evaluation participants identify as Bl/AA (71.4%). 8.0% of participants identify as H/L. 60.7% of participants report hypertension, 32.1% hyperlipidemia, and 66.7% obesity. 32.1% were current/former tobacco users, and 64.3% of participants scored ≤ 23 on the Godin Leisure Score indicating insufficient physical activity.

Conclusion: Total Wellness demonstrated preliminary success in reaching the MKE Bl/AA community that could benefit from health programming. Program awareness is the greatest barrier to success, specifically in the H/L community. Future work will assess program impact via pre- vs post-intervention evaluation data. Long-term participant follow-up (3 months) will assess maintenance of acquired skills/knowledge from classes.

Devon Riegel
The goal of this project was to improve the consistency and effectiveness of stroke/transient ischemic attack transition of care actions (i.e. first attempt at discharge phone call within 1-2 business days post-discharge home and stroke clinic follow-up appointments completed within 1-2 weeks of hospital discharge home while observing 30-day readmission rates). Quarterly readmission rates for stroke patients has historically been higher than national top decile. Reports in the literature suggest a more structured transition period from hospital to home may prevent readmissions by addressing needs during scheduled contacts and prior to readmission occurring. Process improvement involved having a more structured follow up phone call process occurring within the first few days after hospital discharge and by allowing for patients to be seen in clinic within two weeks by nurse practitioner after hospital discharge (as readmissions often occurred within this timeframe). During the nurse-driven phone calls, patients were asked what went well during their hospitalization and what could be improved. Additionally, the nurse offers additional ongoing phone communication and provides patients with instructions on how to sign up for "Get Well Loops", an app to improve lifestyle/habits. Furthermore, Press Ganey patient satisfaction data is referenced to guide topics of discussion to address needs. During clinic appointment, the nurse practitioner provides stroke support group information, written stroke education materials, free pill boxes, and blood pressure monitoring cards to enhance compliance and encourage patients to advocate for their health. Prior to implementation of this project, there was great variability in the structure of the discharge phone call and a delay in access to care in the stroke discharge clinic due to lack of provider availability. In the months following process implementation, readmission rates began to decrease with structured soon-after-discharge phone calls and stroke clinic visits within 2 weeks.
Overview: Given the increasing ethnic and racial make-up of the U.S. and the health disparities present, the need for a diverse healthcare workforce is imperative, especially within competitive specialties such as ophthalmology. To address this challenge, efforts must be made to support underrepresented minorities (URM) in medicine and the STEM fields at all levels, including early in their education.

Objective: In response to the 2014 Association of American Medical Colleges (AAMC) Diversity Policy and Programs' ProjectMED competition, the Eyes of the Future (EOTF) program was developed to introduce URM eighth grade middle school students in Milwaukee to ophthalmology and medicine via interactive science-based programming and mentorship by Medical College of Wisconsin (MCW) medical and graduate students.

Method: Twenty-five students from Bruce Guadalupe Middle School participated in the EOTF program in April 2022 which included five seasons focused on different topics within ophthalmology and medicine with a final session on the different pipeline programs available at MCW. The effectiveness and impact of the program was evaluated using pre- and post-program student surveys.

Results: Most students desired to attend a four-year college after high school. After the program, 100% of students agreed or strongly agreed to the statements “Science is useful to the world” and “I feel like I will have adequate resources and support to apply to college in the future.” Most students scored highly on items that described a career in science/medicine as cool and on the importance of attending college.

Conclusions: The EOTF program is a high-reward educational outreach program aimed at increasing interest in science and medicine within middle school students in an effort to diversify healthcare. This program can be implemented at other middle schools in Milwaukee, increasing the visibility and confidence on the Medical College of Wisconsin within the Milwaukee community.
Quarterly readmission rates for stroke patients have historically been higher than national top decile. Reports in the literature suggest a more structured transition period from hospital to home may prevent readmissions by addressing needs during scheduled contacts and prior to readmission occurring. Process improvement involved having a more structured follow up phone call process occurring within the first few days after hospital discharge and by allowing for patients to be seen in clinic within two weeks by nurse practitioner after hospital discharge (as readmissions often occurred within this timeframe). During the nurse-driven phone calls, patients were asked what went well during their hospitalization and what could be improved. Additionally, the nurse offers additional ongoing phone communication and provides patients with instructions on how to sign up for "Get Well Loops", an app to improve lifestyle/habits. Furthermore, Press Ganey patient satisfaction data is referenced to guide topics of discussion to address needs. During clinic appointment, the nurse practitioner provides stroke support group information, written stroke education materials, free pill boxes, and blood pressure monitoring cards to enhance compliance and encourage patients to advocate for their health. Prior to implementation of this project, there was great variability in the structure of the discharge phone call and a delay in access to care in the stroke discharge clinic due to lack of provider availability.
Collaborative Work Groups - engaging community in transdisciplinary collaboration to reduce Wisconsin lung and breast cancer disparities

**AUTHORS:** Staci Young, PhD, MCW-Milwaukee, Family and Community Medicine; David Frazer, MPH, Center for Urban Population Health; Tim Meister, MA, MCW-Milwaukee, Medicine; Tobi Cawthra, MPH, MCW-Milwaukee, Medicine; Laura Pinsoneault, PhD, Evaluation Plus; Melinda Stolley, PhD, MCW-Milwaukee, Medicine

**ABSTRACT:** Cancer disparities are complex. Solving these problems requires an approach which engages diverse sectors with knowledge of biology, behavior, and the socio-cultural and physical environments. This engagement is called transdisciplinary collaboration and requires a shift in thinking and practice across multiple sectors. Collaborative Work Groups (CWG) is a program of the Community Cancer Science Network (CCSN) initiative of the MCW's Cancer Center to address breast and lung cancer disparities statewide. CCSN leverages a transdisciplinary approach to integrate academic and non-academic perspectives. The development of CCSN was led by a Design Team consisting of both academic and community members, and CWG is led by three community champion partner organizations (YWCA, Wisconsin Women's Health Foundation, and Great Lakes Inter-Tribal Council). The work groups involve a transdisciplinary partnership which considers community expertise and lived experience on the same level of importance as academic/clinical expertise. The outcomes of the initiative will primarily benefit communities. The goal of the CWG program is to build collaborative teams to focus deeply on community level solutions to eliminate cancer disparities and achieve positive health outcomes. A critical first step is to understand the issues facing local communities, integrate diverse sectors with knowledge of biology, behavior, and the socio-cultural and physical environments, and develop work groups to create an equitable voice for all participants to contribute to designing viable solutions. CWGs focus on collaborations between diverse teams of academic, community partners, and cancer survivors. They will create an equitable co-learning space allowing teams an opportunity to build empathy with those affected by the disparity and grow their understanding of a specific topic related to breast or lung cancer and reimagine how it might look to successfully address this topic. CWGs will use a human-centered design approach to co-design solutions to be implemented in the second phase of the project.

**SUBMITTER:** Tim Meister
Background: Childhood obesity in the U.S. is an epidemic that disproportionately affects marginalized groups. Because socioecological factors strongly influence community health, engaging community partners via community engagement efforts, defined as collaboration between academic partners and the community, allow unique perspectives and experiences to guide the creation of a culturally appropriate and community-facing health promotion program. Such programs may provide families with tools to improve their health status.

Objective: There is a need for an increased presence of community engagement in medical education, as community service is typically emphasized over partnership, to expose future generations of physicians to community-engaged work.

Methods: The proposed study is an extension of a previous project completed by the research team in collaboration with the United Community Center (UCC). Analysis of a fitness and nutrition education program, FIT4YES, led to the development of a novel model to highlight aspects of this community-engaged program, within a social-ecological framework, that ultimately led to its success among participants. In this study, feedback from the community partners as well as focus groups involving families who participated in the program, will inform the development of a teaching module on community engagement for medical students. The teaching module will then be presented to medical students at the Milwaukee campus of the Medical College of Wisconsin.

Anticipated Results: We hypothesize that medical students who participate in this training module will demonstrate an enhanced understanding and interest towards community engagement and its utility to improve community health in their future medical training. This training can also be utilized by stakeholders to form lasting relationships with the community to strengthen future community health efforts.
Title: The Importance of Social Support Systems among Patients with Pancreatic Cancer: A Community-Engaged Project

Authors: Meghan Conroy, BS, MCW-Milwaukee; Samih Thalji, MD, MCW-Milwaukee, Surgery; Susan Tsai, MD, MPH, MCW-Milwaukee, Surgery; David A. Nelson, PhD, MS, MCW-Milwaukee, Family and Community Medicine

Abstract: Purpose: Pancreatic cancer is a highly burdensome disease that has detrimental effects on patients and their caretakers. Social support systems play a role in cancer outcomes; however, there has been little research into how they impact patients with pancreatic cancer and their personal experiences of illness. This study aims to gain insight into the social support systems of patients with pancreatic cancer and the mechanisms by which social support can improve their quality of life.

Methods: Participants from Froedtert Hospital (Milwaukee, WI) were recruited after seeing a surgical oncologist for their pancreatic cancer. In-depth interviews were conducted around perceptions of social determinants and social support in the context of their disease. The team coded the data through inductive analysis based on grounded theory. Two researchers discussed codes for accuracy.

Results: Initial coding of eleven (11) interviews resulted in four primary themes: What or Who Provides Support, Tangible Support, Emotional Support, and Mechanisms of Social Support. Participants discussed people and groups that provided support, such as significant others, family, friends, community and faith groups, and healthcare providers. Support was categorized as tangible (transportation, food delivery), or emotional (someone to be there, encourage, listen). Patients discussed how support systems were essential to feeling stable during their cancer journey.

Conclusions: The presence and recognition of social support systems is an important consideration for the health of patients and positive outcomes. For example, one patient said, "... when you go through something this devastating, you need to have a couple of people right at your side, all the time, the whole way. And I think that that's a big determination on the outcome." This patient-centered study illustrates that social support is essential to patients with pancreatic cancer. Future directions include developing interventions around social support systems to improve quality of life and clinical outcomes.

Submitter: Meghan Conroy
Perspectives and wisdom from parents of children impacted by lead poisoning

Joanna Balza, RN, MCW-Milwaukee; Kairee Hamelin, MCW-Milwaukee, Family and Community Medicine; Tessa Miller, MPH, MCW-Milwaukee; Julia Kellis, MCW-Milwaukee; David A. Nelson, PhD, MS, MCW, Family and Community Medicine

Background: Exposure to lead (Pb) remains a severe threat to the health of children in our community. Lead poisoning causes irreversible health effects such as learning difficulties, behavioral issues, decreased IQ, kidney damage, and more. Disparities related to race, socioeconomic status, and immigration status impact which children are most affected.

Problem statement and Objective: Although lead is one of the most heavily researched toxicants, the problem persists, largely due to the financial and time burden associated with lead remediation of homes, soil, and water. Primary prevention of lead poisoning is essential, and until lead hazards everywhere are eliminated, clinicians, communities, and parents must work together to protect children. With this in mind - and in collaboration with community partners and community members - we developed this objective: examine the experiences of parents whose children have been impacted by lead poisoning through in-depth interviews. Allowing parents to express their perspectives will support navigating a path forward together.

Methods: Thus far, 5 one-on-one semi-structured interviews have been conducted with parents of lead-poisoned children, with an additional 5 pending, and recruitment ongoing. Interviews are recorded and transcribed, coded, and then analyzed for themes.

Results: Participants described the impact of lead poisoning on their family - particularly related to housing, lead education, community resources, and clinical care. In addition to describing these experiences and thus providing valuable information on potential points of intervention, participants also identified the lasting impact that lead poisoning has on themselves and their children.

Conclusion: Illustrating the nuances of an issue as complex as lead poisoning and prevention is incomplete without learning from and valuing the perspectives of impacted community members. In the future, these narratives provide a steppingstone for researchers, clinicians, community groups, and parents to advocate for change in the community.

Joanna Balza
Background: In 2019, the Milwaukee Health Care Partnership (MHCP) launched the Housing is Health (HIH) Program for homeless and vulnerably housed patients receiving care at hospitals and the seven largest safety-net primary care clinics (SNCs) in Milwaukee. The goal of the HIH, in partnership with the Milwaukee County Housing Division and IMPACT Coordinated Entry (CE), is to navigate patients to housing resources to improve health outcomes and reduce ED visits, inpatient stays, and readmissions.

Objective: This study categorized health care referrals sent by participating hospitals and safety-net care clinics to the CE team and compare the referrals across participating organizations.

Method: Referrals to the CE team were reviewed from February to April 2022. Data included were the date of the referrals, where referral was from, and narrative summaries documenting patient’s housing needs. Each referral was categorized into 7 categories: Homeless Services, Doubled-Up (experiencing housing instability but temporarily staying with family or friends), Housing Quality, Affordable Housing, Eviction Prevention, Violence, and Unknown.

Results: 94 referrals were made, with 51 coming from hospitals and 43 sent from safety net care clinics. Homeless services was the category that had the most referrals from hospitals with 76%, followed by 8% for Doubled Up, and 6% for Violence. Doubled-Up was the category that had the most referrals from primary care clinics with 33%, followed 21% for Homeless Services, 16% for Eviction Prevention, 9% for Housing Quality, 5% for affordable housing, and 5% for violence.

Conclusion: Street homelessness is more likely to be detected in hospital settings while housing insecurity is more likely to be surfaced in the primary care setting. While this review only accounted for the first three months of the program’s data collection, it suggests more focus should be on training frontline staff on homeless services in hospitals and housing instability resources in the SNC setting.
Duration of Stay and its Effect on COVID-19 Vaccination Acceptability within the Undocumented Latinx Population in two Major California Cities

Leopoldo Bello-Luna, BS, MCW-Milwaukee; Jesus R. Torres, MD, MPH, MS, UCLA, Emergency Medicine

Objectives: Factors that affect vaccination rates are lacking and may have important policy implications. Thus, we sought to explain the effects of duration of stay in the US from time of immigration on COVID-19 vaccination uptake among the undocumented Latinx patient population.

Methods: The survey took place in Olive view and ZSFG Emergency Departments, well known for their number of Latinx undocumented immigrants and their progressive healthcare on undocumented. Trained research assistants verbally consented participants in both English and Spanish after receiving their medical screening exam. This analysis describes the effects of duration of stay, represented as those living in the US for 10 or less years and those over ten years of undocumented Latinx patients on vaccination hesitancy.

Results: Of the 309 patients enrolled, 52% were male, 68% identified as Latinx, 14% White, and 11% Black; their median age was 51 years. Among the Latinx participants, 56% reported Spanish as their primary language and 34% self-identified as having an undocumented status. Of the entire Latinx cohort, 36% experienced COVID-19 compared to 18% of non-Latinx. Within the undocumented Latinx, 38% reported a COVID-19 infection in the past. The undocumented Latinx group with greater than 10-years duration of stay had a vaccination rate of 84% and 72% reported having health insurance; whereas, when compared to those with less than 10-year duration, a 97% vaccination and a 47% health insurance rate were reported.

Conclusion: Our analysis demonstrates a lower vaccination rate among the undocumented Latinx who have resided in the US for over a decade. California is the leading state in undocumented healthcare, but our data demonstrates that we still have work to do. These results are instrumental in forming an education component to educate our patient population and physicians that everyone, regardless of legal status, has the right to get vaccines.
Development of an EcoTherapy Prescription: Community partnerships for advancing nature immersion in an urban setting

As people live more urbanized lifestyles especially within densely populated areas, there is potential to lose daily contact with nature, diminishing access to the wide range of associated health benefits of interacting with nature. This is increasingly the case amongst the urban impoverished population who may face systemic barriers and may lack adequate access to transportation and resources to make the journey to preserves or nature areas that are often in accessible to public transportation or require possession of a personal vehicle - a barrier experienced by an urban population. This project seeks to address inequities regarding access and accessibility to nature through the development of an "EcoTherapy Prescription" - a prescription partnership with local nature preserves, county parks, as well as grant funded transportation options, could provide access to an immersive nature experience. An EcoTherapy self-guided curriculum, designed by mental health professionals would provide a framework for an experience of how to immerse oneself in nature for emotional, mental, and physical wellness. The Eco-Therapy self-guided curriculum is a four-visit curriculum in development by a clinical psychologist and naturalists with the consultation of eco-psychology faculty. Community partnerships with Wehr Nature Center (Franklin, WI), a public county park that is well known to be committed to broadening accessibility in the outdoors. The Eco-Therapy Prescription will then be utilized by a Family Medicine Residency to encourage a patient to intentionally engage with nature at the Wehr Nature Center as part of prevention and treatment. The patient will then submit an evaluation of their experience once they participate in any aspect of the self-guided Eco-Therapy curriculum. This project, if successful, could serve as a framework for cross collaboration and community engagement between healthcare partners, environmental organizations, and on-profit organizations to advance health and wellness to a traditionally underserved population through experiences in nature.

David Songco
Engaging primary care physicians and individuals with disabilities to improve access to Medicaid-covered Personal Assistance Services (PAS)

Moriah Iverson, MS, Independence First, Personal Assistance Services; David A. Nelson, PhD, MS, MCW-Milwaukee, Family and Community Medicine

Overview: Personal Assistance Services (PAS) for individuals with disabilities (IwD) are covered by Medicaid and include non-skilled nursing tasks performed in the home. PAS empower independent living and decrease the risk of institutionalization for IwD. Primary care physicians play a significant role in access to PAS through provision of orders for service prior authorization.

Problem statement: Few studies have explored the role of primary care physicians in PAS. Renewal of physician orders for PAS are required every 13-52 weeks. Independence First, a non-profit provider of PAS, has observed delays in receiving orders from primary care physicians leading to disruption of PAS. The objective of this project is to engage IwD and primary care physicians to identify strategies to minimize service disruptions.

Methods: The proposed project will utilize qualitative methods of focus groups and quantitative survey methods to identify 1) barriers and facilitators to accessing primary care for IwD, 2) awareness of PAS among primary care physicians, and 3) barriers and facilitators to completing PAS orders among primary care physicians.

Results: Anticipated barriers to primary care are transportation and navigation of the healthcare system. Anticipated facilitators include natural supports, technology literacy, and access to transportation. Low awareness of PAS among primary care physicians is anticipated. Anticipated barriers to completing PAS orders among primary care physicians include pressure for increased productivity, limited awareness of PAS prior authorization timelines, and clinic staffing, while anticipated facilitators include adequate clinic staffing and awareness of PAS.

Conclusion: Medicaid-covered PAS for IwD are critical to independent living. There are few studies exploring physician engagement in PAS or strategies to minimize disruption of PAS. The proposed partnership provides a compelling space to establish a foundational understanding of barriers and facilitators to PAS in primary care and identify meaningful strategies to increase access to these critical services.

Moriah Iverson
Background: The link between social connections and health in the general population has been well documented. Information on how social connections may impact African American prostate cancer survivors (AAPCS) is limited. This study uses qualitative interviews to explore how social connections may impact the health and health behaviors of AAPCS enrolled in Men Moving Forward (MMF), a lifestyle intervention designed for and by AAPCS.

Objective: We sought to understand how social networks impact health and behaviors, and to identify opportunities to leverage social networks to improve survivorship among AAPCS.

Methods: Men completing MMF were invited to participate in interviews. A semi-structured interview guide exploring social networks, health, behaviors, and cancer survivorship was developed in consult with the MMF community advisory board. Interviews were held virtually or at a study location of the participants choosing. Interviews were audio recorded, transcribed, and coded using MAXQDA software.

Results: 14 interviews have been completed and some preliminary findings are included here. Early findings identified themes around the importance of peer support, shared experiences and sharing of stories across the survivorship continuum. Within this theme, four sub-themes were identified: 1) Connecting with other survivors helped with acceptance and isolation. 2) Advice and information felt more valued when coming from someone who understood what they had been through. 3) Shared experience helped men feel understood and able to share without fear of judgement. 4) Telling their story to others offered a way to confront stigma around prostate cancer and offer support to men in their communities.

Conclusions: Peer support and sharing offer an opportunity to provide education and support to AAPCS. Currently, peer support resources for men are limited, and few offer culturally tailored programming. Enhancing efforts to create and activate connections between survivors may offer an opportunity to improve survivorship outcomes in AAPCS.
TITLE: WeCare in Northwest Wisconsin: A Multifaceted Community Organization Addressing the Caregiver Crisis

AUTHORS: Christopher Gitter, MCW-Milwaukee; Maria Harvet, University of Minnesota-Duluth; Jodi Mader, Inclusa; Jennifer Harris, MPA, Inclusa; Rebecca Mein, Inclusa; Deb Magowan, Inclusa

ABSTRACT: Background: By 2034, older adults will outnumber children for the first time. Specifically, our region of northwest WI will see over 25% of its population over 65 by 2030. Northwest WI faces a critical shortage of caregivers, both paid and unpaid, amidst an ever-aging population. A caregiver is a person who tends to the needs or concerns of a person with short- or long-term limitations due to illness, injury or disability. While caregiver roles traditionally include paid CNAs, personal care workers, respite workers, these roles also include transportation and meal services. WeCare seeks to connect people along with each communities' unique resources and strengths to address this caregiver crisis one community at a time across Wisconsin.

Mission and Goal: WeCare mission: to bring awareness and educate community members on the caregiver crisis WeCare goal: to recruit and retain caregivers in WeCare communities

Method WeCare utilizes Asset Based Community Development (ABCD) to create multidisciplinary groups in counties in Wisconsin to address the caregiver crisis on a local scale. Using ABCD, we "draw upon existing community strengths to build stronger, more sustainable communities for the future." Our groups include healthcare organizations, nonprofits, schools, Native American tribes, local business partners, and patient advocates. We developed WeCare groups in Barron, Douglas, Price, Rusk, Sawyer, and Ashland/Bayfield/Iron (combined) counties.

Early Success Stories: One example of success we've seen in reaching a younger population is Douglas County, through a personal care worker program at Superior High School and a CNA class at Northwestern High school.

Future Direction and Networking: We are planning WeCare Walk 'n Roll events in each WeCare County for Summer 2023 to spread awareness and recruit caregivers in those communities. Going forward, we hope to spread WeCare groups to counties across WI using the toolkit established by our NW WI groups.

SUBMITTER: Christopher Gitter
**TITLE:** Precision Epidemiology and opioid crisis: Using next-generation geospatial analyses to guide community level responses in diverse segregated metropolitan regions

**AUTHORS:** John Mantsch, PhD, MCW-Milwaukee, Pharmacology and Toxicology; Rhina Ghose, MA, PhD, University of Wisconsin Milwaukee, Geography; Amir Forati, University of Wisconsin Milwaukee, Geography; Constance Kostelac, PhD, MCW-Milwaukee, Division of Data Surveillance and Informatics; Mallory O'Brien, PhD, Johns Hopkins, Health Policy and Management; Peter Brunzelle, WisHope; Cassandra Laibly, MCW-Milwaukee, Global Health

**ABSTRACT:** Throughout the past decade, opioid overdoses have doubled in Milwaukee County. Casualties are most prevalent in regions that experience high levels of poverty, marginalization, and low access to healthcare. Previous intervention strategies utilize "one-size-fits-all" approaches that have limited effectiveness and vary across the demographically diverse communities in Milwaukee. The persistent rising number of overdose deaths and fluctuating effectiveness of community responses highlights the need for novel, innovative and equitable approaches. Our project includes an interdisciplinary team of researchers at the Medical College of Wisconsin and University of Wisconsin Milwaukee, the City of Milwaukee Health Department, and WisHope, a non-profit peer recovery community organization. Building on findings that opioid overdoses vary across the diverse communities of Milwaukee County, our project uses precision epidemiology and data-guided community engagement to identify community characteristics that influence overdoses and recovery with the goal of optimizing Milwaukee’s response to the crisis. Precision epidemiology along with data-informed peer community engagement, allow for identification of community level risk factors that influence overdoses and response effectiveness. Feedback received supports organizations and health agencies to optimize community responses. Thus far, collaboration with partners offering resources throughout Milwaukee have allowed for better understanding of the best approach to engaging communities in both communication and dissemination of information. Through data-informed community engagement, we obtain qualitative data that provides important context, enabling us to format community engagement. The data provides context for interpreting and understanding community characteristics that confer risk for or are protective against overdose as well as factors that determine the effectiveness of community resources, policies, and practices targeting the overdose. These relationships vary with scale across the cities and neighborhoods. Critical information gained enables the team to move past "one-size-fits-all" approaches that are problematic in diverse and segregated metropolitan areas and embrace data/outcome-informed strategies that are guided by community engagement.

**SUBMITTER:** Cassandra Laibly
First year results of a cancer disparities curriculum to address mistrust and misunderstanding between basic science researchers and community members

Tobi Cawthra, MPH, MCW-Milwaukee, Medicine; Laura Pinsoneault, PhD, Evaluation Plus; Kristen Gardner-Volle, MS, Evaluation Plus; Jessica Olson, PhD, MPH, MCW-Milwaukee, Institute for Health and Equity; Alexis Krause, MPH, MCW-Milwaukee, Medicine; Deborah Thomas, DD, House of Grace Kingdom Ministries; Melinda Stolley, PhD, MCW-Milwaukee, Medicine; Carol Williams, PhD, MCW-Milwaukee, Pharmacology & Toxicology

In Black, Hispanic, and Native American communities, historical and current systemic inequities result in medical mistrust limiting participation in biomedical studies. Meanwhile, many researchers misunderstand the context of communities experiencing the highest disparities, which may produce incomplete or inapplicable research questions. These conditions constrain the development of new and relevant biomedical research questions and hamper understanding of biological, clinical, and social factors holding disparities in place. With the goal of reducing misunderstanding and mistrust between researchers and community members, an MCW senior basic science researcher and a retired community college faculty member led a team to launch a pilot 9-month bi-weekly Cancer Disparities Curriculum for Research and Community Scholars in Fall 2021. The curriculum, designed for early career researchers ("research scholars") and Milwaukee community members ("community scholars"), included topics such as cancer disparities, social determinants of health, bias, racism, communicating with different audiences, and bridging diverse perspectives. Sessions were facilitated by respected experts from the Milwaukee community and MCW. Additionally, scholars worked in pairs (a research and a community scholar) to develop project plans addressing cancer disparities, incorporating both scholars’ perspectives. To continuously improve curriculum delivery and assess its impact, the team collected quantitative and qualitative data including attendance, scholar and facilitator surveys, and session observations and debriefs. Following the first cohort, the preliminary data showed that scholars reported an increased understanding of the scientific, environmental, and social factors influencing cancer disparities but wanted more opportunities to connect learning to action. Research scholars specifically reported that engagement with community led them to begin to think differently about their work. To fully address cancer disparities, biomedical researchers and community members must collectively address issues of mistrust and misunderstanding. Our curriculum provides opportunity and guidance to build authentic collaboration, shared vocabulary, increased understanding and empathy, and to engage in low-risk program exploration.

Tobi Cawthra
Background: Community-engaged research is an inclusive approach for population-based studies that address social determinants of health to advance health policy. The COVID-19 pandemic posed challenges to building collaborative, equitable research partnerships.

Objective: To describe the lessons learned about conducting community-engaged research during the COVID-19 pandemic about access to mental health care for Black and Latinx teens from the perspectives of teens, parents, and providers.

Methods: We approached community stakeholders to provide input on interview topics, recruitment materials, a minimizing risk protocol, a resource list, and for help with recruitment. Relationship building involved attending community-based organization (CBO) member meetings, presenting the study to individuals and groups, volunteering time, and sharing resources. Communication between the academic and community partners moved from in person meetings to email and video calls.

Results: Connecting with new partners was difficult early in the pandemic as organizations were busy adapting. Later, COVID-19 precautions continued to preclude in-person meetings, and initial contacts were made through email. Other challenges included partner staff turnover and Institutional Review Board administrative delays. Still, ten organizations agreed to partner with the academic team. They are health care organizations, schools, and CBOs. Two were existing partnerships, and the rest were newly developed. Adjustments to the original project were made for feasibility (ex. recruitment goal reduced by 67%). To date, nine interviews have been completed and data collection continues.

Conclusion: Although the COVID-19 pandemic shifted communication modes and eliminated some relationship building opportunities, adapting to virtual formats and adjusting for feasibility has helped to meet project goals.
**TITLE:** COVID 19 and Grief: Assessing the Availability of Grief-related Treatment in the Greater Milwaukee Community, Two Years into the Pandemic

**AUTHORS:** Saba Anwer, MBA, MPH, MCW-Milwaukee; Amanda Liewen, MD, MCW-Milwaukee, Psychiatry; Himanshu Agrawal, MD, MCW-Milwaukee, Psychiatry; Rida Khan, MD, MCW-Milwaukee, Psychiatry; Cameron Gmehlin, MCW-Milwaukee; Clara Martin, MPH, MCW-Milwaukee; Buruj Mohammed, MCW-Milwaukee

**ABSTRACT:**

Background: COVID-19 deaths can be more unexpected and traumatic than other types of deaths, leading to an increased risk of prolonged grief.

Problem Statement: Many organizations, including those providing services for grief, closed during the pandemic due to staff attrition or financial circumstances.

Objective: Our team examined how grief support organizations in Milwaukee evolved during the pandemic and developed a directory of local organizations offering counseling, support, and other services for grief.

Methods: Organizations providing grief services in the Milwaukee area were identified via a web search or were recommended by hospital staff. All organizations were contacted via telephone to detail services, including relationship to the deceased, age group, religious affiliation, in-person or virtual services, and individual or group counseling.

Results: We identified 72 organizations offering grief support services in Milwaukee and surrounding counties. Of these 15 (20.8%) had shuttered over the course of the pandemic. Of the organizations that closed permanently, 13 catered to adults, and 2 organizations specifically catered to parents experiencing the loss of a child. Of the 57 remaining organizations, 20 offer virtual services. Another 8 organizations were contacted; however, their services were not detailed due to staff attrition.

Conclusions & Future Directions: The availability of grief resources has decreased because of the effects of the COVID-19 pandemic, creating gaps in services for specific populations and needs. The MCW Grief clinic provides acute and prolonged grief treatment to address these gaps. Our research will help us develop support groups for specific populations with gaps and provide an online database to improve access to local grief resources. Based on our findings, the MCW Grief clinic will create a community engagement task force to strengthen collaboration and consolidation within the remaining agencies that provide grief-related treatment, with the goal of optimizing this specialized treatment in the Milwaukee area.

**SUBMITTER:** Saba Anwer
**Title:** Investigating Healthcare Needs of the Muslim Community in Milwaukee

**Authors:** Saba Anwer, MBA, MPH, MCW-Milwaukee; Laila Azam, PhD, MCW-Milwaukee, Emergency Medicine; Buruj Mohammed, MCW-Milwaukee; Sarah Farhan, MA, MCW-Milwaukee; Nawara Abufares, MA, MCW-Milwaukee; Shakirah Tumusiime, MCW-Milwaukee; Matida Bojiang, MCW-Milwaukee; Maie Zagloul, MCW-Milwaukee

**Abstract:**

**Background:** Milwaukee has seen a recent influx of Muslim refugee resettlement. Consequently, healthcare providers will work with more Muslim patients, making cultural humility training imperative for quality care. Presently, this training is lacking within the MCW medical school curriculum.

**Problem Statement:** In order to develop Islamic Cultural Humility Training within the medical school curriculum, engagement and feedback from the Muslim community on their healthcare needs is essential.

**Methods:** A literature search was conducted to assess the Muslim patient experience and the level of cultural humility in healthcare. Additionally, qualitative interviews with leaders at the Islamic Society of Milwaukee (ISM) were conducted to identify local community healthcare challenges. The themes identified from this research were used to develop a survey to further investigate the healthcare needs of the local Muslim community.

**Results:** Amongst 1507 articles analyzed, a total of 28 articles were found to meet the inclusion criteria. Muslim patient needs identified included the importance of cultural humility when addressing: Physician-Patient Relationships, Ramadan and Fasting, Mental Health Services, Trauma and Discrimination, and Advanced Care Planning. The qualitative interviews with the ISM provided insight into Milwaukee Muslim patient needs which included: access to care, health insurance, chronic condition management, language barriers, and refugee & resettlement support.

**Conclusion:** Muslims are a growing and diverse community in Milwaukee. Research from this project highlighted the importance of identifying local Muslim patient needs and educating healthcare providers on providing culturally competent care.

**Future Directions:** Imams will organize community participation and will distribute surveys to over 7000 congregants. Specific needs of Muslim community members will be assessed using survey data. These results will be used to shape a one-day cultural humility course for first-year medical students on the needs of Milwaukee Muslim patients and will be piloted at the Medical College of Wisconsin.

**Submitter:** Saba Anwer
Introduction: During the COVID-19 Pandemic, disruptions to health care disproportionately reduced access to routine screenings for patients in underserved populations. The purpose of this study is to identify differences in cervical cancer screening by race during the pandemic.

Methods: A database containing health records for all patients with a primary care provider in the Bellin Health Care System was used to analyze cervical cancer screening data on a quarterly basis from 3/1/20 to 1/1/22. Unadjusted Odds ratios (OR) and confidence intervals (95% CI) were used to calculate differences by race, with white as the reference group.

Results: 36,774 female patients with a cervix, ages 21-65 were included in the analysis. Overall white patients had the highest rate of baseline screening at (85.2%) followed by Hispanic/Latino (84.6%) Asian (82.4%). Screening rates were lowest among Black (76.1%, OR=0.63, 0.517-0.78) and Native/American Indian (75.8%, OR=0.66, 0.513-0.86) in March 2020. Differences in screening rates by racial group were greatest between October 1-December 31, 2020, with half the screening rate for Black (71.6%, OR=0.54, 0.45-0.65) and Native/American Indian (70.3% OR=0.51, 0.40-0.64) patients compared to the beginning of the pandemic, and significantly lower screening rates for Asian patients (77.8%, OR=0.80, 0.65-0.99) during that time period. Screening rates for White patients did not vary significantly during the pandemic (OR=0.97, 0.93-1.01).

Conclusions: Members of minority groups are disadvantaged when it comes to access to cancer screening, and the COVID-19 pandemic has only widened these disparities. Further research is needed to investigate the underlying barriers to cancer screening and the impact it has on health beyond the pandemic. Future directions include distributing a community needs assessment survey to understand and address barriers to cervical cancer screening in the populations with lowest screening rates, as well as implementing interventions in the health system to promote screening.
Overview: A Youth Behavior Risk Survey administered in Marathon County, WI in 2017 found 31.5% of local students described their mental health as "not good". The D.C. Everest Kind Minds Student Wellness Day was initiated in Wausau, WI in 2019 to address this concern. As an all-day mental wellness event, it was designed to provide wellness activities and mental health resources to 8th and 9th grade students. The 2020 event was canceled due to COVID-19; however, events were held again in 2021 and 2022. The pandemic and its aftermath brought unprecedented challenges, making mental health resources and outreach crucial for students.

Problem Statement: Determine whether the 2022 Wellness Day was helpful, identify what had the greatest impact, delineate changes in student wellbeing, and determine where students obtain mental health resources.

Methods: An anonymous Google Forms survey was provided to all 8th & 9th grade students collecting information on which sessions were most useful, student’s perceived mental health over the last year, and what additional resources are needed.

Results: The survey completion rate was 62.3%. 90.3% felt the Wellness Day provided resources that would be helpful if they needed help. 48.3% felt they were coping, struggling, or unwell. This was not significantly changed from last year. ($\chi^2 (4, N = 899) = 0.136, p = 0.997$) Students reported receiving mental health resources from friends (28%), adults/family (22%), and social media (17%).

Conclusions: Students have shown remarkable resilience; however, there was no significant difference in self-reported mental health from last year. This may indicate efforts to bolster mental health have not been as effective as expected. Moving forward, we will incorporate student feedback by increasing the frequency of mental health outreach, identifying social media platforms that may be more effective in delivering resources, and educating students on where to turn for resources.
A Step towards Health Equity: Leveraging Community Engagement & Partnerships in Dermatology

Ana Maria Viteri, BS, MCW-Milwaukee; Olushola Akinshemoyin Vaughn, MD, MCW-Milwaukee, Dermatology; Allyson Rennebohm, Froedtert & MCW

ABSTRACT: Background: Racial and ethnic minorities experience increased mortality and morbidity associated with skin conditions. Delayed diagnosis contributes to these poor healthcare outcomes. Community engagement and partnerships may serve as crucial intervention strategies to improving these outcomes in our medically underserved communities. Objectives: The purpose of this study is to analyze the impact of the Skin, Hair, & Nails Screening community outreach event done in partnership with Gee’s Clippers Barbershop and Beauty Salon.

Methods: This initiative was led by dermatologist Dr. Olushola Akinshemoyin Vaughn, in collaboration with Froedert & MCW dermatologists, staff, medical students, and Spanish interpreters. Attendees completed an intake form sharing their race, ethnicity, reason for utilizing the free screening services, and preferred language. After screening, attendees were directed to local medical resources, received information pertaining to their skin findings (available both in English and Spanish), and left with complimentary sunscreen samples.

Results: 65% of attendees identified as Hispanic and 31% identified as Black or African American. 59% of attendees preferred Spanish as their target language and 39% reported lack of health insurance coverage. Nevus, seborrheic keratosis, and dermatitis were the most common conditions identified among the 66 individuals who completed the screening. 3 lesions concerning for skin cancer were detected. 17 patients were referred for follow-up care at the MCW student-run free clinic.

Conclusion: Community outreach events done in partnership with local organizations or businesses serve as innovative approaches towards improving outcomes in medically underserved communities. Skin, hair, and nails screening events, specifically, serve as skin cancer prevention strategies, help reduce delayed diagnoses, and strengthen the physician-patient interaction between dermatologists and local community members from diverse backgrounds.

SUBMITTER: Ana Maria Viteri
**TITLE:** The Medical Assistant Accelerated Pathway to Employment Training Project (MAAPET)

**AUTHORS:** Katherine Karshna, Employ Milwaukee; Yvette Willis, Employ Milwaukee; Elizabeth Eiland, Employ Milwaukee; Chytania Brown, MS, Employ Milwaukee; Cheyenne Greenhouse, MCW-Milwaukee; Carletta Rhodes, MBA, MCW-Milwaukee, Family and Community Medicine; Linda Meurer, MD, MPH, MCW-Milwaukee, Family and Community Medicine

**ABSTRACT:**

Introduction: A shortage of Medical Assistants (MA) is a critical workforce need in our community, yet traditional 12-24-month programs are expensive and unable to keep up with health systems' demand. A collaboration among major regional health system employers, the Center for Healthcare Careers and Employ Milwaukee, the MAAPET aims to build a talent pool of MAs in SE Wisconsin by implementing a 14-week, accelerated, tuition-free training program with immediate employment targeting individuals from diverse, low income and underrepresented groups.

Methods: A target of 130 trainees in 10 cohorts will participate in 10 weeks of classroom training and 4 weeks of on-the-job clinical experience. MAAPET provides salary, community supports, trained preceptors, mentors and instructors. The evaluation includes process measures (e.g., achievement of program milestones, number/ characteristics of trainees), and product measures (reactions, learning outcomes, completion, employment and retention six- and 12-months post-program completion).

Results: To date, 103 trainees (8 cohorts) have enrolled, 75% of whom are 'underserved' [(Black (43%), Hispanic (17%), Hmong (3%), Native American (1%), Mixed race (3%); receiving public assistance/TANF (29%); and/or disabled (3%)]. While 15 enrollees remain in training, 79/88 (90%) successfully completed the 14-week program, and 74 of these (94% of completers; 73% of enrollees) were placed as MAs in one of the partner clinics. Of those placed early, 29 of 35 (83%) remained in their positions after 6 months, and 18 of 24 (75%) remained at 12 months. Of 43 graduates who took the national MA certification test, 42 (98%) passed. Participants report high satisfaction with program and many report achievements unreachable without the accelerated training and employment model.

Discussion: MAAPET is accelerating the production of a diverse MA workforce providing care at the frontline of clinical services, while providing life-changing career opportunities for individuals who may not have had such options in the past.

**SUBMITTER:** Linda Meurer
The COVID-19 pandemic disproportionally impacted underserved and vulnerable populations across the United States. However, territories such as Puerto Rico (PR) received considerably less attention and resources. This project focused on Loiza, a northeast coastal town located next door to the capital that is predominantly Afro-Caribbean and under resourced. During COVID-19, the municipality had one of the lowest vaccination rates and was identified as a high-risk site for disease transmission. In response, a partnership with Yale University School of Medicine, Puerto Rico Public Health Trust (PRPHT) and the Parcelas Suarez Community Board began to address testing barriers by implementing a COVID-19 surveillance program. Additionally, CENSUS surveys were performed to improve emergency preparedness. This work aimed to understand COVID-related challenges in the community and develop a new testing protocol. We hypothesize that implementation of the new protocol will increase testing. The study enrolled 144 eligible participants, followed-up with 114 participants and performed 705 tests. Preliminary data identified medical care, medication access, food, water, and transportation as COVID-specific community challenges. During a six-week period, we observed an increase in total tests performed and average daily testing compared to pre-implementation. Importantly, we observed an increase in follow-up testing amount in comparison with pre-implementation. Lastly, CENSUS data was collected for 679 houses and 715 community members were surveyed out of 888 houses. Preliminary data showed an increase in result turnover and retention of participants after protocol implementation. Given this data, our study identified the new protocol as a potential alleviator of testing barriers in Loiza. Our next steps are to continue working closely with community partners to complete community CENSUS and increase participant recruitment and survey follow-ups utilizing the new testing protocol. Our end goal is to ameliorate COVID testing and vaccination barriers for underserved and vulnerable populations, one vibrant community at a time.
What’s Happening in the Office of Community Engagement (OCE)

Meet Our Team

New OCE Staff Members

The OCE welcomed Jai Lor (top) and Yesica Desarden (bottom) to our office this year. Jai is an Administrative Associate who focuses on the needs of our office as well as supporting the different programs. He graduated from the University of Wisconsin-Milwaukee with a BS in Healthcare Administration. Jai loves meeting new people and making them feel comfortable. His favorite part of working in OCE is working with a diverse community of partners on different collaborations to advance the mission of MCW Office of Community Engagement.

Yesica is a Program Coordinator II and manages the office’s communications, planning of events, and program planning. She received a BA in Communication from Alverno College. Yesica is fluent in Spanish and loves to spend time with her husband and two small children. Her favorite part of working in OCE is being a part of a team that is committed to improving the health of our communities.
2022 President’s Community Engagement Awards
The President’s Community Engagement Award recognizes exemplary community-academic partnerships, community-engaged research, and community outreach activities of faculty, staff, students, and community partners. In 2022, 12 people and programs were recognized for their excellence. [Watch the award ceremony on our YouTube channel.]

Campus Compact Recognitions
Recognizing the importance of engaging on a national level with others working in community engagement, the OCE managed the nomination and application process for Campus Compact cohort opportunities.

Campus Compact Newman Civic Fellowship
Jonathan Wong, a second-year medical student at MCW-Milwaukee, was selected as a 2022-2023 Campus Compact Newman Civic Fellow for his outstanding work in community outreach and engagement. Wong was nominated for his volunteer work in housing and health equity and is one of a cohort of 173 students from across the country to be recognized. The fellowship provides students with training, networking opportunities and resources to nurture their interests.

Campus Compact Engaged Scholars Initiative (ESI)
Sara Kohlbeck, MPH, Director of the Division of Suicide Prevention for the Comprehensive Injury Center at MCW-Milwaukee, was selected for the 2022-2023 Engaged Scholars cohort. The ESI is a cohort-based program for early-career faculty and staff at Campus Compact member institutions. The Engaged Scholars will participate in a year-long collaborative learning and leadership program that will strengthen their individual and collective scholarship, research, and impact.
Catch Up on OCE’s Virtual Offerings

Watch past webinars, presentations, and ceremonies on our YouTube channel. Search “MCW Community Engagement” on YouTube or click here for the MCW OCE channel.

Community and Clinical Solutions to Lead

This 2-part webinar series was presented by the Medical College of Wisconsin (MCW) Office of Community Engagement and the Clinical and Community Solutions to Lead-Free Children Project. The Clinical and Community Solutions to Lead-Free Children Project is funded by the Advancing a Healthier Wisconsin Endowment (AHW).

Session 1: Community Responses and Solutions to Lead
The first session explored the issues of lead within the community through information and personal experiences shared by a physician, experts in lead-related areas, and a parent. The 148 attendees learned about the history of lead in Milwaukee, current data, common sources of lead, the impact of COVID-19 on the issue, and strategies for response.

Session 2: Clinical Responses and Solutions to Lead
The second session focused on the role of the health system in testing, response, surveillance, and prevention. The 145 attendees heard from a parent, medical professionals, and other health-focused experts about lead processes in the clinical setting, the impact of COVID-19 on this issue, and opportunities for improvement.

View both sessions on OCE’s YouTube channel.
CE Spotlight Series – Season 2

This monthly virtual series features community partners and the important work they are doing for and with the community; highlight their goals, motivations, and accomplishments, and the ways they have partnered with people and programs at MCW; and a chance to hear stories of resilience and inspiration. Join us on the 2nd or 3rd Wednesday of each month to learn about the many ways people partner with MCW to improve the health and lives of community members.

You can find our series webpage by googling “MCW CE SPOTLIGHT.”

Community Engagement (CE) Dashboard

The CE Dashboard was deployed in November 2020 with the intention of addressing the increasing needs to better measure the important components of CE work. Key features of the dashboard include access to our Faculty and Staff CE Surveys results, along with other metrics. The Dashboard is available to MCW department and institutional leaders. Contact communityengagement@mcw.edu for more information or to request access.
Recognitions

As a leader in community engagement, the Medical College of Wisconsin has received the following recognition in relation to its community engagement programs and initiatives.

Carnegie Community Engagement Classification

In 2015, the Carnegie Foundation for the Advancement of Teaching, which works to develop networks of ideas and institutions to advance teaching and learning, awarded the Community Engagement Classification to the Medical College of Wisconsin (MCW) in recognition of MCW’s community engagement practices. The Carnegie Community Engagement Classification designation for MCW is an honor and a monumental achievement, as it recognizes the innumerable exemplary campus-wide programs and initiatives that are focused on excellence in community engagement and on serving the needs of our communities. MCW is now one of four medical schools nationwide who have received this honor.

Campus Compact Richard Guarasci and Eduardo J. Padron Awards for Intuitional Transformation

The Campus Compact Richard Guarasci and Eduardo J. Padrón Awards for Institutional Transformation recognizes institutions that have successfully implemented institution-wide efforts to address issues of public concern by aligning teaching, research, practice, and values in service of the common good. Recipients are institutions that have undertaken comprehensive efforts to advance the values articulated in Campus Compact’s 30th Anniversary Action Statement of Presidents and Chancellors. As a national leader in community engagement, the Medical College of Wisconsin was recognized for this award in 2020 for integrating engagement into research, education, and clinical care with the goal of advancing health policy and advocacy and addressing the social determinants of health. Through initiatives like the Healthier Wisconsin Partnership Program and its extended community-engaged research, the Medical College of Wisconsin demonstrates a deep strategic commitment to community, embracing its responsibility as a place-based institution to address diverse health needs throughout Wisconsin.

Spencer Foreman Award for Outstanding Community Engagement

The Spencer Foreman Award for Outstanding Community Engagement is presented annually to a U.S. AAMC-member medical school or teaching hospital with a long-standing, major institutional commitment to partnering with the community it serves to identify and address community needs. MCW was recognized as a top institution in Community Engagement and Community Service as a Finalist for the Spencer Foreman Award (each year there are two Finalists recognized along with the recipient). This award is one of the most prestigious given by the AAMC and MCW is the only medical school to have been recognized among the top three institutions for the award more than once in the past 11 years; MCW was the recipient of the Spencer Foreman Award for Outstanding Community Engagement in 2005.
Stay Connected!

Scan the QR code with your cell phone camera to stay up to date on upcoming events and programs.
Acknowledgements

Thanks to all the presenters, faculty and staff who were involved in the 8th annual Community Engagement Poster Session. We appreciate your hard work, expertise and time investment!

Special thanks to the people listed below for their support of the 2022 Community Engagement Poster Session!

Joseph E. Kerschner, MD
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Julia A. Uihlein, MA, Dean of the School of Medicine
Medical College of Wisconsin

Staci Young, PhD
Senior Associate Dean for Community Engagement (interim)
Professor, Dept of Family & Community Medicine
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Sarah O’Connor, MS
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Karri Stock, BA
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Glossary of Terms

**Anti-Racist Institution** is an institution that has committed to identifying and changing its role in the systemic accumulation of disadvantages for one group(s) to the advantage of another group(s), based on persisting racist beliefs, with a sustained focus on racism that impacts Black Indigenous People of Color (BIPOC).¹

**Black Indigenous People of Color (BIPOC)** is a phrase used to identify people who are Black, Latinx, Asian and Indigenous peoples (see the definition for People of Color—POC). “Two letters, for Black and Indigenous, were included in the acronym to account for the erasure of Black people with darker skin and Native American people,” according to Cynthia Frisby, a professor of strategic communication at the University of Missouri School of Journalism.² Its use is still evolving and contested by some activists.¹

**Collaboration** is a “...process by which groups come together, establishing a formal commitment to work together to achieve common goals and objectives” through joint ownership of the work, risks, results, and rewards.³

**Community** is a group of individuals organized into a unit or manifesting some unifying trait or common interest. Community need not be defined solely by geography. It can refer to a group that self-identifies by age, ethnicity, gender, sexual orientation, special interest, faith, life experience, disability, illness, or health condition; it can refer to a common interest or cause, a sense of identification or shared emotional connection, shared values or norms, mutual influence, common interest, or commitment to meeting a shared need.⁴

**Community-Academic Partnership** is partnership that leverages the strengths of both community and academic partners to answer community health problems.⁵

**Community Based Participatory Research (CBPR)** is a “collaborative approach to research that equitably involves, for example, community members, organizational representatives, and researchers in all aspects of the research process.”⁶ “CBPR begins with a research topic of importance to the community with the aim of combining knowledge and action for social change to improve community health and eliminate health disparities.”⁷

**Community Capacity Building** is “an increase in community groups’ abilities to define, assess, analyze, and act on health or any other concerns of importance to their members.”⁸

**Community-Engaged Dissemination** is a way to distribute and integrate research evidence and evidence-based practice within communities and service systems.⁹

**Community-Engaged Research (CEnR)** is “a process of inclusive participation that supports mutual respect of values, strategies, and actions for authentic partnership of people affiliated with or self-identified by geographic proximity, special interest, or similar situations to address issues affecting the well-being of the community or focus.”¹⁰ It “is a core element of any research effort involving communities which requires academic members to become part of the community and community members to become part of the research team, thereby creating a unique working and learning environment before, during, and after the research.”¹⁰
Community Engagement is “collaboration between institutions of higher education and their larger communities (local, regional, state, national, global) for mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity.”¹¹

Community Outreach is “the ways faculty, staff, and students collaborate with external groups in mutually beneficial partnerships that are grounded in scholarship and consistent with [the] role and mission” of their professional appointment.¹²

Community Service is co-curricular or extracurricular service that is done apart from or in addition to academic or professional duties.¹³

Culture is the shared attitudes, values, beliefs, practices, goals, aesthetic standards, linguistic expression, patterns of thinking, behavioral norms and styles of communication which a group of people has developed to assure its survival in a particular environment and characterize a group.¹

Cultural Competence is the capacity to function effectively with various cultures and successfully navigate a multicultural, global society. On an organizational level, it assumes the capacity to creatively utilize a diverse workforce for meeting business goals, achieving the mission, and enhancing performance.¹

Cultural Humility is the “ability to maintain an interpersonal stance that is other-oriented (or open to the other) in relation to aspects of cultural identity that are most important to the person.” Cultural humility is different from other culturally based training ideals because it focuses on self-humility rather than achieving a state of knowledge or awareness.¹

Equality is about ensuring that every individual has an equal opportunity to make the most of their lives and talents.¹

Equity is the assurance of conditions for optimal access and opportunity for all people, with particular focus on promoting policies, practices, and cultural messages that eliminate differential negative outcomes for people from historically subordinated groups.¹

Health is broadly defined as a “state of complete physical, mental, and social well-being, and not merely the absence of disease.”¹⁴ It is “a resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities.”¹⁵

Health Disparities refer to “a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage. Health disparities adversely affect groups of people who have systematically experienced greater obstacles to health based on their racial or ethnic group; religion; socioeconomic status; gender; age; mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion.”¹⁶

Health Equity means that “everyone has a fair and just opportunity to be healthier. This requires removing obstacles to health such as poverty, discrimination, and their consequences, including powerlessness and lack of access to good jobs with fair pay, quality education and housing, safe environments, and health care.” “For the purposes of measurement, health equity means reducing and
ultimately eliminating disparities in health and its determinants that adversely affect excluded or marginalized groups.⁷

**Human-Centered Design** is “a problem-solving technique that puts real people at the center of the development process, enabling you to create products and services that resonate and are tailored to your audience’s needs.”¹⁸ Community-centered design set the stage for shared governance and people-focused design consideration.

**Inclusion (organizational inclusion)** is the co-creation and continual nurturing of a culture in which all people experience respect, belonging, access to opportunity, and influence through the integration of many cultural backgrounds, ideas, perspectives, and approaches to the work. An inclusive culture can produce learning, innovation, excellence, and mutual benefit throughout the missions of MCW and the communities we serve.¹

**People of Color (POC)** is a phrase used to identify people who are Black, Latinx, Asian, and Indigenous peoples – not to be confused with “colored” (a pejorative because of its historical context); the phase now frequently is used instead of “minority”.¹, ¹⁹

**Population Health** is “the health outcomes of a group of individuals, including the distribution of such outcomes within the group.”²⁰

**Public Health** has the mission of “fulfilling society’s interest in assuring conditions in which people can be healthy.”²¹ “Public health promotes and protects the health of people and the communities where they live, learn, work, and play.”²¹ “Public health works to track disease outbreaks, prevent injuries, and shed light on why some of us are more likely to suffer from poor health than others.”²²

**Racial Equity** is having full participation and access to the benefits and institutions of society free from discrimination for all people. These include health care, education, safe and affordable neighborhoods, sustainable employment, and the right to vote.¹

**Racial Inequity** is when two or more racial groups are not standing on approximately equal footing.²³

**Racism** is a marriage of racist policies (any measures that produce or sustain racial inequity between racial groups) and racist ideas (any ideas that suggest one racial group is inferior or superior to another racial group in any way) that produces and normalizes racial inequities.²³

**Social Determinants of Health** are “the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life. These forces and systems include economic policies and systems, development agendas, social norms, social policies, and political systems.”²⁴

**Social Justice** is “the view that everyone deserves equal rights and opportunities — this includes the right to good health.”²¹ Elimination of oppression and the “isms” to create a full and equal participation of all groups in a society where the distribution of resources is equitable and all members are physically and emotionally safe and secure.¹
Translational Science is “the field of investigation focused on understanding the scientific and operational principles underlying each step of the translational process.”\textsuperscript{25, 26}

Translational Science Spectrum is a continuum of “activities where critical insights are passed between research modalities so that biomedical discoveries can lead to tangible improvements in human health.” Basic science discoveries are “translated” to generate clinical insights which then are developed to inform implications for clinical practice which then lead to implications for population health. Levels of the spectrum are often identified by “T-levels”\textsuperscript{27} which correspond to the following:

- T0—Basic Scientific Discovery
- T1—Translation to Humans
- T2—Translation to Patients
- T3—Translation to Practice
- T4—Translation to Population Health
- T5—Improved Global Health
REFERENCES