



Community Engagement

Community Engagement Poster Session

Tuesday, November 17, 2020
3:00—4:30 PM

Virtual Meeting via ZOOM

Welcome to the 6th Annual MCW Community Engagement Poster Session.

Across the world and here in Wisconsin, the COVID-19 pandemic continues, and we are currently seeing rising numbers throughout Wisconsin. Though we are unable to gather in person during this unprecedented time, we are excited to try something new and recreate our poster session virtually. We hope that this new platform provides an opportunity to explore and look at the traditional poster session through a new lens. With the many challenges faced by our healthcare system and by our communities alike during this time, we want to encourage people to innovate not only by doing community engagement, but also in how we engage each other, for the overall health and benefit of the communities we serve.

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 community engaged works happening across MCW campuses and in Wisconsin communities, as well as the expertise and commitment to the practice of community engagement by faculty, staff, students, and community partners. We are fostering future leaders in community engagement by leveraging the mentorship, experience, insights, and efforts 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.

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

We wish you good health during these challenging times.

Sincerely,



Syed M. Ahmed, MD, MPH, DrPH, FAAFP

Associate Provost and Senior Associate Dean for Community Engagement

Professor, Department of Family and Community Medicine

Professor, Institute for Health and Equity

Director, Community Engagement Core

Director, CTSI Collaboration/Engagement Domain, CTSI SEW

Medical College of Wisconsin



Table of Contents

Abstracts and posters are provided in this document in the following order, grouped by breakout room:

1. Child Health, Care and Education

- a. *Assessment of Indoor Air Quality and Cleaning Behaviors in Urban Childcare Facilities* by Erin A. Lee, MS; Joshua Steinberg, MD; Anne Dressel, PhD
- b. *Community Engaged Program to Implement the Malawi Developmental Assessment Tool for Young Children at the Child and Family Foundation of Uganda Clinic in Kampala Uganda* by Sarah Benett, MS; Brittany Fickau; Ronald Anguzu; Harriet Babikako, PhD; Laura Cassidy, PhD
- c. *Key Stakeholder Perspectives on Information Exchange Between Early Head Start/Head Start (EHS/HS) Programs and Pediatric Practices* by Constance Gundacker, MD, MPH; Rachel Cusatis, PhD; Earnestine Willis, MD, MPH
- d. *“Eyes on the Future” Project at St. Augustine Preparatory Academy* by Jenna E. Maurer, BA; Velinka Medic, MS; Judy E. Kim, MD
- e. *Integrated Mental Health Curriculum for Middle School Students: A Pilot Study* by Jacqueline Schaefer, BS; Rebecca Waldman, BA; James Stevens, MD, PhD
- f. *Green Schoolyards: A Descriptive Analysis of Baseline Data Prior to a Natural Experiment* by Taylor Brockman; Charissa Fritzen-Pedicini; Yuhong Zhou; Michael Totoraitis; Sima Namin; Ronald Anguzu; Justin Hegarty; Kirsten Beyer
- g. *Key Stakeholder Perspectives On Community-Wide Resource Directories To Address Social Determinants Of Health* by Constance Gundacker, MD, MPH; Krisjon Olson, PhD; Sarah Zuk, MD, MPH; Earnestine Willis, MD, MPH
- h. *Housing Instability among Families and Caregivers of Children in Foster Care* by Michellai K. Parks, BS; Lisa Zetley, MD

2. Community Health and Clinical Care

- a. *Emergency Department Utilization* by Kaitlyn S. Sonnentag
- b. *Partnering with Community Leaders to Enhance Patient Care in the Emergency Department* by Ashley Pavlic, MD, MA; Taylor Sonnenberg, MD, MSGH; Sarah Russell
- c. *Factors Influencing Show Rates of Emergency Department Referrals to Primary Care Clinics* by Miranda H. Brown; Greg Stadter, MPH; M. Chris Decker, MD
- d. *Measuring Patient Length of Visit & Reducing Wait Times at Philippine Center Free Medical Clinic* by Jonathan Slimovitch; Cameron Stewart; Maria Mendoza-Lemes, MD
- e. *Empowering Primary Care Family Networks towards Nutrition Behavior Change* by Marie Balfour; Bryan Johnston, MD
- f. *Qualitative Findings of Latinx Families Experiences Following a Physical Activity and Nutrition Program* by David Nelson, PhD; Kelly Dione, MA; Mari Cevilla; Jackie Jones, MS, RDN; Jeffrey Condit, MS; Paula Papanek, PhD, MPT, LAT, ATC, FACSMT
- g. *Impacting pharmacy practice based on community-centered interventions at community pharmacy* by Sanaya Bhatena, BSc
- h. *Lessons learned in the first year of implementing a pharmacist-led community-based health screening program in underserved Milwaukee neighborhoods* by Michael DeBisschop, PharmD; David Ombengi, PharmD, MBA, MPH; Colleen Cornelius, MS

3. Creative Care for Vulnerable Populations

- a. *Community-Academic Partnership in Milwaukee County: A Model For Improving Veteran Healthcare Nationally* by Anjali Goswami, MS; Zeno Franco, PhD
- b. *Opioid Misuse Among Veterans: A community engaged approach to tackling a wicked problem* by Myah Pazdera, MS; Kajua B. Lor, BCACP; Otis Winstead Jr.; L. Kevin Hamberger, PhD; Zeno Franco, PhD; Sarah O'Connor, MS; Martina Gollin-Graves, MSW; Robert Hurley, MD, PhD; Syed M. Ahmed, MD, MPH, DrPH
- c. *The Warriors Path: Using clinical measures in a Veteran arts- based community project... should we?* by Katinka Hooyer, MS, PhD; Nancy Smith-Watson, BA; Leslie Ruffalo, MS, PhD
- d. *Bringing COVID-19 Patients Comfort: Virtual Music Sessions in the ICU* by Jennifer C. Mackinnon, MD, MM; Jennifer Hollis, CM-Th, MDiv; Julia Reimann
- e. *Enhancing patient-centered medical care through life story work* by Sai Suma K. Samudrala; Justin Laridaen; Seth Jovaag; Thor Ringler, MFA, MS; Michael McBride, MD, MS; Bertrand D. Berger, PhD
- f. *Evidence-Based Decision Making: Marathon County Pre-trial Project* by Natalie Weeks
- g. *Wisconsin Views on Addiction and Mental Health* by Nathan R. Staidl
- h. *Factors Associated with Tobacco use in Homeless Adults; A Mixed Methods Study* by Benjamin Wrucke, BS; Lauren Bauer, MD, MPH; Rebecca Bernstein, MD, MS

4. Health Communication and Messaging

- a. *Examining the Social Network of PATCH Teens* by Anna Bauman; Paula Neiweem; Corina Norrbom, MD; Amy Prunuske, PhD
- b. *"A gay man and a doctor are just like, a recipe for destruction": How racism and homonegativity influence health care for young Black gay and bisexual men* by Katherine G. Quinn, PhD; Broderick Pearson, MCW; Matthew Lewis
- c. *Anatomy-based Community Education Using Plastinated Organs* by Ryan E. Hillmer, PhD; Teresa N. Patitucci, PhD
- d. *COVID-19 in Wisconsin: A Qualitative Study Examining Wisconsinites Perceptions and Reactions* by Maren Hawkins; Anne Dressel, PhD, MLIS, MA, CFPH; Lucy Mkandawire-Valhmu, PhD; Peninnah Kako, PhD; Lance Weinhardt, PhD
- e. *Implementation of Digital Strategy for Community-Based COVID-19 Clinical Trial Recruitment* by Thomas Luo, BSE; Tom Jiang, PharmD
- f. *MaskUpMKE: The Medical College of Wisconsin's Collaborative Response to the COVID-19 Pandemic in Greater Milwaukee* by Jonathan C. Horng, BA; Michelle C. Horng, MPAS, PA-C; Mack G. Jablonski, BA; Zeno E. Franco, PhD; Adina L. Kalet, MD, MPH; Christopher S. Davis, MD, MPH
- g. *COVID-19: Engaging Hmong and Hispanic Populations in Bi-Directional Communication - Part 1 and Part 2* by Corina J. Norrbom, MD; Dima T. Jaber, BS; Greta Berger, BA; Mariana Savela, BS; Julie Bunczak, MSED; Amy Prunuske, PhD; Mang Xiong, BA; Tony Gonzalez, BA

5. Medical Student Education and Research

- a. *Analysis of Focus Group Results for Teleophthalmology to Improve Eye Health Among Latinos Study* by Megan D. Yee, BA; Militza Bonet Vázquez, MPH; Al Castro, MS; Velinka Medic, MS; Blanca Rodriguez; Judy E. Kim, MD
- b. *A community-engaged tool to bridge the gap in student ophthalmology education and inform student-led CHECK UP education sessions* by Katerina Tori; Megan Cory; Wasif Osmani; Rebecca C. Lundh, MD; Annette L. Giangiacomo, MD; Deborah M. Costakos, MD, MS
- c. *Implementing Telemedicine at a Student-Run Free Clinic: Adapting Operations to Continue our Mission During a Pandemic* by Allison E. Whorton; Spenser T. Marting; Staci A. Young, MD; Rebecca C. Lundh, MD
- d. *Medical Student Competencies for Community Engagement Informed by Community Stakeholders* by Amy Prunuske, PhD; Lucas Mathson, BS; Haley Pysick; Eric Giordano, PhD; Jacob Prunuske, MD; Corina Norrbom, MD
- e. *Wisconsin Physician Gender Bias* by Kristin Tischer; Brittany Shultz
- f. *Impacts of a Service-Learning Health Education Program on Public Housing Residents and Medical Student Leaders* by Eliana Sosa; Linda Meurer, MD, MPH; Staci Young, PhD
- g. *Implementing a Medical Student Community Engagement Summer Immersion Program* by Bryan Johnston, MD; Sarah O'Connor, MS; Kelsey Heindel; Myah Pazdera, MS; David Nelson, PhD, MS; Leslie Ruffalo, PhD; Syed M Ahmed, MD, MPH, DrPH, FAAFP
- h. *Tiered Mentoring At JMAC: Evaluation of a Medical Student-Led Health Careers Outreach Program* by Morgan Ashley C. Craft; Kyle Welhouse; Suzanne Letellier, MEd, MCHES; Linda Meurer, MD, MPH

6. Taking Care and Giving Care

- a. *The Impact of Adaptive Garden Tools in Central Wisconsin* by Hannah Phelan; Corina Norrbom, MD; Amy Prunuske, PhD; Elise Schuler; Brianna Wright
- b. *Avanzando Juntas: Adapting an Evidence-based Weight Loss Program for Hispanic Breast Cancer & Gynecological Cancer Survivors* by AnaKaren Manriquez Prado, BA; Staci Young, PhD; Sailaja Kamaraju, MD; Patricia Sheean; Kathleen Jensik, MSW; Melinda Stolley, PhD
- c. *A framework for transformed community-academic partnerships to reduce cancer disparities: A Case Study* by Tobi Cawthra, MPH; Laura Pineseault, PhD; Beth Brunner; Deborah Thomas, DD; Carol Williams, PhD; Melinda Stolley, PhD
- d. *Prescription Medication Disposal Methods in Marathon County Among the Aging* by Shannon D. Faehling; Corina Norrbom, MD
- e. *Geriatric Perceptions of Weight and Weight Loss in a Community Clinic* by Elise Kahn, BA; Leslie Ruffalo, PhD, MS
- f. *Healthcare System Support for Caregivers of Elderly Adults Through the Lens of the Medical Community* by Annie Tuman; Leslie Ruffalo, PhD
- g. *Brain is Time* by Abdulghani Mounir; Timothy Guthrie
- h. *Assessing Efficacy of Pre-Hospital Providers in Correctly Identifying CVA in De Pere and Ashwaubenon WI - A Retrospective Study* by Jayme S. Nelson; Patrick D. Best

Breakout Room: **1 - Child Health, Care and Education**

Title: Assessment of Indoor Air Quality and Cleaning Behaviors in Urban Childcare Facilities

Authors: Erin A. Lee, MS, MCW, Pediatrics; Joshua Steinberg, MD, MCW, Pediatrics; Anne Dressel, PhD, University of Wisconsin Milwaukee

Abstract: **BACKGROUND:** In Wisconsin, children 0-4 years old with asthma have the highest rates of both inpatient hospitalizations and emergency department visits. Indoor air quality (IAQ) can be 5 times higher than outdoor air and is a major risk factor for the development and aggravation of asthma.

OBJECTIVE: Pre-school aged children spend most of their time indoors, often in childcare centers where IAQ is unregulated. Project aims include characterizing baseline IAQ in childcare centers, assessing behaviors that affect IAQ, and determining efficacy of education to alter behaviors and IAQ measures.

METHOD: 36 Milwaukee County childcare centers participated in a 4-month program. IAQ monitors were installed in each center and collected air quality information continuously during the 4 months. Childcare administrators completed a survey about cleaning behaviors at the beginning and again at the end of the program. Half the centers received "early" education and the other half received "late" education on green cleaning. Nursing students, community health workers and asthma coalition members taught the curriculum and collected evaluations completed by participating childcare staff.

RESULTS: 33 child-care centers completed the program. Particulate Matter (PM_{2.5}), Total Volatile Organic Compounds (tVOC), and Carbon Dioxide (CO₂) levels all exceeded thresholds with levels increasing both during the day and during the week. During operational hours, PM_{2.5} exceeded 8% of the time, tVOC exceeded 31.5% of the time, and CO₂ exceeded 37.4% of the time. The educational program was well accepted by staff; however no significant behavioral changes were found.

CONCLUSION: High CO₂ suggests poor ventilation. Support may include retrofitting ventilation equipment or suggesting that staff open windows when IAQ gets worse. Individualized, longer term programming may be superior to a single curriculum intervention. Future projects are anticipated to assess how IAQ levels may affect the health of children in childcare.

Submitter: Lee, Erin

Record ID: 64

Assessment of Indoor Air Quality and Cleaning Behaviors in Urban Child Care Facilities



Erin Lee, MS | Medical College of Wisconsin, Fight Asthma Milwaukee (FAM) Allies; Joshua Steinberg, MD | Medical College of Wisconsin; Anne Dressel, PhD | University of Wisconsin, College of Nursing

The project described was supported by the National Center for Advancing Translational Sciences, National Institutes of Health, Award Number 2UL1TR001436. The content is solely the responsibility of the author(s) and does not necessarily represent the official views of the NIH. This project is funded by the Research and Education Program Fund, a component of the Advancing a Healthier Wisconsin Endowment at the Medical College of Wisconsin.

Problem / Question

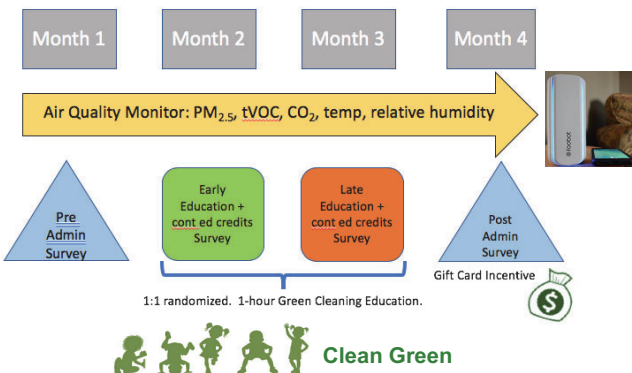
- Indoor Air Quality (IAQ) can be 5 times worse than outdoor air
- IAQ is associated with wheeze and asthma development
- Wisconsin childcare centers have unregulated IAQ
- Pre-school children spend most of their time indoors, often at childcare centers
- Asthma hospitalizations and ED visits are highest for pre-school aged children

Project aims:

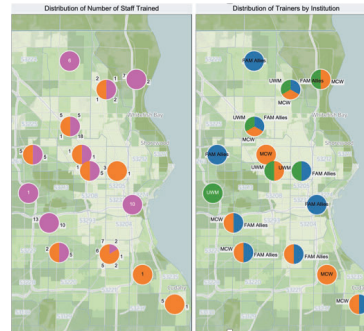
- Characterize baseline IAQ in childcare centers
- Assess behaviors that affect IAQ
- Determine influence of education on behaviors and IAQ

Project Overview

INTERVENTION: 36 Centers



Methods

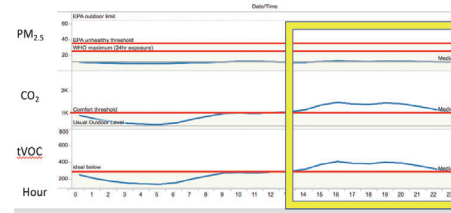


33 centers completed:
Family centers (≤8 kids)
Group centers (>8 kids)
 Household income increasing from light green to dark green

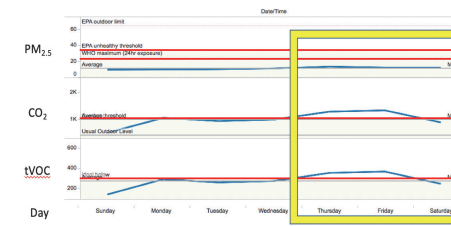
15 Instructors from:
4, FAM Allies, local nonprofit
8, UWM Nursing students
3, MCW Community Health Workers

Observations

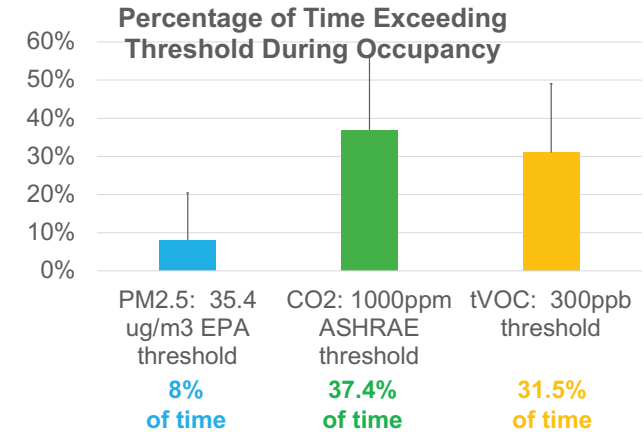
Carbon Dioxide (CO₂) and Volatile Organic Compounds (tVOC) increased during each day:



Carbon Dioxide (CO₂) and Volatile Organic Compounds (tVOC) increased during each week:



Results



Exceedences found for PM_{2.5}, CO₂, and tVOC during operational hours.

Conclusions

- Average CO₂ and tVOC increased during each day and during each week.
- Exceedences found for PM_{2.5}, CO₂, and tVOC during operational hours.
- Education did not alter behaviors or IAQ.
- Education was feasible and well accepted.

Works Cited

IAQ Threshold Criteria:

- Salthammer, T., 2011. Critical evaluation of approaches in setting indoor air quality guidelines and reference values. *Chemosphere*, 82(11), pp.1507-1517.

IAQ related to Wheezing/Asthma, Major References:

- Burbank AJ, Sood AK, Kasic MJ, Peden DE, Hernandez ML. Environmental determinants of allergy and asthma in early life. *J Allergy Clin Immunol*. 2017;140(1):1-12. doi:10.1016/j.jaci.2017.05.010
- Bernstein JA, Alexis N, Bachhav H, et al. The health effects of nonindustrial indoor air pollution. *J Allergy Clin Immunol*. 2008; 121(3):585-591. doi:10.1016/j.jaci.2007.10.045

Cleaning Products related to wheezing:

- Heavy use of cleaning products have been associated with respiratory health in young children:
- Frequent use of household cleaning products in early life was associated with an increased risk for child-hood wheeze and asthma but not atopy at age 3 years.
- Parks, J, McCandless, L., Dharmia, C., Brook, J., Turvey, S.E., Mandhane, P., Becker, A.B., Kozyrskyj, A.L., Azad, M.B., Moraes, T.J. and LeBlanc, D.L., 2020. Association of use of cleaning products with respiratory health in a Canadian birth cohort. *CMAJ*, 192(7), pp.E154-E161.
- Sherriff, A., Farrow, A., Golding, J. and Henderson, J., 2005. Frequent use of chemical household products is associated with persistent wheezing in pre-school age children. *Thorax*, 60(1), pp.45-49.

References for quality of data from Foobot:

- Sousan S, Koehler K, Hallett L, Peters TM. Evaluation of consumer monitors to measure particulate matter. *J Aerosol Sci*. 2017;107:123-133. doi:10.1016/j.jaerosci.2017.02.013
- Singer B, Delo W. Response of consumer and research grade indoor air quality monitors to residential sources of fine particles. *Indoor Air*. 2018;28(4):624-639. doi:10.1111/ina.12463
- District S. Air Quality Sensor Performance Evaluation Center. 2019.
- Moreno-Rangel A, Sharpe T, Musau F, McGill G. Field evaluation of a low-cost indoor air quality monitor to quantify exposure to pollutants in residential environments. *J Sensors Sens Syst*. 2018;7(1):373-388. doi:10.5194/jsss-7-373-2018

Survey Results

- Common Tools:** Dusters, Wet Mops, Vacuums
- Common Cleaners:** Bleach, Bathroom cleaner, Floor cleaner
- Timing:** Non-business hours, except for floor sweeping
- Rare:** Ammonia Use, Pillow Washing, Carpet Cleaning
- Bleach:** typically measured and diluted rather than "eyeballed"
- Candles and incense were exclusively used in Family facilities, yet rarely used.
- Air freshener use common, more often in Group facilities.
- Plug-ins common in Family centers.

Breakout Room: **1 - Child Health, Care and Education**

Title: Community Engaged Program to Implement the Malawi Developmental Assessment Tool for Young Children at the Child and Family Foundation of Uganda Clinic in Kampala Uganda.

Authors: Sarah Benett, MS, MCW; Brittany Fickau, MCW; Ronald Anguzu, MCW; Harriet Babikako, PhD, Child and Family Foundation Uganda; Laura Cassidy, PhD, MCW

Abstract: BACKGROUND: Studies of neurodevelopment in children using tools appropriate for western culture may yield inaccurate results for children in Uganda. Therefore, we engaged clinic personnel in Kampala Uganda to implement a culturally appropriate neurodevelopmental screening program for children under six years old using the Malawi Developmental Assessment Tool (MDAT) at the Child and Family Foundation of Uganda (CFU). Implementation of the program has been assessed.

METHODS: The program was developed in collaboration with the CFU in Kampala as they identified this as a significant need. The lead physician, along with the community, led the design and implementation. Parents who brought their children to the Friday immunization clinic were offered the free screening for their children. The immunization clinic serves a large catchment area in an underserved area of Kampala.

RESULTS: An iterative implementation process improvement method involved comprehensive training for administrating the MDAT, comparison of results, and discussion of interpretations to refine the process. Training included a week of structured sessions to identify proper means of assessing each step of development, scoring each section, the score interpretation by age defined developmental milestones, and practice sessions. Essential components involved learning about cultural norms of the community, working with a translator, and data entry and quality checks into KoBoCollect.

CONCLUSION: A significant challenge was to ensure the program tested the child's skill in performing the task rather than their ability to understand English. We partnered with interpreters from the local communities which improved accuracy. This ensured the caregiver was not over-instructing and influencing the child's performance. They identified the need for adequate physical space free of distractions. It was important that the testing occurred at times where community members were available. It was essential to partner with the clinic for training, implementation, and evaluation to integrate into the workflow with minimal disruption.

Submitter: Benett, Sarah

Record ID: 65

Program Implementation and Assessment of the Malawi Developmental Assessment Tool for Young Children at the Child and Family Foundation of Uganda Clinic in Kampala, Uganda



Sarah Bennett¹, Brittany Fickau¹, Ronald Anguzu¹, Harriet Babikako PhD^{2,3}, Laura Cassidy PhD¹
 Medical College of Wisconsin¹, Makerere University², Child and Family Foundation Uganda³

Background

- It is estimated that over one-third of children under the age of 5 in low-and-middle-income countries are at risk of not reaching their neurodevelopmental potential¹
- In Uganda, only 26% of children under the age of 5 are developmentally on track for literacy and numeracy¹
- The Malawi Developmental Assessment Tool (MDAT) was developed in 2010 due to the fact that other developmental assessment tools have unfamiliar terms and milestones which may yield misleading results²

Specific Aims

- To assess the program implementation of the MDAT tool at the Child and Family Foundation of Uganda
- To evaluate neurodevelopment in children under 6 years old in Kampala Uganda

Methods

- Approval from the study was sought from the Institutional Review Board at the Medical College of Wisconsin and Mulago Hospital, as well as the Ugandan National Council of Science and Technology
- The implementation was conducted from June 2019 – August 2019 at the Child and Family Foundation in Kampala, Uganda
- Implementation of the program included a week of structured sessions to identify proper means of assessing each step of development, scoring each session, and score interpretation by age defined developmental milestones, and several practice sessions
- Parents who brought their children to the Friday immunization clinic were offered the free neurodevelopmental screening for their children
- We determined when to implement the assessment with consideration given to work flow of the clinic
- Components involved learning about cultural norms, how to work with a translator, and data entry & quality checks into KoboCollect
- Demographic information including Malaria and TB history, HIV status of mom and child, and home life was collected from the caregiver to determine what could impact neurodevelopment

Results

Challenges:

- Testing the child's skill in performing the task rather than English comprehension
- Ensuring interpreters were properly translating and administering the tool
- Ensuring the caregiver was not over-instructing and influencing the child's performance
- Caregivers did not know the answers to the demographic questions ex: APGAR score or child's HIV status
- Having adequate spaces free of distractions
- How to answer demographic questions without access to an EMR
- Using KoboCollect correctly

Unique Barriers Faced:

- Patient population was largely correlated to the vaccine clinic which was dependent on availability of vaccines
- Due to broken refrigerator, vaccine supply was dependent on a near-by clinic's supply, limited days the vaccines could be offered, and increased the cost of vaccines

D SOCIAL					
1. Smiles but not at a particular person...	2. Smiles in response to a person	3. Pretends with mother or caregiver in response to being played with	4. Pretends alone, happily playing, moving around moving body and kicking legs in a happy way.	5. Recognizes or settles (quits) with caregiver known family members. Shows calm or quiet when mom or another known caregiver takes the baby.	6. Will take phala (porridge) from a spoon when fed by a caregiver
7. Helps hold a cup while mom gives a drink.	8. Stretches to be picked up.	9. Can hold a spoon with phala (porridge) but NOT get to mouth with it.	10. Drinks from a cup by self without spillage.	11. Is able to indicate by pointing that they want something.	12. Can eat by picking up morsels of maize (maize) made by man.
13. Puts hands out to be washed by mom or caregiver - helps by putting hands out.	14. Can hold a spoon and take phala (porridge) by self but spills some a little bit	15. Indicates in some way the need for a pee or a pee. For example by crying, pulling at pants or saying something...	16. Wants to join in singing games. Ask: "When the child like to be included in singing games even if he/she can not yet do them?"	17. Able to greet either by extending hand or verbally.	18. Understands to share things with others and will do so if with friends or family and asked to share.
19. Shows a pee or a pee by themselves without wetting their pants.	20. Takes phala (porridge) off a spoon without spillage.	21. Can make own morsels of maize/maize and put in mouth (often with milk)	22. Is able to undress by themselves - can take off even one item of clothing e.g. shorts or shirt, need to be able to remove it completely.	23. Wants to go and visit a friend's house, shows independence	24. Can go to the toilet by themselves anywhere (not necessarily at the pit latrine)
25. Can eat food or milk with bits or bones in it such as fish with bones or tangerines with seeds	26. Is able to dress but not completely. Can put on at least one item e.g. T shirt/shirt	27. Washes hands well before/after eating	28. Knows how to keep quiet at important meetings or ceremonies	29. Does household chores in a useful way e.g. drawing water or washing, could be even a small amount of help but not just pretend.	30. Able to dress by self completely. May need help with buttons, shoe laces or zips.
31. Understands the concept of discipline e.g. causes and consequences such as that saying bad words might lead to punishment...	32. Plays games with turn taking such as falays, mwa, jinga.	33. Knows how to be respectful to elders. Is polite and shows respect such as putting hands together or bowing before elders	34. Can go to the toilet or pit latrine by self	© MDAT Research Team	

Figure 1. MDAT Social Screening Tool

Milestones Unique to MDAT Compared to Western Culture Developmental Tools

Fine Motor Milestones

- Making car out of wire
- Making a pattern with bottle tops
- Sorting out maize/beans

Social Milestones

- Able to conduct chores around the house
- Participating in helping the caregiver
- Pretend play involving household chores
- Respect of elders
- Able to go to the latrine/toilet by themselves, anywhere (not necessarily on the toilet)

Language Milestone

- Able to stay quiet during important ceremonies
- Sharing with others
- Able to greet other by shaking their hand
- Two syllable recall with Pa, Chi, Tu, Go



Image 1. Friday Vaccine Clinic



Image 2. Study staff conducting the tool

Conclusion

- Implementation of a neurodevelopmental assessment program in clinic has the potential for early detection of developmental delay in children that could lead to early intervention and drastic improvement of their quality of life
- There are no standardized screening programs to assess developmental outcomes in Ugandan children
- It is important to use a tool that is culturally appropriate in order to obtain accurate results
- Answers to demographic questions allowed for health interventions ex: HIV testing

Next Steps

- Continue to work with Child and Family Foundation of Uganda to implement developmental screening for early detection and improved quality of life
- Ensure standard operational procedures are continued to be established for consistent and accurate data collection
- Ensure that data collection does not interfere with the work-flow of the clinic
- Continue to integrate data collection into the clinic flow
- Implement the MDAT into a rural clinic to compare and contrast data to the urban clinics
- Future development of the MDAT throughout Kampala, as well as expanding the tool to other rural areas within Uganda will continue to provide data about neurodevelopment

Acknowledgements

Dr. Elaine Kohler Summer Academy of Global Health Research, the Medical College of Wisconsin Office of Global Health, The Child and Family Foundation Uganda, and Makerere University

Citations

- Chandy, John C., Black, Maureen M., & Nelson III, Charles A., "Neurodevelopment: the impact of nutrition and inflammation during early to middle childhood in low resource settings." *Pediatrics*, Vol. 139, 2017, pp. S59-S71.
- Gladstone, M., et al. "Perspectives of normal child development in rural Malawi—a qualitative analysis to create a more culturally appropriate developmental assessment tool." *Child: care, health and development* 36:3 (2010): 346-353.
- Gladstone, Melissa, et al. "The Malawi Developmental Assessment Tool (MDAT): the creation, validation, and reliability of a tool to assess child development in rural African settings." *PLoS medicine* 7.5 (2010): e1000273.

Breakout Room: **1 - Child Health, Care and Education**

Title: Key Stakeholder Perspectives on Information Exchange Between Early Head Start/Head Start (EHS/HS) Programs and Pediatric Practices

Authors: Constance Gundacker, MD, MPH, MCW, Pediatrics; Rachel Cusatis, PhD, MCW; Earnestine Willis, MD, MPH, MCW

Abstract: BACKGROUND: EHS/HS is an evidence-based early childhood education and family support service program for low-income families with children < 5 years. Currently, tracking health information occurs through paper EHS/HS forms completed by pediatric practices and returned via caregiver or fax to the EHS/HS agency while family support information is predominantly collected in EHS/HS. Gaps exist in timely exchange of information between childcare and healthcare providers to benefit children and families.

OBJECTIVE: Identify perspectives of parents/caregivers, EHS/HS staff, and clinical staff on medical and social information exchange between EHS/HS and pediatric practices.

DESIGN/METHODS: Focus groups were conducted with caregivers and EHS/HS staff at an early childhood development center. Semi-structured in-person interviews were conducted with clinical staff associated with pediatric practices. Clinic and EHS/HS staff recruitment aimed for broad representation by roles/experiences. Caregivers meeting inclusion criteria (≥ 18 years, child enrolled in EHS/HS program, English-speaking) were recruited via email or flyer from EHS/HS agency. Inductive qualitative analysis of transcripts from audio-recordings identified emergent themes. We conducted 3 EHS/HS staff focus groups (n=18); 5 caregivers' focus groups (n=34); and 8 clinical staff interviews.

RESULTS: Major themes included: knowledge gaps and workflow issues. Knowledge gaps included subthemes of health, EHS/HS, and purpose of forms. Workflow issues included subthemes of interagency communication, roles, health physical forms, and parental perceptions. Issues that were common across all three groups were repetitiveness and release of information. Uniquely, most caregivers found medical/social information sharing acceptable; EHS/HS staff reported knowledge gaps in medical terminology; and clinic staff expressed knowledge gaps about EHS/HS programs/roles and desire for an automated form in the electronic health record.

CONCLUSION: Knowledge gaps and workflow issues exist between service sectors for children. Next steps are to implement education to address knowledge gaps, electronic communication tools, and workflow changes to benefit families.

Submitter: Gundacker, Constance

Record ID: 66

BACKGROUND

- Early Head Start/Head Start (EHS/HS) is an evidence-based early childhood education and family support service program for low-income families with children birth to age 5 years.
- Tracking health information currently occurs through paper EHS/HS forms completed by pediatric practices and manually processed by EHS/HS centers.

OBJECTIVE

- Identify perspectives of parents/caregivers, EHS/HS staff, and clinical staff on medical and social information exchange between EHS/HS and pediatric practices.

METHODS

A qualitative approach with 3 key groups:

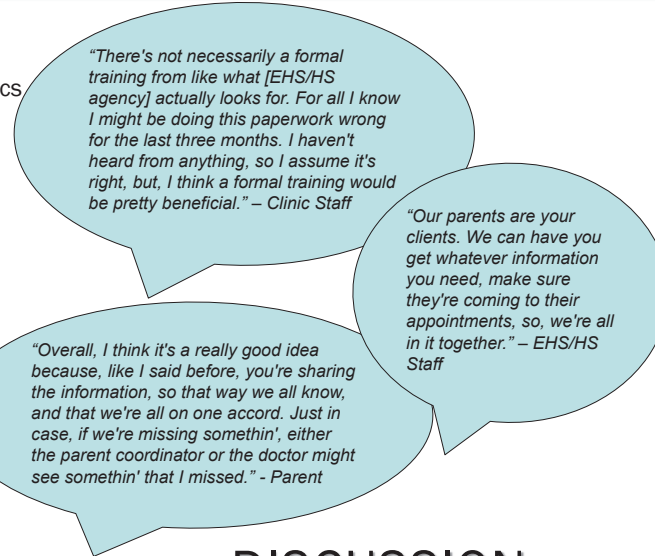
- Parents/Caregivers:**
 - 5 focus groups (Demographics in Table 1).
 - Inclusion criteria: ≥18 years, child enrolled in EHS/HS program, English-speaking.
- EHS/HS Staff:**
 - 3 focus groups.
- Clinical Staff:**
 - 8 semi-structured in-person interviews.
- Clinical and EHS/HS staff recruitment aimed for broad representation by roles/experience.
- Inductive qualitative analysis of transcripts from audio-recordings identified themes.

RESULTS

Table 1. Parent/Caregiver, EHS/HS Staff, and Clinical Staff Demographics

N/Mean (%/SD)	Parents (n= 34)	EHS/HS Staff (n= 18)	Clinical Staff* (n= 8)
Age	32.8 (11.6)	37.1 (11.7)	
18-24			2 (25)
25-34			3 (37.5)
35-44			1 (12.5)
45-54			1 (12.5)
55-64			1 (12.5)
Gender			
Female	30 (88.2)	17 (94.4)	7 (87.5)
Male	4 (11.8)	1 (5.6)	1 (12.5)
Ethnicity			
Hispanic or Latino	1 (3.0)	2 (11.1)	0
Not Hispanic or Latino	32 (97.0)	16 (88.9)	8 (100)
Race			
Asian	2 (6.3)	4 (25.0)	1 (12.5)
Black or African American	30 (93.8)	10 (62.0)	1 (12.5)
White	0	2 (12.5)	6 (75)

* Clinical staff includes: 2 medical assistants, 3 registered nurses, 3 pediatricians or advanced practice providers



"There's not necessarily a formal training from like what [EHS/HS agency] actually looks for. For all I know I might be doing this paperwork wrong for the last three months. I haven't heard from anything, so I assume it's right, but, I think a formal training would be pretty beneficial." – Clinic Staff

"Our parents are your clients. We can have you get whatever information you need, make sure they're coming to their appointments, so, we're all in it together." – EHS/HS Staff

"Overall, I think it's a really good idea because, like I said before, you're sharing the information, so that way we all know, and that we're all on one accord. Just in case, if we're missing somethin', either the parent coordinator or the doctor might see somethin' that I missed." - Parent

DISCUSSION

- Major themes included: knowledge gaps and workflow issues.
- Knowledge gaps included: health, EHS/HS and purpose of forms.
- Workflow issues included: interagency communication, roles, health physical forms, and parental involvement.

CONCLUSION

- Knowledge gaps and workflow issues exist between service sectors for children.
- Implement education to address knowledge gaps, electronic communication tools, and workflow changes to benefit families and staff.

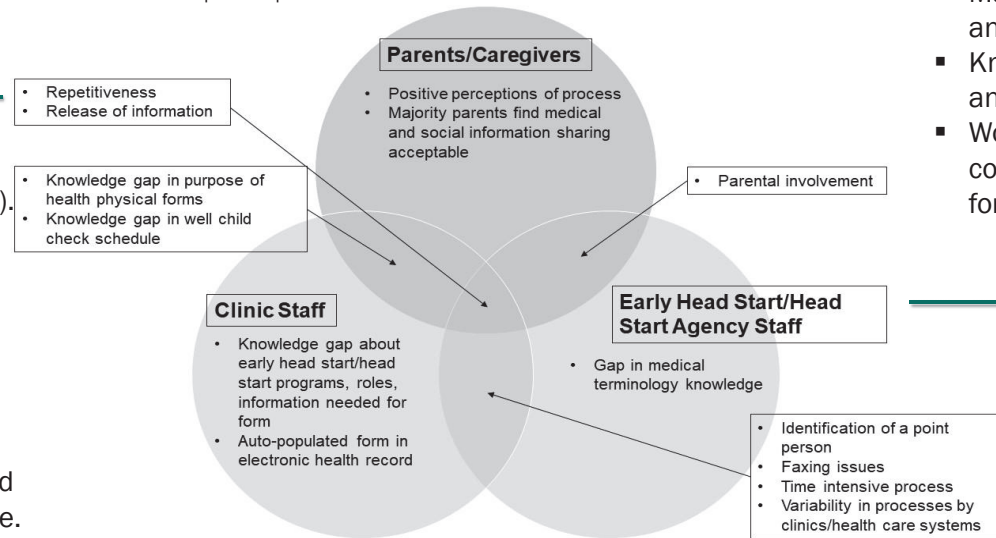


Figure 1. Unique and Common Subthemes Across Key Stakeholders

Breakout Room: **1 - Child Health, Care and Education**

Title: "Eyes on the Future" Project at St. Augustine Preparatory Academy

Authors: Jenna E. Maurer, BA, MCW; Velinka Medic, MS, MCW, Ophthalmology Clinical Research; Judy E. Kim, MD, MCW, Ophthalmology

Abstract: BACKGROUND: Latinos are considered an underrepresented group in science and medicine. Therefore, innovative methods are needed to increase Hispanic and Latino exposure, interest, and representation in these fields.

OBJECTIVE: A pipeline program called "Eyes on the Future" was created, and implementation and acceptance by the stakeholders was evaluated. It was believed that a program incorporating early exposure to medical science during education and mentoring by medical students may be effective.

METHOD: 8th grade students at St. Augustine Preparatory Academy in Milwaukee, which provides education to predominantly Latino students, participated in the project. Several activities led by MCW medical students were designed to engage the 8th grade students throughout the year, including an interactive presentation on the eye with an introduction to possible STEM careers, a collaborative eye dissection, and a visit to the STAR Center at MCW for clinical simulations. Students and teachers were asked to complete an anonymous evaluation upon culmination of the program.

RESULTS: For the STAR Center visit, teachers selected 26/120 students who showed exceptional motivation and interest in the presentation and eye dissection. While the majority of students (63%) selected the STAR Center as their favorite event, the majority of students (81%) also indicated that they did not have a least favorite event. Overall, the number of students who demonstrated an interest in science/medicine before the program as compared to after increased from 40% to 73%. Both students and teachers expressed an overall satisfaction with the program, especially the hands-on components. Teachers reported high student engagement, which corresponded with comments from the students reflecting a joy in learning new things.

CONCLUSION: Creation and implementation of a pipeline program for mostly Latino middle school students was feasible, well-received, and may serve as a model that can be followed at other schools.

Submitter: Maurer, Jenna

Record ID: 67

"Eyes on the Future:" Engaging A Future Generation of Latino Physicians and Scientists

Jenna Maurer, BA; Velinka Medic, MS; Joshua George, BA, MPH; Judy E. Kim, MD

Background

- An estimated 18.3% of the U.S. population identifies as Hispanic or Latino (1), while the number of Latino students graduating from medical school remains around 4.6% (2).
- Innovative methods are needed to increase Hispanic and Latino exposure, interest, and representation in these fields.

Objective

- Our program aims to:
 1. Incorporate early exposure to science and medicine.
 2. Involve education and mentoring by current medical students.
 3. Spark an interest in and inspire the pursuit of STEM-related careers.

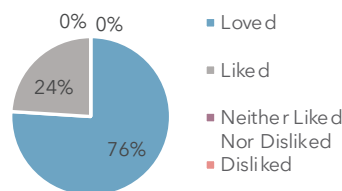
Methods

- The project was launched for the 8th grade class at St. Augustine Preparatory Academy, which provides education to predominantly Latino students.
- Several activities were led by MCW students throughout the year. Activities included:
 - an interactive presentation on eye anatomy, general eye health, and an introduction to a variety of potential STEM careers.
 - a collaborative cow eye dissection.
 - a visit to the STAR Center at MCW for clinical simulations.
- Students and teachers were asked to complete an anonymous evaluation upon culmination of the program so that improvements could be made for upcoming years.

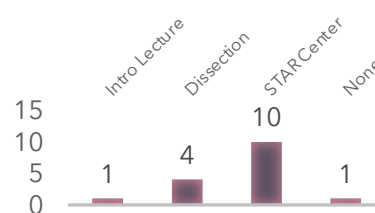
Results

- The entire class of 120 students participated in both the interactive presentation and the eye dissection. A group of 26/120 students who showed exceptional interest and motivation were selected by St. Augustine teachers for the STAR Center visit.
- Out of the 26 students who participated in all 3 events, 16 completed the anonymous evaluation.

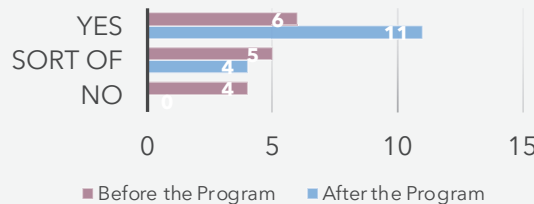
STUDENTS' OVERALL RESPONSE TO THE PROGRAM



STUDENTS' FAVORITE PART OF THE PROGRAM



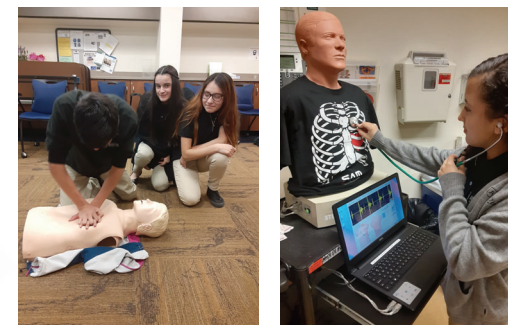
Interest in Science/Medicine



- Student **interest in science/medicine** increased from 40% to 73%.
- Both students and teachers especially appreciated the **hands-on** components.
- Teachers reported high **student engagement**, which corresponded with comments from the students reflecting a **joy in learning new things**.

Conclusions

- Creation and implementation of a pipeline program for mostly Latino middle school students was feasible, well-received, and may serve as a model that can be followed at other schools.
- The program was successful in exposing students to a variety of topics and careers in science and medicine and planting the seed for continued exploration in these areas.
- Mentorship and guidance from current medical students was beneficial for middle school students.



References

- 1) "U.S. Census Bureau QuickFacts: United States." *Census Bureau QuickFacts*, www.census.gov/quickfacts/fact/table/US/PST045218.
- 2) "Current Trends in Medical Education." AAMC, 2016. <https://www.aamcdiversityfactsandfigures2016.org/report-section/section-3/#figure-17>.
- 3) Reede, JY. "A recurring theme: the need for minority physicians." *Health Aff (Millwood)* Vol. 22, No. 4 (Jul. - Aug. 2003).

Breakout Room: **1 - Child Health, Care and Education**

Title: Integrated Mental Health Curriculum for Middle School Students: A Pilot Study

Authors: Jacqueline Schaefer, BS, MCW; Rebecca Waldman, BA, MCW; James Stevens, MD, PhD, MCW, Psychiatry

Abstract: **OBJECTIVE:** This project involved teaching a mental health curriculum for seventh-grade students and evaluating the overall efficacy and impression on students and staff.

METHOD: A new partnership was established between the Medical College of Wisconsin and Longfellow Middle School in Wauwatosa, WI in order to develop a school-specific, need-based mental health curriculum. A total of 261 students received the five-lesson curriculum over a period of 12 weeks from medical student volunteers. Self-esteem surveys were completed at the beginning and end of the curriculum; pre- and post- curriculum scores were analyzed. Additional surveys were given to students, teachers, and medical students to collect their feedback.

RESULTS: Of the 95 students who provided reportable pre- and post- surveys, the average scores showed no significant difference. However, the qualitative response to the curriculum was positive from students, teachers and medical students.

CONCLUSION: Survey data did not show significant change, which was expected in light of the complexity of mental health knowledge and skills, as well research concerns, including missing responses and when the surveys were timed. The feedback of this pilot project showed in several forms that the project was highly valued by both its participants and instructors, and plans to continue the program are underway that implement feedback-guided changes.

Submitter: Schaefer, Jacqueline

Record ID: 75



knowledge changing life

Integrated Mental Health Curriculum: A Pilot Study

Jacqueline Schaefer; James M. Stevens, MD, PhD; Rebecca Waldman
Medical College of Wisconsin

INTRODUCTION

Longfellow Middle School is one of two middle schools in the Wauwatosa School District within the town of Wauwatosa, WI. There are roughly 600 students enrolled at Longfellow Middle School. Wauwatosa has a population of about 47,000 people and is in Milwaukee County, west of downtown Milwaukee. The Medical College of Wisconsin (MCW) is also located in the environs of Wauwatosa.

Mental health focused, skills-based curriculums have been shown to be effective at reducing problem behaviors at school in adolescents. One study¹ instituted their "integrated comprehensive school model for character development, problem behavior prevention, and academic achievement enhancement" through 15-20 minute daily lessons. They focused on the theories of self-concept and learning. The two study schools showed a decrease in disciplinary referrals by 78 – 85%.

Those with low levels of self-esteem may use negative coping skills to compensate for their lack of confidence and self-worth. Because self-esteem encompasses many entities of self-worth, it can be used as a global measure of mental health and measured quantitatively with Rosenberg's Self-Esteem Scale².

PROJECT GOALS

1. Reinforce mental health topics and skills already being taught in the general education curriculum of Longfellow.
2. Teach new coping and mindfulness skills to the students, to compliment and expand on their existing skills.
3. Increase students' self-esteem and decrease their negative coping behaviors via life skills acquisition.
4. Establish a curriculum that can be implemented on a continual, yearly basis with MCW's community partner, Longfellow Middle School.

METHODS

- Needs assessment completed to determine most relevant topics
- Five lesson curriculum developed with focus on previously taught and most relevant topics
- Rosenberg self-esteem survey selected to measure growth
- MCW medical student volunteers recruited and trained to teach lessons
- Parental consent obtained for self-esteem survey data analysis
- All 7th grade Longfellow Middle School students received the curriculum
- Students completed survey in the middle of first lesson and at end of last lesson
- Pre- and post-survey average scores were calculated and compared
- Feedback surveys given to students, teachers, and medical student volunteers

RESULTS

Self-Esteem Survey Data

- Ninety-five pre-curriculum surveys with average score of 20.68 out of 30.
- Seventy-nine post-curriculum surveys with an average score of 20.66.
- There was no significant change in the average score between the beginning and end of the curriculum.

Student Feedback Survey Data: Middle of Curriculum

- 62% of students agreed or strongly agreed that they felt confident in helping a friend who was struggling.
- 10% of students indicated that they did not enjoy the lessons.

Student Feedback Survey Data: End of Curriculum

- 92% of students felt all or some of the topics covered in the MHC were relevant to 7th grade students

Medical Student Volunteer Feedback Data

- All students enjoyed or very much enjoyed their MHC experience.
- Sixty-four percent of students felt prepared or very prepared to teach their first session based on materials/ preparation provided.
- 91% percent of student volunteers agreed or strongly agreed that the teaching materials provided were adequate/sufficient to teach the lessons.



Figure 1. Mid-curriculum student feedback survey. 1= Strongly Agree, 5= Strongly Disagree

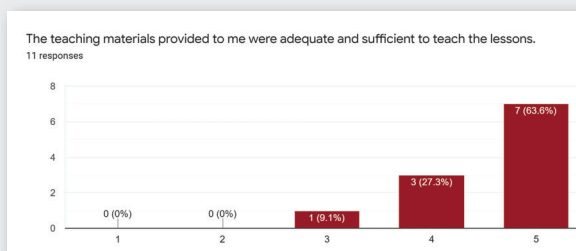


Figure 2. Medical student volunteer feedback survey. 1= Strongly Disagree, 5= Strongly Agree

DISCUSSION

The self-esteem survey scores did not show significant change from the beginning to end of the curriculum, which is somewhat expected as mental health is a complex entity that is difficult to measure. Additionally, this study had several statistical shortcomings, including a low consent rate and a poor survey response rate. Many surveys were unable to be analyzed as some surveys had names instead of ID numbers, were improperly filled out or where illegible. Additionally, some students were absent and therefore unable to fill out either a pre- or post-survey. Because our analysis only represents approximately one-third of students, it is possible that the curriculum led to a significant change in students' reported self-esteem and our analyzed subset is not an accurate representation of the population.

Even though this was a pilot program with a brand-new partnership, this project was successful at teaching important topics/skills, engaging students and provided valuable teaching opportunities for medical students. One 7th grade student commented, "I feel that it was a LOT of fun, and that learning about this type of thing is really important." Medical students also felt this experience was relevant and valuable. All medical student volunteers indicated they enjoyed or very much enjoyed their MHC experience and 91% of volunteers indicated they would consider teaching again next year. One medical student volunteer commented, "This was so fun and rewarding, and I am really glad I was able to be a part of it this year."

FUTURE DIRECTIONS

- Data collection changes: implement online consent
- Teaching style changes: utilize more videos, games, role playing and small group activities
- Content changes: less time for introductions and classroom rules
- Future use of curriculum: Currently planning for teaching of a similar curriculum this fall, but uncertain if in-person teaching will be possible, due to the Coronavirus-19. If this is not an option, hopefully virtual teaching methods will be explored so that students will have a change to learn about these vitally important topics.

REFERENCES

1. Flay, B.R., Alred, C.A., and Ordway N. (2001). Effects of the Positive Action program on achievement and discipline: two matched-control comparisons. *Prevention Science*, 2(2), 71-89.
2. Hagborg, W. J. (1996). Scores of Middle-School-Age Students on the Rosenberg Self-Esteem Scale. *Psychological Reports*, 78(3_suppl), 1071-1074. <https://doi.org/10.2466/pr0.1996.78.3c.1071>

Breakout Room: **1 - Child Health, Care and Education**

Title: Green Schoolyards: A Descriptive Analysis of Baseline Data Prior to a Natural Experiment

Authors: Taylor Brockman, MCW, Institute for Health and Equity; Charissa Fritzen-Pedicini, MCW, Institute for Health and Equity; Yuhong Zhou, MCW, Institute for Health and Equity; Michael Totoraitis, MCW, Institute for Health and Equity; Sima Namin, MCW, Institute for Health and Equity; Ronald Anguzu, MCW, Institute for Health and Equity; Justin Hegarty, Reflo and Green Schools Consortium of Milwaukee; Kirsten Beyer, MCW, Institute for Health and Equity

Abstract: SIGNIFICANCE: Increasing physical activity (PA) among children is not only important in preventing childhood obesity, but increasing PA may also improve children's overall well-being, mental health, and development. Studies have shown that spending time outside, and specifically in greenspace, is associated with decreased sedentary time, increased moderate-to-vigorous physical activity (MVPA), and improved cognitive functioning and social-emotional well-being. A way to increase PA in children, therefore, may be through addition of greenspace in the schoolyard.

HYPOTHESIS: The Institute for Health and Equity has the unique opportunity to conduct a natural experiment in partnership with the Green Schools Consortium of Milwaukee, Reflo, and Milwaukee Public Schools to evaluate the impact of an initiative to increase schoolyard greenspace, with the primary hypothesis being that schoolyard greening will lead to increased PA.

METHODS: In this study, we measured PA levels, time spent outdoors, and patterns of play prior to schoolyard greening. Accelerometers, GPS devices, and the System for Observing Play and Leisure Activity in Youth (SOPLAY) were used to measure activity levels, time spent outside, and student engagement levels, respectively, of 55 4th grade students in Milwaukee, WI.

RESULTS and CONCLUSION: The average number of steps/min per student was found to be 10.1, and the median time spent outdoors was 17 minutes, indicating the school day is largely sedentary. There is plenty of room for increasing PA and time outdoors. SOPLAY observations revealed unequal distribution of student engagement and activity levels over the schoolyard, suggesting students have varying interest in engaging in PA and with specific schoolyard features. These findings could all be impacted by greening through the planned construction of outdoor classrooms, sports fields for PE class, and addition of a variety of new green schoolyard features.

Submitter: Brockman, Taylor

Record ID: 76

Green schoolyards: a descriptive analysis of baseline data prior to a natural experiment

Taylor Brockman¹, Charissa Fritzen-Pedicini¹, Yuhong Zhou¹, Michael Totoraitis¹, Sima Namin¹, Ronald Anguzu¹, Justin Hegarty², Kirsten Beyer¹
 1. Institute for Health & Equity, Medical College of Wisconsin, Milwaukee, WI 2. Reflo and Green Schools Consortium of Milwaukee

Background

One third of US children are overweight or obese, which increases their risk for chronic disease later in life and negatively impacts their well-being during childhood.¹ A critical target for obesity prevention in children is increasing physical activity (PA). The physical environment is recognized as a key target for obesity prevention as studies have shown that spending time outside, and specifically in greenspace is associated with decreased sedentary time, increased moderate-to-vigorous activity,^{2,3} as well as improved cognitive functioning and social-emotional well-being.⁴ Also, school-age children obtain much of their PA during school recess, so addition of greenspace to the schoolyard may be a particularly important target in increasing PA among children.⁵

Hypothesis

The primary hypothesis of the schoolyard greening project is that greening will lead to increased student engagement, PA, and time spent outdoors, with implications for improving health. In this study, we measured PA levels, time spent outdoors, and patterns of play prior to schoolyard greening.

Methods

- Actigraph GT3X accelerometers and GPS devices were mounted on waistbands and used to measure the activity levels of and time spent outside by 55 4th grade students at Longfellow School
- Devices were worn by participating students at school for five consecutive days
- Student engagement and activity levels were observed in the schoolyard during recess using the System for Observing Play and Leisure Activity in Youth (SOPLAY), a systematic validated tool used to quantitatively evaluate levels of PA of individuals

Results

Table 1. Average MVPA, walking, and sedentary activity counts per day calculated using the four days of SOPLAY observation with the highest percent agreement between observers

	4th grade			Total
	MVPA (%)	Walking (%)	Sedentary (%)	
Females	3 (11)	14 (50)	11 (39)	28
Males	4 (18)	10 (46)	8 (36)	22
Total	7 (14)	24 (48)	19 (38)	50

SOPLAY:

- The largest category of activity was walking (48%)
- MVPA was the least observed activity (14%)
- Sedentary activity comprised 39% of female activity and 36% of male activity
- MVPA comprised 11% of female activity and 18% of male activity
- Much of the activity in the schoolyard (30%) was observed in area E—an area that contained the schoolyard garden and where the students played soccer and racing games
- Most male activities (36%) were also observed in area E
- Most female activities (32%) were observed in area C—an area of the schoolyard shaded by a large tree where students gathered to socialize

Table 2. Average activity counts by area per day calculated using the four days of SOPLAY observation with the highest percent agreement between observers

Zones	All Activities		Male Activities		Female Activities	
	Observed Activities	% of All Activities in Area*	Observed Activities	% of Male Activities in Area*	Observed Activities	% of Female Activities in Area*
A	2	4%	1	5%	1	4%
B	2	4%	1	5%	1	4%
C	11	24%	3	13%	8	32%
D	10	21%	5	23%	5	20%
E	14	30%	8	36%	6	24%
F	8	17%	4	18%	4	16%

*This percentage was calculated by dividing the number of observed activities in the given area by the total number of observed activities in the category (e.g. All Activities, Male Activities, Female Activities)



Figure 1. GPS-determined percent of activity (left) and density of activity (right) per schoolyard zone

ACCELEROMETRY AND GPS:

- Accelerometry data indicated an average of 10.1 (2.2, 18.6) steps per student per minute (sedentary activity is defined as 0-25 counts/15 second epoch, which translates to <100 counts/minute for our study)
- GPS data indicated the median time spent outdoors was 17 minutes
- GPS data revealed the area with the highest percentage of activity to be area D—an area of the schoolyard that contained several trees and where students played kickball
- GPS data revealed areas C and F to have the highest density of activity

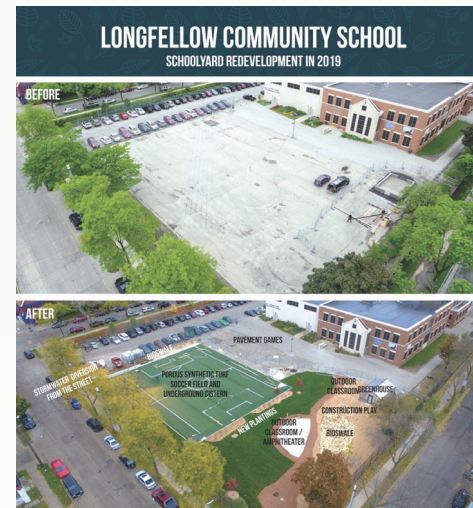


Figure 2. Photos of Longfellow School schoolyard before and after construction of green schoolyard

Discussion

The school day is largely sedentary at Longfellow—there is plenty of room for increasing both PA and time outdoors. This could be impacted by greening through the planned construction of outdoor classrooms and sports fields that can be used for PE classes. Limitations that may have impacted these findings are that only 15 minutes were allotted for recess each day, and the data collection team was unable to ensure 24-hour wear of the accelerometers for 7 consecutive days, which is considered the standard for accelerometer measurements. SOPLAY findings suggest varying interest in engaging in PA and with specific schoolyard features, which may both be impacted by greening. Though there is some difference between the SOPLAY and GPS findings for percentage of activity in each schoolyard zone (perhaps due to the activity “snapshot” nature of the SOPLAY tool), areas C, D, E and F had the highest percentage of activities according to both GPS and SOPLAY data. It is interesting to note that as well as being the largest areas of the schoolyard, areas C and D were the sole areas with tree-cover on the schoolyard, and areas E and F also contained the schoolyard garden.

Future Work

Post-greening data collection for Longfellow has unfortunately been greatly impacted by the Covid-19 Pandemic. What we have learned through this preliminary data collection will inform our work with future cohorts involved in the Greening Schoolyards initiative.

References

- Ogden CL, Carroll MD, Fryar CD, et al: Prevalence of obesity among adults and youth: United States, 2011-2014. *NCHS Data Brief* 219: 1-8, 2015
- Wheeler BW, Cooper AR, Page AS, et al: Greenspace and children's physical activity: A GPS/GIS analysis of the PEACH project. *Prev Med (Baltimore)* 51: 148-152
- Lachowycz K, Jones AP, Page AS, et al: What can global positioning systems tell us about the contribution of different types of urban greenspace to children's physical activity? *Health Place* 18: 586-594, 2012
- Chawla L: Benefits of Nature Contact for Children. doi:10.1177/0885412115595441
- Ridgers ND, Stratton G, Fairclough DL: PA levels of children during school playtime. *Sports Med*, 2006

Acknowledgements

This project was funded by the Medical College of Wisconsin Institute for Health & Equity, the Advancing a Healthier Wisconsin Endowment, and the Medical College of Wisconsin Cancer Center. Special thanks to Drs. Swartz, Massey, Pearson, Stolley, Hyun, and Banerjee for their contributions. Thanks also to Longfellow Principal Ms. Cerda and Riya Mehta.

Breakout Room: **1 - Child Health, Care and Education**

Title: Key Stakeholder Perspectives On Community-Wide Resource Directories To Address Social Determinants Of Health

Authors: Constance Gundacker, MD, MPH, MCW, Pediatrics; Krisjon Olson, PhD, MCW, Pediatrics; Sarah Zuk, MD, MPH, Children's Wisconsin; Earnestine Willis, MD, MPH, MCW, Pediatrics

Abstract: **BACKGROUND:** Many pediatric medical practices now screen for social determinants of health (SDOH) and connect families with resources. Practice-based resource directories are being created, despite the availability of community-wide resource directories. It is unclear why these efforts are being duplicated. **OBJECTIVE:** Determine caregivers', pediatric medical clinicians', and social workers' knowledge, use of, and recommendations regarding community-wide resource directories and community resources.

METHODS: Semi-structured interviews were conducted in 7 outpatient clinics serving a majority Medicaid population. Caregivers were recruited in-person before or after their clinic visit. Pediatric medical clinicians and social workers were recruited via email. Interviews were recorded, transcribed, and analyzed inductively using grounded theory with NVivo12 software. 34 interviews were completed; 20 with caregivers (10 in English/10 in Spanish), 9 with medical clinicians, and 4 with social workers.

RESULTS: Among participants there was a high degree of consensus that trust is key to navigating community resources. Clinicians trust social services, community navigators and personal experience to address SDOH; social workers trust professional ties, personal contacts and research on patient issues; caregivers trust family/friends. Overlapping themes emerged: regionalized patterns of agency utilization/referrals; focus on family self-determination; engaging experiences with trusted community resources offering cultural consonance; and apathy regarding the locus of responsibility for community stewardship. Few caregivers/clinicians knew community-wide resource directories existed; of those who had utilized them, varied opinions existed on usefulness. However, many families requested to take home a paper community-resource directory shown during the interview. Families recommended placements of resource directories to improve accessibility.

CONCLUSION: Trust is an essential element in interdisciplinary collaborations to improve access to community resources. Additional research is needed on families' use of social and resource networks to determine if placement of resource directories in trusted areas of the community will improve families' access to and utilization of available services.

Submitter: Gundacker, Constance

Record ID: 79

BACKGROUND

- Many pediatric medical practices now screen for social determinants of health (SDOH) and connect families with resources.
- Practice-based resource directories are being created, despite the availability of community-wide resource directories.
 - Unclear why efforts are being duplicated.

OBJECTIVE

- Determine caregivers', pediatric medical clinicians', and social workers' knowledge, use of, and recommendations regarding community-wide resource directories and community resources.

METHODS

- Semi-structured interviews in 7 outpatient clinics serving a majority Medicaid population.
- Caregivers recruited in-person before or after their clinic visit.
- Pediatric medical clinicians and social workers recruited via email.
- Interviews were recorded, transcribed, and analyzed inductively using grounded theory with NVivo 12 software.
- 34 interviews completed:
 - 20 with caregivers (10 in English/10 in Spanish).
 - 9 with pediatric medical clinicians.
 - 4 with social workers.

RESULTS

Table 1. Demographics of Caregivers, Pediatric Medical Clinicians, and Social Workers

	Caregivers N=20	Pediatric Medical Clinicians* & Social Workers N=13
	N (%)	N (%)
Gender		
Female	17 (85)	11 (85)
Male	3 (15)	2 (15)
Race/ethnicity		
African American	10 (50)	1 (8)
Hispanic	10 (50)	6 (46)
Caucasian	0 (0)	6 (46)

* Includes pediatricians (MDs) and advanced practice providers (APPs)

Table 2. Community Resource Agencies Most Commonly Utilized (Caregivers) or Referred To (Medical Clinicians and Social Workers) (Note that these are reported by descending frequencies for each sector)

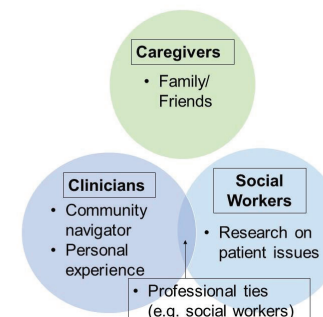
Caregivers	Medical Clinicians	Social Workers
Human Service Center	WIC (Women, Infants, Children Program)	Legal Services
WIC (Women, Infants, Children Program)	Birth to Three	Housing
Food Pantries	Schools: Individualized Educational Plans (IEPs)	Domestic Violence Services
Childcare	Childcare	Food Pantries
Schools	Transportation	Supplemental Security Income (SSI)

Table 3. Caregivers' Recommendations To Improve Accessibility of Community Resource Directories to Families

1. Available in different languages
2. Schools – send home with children
3. In stores (Human Service Center, corner stores, Walmart)
4. Clinic waiting rooms
5. Daycares
6. TV or Radio
7. Employment places/factories
8. Social network pages (Facebook, Instagram)
9. Billboards or Bus Stops

DISCUSSION

- High degree of consensus among participants that **trust** is key to navigating community resources:



- Overlapping themes emerged:
 - Regionalized patterns of agency utilization referrals (Table 2).
 - Focus on family self-determination.
 - Engaging experiences with trusted community resources offering cultural consonance.
 - Apathy regarding locus of responsibility for community stewardship.
- Few caregivers/clinicians knew community-wide resource directories existed; of those that had utilized them, varied opinions on usefulness.
- Families requested to take home a paper resource directory shown in the interview.
- Families recommended placement of directories to improve accessibility (Table 3).

CONCLUSION

- Trust is an essential element in interdisciplinary collaborations to improve access to resources.
- Further research needed regarding lack of overlap in trusted resources across stakeholder groups.

Breakout Room: **1 - Child Health, Care and Education**

Title: Housing Instability among Families and Caregivers of Children in Foster Care

Authors: Michellai K. Parks, BS, MCW; Lisa Zetley, MD, Children's Wisconsin, Pediatrics

Abstract: **BACKGROUND:** Housing instability is defined by experiencing at least one of four circumstances in the past 12 months: two or more moves, inability to pay rent/mortgage/utilities, needing to stay with others due to difficulty paying bills, or a history of homelessness. Children subjected to housing instability are more likely to have poorer physical health, exacerbated chronic conditions, behavioral problems, and increased hospitalizations. Children entering foster care also tend to have poorer mental and physical health in comparison to children who have never been in foster care.

OBJECTIVE: Assess the rate of housing instability of families/caregivers of foster children in Milwaukee who are enrolled in Care4Kids Foster Care Medical Home Program.

METHODS: Triweekly review of the Care4Kids database to identify children enrolled in the C4K program eligible for study enrollment. The study included children that entered foster care, changed placement, or re-enrolled in C4K between July and December 2019. Caregivers of identified children were interviewed regarding the four housing instability circumstances. Survey data was entered and stored into REDCap. Caregivers who were found to have housing instability were offered referrals to the Children's Community Health Plan housing navigator. Caregivers who did not have housing instability were also able to request a housing referral.

RESULTS: From July-December 2019, 134 caregivers consented to answering housing questions. 23% of respondents (31/134) were found to have a possible housing need. 19 caregivers confirmed housing instability and 12 requested a housing referral without disclosing housing instability. Kinship caregivers were disproportionately more likely to acknowledge housing instability.

CONCLUSION: Unmet housing needs are significant among caregivers of children in the Care4Kids foster care program. Since a significant number of caregivers requesting a housing referral had a negative screen for housing instability, the screening tool may not be optimal for identifying all families desiring housing support.

Submitter: Parks, Michellai

Record ID: 98

Background

Housing instability is defined by experiencing at least one of four circumstances in the past 12 months: two or more moves, inability to pay rent/mortgage/utilities, needing to stay with others due to difficulty paying bills, or a history of homelessness.

Children subjected to housing instability are more likely to have poorer physical health, exacerbated chronic conditions, behavioral problems, and increased hospitalizations. Children entering foster care also tend to have poorer mental and physical health in comparison to children who have never been in foster care. A study of housing needs of grandparent caregivers concluded that, "poverty and financial strain was found to be the overarching threat to securing and maintaining safe, affordable housing that is suitable for raising grandchildren."

Hypothesis

We hypothesized that kinship caregivers of youth enrolled in the Care4Kids (C4K) program were more likely to acknowledge having circumstances associated with housing instability and were more likely to accept housing resources.

Specific Aims

- Assess the rate of housing instability of families/caregivers of foster children enrolled in Care4Kids Foster Care Medical Home Program.
- Offer community resources (directed toward addressing housing needs) to caregivers identified as having housing instability.
- Compare rates of housing instability for different categories of caregivers.

Methods

- Triweekly review of the Care4Kids database to identify children enrolled in the C4K program who met criteria for study inclusion (removed from and placed in Milwaukee County).
- The study included children that entered foster care, changed placement, or re-enrolled in C4K between July and December 2019.
- Caregivers of identified children were interviewed regarding move frequency, inability to pay rent/mortgage/utilities, needing to stay with others due to difficulty paying bills, and history of homelessness in the past 12 months, as a part of the introduction to Care4Kids.
- Survey data was entered and stored into a RedCap database.
- Caregivers who screened positively for housing instability were offered a referral to the Children's Community Health Plan housing navigator.
- Caregivers who did not screen positively were also able to request and receive a housing referral.

Results

Figure 1: Children Enrolled in Study

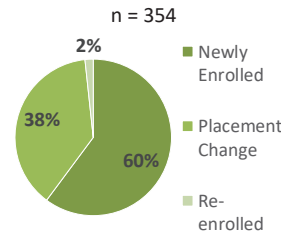


Figure 2: Caregivers Enrolled in Study

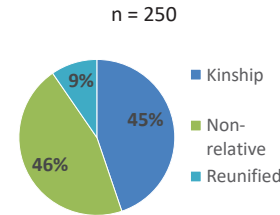


Figure 3: Caregivers Consenting to Housing Questions

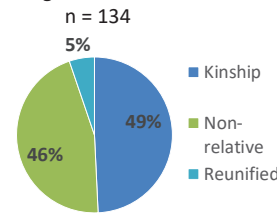


Figure 4: Housing Instability vs Caregiver Type

Housing Instability Type	Number of Kinship Caregivers	Number of Non-relative Caregivers	Number of Reunified Caregivers	Total
Overall Housing Instability	15	1	3	19
Reason for Housing Instability*:				
Two or more moves	2	1	1	4
Inability to pay bills	13	0	3	16
Stayed with others	5	0	1	6
History of homelessness	2	0	0	2

*May have disclosed ≥1 reason for housing instability

Figure 6: Housing Instability and Housing Resources

Caregiver Type	Housing Instability Identified	Housing Instability Identified; Housing Referral Declined	Housing Instability Identified; Housing Referral Requested	No Housing Instability Identified; Housing Referral Requested
Kinship	15	10	5	6
Non-relative	1	1	0	6
Reunified	3	0	3	0
Total	19	11	8	12

Discussion

From July to December 2019, 354 children met criteria for study enrollment (213 newly enrolled, 135 placement changes, 6 re-enrolled) (Fig. 1). 250 caregivers were enrolled in the study (Fig. 2). 134 caregivers consented to answering housing questions (Fig. 3). Survey response rate was 54%. There were 47 homes where multiple eligible children resided. 66/134 (49%) consenting caregivers were kinship caregivers, 61 (46%) were non-relative caregivers, and 7 (5%) were reunified caregivers (Fig. 3). 15 kinship, 1 non-relative and 3 reunified caregivers screened positively for housing instability, with inability to pay bills being the most common reason (Fig. 4). Of these, 5 kinship and 3 reunified caregivers desired referrals to housing resources. 12 caregivers (6 kinship and 6 non-relative) did not screen positively for housing instability but desired a housing referral. 23% (31/134) of respondents were found to have a possible housing need. 19 caregivers confirmed housing instability and 12 caregivers requested a housing referral without disclosing housing instability. (Fig. 5).

Conclusion

Unmet housing needs were identified in 23% of caregivers surveyed. The most common type of housing instability was inability to pay bills (rent/mortgage/utilities). Housing instability was most common for kinship caregivers but was also significant for reunified caregivers. Since more caregivers requesting housing referral had a negative screen for housing instability, the screening tool may not be the optimal strategy for identifying those families truly needing support.

Next Steps

- Improve the housing instability screening process (working with care coordination team and possible focus group with caregivers).
- Analyze claims data to assess whether there is an association between housing instability and unplanned health care utilization (urgent care visits, ER visits, and hospitalizations) for foster children in the study.

Acknowledgments

- Research approved by Children's Wisconsin IRB.
- Funding from the Wisconsin Medical Society Foundation.
- Research support from Dr. Peter Havens and Kelsey Porada.
- Enrollment support from Care4Kids leadership (Heather Swider, Jacqueline Johnson, Jessica Cabrera, and Emily DeLeo).
- Statistical support from MCW Dept. of Pediatrics Section of Quantitative Health Sciences (Dr. Amy Pan and Melodee Liegl).

Contact Information

- Michellai Parks, BS: miparks@mcw.edu
- Lisa Zetley, MD: lwzetley@mcw.edu

Breakout Room:

2 - Community Health and Clinical Care (ER; pharmacy; primary & preventive care)

Title: Emergency Department Utilization

Authors: Kaitlyn S. Sonnentag, MS3, MCW-Green Bay

Abstract: INTRODUCTION: Past research looking at emergency department (ED) utilization found key reasons why patients come to the ED for non-emergent conditions are: lack of knowledge about affordable and convenient care outside of the ED; patients' perceptions of the acuity of their conditions being inconsistent with perceptions of the ED providers.

PURPOSE:

- To investigate the reasons for usage of the Bellin ED in Green Bay, WI for non-emergent conditions.
- To provide patients with information on when they should seek care at an alternative healthcare facility and specific alternatives for care in the area. The ultimate reason for this is to decrease the number of patients presenting to the ED so that patients with actual emergent conditions can get faster and better care.

METHODS: Patients who received an acuity level of 4 or 5 by ED provides were considered for the survey. At the end of the survey, patients were asked if they would like an informational handout on criteria for coming to an ED or seeking care elsewhere, as well as locations of urgent care and primary care facilities in the area.

RESULTS: 75% of patients rated their problem as more severe than providers did. 87% stated that they would use reliable alternatives to getting care outside of the ED if these existed. 50% stated they wanted the informational handout.

CONCLUSION:

- Patients' perceptions of the acuity of their conditions are inconsistent with providers' perceptions.
- There is lack of knowledge about alternatives to the ED.
- Patients would be willing to use alternatives to the ED if they knew when they should go elsewhere and if they knew locations of other healthcare facilities.
- With educating our patients, we could reduce the number of people who use the ED for non-emergent conditions and have more resources for patients with emergent conditions.

Submitter: Sonnentag, Kaitlyn

Record ID: 95

Emergency Department Utilization

Kaitlyn Sonntag, MS3

INTRODUCTION

Past research looking at emergency department (ED) utilization found key reasons why patients come to the ED for non-emergent conditions are:

- Lack of knowledge about or access to affordable and convenient care outside of the ED.
- Patients' perceptions of the acuity of their conditions being inconsistent with ED providers' perceptions.^{1,2,3}

PURPOSE

- To investigate the reasons for usage of the Bellin ED in Green Bay, WI for non-emergent conditions.
- To provide patients with information on when they should seek care at an alternative healthcare facility and specific alternatives for care in the area. The ultimate reason for this is to decrease the number of patients presenting to the ED so that our ED healthcare providers are not overwhelmed with the great number of patients and can therefore give faster and better care to patients with actual emergent conditions.

METHODS

- The project was conducted between August 2019 and February 2020 at Bellin ED during the hours when urgent care locations were open.
- Patients were considered for the survey if they received and maintained an acuity level of 4 or 5 by the ED healthcare staff throughout their time in the ED.
- At the end of the survey, patients were asked if they would like an informational handout on criteria for seeking care at an ED, urgent care, or primary care facility as well as addresses of these facilities in the area.

RESULTS

- N = 8
- 75% of patients had a chief complaint of pain

Chief Complaints

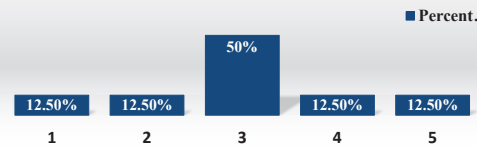
- Generalized pain
- Damage to elbow
- Back pain
- Eye irritation/pain
- Knee and neck pain
- Return to work evaluation
- Painful oozing boil
- Pain in the corner of the eye

Survey Participant Demographics

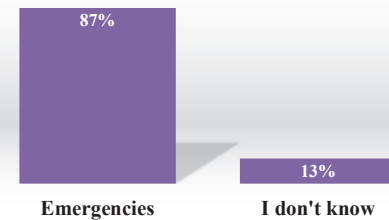
- | Age | Sex |
|-----------------------|----------------|
| • 50% 18-40 years old | • 62.5% Male |
| • 25% 41-65 years old | • 37.5% Female |
| • 25% 66-95 years old | |

Survey Questions and Participants' Responses

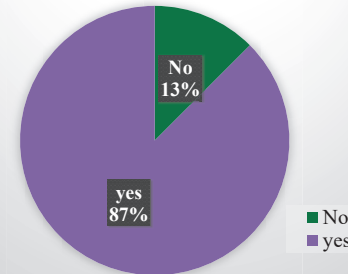
On a scale of 1-5, what would you rate the severity of the problem bringing you to the ED today?
(Please use the following as a guide:
1 = not urgent, 3 = urgent but not life threatening,
5 = life threatening):



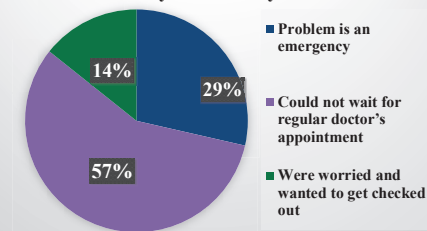
In your opinion, what is the purpose of an Emergency Department?



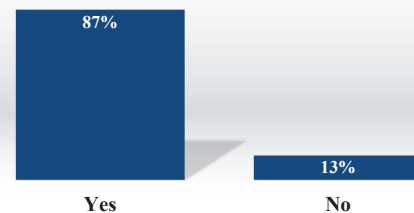
Do you have a doctor that you normally see for care?



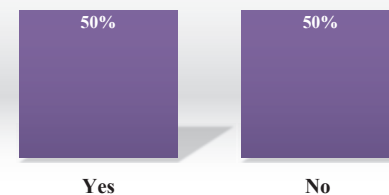
If you have a doctor you normally see for care, why are you using the emergency department instead of the doctor you normally see?



If there were reliable alternatives to getting care outside of the Emergency Department would you use these?



Would you like a guide to help you choose where to seek medical care for specific conditions/symptoms and locations of these services?



CONCLUSIONS

- Patients' perceptions of the acuity of their conditions are inconsistent with providers' perceptions with 75% of patients reporting their problem as urgent or life threatening which is not consistent with an acuity level of 4 or 5. Additionally, majority of patients stated that their problem was an emergency or could not wait for a doctor's appointment which is also inconsistent with an acuity level of 4 or 5.
- Majority of patients stated that they would use reliable alternatives to getting care outside of the ED if these existed, so there is lack of knowledge about alternative locations to receive care. Moreover, half of these patients stated they wanted the guide to help them choose when they should go elsewhere, suggesting that with education, patients would be willing to change their practice of using the Bellin ED for non-emergent conditions.
- For future studies, it would be useful to follow up with the patients that received the handout to see if they used alternatives to the ED. If majority did use the alternatives, then including this informational handout with ED discharge paperwork could reduce the number of patients using the Bellin ED. This would decrease the ED providers' workload and allow them to provide faster and better care to patients with actual emergent conditions.

REFERENCES/ ACKNOWLEDGEMENTS

1. Howard MS, Davis BA, Anderson C, Cherry D, Koller P, Shelton D. Patients' perspective on choosing the emergency department for nonurgent medical care: a qualitative study exploring one reason for overcrowding. *J Emerg Nurs.* 2005 Oct; 31(5): 429-35.
2. Koziol-McLain J, Price DW, Weiss B, Quinn AA, Honigman B. Seeking care for nonurgent medical conditions in the emergency department: through the eyes of the patient. *J Emerg Nurs.* 2000 Dec; 26(6): 554-63.
3. Spradling JA. An investigation of demographic factors contributing to emergency department utilization in rural Williamson County: Herrin, Illinois. Rockford, Illinois: University of Illinois College of Medicine at Rockford; 2013.

Special thanks to Dr. Paul Casey, Dr. Ben Pilkey, Dr. Matt Hunsaker, Dr. Katrina Rosculet and Bellin Hospital for their guidance and support during this study.

**Breakout
Room:**

2 - Community Health and Clinical Care (ER; pharmacy; primary & preventive care)

Title: Partnering with Community Leaders to Enhance Patient Care in the Emergency Department

Authors: Ashley Pavlic, MD, MA, MCW, Emergency Medicine; Taylor Sonnenberg, MD, MSGH, MCW, Emergency Medicine; Sarah Russell, MCW

Abstract: **BACKGROUND:** Recent national crises have highlighted that racial and health care disparities persist in our country and call for medical providers to no longer treat patients and their biomedical disease process in isolation, but rather to assess and treat patients in the context of their social determinants of health in order to provide better care.

PROBLEM STATEMENT: Previously, there was no formal curriculum for teaching our Emergency Medicine residents about social determinants of health or vulnerable groups.

METHODS: We developed a longitudinal curriculum for our residents, advanced practice providers, and attending physicians focusing on understanding social determinants of health and patient populations made vulnerable by them as well as the resources available to help these populations. This program involves partnerships with community organizations that treat vulnerable patient populations as well as leaders in other departments and institutes on campus. The curriculum is integrated into the Emergency Medicine weekly conference and we have also planned a community outreach experience on October 28th, 2020. We conducted a pre-test of each resident's personal familiarity with certain vulnerable patient groups as well as a pre-test and post-test of their awareness of the resources available in the emergency department. We also assessed whether the curriculum caused our residents to change their practice.

RESULTS: This curriculum has increased the residents' familiarity with resources available to help vulnerable patients and to improve patient care, and has caused them to change their practice on shift.

CONCLUSION: A curriculum targeting social determinants of health can change practice and enhance patient care.

Submitter: Sonnenberg, Taylor

Record ID: 121

Partnering with Community Leaders to Enhance Patient Care in the Emergency Department

A. Pavlic¹, T. Sonnenberg¹, S. Russell¹
Medical College of Wisconsin¹

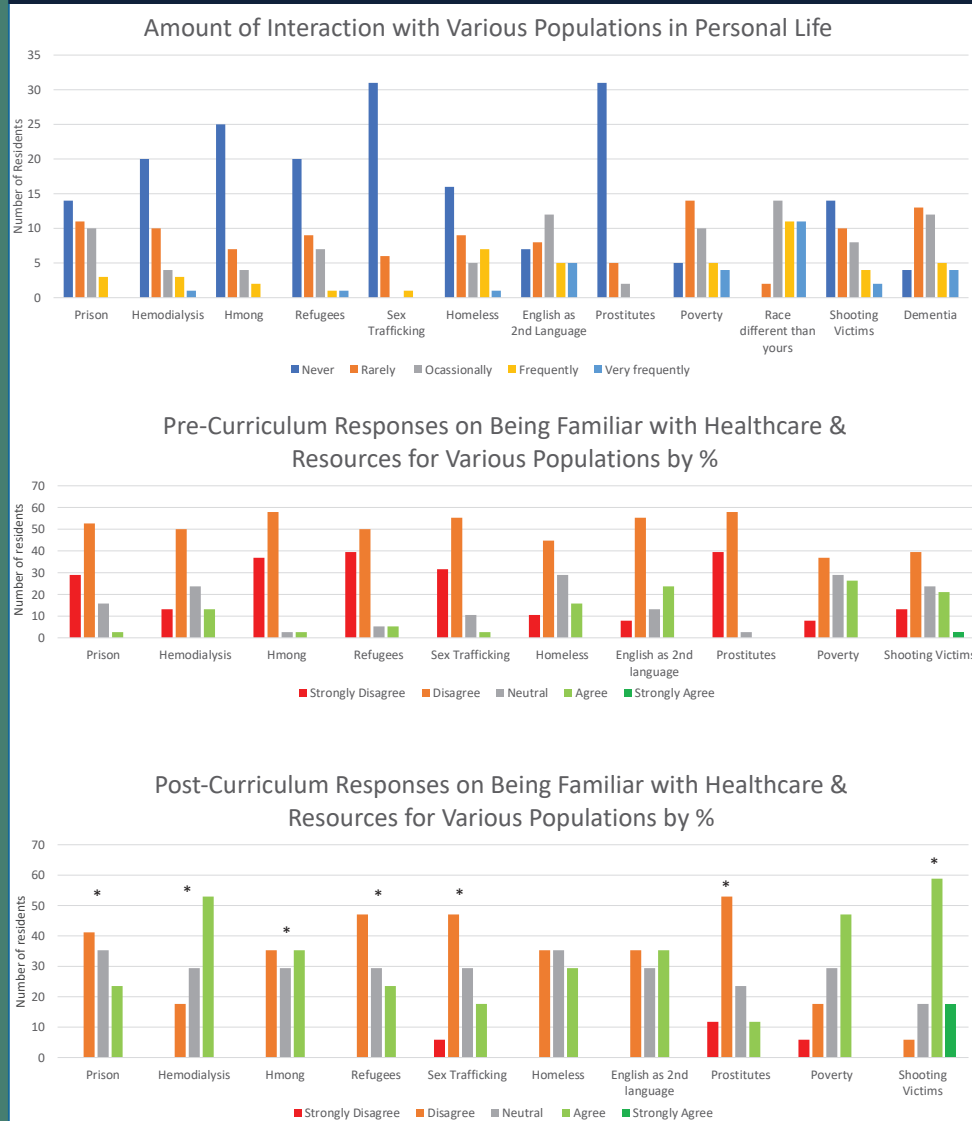
Background

- Recent national crises have highlighted that racial and health care disparities persist in our country and call for medical providers to no longer treat patients and their biomedical disease process in isolation, but rather to assess and treat patients in the context of their social determinants of health in order to provide better care.
- Problem statement:** Previously, there was no formal curriculum for teaching our Emergency Medicine residents about social determinants of health or vulnerable groups.

Methods

- Developed a longitudinal curriculum focusing on the social determinants of health, the patient populations made vulnerable by them and the resources available to help these populations with various community partners.
- Assessment using a pre-test of each resident's personal familiarity with certain vulnerable patient groups, and a pre-test and a post-test of their awareness of the resources available in the ED.

Results



Discussion

- Resident physicians were exclusively from middle- and upper-class backgrounds and had not interacted with most vulnerable populations outside the hospital, lacking personal experience with the unique challenges many of our patient's face. This highlights the need for formal curricula focusing on social determinants of health and vulnerable populations.
- Familiarity of ED and community resources increased as a result of this curriculum.
- On average, residents reported this curriculum led to a change in their practice 52% of the time, indicating that a curriculum targeting social determinants of health can change practice and enhance patient care.

Next Steps

- Expand the number of topics and community partners.
- Formalize Community Engagement Day, where residents visit our community partners.
- Develop a Social Emergency Medicine track focusing on these topics.

Acknowledgements

Dr. Alisa Hayes, Dr. Colleen Crowe, Dr. Kathleen Williams and Dr. Stephen Hargarten for their support of the development of this curriculum.

**Breakout
Room:**

2 - Community Health and Clinical Care (ER; pharmacy; primary & preventive care)

Title: Factors Influencing Show Rates of Emergency Department Referrals to Primary Care Clinics

Authors: Miranda H. Brown, MCW; Greg Stadter, MPH, Milwaukee Health Care Partnership; M. Chris Decker, MD, Froedtert Hospital, Emergency Medicine

Abstract: BACKGROUND: Utilization of emergency departments (EDs) for non-urgent conditions has led to excessive health care spending, unnecessary testing and missed opportunities for patients to form longitudinal relationships with primary care physicians (PCPs). The Milwaukee Health Care Partnership (MHCP) established the Emergency Department Care Coordination (EDCC) program in 2007 to decrease avoidable ED visits and connect high risk individuals with primary care health homes. The program includes EDs and safety net clinics throughout Milwaukee County; ED providers schedule at risk patients to safety net clinics to establish timely and appropriate follow-up care. Between the years of 2018-2019 there were over 5,000 appointments scheduled with a 43% show rate to follow-up appointments.

OBJECTIVE: This project aimed to identify factors influencing show rate to follow-up appointments and to develop future program interventions to increase appointment show rates. The results will improve connecting low-income, unestablished community members to primary care through changes to safety net clinic and ED workflows.

METHODS: This project utilized the MyHealthDirect (online scheduling tool used to make EDCC appointments) database of de-identified patient and referral information and performed logistic regressions to determine factors that were associated with show rates.

RESULTS: There was a significant difference in show rate when looking at days between ED visit and follow-up appointment and age (both $p < 0.001$). Patients seen within five days of ED visit and patients 65 years and older had increased likelihood of attending follow-up appointments.

CONCLUSION: These results demonstrate that older adults are more likely to attend these appointments, and more efforts are needed to engage younger people to increase their likelihood of attending. In addition, the analysis shows the need to schedule patients with follow up primary care quickly, as a short amount of days from ED visit to PCP appointment was strongly correlated with a higher show rate.

Submitter: Brown, Miranda

Record ID: 104



Factors Influencing Show Rates of Emergency Department Referrals to Primary Care Clinics

Miranda Brown, Gregory Stadter MPH, M. Chris Decker MD

BACKGROUND

Utilization of EDs for non-urgent conditions has led to:

- Excessive health care spending
- Unnecessary/duplicative testing
- Missed opportunities for patients to form longitudinal relationships with primary care physicians

Milwaukee Health Care Partnership (MHCP) created the Emergency Department Care Coordination in 2007

- Allows providers from ED to refer low-income unestablished community members to primary care follow-up appointments
- 8 EDs can schedule referral appointments at over 20 safety net clinics in Milwaukee County

In 2018-2019, over 5,000 appointments were scheduled with a 43% show rate to follow-up appointments

GOALS

- Identify factors influencing show rates to follow-up appointments
- Develop program interventions to increase show rates
- Improve connections between Medicaid and uninsured ED patients with primary health care homes
- Decrease avoidable ED visits and associated hospitalizations

METHODS

Utilized the MyHealthDirect database of de-identified patient information and referral information

Included:

- All referring emergency departments
- Federally qualified health center (FQHC) safety net clinics

Performed a logistic regression analysis including the following data elements:

- Receiving clinic
- Provider specialty of referring provider
- Days to appointment
- Insurance type
- Patient age
- Patient sex
- If the patient attended scheduled appointment

RESULTS

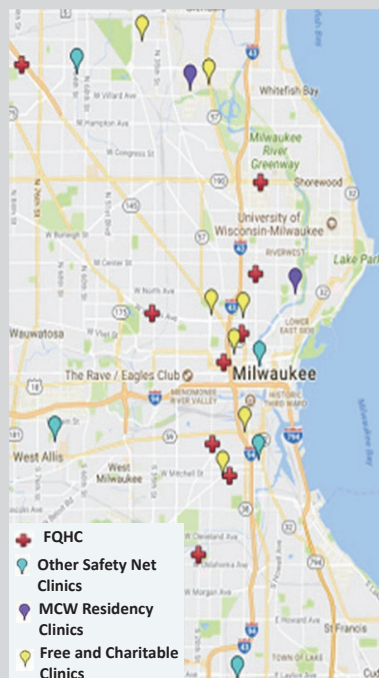
- Older adults are more likely to attend follow-up appointments ($p = >0.0001$)
- Follow-up appointments closer to date of patients seen in the ED were more likely to be attended ($p = >0.0001$)
- Uninsured patients were more likely to attend follow-up appointments than Medicaid ($p = 0.01$)
- Show-rates varied amongst individual FQHC receiving safety net clinics ($p = >0.0001$)
- Patient gender, referring ED, and provider type did not have a statistically significant difference

DISCUSSION

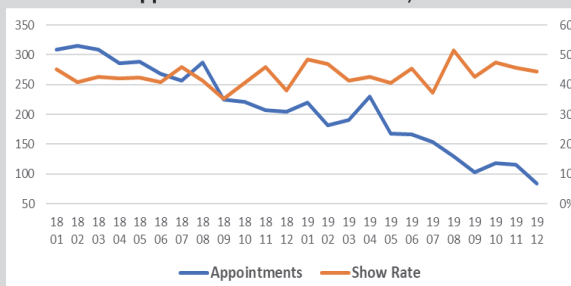
- More work is needed to engage younger individuals to ensure they attend appointments as this population may be less motivated to establish primary care.
- Given that low days from ED visit to follow up appointment was linked to higher show rates, it is important for safety net clinics to ensure they have ample appointment slots
- More work is needed to understand why there are differences in show rates by payor status and among the different FQHCs.

EDCC PROGRAM OVERVIEW

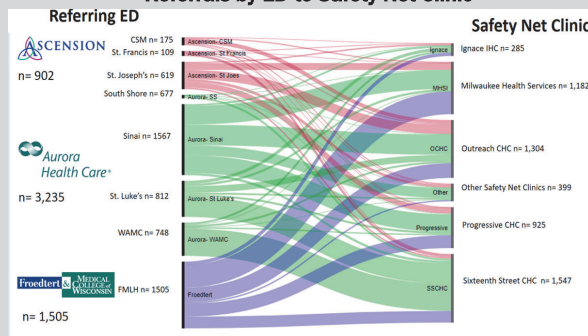
Map of Participating EDCC Clinics



EDCC Appointments and Show Rate, 2018 - 2019



Referrals by ED to Safety Net Clinic



NEXT STEPS

- Develop clinic-specific analyses of the larger data set and share with FQHC leadership.
- Conduct interviews with FQHC leadership to identify best practices shown to impact show rates to follow-up appointments
- Further analysis on the data set to determine differences by different clinical diagnoses
- Work with ED leadership on best patient populations likely to benefit and follow-up with EDCC program

ACKNOWLEDGEMENTS

Thanks to the organizations participating in the EDCC program: the EDs at: Ascension (Columbia St. Mary's, St. Francis, St. Joseph), Advocate Aurora (St. Luke's, Sinai, South Shore, West Allis) and Froedtert, and the FQHCs in Milwaukee (Ignace, Milwaukee Health Services, Outreach, Progressive, Sixteenth St)

**Breakout
Room:**

2 - Community Health and Clinical Care (ER; pharmacy; primary & preventive care)

Title: Measuring Patient Length of Visit & Reducing Wait Times at Philippine Center Free Medical Clinic

Authors: Jonathan Slimovitch, MCW; Cameron Stewart, MCW; Maria Mendoza-Lemes, MD

Abstract: **OVERVIEW:** The Philippine Center Free Medical Clinic (PCFMC) provides valuable patient care to a large number of patients, many of whom are uninsured. Patient visits typically last approximately 80 minutes, and there is a high rate of failure to return to clinic, which often results in patients running out of medication. Reducing patient wait times and developing a more efficient process may encourage compliance and regular return to clinic.

OBJECTIVE: The objectives are to better determine how much time is spent at each step of the visit, identify key areas for improvement, and make changes with the goal of improving wait times and reducing length of total appointment.

METHODS: De-identified timesheets were attached to each patient chart to document the time spent at each step of the visit. Members of the clinic recorded times during each visit, and this data was used to determine duration of each stage. Based on this data, changes were implemented and monitored.

RESULTS: Approximately 50% of total time in clinic was spent on medication dispensation, which is typically performed by volunteer medical students. Pre-registering patients and having prepackaged medications succeeded in reducing medication dispensation time in half, however these changes were implemented in the context of COVID-19. Due to the pandemic, the clinic transitioned to drive up medications refill only (no new patients), patients did not see a provider, and medications were largely unchanged from previous visits.

CONCLUSION: Medication dispensation was the key step responsible for extensive patient wait times. Changes were implemented which reduced time spent during this stage, but further research is needed to determine if these changes (a) will result in improved compliance/return rates and (b) are sustainable once COVID precautions are lifted. Post COVID, patients will begin seeing physicians again and new medications may be prescribed, which could prolong dispensation rates.

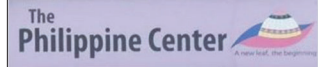
Submitter: Slimovitch, Jonathan

Record ID: 111



Measuring Patient Length of Visit & Reducing Wait Times at Philippine Center Free Medical Clinic

Jonathan Slimovitch¹, Cameron Stewart¹, Maria Mendoza-Lemes, MD²
 Medical College of Wisconsin; Medical Students¹; Family Physician²



Introduction

The Philippine Center Free Medical Clinic (PCFMC) provides valuable care to a large number of patients, many of whom are uninsured or underinsured. The clinic is open at least once a month and is situated in Greenfield, Wisconsin. Patient visits typically last approximately 80 minutes, and consist of the following steps: triage, lab appointment, physician visit, and medication dispensation.

Unfortunately, there is a high rate of failure to return to clinic, which often results in patients running out of medication. Reducing patient wait times and developing a more efficient process may encourage patient compliance and regular return to clinic.

Objectives

- (1) Better determine how much time is spent at each step of the clinic visit.
- (2) Identify key areas for improvement and make changes with the goal of improving wait times and reducing length of total clinic time.

Context

PCFMC typically serves an average of 25 patients per shift. However, this number can experience great variability. During the shifts selected for this research project, patient numbers ranged from 12 to 38. Patients most commonly visit the clinic to receive medications for chronic conditions, including diabetes, hypertension, and hyperlipidemia.

Shift Number	# of Patients
1	26
2	29
3	12
4	33
5	38
6	29
7	15
8	38
9	16
10	17
11	14

Table 1: Number of patients seen at each clinic shift.

Methods

(A) Data Collection: De-identified timesheets were attached to each patient chart for eleven shifts between 9/28/19 and 10/10/20. The duration patients spent at each step within their encounter was recorded by the physicians, nurses, laboratory technicians, and medical students.

(B) Data Analysis: Using timesheet values, the average times spent at each step in the clinic process were calculated. These values were plotted against average total clinic time (Figure 1). Statistical tests were completed to calculate correlation (Figure 2), and Medication Dispensation was identified as the step with the highest correlation with average clinic time (Table 2).

(C) Implemented Changes: Two specific changes were implemented to improve time spent during the medication dispensation stage:

- (1) Reorganizing pharmacy room by having fewer people in the pharmacy and dividing the workflow.
- (2) Pre-registering patients and pre-packaging medications.

Results

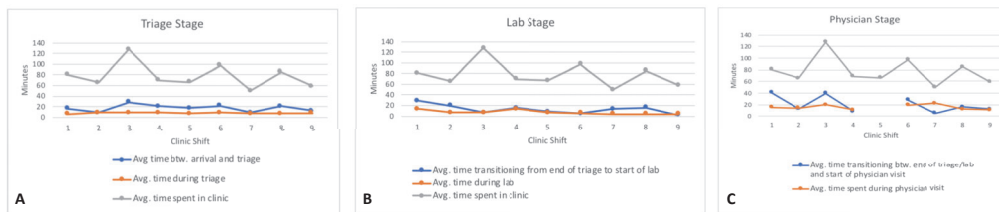


Figure 1: Average total time spent in clinic graphed against average time spent at the following stages: **A)** btw. arrival & triage; time spent in triage; **B)** btw. triage & lab; time spent in lab; **C)** btw. triage/lab and physician; time spent with physician.

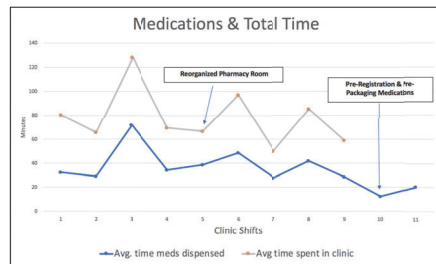


Figure 2: Average time spent during medication dispensation graphed against average total time in clinic. Two changes were implemented, which are illustrated on the graph.

	Multiple R (Correlation Coefficient)	P-Value
Btw Arrival & Triage	0.878539462	0.00182234
Triage	0.256358608	0.50551308
Btw Triage & Lab	0.150875555	0.69840978
Lab	0.05004647	0.89825873
Btw Triage/Lab & Physician	0.788431287	0.02007749
Physician	0.273321517	0.51247314
Med Dispensation	0.950948537	8.2021E-05

Table 2: Statistical analysis of timing. Two stages demonstrated statistically significant correlation with the total time spent during clinic.

Results/Conclusions

Approximately 50% of total time in clinic was spent on medication dispensation, which is typically performed by volunteer medical students. This stage demonstrated the highest correlation (.95) with the total time of patient's visit in clinic. This result was statistically significant, with a p value of < .05. Time spent between arrival and triage also demonstrated statistically significant correlation, however comparatively less time was spent at this stage.

Reorganization of the Pharmacy Room did not lead to a noticeable change in medication dispensation times. However, pre-registering patients and having pre-packaged medications succeeded in reducing medication dispensation time by half. It is important to note, however, that these changes were implemented in the context of COVID-19. Due to the pandemic, the clinic transitioned to drive up medications refill only, patients did not see a provider, and medications were largely unchanged from previous visits. In addition, during this time, no new patients were accepted.

Limitations to this study included a large variability in the number of patients at each shift, and an inability to track other variables once the clinic format changed to accommodate the COVID pandemic. Furthermore, certain categories did not have timesheet data for all patients on each given clinic shift.

Further research is needed to determine if these changes: (a) will result in improved compliance/return rates, and (b) are sustainable once COVID precautions are lifted.

Acknowledgements

This project could not have been completed without the help and support of all members of the PCFMC, including physicians, nurses, pharmacists, lab technicians, and medical students. Special thanks to Marena Prill (Liason Officer), Linda Ramos (Clinic Administrator), and Violeta Singson, MD (Medical Director). Additional thanks to the Biostatistics Consulting Service at MCW for help with data analysis.

**Breakout
Room:**

2 - Community Health and Clinical Care (ER; pharmacy; primary & preventive care)

Title: Empowering Primary Care Family Networks towards Nutrition Behavior Change

Authors: Marie Balfour, MCW; Bryan Johnston, MD, MCW, Family and Community Medicine

Abstract: **BACKGROUND:** Previous initiatives in the Milwaukee community through the Food Doctors nutrition education project have shown increases in baseline nutritional knowledge for students after targeted lessons and a desire among the students to share their newfound nutritional knowledge with family members. The present study aimed to determine the factors that contribute to nutritional choices within family circles.

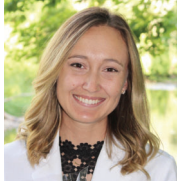
METHODS: Interactive virtual family nutritional education sessions modeled after previously successful Food Doctors lesson plans were provided to families at the All Saints Family Medicine Clinic, St. Marcus Lutheran School, and Milwaukee Academy of Science. 15 post-session phone interviews were conducted with participating families to assess their nutritional behaviors within their family unit. Grounded theory analysis and open coding were used with Dedoose qualitative software to identify themes.

RESULTS: Virtual lessons were presented live, recorded, and distributed to over 4,500 individuals. Throughout the family-based interviews, five main themes emerged: perceptions of "healthy" eating among different age groups, family member influence on "healthy" diet, roles of extended family in nutrition, family communication around food, and factors that influence healthy eating in families. Parents' perceptions of healthy eating were often tied to online research, while children's views on healthy eating were more granular and centered around conversations with their parents. Many adult participants noted eating as a family unit prompted different eating patterns than their individual nutrition habits outside their family. Numerous parents specifically indicated their nutritional advice from extended family members involved connection through recipe sharing.

CONCLUSION: All interviewed participants expressed personalized challenges integrating their own dietary preferences and/or their family's dietary preferences with healthy eating guidelines they received from various sources including their doctor, other family members, or their own Internet research. This research highlights the need for additional specialized resources to be available for family networks needing more support.

Submitter: Balfour, Marie

Record ID: 107



Empowering Family Nutrition Choices

Marie Balfour, M2; Bryan Johnston, MD

Department of Family & Community Medicine, Medical College of Wisconsin



Introduction

Recent studies suggest improving dietary choices involves a social component, with the largest influence on children's nutrition coming from their parents' nutritional habits¹. Previous initiatives in the Wisconsin community through the Food Doctors nutrition education project have shown increases in baseline nutritional knowledge for third grade students after targeted lessons and a desire among the students to share their newfound nutritional knowledge with family members². A future goal of the Food Doctors project has been to bring the curriculum into family networks to improve baseline nutritional knowledge and empower families toward nutrition behavior change.

Hypothesis

Distributing family-based online nutrition education sessions and conducting interviews with family networks will help determine the factors that contribute to nutritional choices within family circles.

Methods

Interactive virtual family nutritional education sessions modeled after previously successful Food Doctors lesson plans were provided to families at the All Saints Family Medicine Clinic, St. Marcus Lutheran School, and Milwaukee Academy of Science (Fig. 1). Semi-structured, post-session phone interviews were conducted with participating families to assess nutritional behaviors.

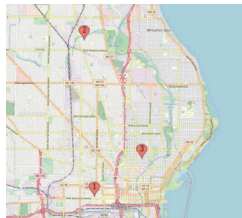


Figure 1: Interview participant recruitment locations in Milwaukee

Interview questions included the following prompts:

- Who is the biggest influence on your nutritional choices?
- Who do you go to when you have questions about food, eating habits, or new recipes?
- What do your family's conversations about food, nutrition, and healthy eating look like?
- If you lived alone, would you eat any differently? If so, how?
- When you eat with your family, do you eat any differently than when you are alone? If so, how?

Interviews were recorded and transcribed verbatim. A list of themes was created and developed by the interviewer (MB), and interviews were coded in Dedoose software by two student researchers (MB and WD). Coding agreement was quantified using Dedoose coding tests and Cohen's Kappa. Interviews were evaluated utilizing grounded theory principles to identify interview themes and create a final theme list.

Results

Virtual lessons (Fig. 2, Fig. 3) were presented live, recorded, and distributed to over 4500 individuals connected through the All Saints Family Medicine Clinic, St. Marcus Lutheran School, and Milwaukee Academy of Science.

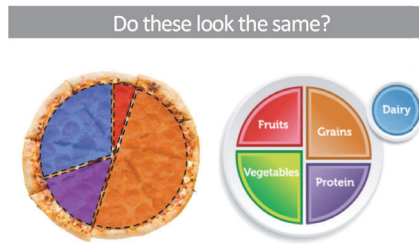


Figure 2: Example topics from nutrition lesson presentations



Figure 3: The above QR code may be used to view the first virtual nutrition lesson

Interviews (n= 15) were performed over the phone with participants from the All Saints Family Medicine Clinic, St. Marcus Lutheran School, and Milwaukee Academy of Science. 11 participants identified as adults and/or parents, and 4 participants were children interviewed with their parents. Participant age ranged from 8 to 66 years old.

Cohen's Kappa was calculated using Dedoose software as 0.53, or "moderate agreement." Throughout the family-based interviews, five main themes emerged: perceptions of "healthy" eating among different age groups, family member influence on "healthy" diet, factors that influence healthy eating in families, roles of extended family in nutrition, and family communication around food (Fig. 4).

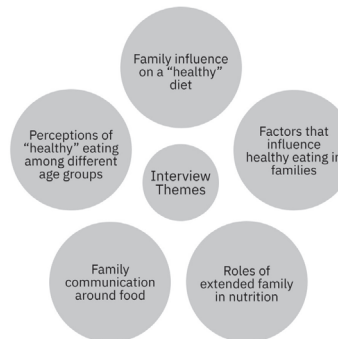


Figure 4: Emerging themes from participant interviews

Discussion

Throughout the interviews, parents' perceptions of healthy eating were often tied to online research, while children's' views on healthy eating were more granular and centered around conversations with their parents. Many adult participants noted eating as a family unit prompted different eating patterns than their individual nutrition habits outside their family. Outside of the home, parents experienced several second-degree relatives influencing their family's eating habits through their own personal health journeys or childcare assistance. Numerous parents specifically indicated their nutritional advice from extended family members involved connection through recipe sharing. All interviewed participants expressed personalized challenges integrating their own dietary preferences and/or their family's dietary preferences with healthy eating guidelines they received from various sources including their doctor, other family members, or their own Internet research. Limitations of this study include limited sample size and potential interviewer bias. This research highlights the need for additional specialized resources to be available for family networks needing more support.

Future Work

Future projects could delve deeper into the value of online nutrition classes and explore the effectiveness of online vs. in-person teaching mediums. Other future work could provide interviewed families with personalized community resources based on their family nutrition challenges.

Acknowledgements

Thank you to Dr. Bryan Johnston for mentorship throughout this project and the Wisconsin Medical Society Foundation for project funding. Additional support came from Dr. Leslie Ruffalo and the Department of Family and Community Medicine at MCW.

References

1. Hammons, A. J., and B. H. Fiese. "Is Frequency of Shared Family Meals Related to the Nutritional Health of Children and Adolescents?" *Pediatrics*, vol. 127, no. 6, 2011, pp. e1565–e1574., doi:10.1542/peds.2010-1440. Accessed January 16, 2020.
2. Johnston, Bryan, et al. "The Food Doctors: A Pilot Study to Connect Urban Children and Medical Students Using Nutrition Education." *Health Education Journal*, vol. 78, no. 4, 2018, pp. 441–450., doi: 10.1177/0017896918816735. Accessed January 16, 2020.

**Breakout
Room:**

2 - Community Health and Clinical Care (ER; pharmacy; primary & preventive care)

Title: Qualitative Findings of Latinx Families Experiences Following a Physical Activity and Nutrition Program

Authors: David Nelson, PhD, MCW; Kelly Dione, MA, Marquette University, Physical Therapy; Mari Cevilla, United Community Center; Jackie Jones, MS, RDN, Marquette University, Physical Therapy; Jeffrey Condit, MS, United Community Center; Paula Papanek, PhD, MPT, LAT, ATC, FACSM, Marquette University, Physical Therapy

Abstract: **BACKGROUND:** There is a need for culturally appropriate community facing programs that support community health. The Latinx community is at risk for obesity, type 2 diabetes and other chronic illness and may struggle with English as a second language. Community physical activity and nutrition programs may provide the basis for families to improve their health status.

METHODS: A year long physical activity and nutrition was provided to Latinx families through a community academic partnership with the United Community Center, Marquette University and the Medical College of Wisconsin. Sixth, seventh and eighth grade students participated in a program several times per week and then brought ideas home to parents. Parents also engaged in capacity building programs and families did activities like camping, skiing and parent child weekend outings. At the end of the year, families participated in an interview to discuss the impact of the program.

RESULTS: Twenty five interviews with parents and parents and children were conducted over the course of three months. All families were impacted by the program and both parents and children grew in their individual understanding of health and wellness. Children had stronger belief in their individual abilities and understood the importance of both receiving and providing support to their peers. Parents saw growth in positive outlook with the children and their ability to be self directed in nutrition and physical activity. All could see how this program will impact the children later in life.

DISCUSSION: Programs like this need evidence based nutrition and physical activity programming but the need to provide constant positive support may be the "secret ingredient" to build into future programming. More research is needed to understand the long term effect of such programming.

Submitter: Nelson, David

Record ID: 106

Qualitative Findings of Latinx Families Experiences Following a Physical Activity and Nutrition Program

David Nelson (1), Kelly Dione (2), Mari Cevilla (3), Jeffrey Condit (2), Paula Papanek (2)

(1) Medical College of Wisconsin, Milwaukee, WI, (2) Marquette University, Milwaukee, WI, (3) United Community Center, Milwaukee, WI

BACKGROUND – There is a need for culturally appropriate community facing programs that support community health. The Latinx community is at risk for obesity, type 2 diabetes and other chronic illness and may struggle with English as a second language. Community physical activity and nutrition programs may provide the basis for families to improve their health status.

METHODS – A year long physical activity and nutrition was provided to Latinx families through a community academic partnership with the United Community Center, Marquette University and the Medical College of Wisconsin. Sixth, seventh and eighth grade students participated in a program several times per week and then brought ideas home to parents. Parents also engaged in capacity building programs and families did activities like camping, skiing and parent child weekend outings. At the end of the year, families participated in an interview to discuss the impact of the program.

Change for the Family

"With that, like got her more into being active. All of us actually because I was going to do the running with her and even though I didn't do it, I'm still active because I just remember how much I liked it. But becoming vegan was more me. She noticed my changes and one day, like I just had to change on my own but I never told my kids you have to do it with me. And then she noticed like the benefits and the changes in my lifestyle so I think that was what helped her."

Change for Individual

"Well, he has been improving his eating habits. He has been doing a lot more movements. He was just like video game kid that wouldn't want to go out and after, when he started the program, he has been more active and everything."



RESULTS – Twenty-five interviews with parents and parents and children were conducted over the course of three months. All families were impacted by the program and both **parents and children grew** in their individual understanding of health and wellness. **Children had stronger belief** in their individual abilities and understood the importance of both receiving and providing support to their peers. **Parents saw growth in positive outlook** with the children and their ability to be **self directed in nutrition and physical activity**. All could see how this program will impact the children later in life.

IMPLICATIONS – Community based participatory research requires the use of evidence-based nutrition and physical activity programming. However, the need to provide continual positive support may be the "secret ingredient" for success and should be built into future programming. Additional research is needed to understand the long-term effect of such supportive programming.

**Breakout
Room:**

2 - Community Health and Clinical Care (ER; pharmacy; primary & preventive care)

Title: Impacting pharmacy practice based on community-centered interventions at community pharmacy

Authors: Sanaya Bhatena, BSc, PharmD Candidate, MCW-School of Pharmacy

Abstract: BACKGROUND: Comprehensive health services are made accessible to improve the overall well-being of the community. Due to their extensive practice scope and clinical knowledge, pharmacists play an integral role in community outreach and engagement. To enhance care management, community pharmacies incorporate community perspectives. Immunization room readiness, medication therapy management (MTM), medication adherence checks, and medication synchronization allow community members to be engaged with their health care needs. MTM and medication synchronization are provider-patient collaboration services to discuss and optimize health outcomes, and coordinate refills of multiple medications.

OBJECTIVE: To evaluate how changes made in pharmacy practices based on community-centered interventions impact practice and patient engagement.

METHOD: Immunization rooms across Walgreens Area 54 (West Wisconsin) community pharmacies were evaluated for ease of process flow and patient experience. Community perspectives, through interviewing of the pharmacy staff, community members, and potential immunizing patients, were incorporated to streamline the process. Call verbiage for community calls was modified to suit each patient's care needs to see changes in engagement for Save-a-Trip Refills (SATR) program, a medication synchronization service. Community calls were performed to gauge perspective through late-to-refill, new-to-therapy, adherence check, and community outreach services.

RESULTS: 7 out of the 28 stores had one rating of fair, poor, or needs improvement for workflow or community experience. Follow-up measures included the addition of community-centered measures, including reorganization and senior-friendly furniture. For the SATR community focused calls, 5 calls received potential for synchronization or enrollment and 1 rejection. 13 MTM calls were accepted to discuss disease state and there were no rejections.

CONCLUSION: Findings show a need to personalize verbiage for MTM and SATR to the patient. It is imperative to continually implement patient and community perspectives into daily pharmacy practice to keep up with the evolving needs of the communities served.

Submitter: Bhatena, Sanaya

Record ID: 99

Impacting Pharmacy Practice Based On Community-Centered Interventions At Community Pharmacy

Sanaya R. Bhatena, PharmD Candidate 2021, BSc.
Medical College of Wisconsin School of Pharmacy, Milwaukee, WI



INTRODUCTION

Comprehensive health services are made accessible to improve the overall well-being of the community. Due to their extensive practice scope and clinical knowledge, pharmacists play an integral role in community outreach and engagement. To enhance care management, community pharmacies incorporate community perspectives. Immunization room readiness, medication therapy management (MTM), medication synchronization, allow community members to be engaged with their health care needs. MTM and medication synchronization are provider-patient collaboration services to discuss and optimize health outcomes, and coordinate refills of multiple medications.

OBJECTIVES

To evaluate how changes made in pharmacy practices based on community-centered interventions impact practice and patient engagement.

METHODS

Immunization rooms across Walgreens Area 54 (West Wisconsin) community pharmacies were evaluated for ease of process flow and patient experience. Community perspectives, through interviewing of the pharmacy staff, community members, and potential immunizing patients, were incorporated to streamline the process. Call verbiage for community calls was modified to suit each patient's care needs to see changes in engagement for Save-a-Trip Refills (SATR) program, a medication synchronization service. Community calls were performed to gauge perspective through late-to-refill, new-to-therapy, adherence check, and community outreach services.

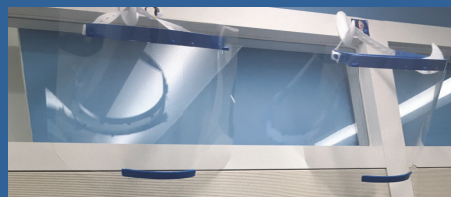


Figure 1. Implementation of Personal Protective Equipment prior to immunization

RESULTS

7 out of the 28 stores had one rating of fair, poor or needs improvement for workflow or community experience. Follow-up measures included addition of community-centered measures, including reorganization and senior-friendly furniture. For the SATR community focused calls, 5 calls received a potential for synchronization or enrollment and 1 rejection. 13 MTM calls were accepted to discuss disease state and there were no rejections.



Figure 2. Medication Synchronization Call Verbiage Implementation

CONCLUSIONS

Findings show a need for personalize verbiage for MTM and SATR to the patient. It is imperative to continually implement patient and community perspectives into daily pharmacy practice to keep up with the evolving needs of the communities served.



Figure 3. immunization room supplies and organization to store emergency kit

Acknowledgement: Special thanks to Rocky LaDien, RPh, for providing me with the wonderful opportunity to intern and visit his Walgreens Area 54 stores. Thank you to all the store pharmacists and district managers for creating an inviting and constructive environment for change through implementation of community perspective.

**Breakout
Room:**

2 - Community Health and Clinical Care (ER; pharmacy; primary & preventive care)

Title: Lessons learned in the first year of implementing a pharmacist-led community-based health screening program in underserved Milwaukee neighborhoods

Authors: Michael DeBisschop, PharmD, MCW, School of Pharmacy; David Ombengi, PharmD, MBA, MPH, MCW, School of Pharmacy; Colleen Cornelius, MS, MCW, School of Pharmacy

Abstract: BACKGROUND: MCW Neighborhood Partners provides free health screenings and education in underserved areas of Milwaukee's north side. The program recently completed its first year of implementation.

OBJECTIVE: Describe the lessons learned over the past year in the areas of community engagement, clinical service operation, and student teaching.

METHODS: Community engagement activities included listening sessions, a community member survey, and partnership creation with several community organizations. A central office location at Next Door Foundation was established with hours on Fridays each week. Pharmacists and pharmacy students conducted health screenings including body mass index, blood pressure, blood glucose, and cholesterol. These screenings were offered free to all community members at both Next Door and at various events sponsored by community partners. MCW School of Pharmacy students participated throughout the year as part of their experiential education. Third- and fourth-year students conducted screenings including performing point-of-care tests, counseling on screening results, and helping clients create lifestyle changes.

RESULTS: Input from community members came primarily through the survey and organizational partnerships; major community health issues identified included hypertension, diabetes, nutrition/physical activity, and mental health. Over 250 health screenings were performed at both the Next Door office and eight additional community-based events. Students gained valuable experience in performing tests, interacting with the community, and developing insight into ways they can incorporate health and wellness into their future practice as a pharmacist. Specific lessons learned in community engagement, provision of health screening services, and student engagement will be presented.

CONCLUSION: A pharmacist-led free health screening service is a viable way to begin addressing health issues in an underserved community. Further work to determine humanistic, clinical, and economic outcomes of these services is necessary.

Submitter: DeBisschop, Michael

Record ID: 69



MCW
PHARMACY SCHOOL

Lessons Learned in the First Year of a Pharmacist-Led Community Health Screening Program in Underserved Milwaukee Neighborhoods

Michael DeBisschop, PharmD¹, David N. Ombengi, PharmD, MBA, MPH^{1,2}, Colleen Cornelius, MS¹, George MacKinnon, PhD^{1,2}
 Medical College of Wisconsin (MCW) School of Pharmacy¹; Department of Family and Community Medicine²
 Medical College of Wisconsin, Milwaukee, WI 53226

RATIONALE



SCREENING SERVICES

Top Needs Identified through Community Engagement

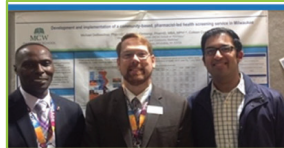


Blood Pressure
Cholesterol

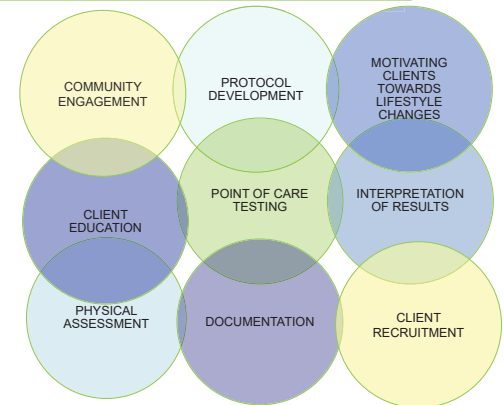
Blood Glucose
Body Mass Index



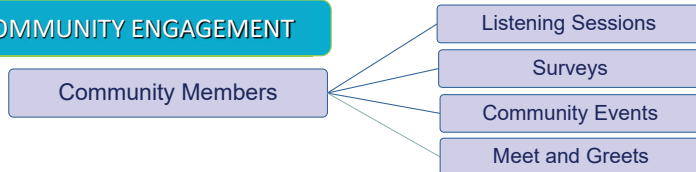
Exercise & Diet Counseling
Health & Wellness Education



STUDENT ROLES – IPPE AND APPE



COMMUNITY ENGAGEMENT



Key Community Service Organization Partners

Service Partnerships	Relationship Type
Next Door Foundation	Primary Partner
Metcalfe Community Bridges	Community Development Organization
COA Goldin Center	Community Center

MILESTONES AND RESULTS

- Over 60 CE and collaboration meetings
- Office established, CLIA Waiver obtained
- Office open each Friday; 9 community events
- 157 unique clients, 214 encounters
- 8 students (4 IPPE, 4 APPE) trained
- 3 referrals made to free health care providers

LESSONS LEARNED

- Start early! Fruitful partnerships take a long time to build.
- Listen to the community voices.
- Incorporate and train students! Organizations and clients love working with students.
- Train students early in didactic education.
- Be in the community! Yes, be visible!
- A consistent presence leads to developing valuable connections with people that can help achieve the mission.
- Talk to the people served! One-on-one and small group conversations are useful.
- These conversations will reveal things previously unknown.
- Be flexible! Stay true to the mission and adopt different ways to do so.

ACKNOWLEDGEMENT

This project is made possible by a generous gift from Dr. John and Mrs. Maggie Raymond to the Community Health and Service Learning Fund.

REFERENCES

1. Braveman, P., & Gottlieb, L. The social determinants of health: it's time to consider the causes of the causes. Public health report, 2014.
2. City of Milwaukee Health Department. 2015-16 City of Milwaukee community health assessment: Understanding the needs of our community. <https://city.milwaukee.gov/health/MAPP-Community-Health-Assessment#.XEIpcGI7m70>. Accessed January 18, 2019.

**Breakout
Room:**

3 - Creative Care for Vulnerable Populations

Title: Community-Academic Partnership in Milwaukee County: A Model For Improving Veteran Healthcare Nationally

Authors: Anjali Goswami, MS, MCW, Family and Community Medicine; Zeno Franco, PhD, MCW, Family and Community Medicine

Abstract: **OVERVIEW:** Veteran community engagement is a nascent area of scholarship mixing traditional Community-Based Participatory Research (CBPR) strategies with veteran studies. Few formal evaluations of complex community-academic partnerships with veterans have been undertaken. This study examines the impacts of a community-academic partnership between Dryhootch, a veteran led non-profit, and several academic partners in Milwaukee.

OBJECTIVE: Our evaluation seeks to document the history of a veteran-led community-academic partnership for health and assess its success. We then analyze the major themes of the program's successes and obstacles that were identified by interviewing partners and use this analysis to discuss its policy successes. This key area of research will allow future organizers to draw from the experiences of DryHootch and will help policy makers determine the utility of funding and advocating for veteran-driven healthcare projects.

METHODS: This study utilized a multimethod approach including document review, grant review, and key-informant interviews. Document review served to provide historical understanding of the partnership and develop guided interview questions. Interviews were conducted with ten community-academic partners, both veterans and nonveterans. Thematic analysis was employed to generate descriptive tables, assign codes to open-ended interview topics, and analyze patterns across interviews.

RESULTS: Our results revealed many qualitative successes for the veteran-led community-academic partnership including educating community healthcare providers about veteran needs, coalescing community resources, and kickstarting innovative peer mentoring services and training modules that were recognized by legislators and national leaders. We explored the success of academic partners in securing over \$3 million in grants, while veteran community partners succeeded in pushing multiple policy initiatives.

CONCLUSION: As DryHootch has succeeded in lobbying national VA leaders for more acknowledgement and collaboration, we explore the need for large institutions to support veteran-led initiatives. We argue that both VA officials and lawmakers would benefit veteran communities by directly funding veteran-led health services.

Submitter: Goswami, Anjali

Record ID: 102



Community-Academic Partnership in Milwaukee County: A Model For Improving Veteran Healthcare Nationally

Anjali Goswami, MS & Zeno Franco, PhD
 agoswami@mcw.edu
 Department of Family and Community Medicine

Introduction

Veteran community engagement is a nascent area of scholarship mixing traditional Community-Based Participatory Research (CBPR) strategies with veteran studies.¹ Few formal evaluations of complex community-academic partnerships with veterans have been undertaken. This is of particular interest as after the Vietnam War, dissatisfaction with United States Department of Veterans Affairs (VA) services led to community-based Veteran Centers and veteran peer-led mental health services.² These types of veteran-led organizations have become common in cities across the country as veterans express their distrust or discontent with public health services like the VA, especially with regard to mental health services.³

This study examines the impacts of a 13 year community-academic partnership between Dryhooch, a veteran led non-profit, and several academic partners in Milwaukee and offers consideration on how this partnership has also impacted state wide and national conversations on veteran community engagement. Veterans in southeastern Wisconsin formed Dryhooch of America in 2007, organized to advocate for their fellow veterans and coalesce the resources that existed within the region to make a broader impact. The public health initiative was initially developed to address the mental health needs of Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) veterans, as well as provide services for reintegration into civilian life. A primary focus of these veterans was to provide a peer-to-peer support system, as opposed to traditional clinical mental healthcare.

A pilot grant for the partnership was awarded by the Healthier Wisconsin Partnership Program between Dryhooch and a VA/Medical College of Wisconsin faculty member along with ongoing guiding input to Dryhooch leadership from a VA psychologist.⁴ The agencies involved eventually expanded to additional faculty from MCW, Marquette University, the University of Wisconsin-Milwaukee, and Mental Health America of Wisconsin.⁴ Over time, the partnership became increasingly formalized as the Dryhooch Partnership for Veteran Health (DPVH).

Our evaluation seeks to document the history of a veteran-led community-academic partnership for health and assess its policy impacts on a local, regional, and national scale. This key area of research will allow future organizers to draw from the experiences of Dryhooch and will help policy makers determine the utility of funding and advocating for veteran-driven healthcare projects.

Methods

This study utilized a multimethod approach including document and grant review, as well as key-informant interviews, aimed to assess collective impact. It's been shown that evaluation of collective impact can better assess the progress of an intervention over several years and can therefore provide information valuable in making long term policy changes.⁵

- **Document review** was chosen as an initial method of analysis in order to provide historical understanding of the partnership, track the development of the partnership over time, and assist in the formation of the guided interview questions.
- **Grant review** was chosen to utilize evaluative thinking in assessing funding to further the discussion of the partnership's sustainability in the key-informant interviews.
- **Key-informant interviews** brought understanding of the underlying dynamics of the partnership. The open-ended interviews detailed data that assessed partnership evolution and obstacles that are not traditionally documented. All available community and academic partners, 2 veterans and 9 nonveterans, were interviewed both in person and via phone using guided questioning.
- **Thematic analysis** was used to extract the most relevant data and compare partner responses pertaining to various situations. We generated descriptive tables, assigned codes to open-ended interview topics, and analyzed patterns across the interviews. Codes were designed based on guided questions that were asked of all participants. We then provide specific quotes from interviewees to expand upon the codes.

Results

Document and Grant Review⁶: The successes of the partnership can be measured by its extensive fundraising, community events, and organization achievements outlined in the timelines below.

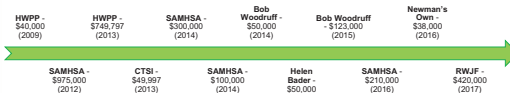


Figure 1. Timeline of Dryhooch Grants
 Between 2009-2017, Dryhooch was granted over three million dollars in funding from both local and national organizations.

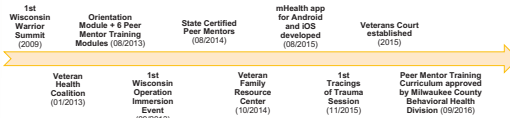


Figure 2. Timeline of Dryhooch Major Accomplishments
 Dryhooch succeeded in utilizing community organization to promote veteran reintegration and peer mentor services.

Key-Informant Interviews and Thematic Analysis: When local impacts were discussed, all partners mentioned the change in community and physician perception of veteran mental illness as a major success of the organization. The Warrior Summits and Veteran's Health Coalition were cited as instrumental products in achieving this. When national impacts were discussed, partners consistently pointed to expansion and inspiration of other veteran-led programs outside of Milwaukee County. Policy successes are outlined below.

LOCAL & REGIONAL POLICY/ADVOCACY SUCCESSSES	NATIONAL POLICY/ADVOCACY SUCCESSSES
Quick Reaction Force (QRF) Manual, veteran-specific peer support training curriculum recognized by the state of Wisconsin as a billable service through Medicaid & Medicare	Community in talks with national VA to utilize the QRF Manual for peer support training as an approved vendor
Jesse Brown VA in Chicago, IL, utilizes the QRF Manual informally in training peer support specialists	Publication of dozens of research and educational material that influence community engagement, policy discussions, and clinical care. For example, in 2011 an academic partner of Dryhooch helped author the first "Occupational Therapy in Mental Health: A Vision for Participation". This text is used nationally and highlights the needs of veterans in clinical care.
Peer app utilized by hundreds of veterans across the state of Wisconsin. Developed by computer scientists at Marquette University. Developers approached to create content to study opioid/substance abuse in veteran populations and guide policy change.	Gained access to key policy makers. Secured meetings with U.S. Representative Dawn Moore and U.S. Senator Tammy Baldwin. Set in on VA's National Advisory Council in Washington, D.C.

Table 1. Dryhooch's Local, Regional, and National Policy & Advocacy Successes

Code	Theme	Statement Examples
Local Impacts	Change in community/physician perception of veteran mental health via Warrior Summits	"The biggest success Dryhooch had was being able to do accessible education and hand-off veterans in order to tie to VA." [veteran partner] "The first Warrior Summit was the first step in having community providers learn about veterans. I think hasn't waned, they don't have a clue about vets. Sometimes their perceptions are off." [veteran partner] "What we've shown this community is the VA and VHC can work together, support each other, and communicate and that's a really big deal." [nonveteran partner] "The Warrior Summits helped to reach a lot of veterans to make them aware of their resources and change opinions of the VA in a positive way." [nonveteran partner] "Dryhooch moved the needle in how the community thought about peer support." [nonveteran partner] "Not everyone wanted to seek services from the VA. The Warrior Summits were the vehicle for community populations to understand veterans health." [nonveteran partner]

Table 2. Thematic Analysis and Statement Examples based on Key-Informant Interviews: Dryhooch Local Impacts

Code	Theme	Statement Examples
Regional or National Impacts	Dryhooch expansion: We've inspired the country along practitioners about Dryhooch. A big success is Quick Reaction Force manual. I want to go all over the out of state and inspiring veteran organizations to embrace peer support systems	"I get calls from people in Ohio who want to start chapters of Dryhooch there. There's now an interest in having similar programs in different locations. We've inspired the country along practitioners about Dryhooch. A big success is Quick Reaction Force manual. I want to go all over the out of state and inspiring veteran organizations to embrace peer support systems." [veteran partner] "We're on the verge of completing Chicago Dryhooch (pending consent). We've got inside Dryhooch locations outside of Milwaukee." [veteran partner] "I think Dryhooch has a great deal of moral authority that a program like Through Veterans, that has gone through, might lack. Veterans doing peer support was not a well-known concept in 2007. New Combined Area, Team Red White and Blue, and Heroes On The Water are all doing it. How many of those were influenced by Dryhooch? Probably quite a few." [nonveteran partner] "You can only be helped by the VA if you meet certain criteria so we have lots of veterans who can't access those services. This peer support program impacts allows them to access the veteran-specific care elsewhere." [nonveteran partner] "You gain connections [with national leaders] by serving on advisory boards or task forces and attending meetings. Dryhooch veterans did a great job of being invited and building those networks. They had successful advocacy and policy impacts by tapping into their relationships with folks that are along the way." [nonveteran partner]

Table 3. Thematic Analysis and Statement Examples based on Key-Informant Interviews: Dryhooch Regional & National Impacts

Conclusion

Our results revealed many qualitative successes for the veteran-led community-academic partnership including educating community healthcare providers about veteran needs, coalescing community resources, and kickstarting innovative peer mentoring services and training modules that were recognized by legislators and national leaders. The product of veteran-led projects can be seen in the evolving structure of how government organizations are interacting with communities. For example, within the last few years the Veterans Health Administration has established an Office of Community Engagement, other veteran-led organizations, including Dryhooch, lobbied for more acknowledgement and collaboration by the VA system.⁷ This is a huge step in ensuring that community programs have potential to receive promotion and assistance from government resources. The VA system, in this way, is beginning to view collaboration with community programs as an asset rather than a burden. This study is intended to provide a model for future veteran-led projects to follow and proved the successes of these initiatives, but future policy focusing on providing support to these programs in their expansion is necessary and a possible area of study. This type of research can serve to identify existing gaps in care and further improve health outcomes.

Major Policy Points:

1. **After the Vietnam War, dissatisfaction with United States Department of Veterans Affairs (VA) services led to community-based Veteran Centers and veteran peer-led mental health services.**
2. **Although veteran-led community-academic partnerships achieve qualitative success, assistance from grantors, policymakers, and national leaders is required to ensure sustainability.**
3. **VA assistance for veteran initiated healthcare projects could expand care to veterans who don't use or are ineligible for VA services and better address veteran mental health needs.**
4. **Policymakers who advocate for veteran-led initiatives can appease veterans who do not wish to seek care at the VA and promote local economic growth.**

References

1. Franco Z, Hooyer K, Ruffalo L, Fitz-Ho Jung RA. Fostering a Special Issue on Veterans Health and Well-Being—Collaborative Research Approaches. *Toward Veteran Community Engagement. J Humanist Psychol.* 2020; doi:10.1177/0022026120909108
2. Resnick SG, Armstrong M, Spertacco M, Harkness L, Rosenheck RA. A model of consumer-provider partnership. *Vets-well. Psychiat Rehabil J.* 2004;28(2):185-188.
3. Fox AB, Meyer EC, Vogt D. Attitudes about the VA health-care setting, mental illness, and mental health treatment and their relationship with VA mental health service use among female and male OEF/OIF veterans. *Psychol Serv.* 2015; 12(1):45-58. doi:10.1037/a0032629
4. Dryhooch of America. Dryhooch 2016 Progress Report: A Peer Based community nonprofit alliance mission is to "helping the veterans & their families & their family who served the war, survive the peace". Milwaukee, Wisconsin, USA. Dryhooch of America, 2017.
5. Wickert M, Praelert L. *Learning in Action: Evaluation Collective Impact.* Stanford Social Innovation Review; 2014.
6. Dryhooch of America. Dryhooch of America: A Social & Technology Support Program for Veteran Mental Health. Reporting Period: 1/2013-6/2017. Milwaukee, Wisconsin, USA. Dryhooch of America, 2015-2017.
7. US Department of Veterans Affairs. *The Office of Community Engagement Serves Veterans Through Partnerships.* Washington, DC: Department of Veterans Affairs; 2020. <https://www.va.gov/HEALTHPARTNERSHIP/index.asp>. Accessed October 16, 2020.

**Breakout
Room:**

3 - Creative Care for Vulnerable Populations

Title: Opioid Misuse Among Veterans: A community engaged approach to tackling a wicked problem

Authors: Myah Pazdera, MS, MCW, Community Engagement; Kajua B. Lor, BCACP, MCW-School of Pharmacy; Otis Winstead Jr., Dryhootch of America, Inc; L. Kevin. Hamberger, PhD, MCW, Family and Community Medicine; Zeno Franco, PhD, MCW, Family and Community Medicine; Sarah O'Connor, MS, MCW, Community Engagement; Martina Gollin-Graves, MSW, Mental Health America of Wisconsin; Robert Hurley, MD, PhD, Wake Forest School of Medicine, Anesthesiology; Syed M. Ahmed, MD, MPH, DrPH, MCW, Family and Community Medicine

Abstract: Opioid use disorder (OUD) disproportionately affects military Veterans who are more likely than the general population to experience chronic pain. A community-academic partnership launched a community engaged research (CEnR) project designed to train Veteran peer mentor specialists to prevent and reduce opioid abuse among Veterans. The Milwaukee Prevention of Opioid Misuse Disorder with Peer Training (PROMPT) project held a series of focus groups to obtain community input for the development of an opioid prevention curriculum to be utilized by peer mentor specialists. The focus group participants' experiences contributed to nuanced perspectives that fostered deeper knowledge and service gaps by using a CEnR approach. The themes produced resulted in a curriculum of key concepts related to substance abuse and recovery for peer mentor specialists providing peer support for Veterans with OUD. Integrating research with community input and partnerships optimizes the opportunity to address aspects of OUD experienced by Veterans. The Milwaukee PROMPT project offers an important example of how existing community-academic partnerships can serve as platforms for increasingly complex interventions and research as the partnership matures and evolves.

Submitter: Pazdera, Myah

Record ID: 93

Opioid Misuse Among Veterans: A community engaged approach to tackling a wicked problem

Myah Pazdera, MS, Syed M. Ahmed, MD, MPH, DrPH, FAAFP, Kajua B. Lor, PharmD, BCACP, L. Kevin Hamberger, PhD, Robert Hurley, MD, PhD, Zeno Franco, PhD, Sarah O'Connor, MS, Otis Winstead Jr., Martina Gollin-Graves, MSW

BACKGROUND

A community-academic partnership launched the Milwaukee Prevention of Opioid Misuse with Peer Training (PROMPT) project designed to equip Veteran peer support specialists with knowledge to prevent and reduce opioid abuse among military Veterans. This community-engaged research (CEnR) study was based on the belief that a comprehensive, community-engaged prevention and intervention effort is needed to prevent opioid use disorder (OUD) among Veterans.

PURPOSE

The interlocking factors of physical injuries, psychological injuries, post-traumatic stress disorder (PTSD), stigma, and unwillingness to seek care are some of the multifaceted contributors to OUD and OUD-related deaths among Veterans. Integrating research with community input and partnerships optimizes the opportunity to address the psychological, social, and physical aspects of pain experienced by Veterans.

METHODS

Milwaukee PROMPT was a multi-phased project that prioritized the importance of a CEnR approach.

- During Phase 1, Veterans who experience OUD, professionals who work with substance abuse populations, and friends/family members who support Veterans participated in **focus groups**. Focus group questions were developed with community input.
- During Phase 2, the research team reviewed and categorized the themes that emerged from the focus group content analysis to collaboratively create a **peer-delivered training curriculum**.
- During Phase 3, PROMPT peer mentors were trained to use the training curriculum, recruited and worked with research participants experiencing OUD, and met regularly with a psychological team to debrief their peer mentoring experiences in a **support group**.



RESULTS

Figure 1. Themes that emerged from focus groups

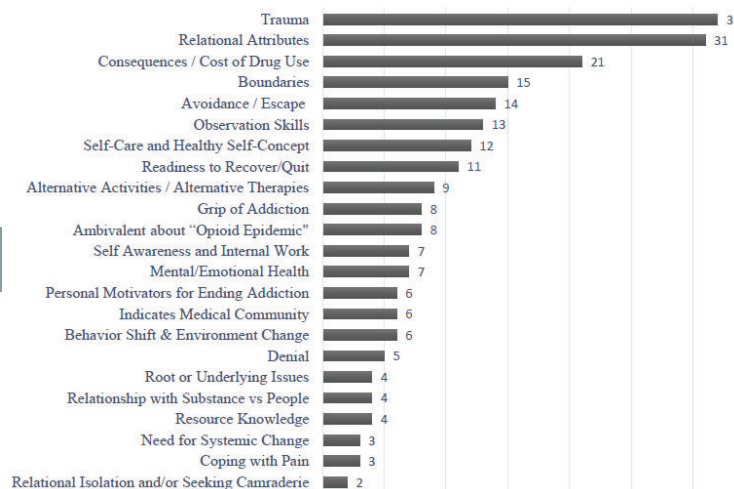


Figure 2. Curriculum modules informed by focus group themes



The Phase 1 focus groups allowed for expression of nuanced perspectives, identified service gaps within the Veteran population, and informed the Phase 2 creation of the peer-delivered training curriculum. During Phase 3, the team developed a process to debrief and mitigate emotional distress that peer mentors may experience while mentoring research participants experiencing OUD. The team developed a process that addressed peer mentors' needs for regular debriefing and support. This support involved regular meetings with a psychological team for peer mentors to debrief their experiences in their roles. Conversations with the peer mentors indicated that the focus group themes and resulting modules resonated with their experiences.

SELF-CARE IS A CORNERSTONE OF RECOVERY



43 support group meetings occurred from December 2019 to August 2020

We established a support group for peer mentors that shifted from supervision to a casual check-in for self-care and reflection.

Experts in addiction, psychology, trauma informed care and veterans health participated.



CONCLUSION

Complex problems require community input. A CEnR approach positioned this community-academic research team to engage community members as co-investigators and collaborative partners in the design. Engaging Veterans and community organizations provided a robust framework through focus groups and the collaborative development of a training curriculum. Support groups allowed peer mentors, who had shared lived experiences with the participants, to debrief. The psychological team adapted to the needs of the group. The Milwaukee PROMPT project offers an important example of how a community engaged approach can tackle OUD among military Veterans.

**Breakout
Room:**

3 - Creative Care for Vulnerable Populations

Title: The Warriors Path: Using clinical measures in a Veteran arts- based community project... should we?

Authors: Katinka Hooyer, MS, PhD, MCW, Family and Community Medicine; Nancy Smith-Watson, BA, Feast of Crispian: Shakespeare with Veterans; Leslie Ruffalo, MS, PhD, MCW, Family and Community Medicine

Abstract: For Veterans, coming home after military service is one of the happiest, most anticipated moments of their lives. But after the initial homecoming, many feel a loss of purpose and alienation from friends and family because of their engagement in war work. These experiences often involve feelings of betrayal, shame or guilt for actions that conflicted with core values. These moral injuries can contribute to severe mental health issues. The goal of our community-academic partnership was to develop a program that provided opportunities for the ethical and spiritual dialogues that are key to making sense of moral injury and the war experience. The Warriors Path: Moral Injury, War and Reclaiming the Soul trained Veteran discussion leaders to facilitate 5-week Veteran-to-Veteran discussion groups. Utilizing Shakespeare's historic plays, basic acting techniques and reading circles of military graphic novels, Veterans experienced the moral injuries of characters as an entry point to embody and articulate their own experiences. We assessed if the program could change the experience ('clinical symptoms') of moral injury through administering the Moral Injury Short Form survey before and after the program. Unexpectedly, scores (symptoms) modestly increased. The modest increase in moral injury symptoms may be due to the reflective nature of the program activities and increase in the participants' ability to name, connect with, and identify feelings associated with moral injury. These results contrasted with interview findings that suggested an improvement in Veterans' self-understanding of their moral wounds. Moral injury discussions require trust building among participants. Programming should allow for longer more sustained interactions to make sense of these complex experiences. Clinical measures may not be the best way to measure non-clinical interventions.

Submitter: Hooyer, Katinka

Record ID: 112

The Warriors Path: Using clinical measures in a Veteran arts - based community project... should we?

PRESENTER: Katinka Hooyer, PhD, MS

BACKGROUND



WHAT'S MORAL INJURY?
And what does this graphic novel of the Iraq War have to say about it?

Many Vets feel alienated from engaging in war work. Ethical and spiritual dialogues are key to making sense of war trauma and humanities programs offer options, but physicians/funders want data that speaks their language.

METHODS

Pre/post changes in clinical symptoms:

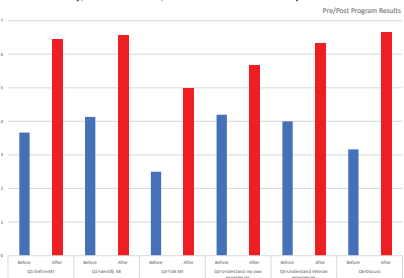
Moral Injury (MI) Short Form MISS-M-SF.

Pre/post knowledge and ability to discuss MI:

Focus groups and survey

RESULTS

MISS-M-SF scores modestly increased symptoms while ability to identify, talk about, understand MI improved.



Vets became comfortable talking about MI with others, able to better express their MI and wanted to continue the dialogues. A majority welcomed the opportunity to share "radical truths" and some used insights as bridge to therapy.



NEGATIVE RESULTS? Modest increases in clinical symptoms. This may be due to the reflective nature of the activities and increase in Vets' ability to name and connect with feelings associated with moral injury.

Discussion Series	Moral Injury Pre-test (mean)	Moral Injury Post-test (mean)	P-value (significance .01)
Series 1&3 Shakespeare Scenes N=20	46.84	47.8	0.95
Series 2&4 Graphic Novel N=14	44.57	45.5	0.54
All Data Combined N=34	45.7	46.65	0.62



Take a picture to view the Moral Injury Symptom Scale

<1% of US population served in military active duty in the recent Global Wars on Terror, making it difficult for Vets to relate to friends, family and clinicians.



"THE ARMS ARE FAIR, WHEN THE INTENT OF BEARING THEM IS JUST."
WILLIAM SHAKESPEARE

Theater is the warrior's art form, invented for returning soldiers to share their experiences with their community. Join the professional actors Feast of Crispian to read, act and discuss the words of Shakespeare as they relate to contemporary military service, sacrifice and returning home.

WARRIORS PATH AIMS

- create space for Vets to explore and gain a deeper understanding of spiritual and moral impacts of war
- provide a language to talk about Moral Injury
- express feelings, first through characters, then with each other, using Shakespeare's plays, graphic novels and war poetry as an entry point

RECONCILING +/- RESULTS

Participants and community partners CONCERN over "Clinical Symptom" results:

- Do not tell the whole story
- Can misrepresent outcomes
- Perceptions of "real" evidence

DISCUSSION

Should we assess non-clinical community-based interventions with measures created for medicine?

Katinka Hooyer, PhD, MCW; Nancy Smith-Watson, FoC; Leslie Ruffalo, PhD, MCW



**Breakout
Room:**

3 - Creative Care for Vulnerable Populations

Title: Bringing COVID-19 Patients Comfort: Virtual Music Sessions in the ICU

Authors: Jennifer C. Mackinnon, MD, MM, MCW; Jennifer Hollis, CM-Th, MDiv; Julia Reimann, Harvard University Divinity School

Abstract: Beginning with the COVID-19 epidemic, a group of musicians from all over the world began to hold weekly virtual meetings to establish a program for music sessions with a live musician to be played for patients in isolation virtually. The idea was to begin in the ICU settings where patients were being reported in medical and news reports as dying alone except for the nurses and physicians caring for them. The group, Harps of Comfort, was formed and made of primarily music thanatologists. Music-thanatology is a professional field that utilizes harp and vocal music to serve dying patients and their loved ones. During a music vigil, the music-thanatologist responds moment by moment to the patient's needs using music in a prescriptive way. By using iPads and a safe secure virtual platform from Froedtert Hospital, WebEx, the musicians are able to play for 30-45 minute sessions. Feedback from the musicians has been positive as they have reported seeing the patients become more relaxed with decreases in respiratory rates and heart rates. Also the patients and family members (if present via digital platform WebEx) have expressed gratitude. Furthermore, the staff nurses taking care of the patients have appreciated the music as a way to lower the overall associated stress in the patient care environment. More study on assessment of the music sessions will be forthcoming. Potential next steps: combining forces with palliative care as well for COVID-19 patients in addition to ICU; measuring effects of music staff in the ICU and well being; measuring effects of music session with family member that can be WebEx-ed into session. Assessment methods will include surveys on IPAD immediately before and after session. In the future, this can be a model of a new platform for other hospitals and nursing facilities in the community.

Submitter: Mackinnon, Jennifer

Record ID: 101

Harps of Comfort: Music for COVID-19 Patients in Isolation

Jennifer Hollis, CM-Th, MDiv; Jennifer C. Mackinnon, MD MM; Julia Reimann, Harvard University Divinity School

INTRODUCTION

- **Harps of Comfort** began with a tweet. On March 31, 2020, Dr. Jennifer Mackinnon of Froedtert Hospital and The Medical College of Wisconsin reached out to music-thanatologist and author Jennifer Hollis on Twitter, saying, "I am a harpist and doctor. I want to see how we can bring music into the ICUs when patients are dying alone. Let's work together and see if we can make this happen."
- Shortly thereafter, we brought together a group of harpists – all highly trained palliative musicians – to meet weekly on Zoom. These harpists come from all across the United States, Canada, and Australia, and many have decades of experience offering live music in medical settings.
- We developed a shared vision, chose a name, built a website, answered initial questions about funding, and tested microphones and equipment to ensure excellent sound quality over remote platforms.
- Harps of Comfort began playing for patients at Froedtert Hospital on September 21, 2020.

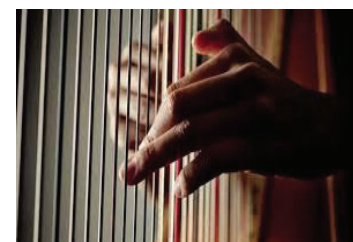
As of early November 2020, Harps of Comfort has played 42 music sessions. Some patients have received repeat music sessions.

Elizabeth Markell, CM-Th, plays for Froedtert Hospital patients from her home in Oregon.



METHODS

- Each week, two harpists are on-call M-F, 12noon-5pm to play music for isolated patients with COVID-19.
- By using iPads and a safe secure virtual platform, WebEx, the musicians are able to play for 30-45 minute Patients were in the CVICU and available during Harps of Comfort on-call time (M-F, 12-5pm)
- Nursing staff offered Harps of Comfort to patients and got consent for music sessions.
- Harpists offered music sessions over WebEx for 30-45 minutes
- Patients, nursing staff, and harpists offered qualitative feedback about music sessions



RESULTS

- During music sessions, harpists have observed decreased respiratory and heart rates, increased relaxation and sleep, and have heard positive feedback from family members.
- Qualitative analysis of musicians virtual encounters with patients review.
- Extraction of themes

Harpists report that the remote platform, WebEx, provides a unique and robust opportunity to provide excellent patient care. "It has been an amazing experience for me to be able to bring comfort and support to Covid-19 patients with my harp and voice and to see how close the virtual platform brings us to the patient's bedside. It is like being right there with them." (Bonita Wood, CMP, RN, BMus)

"A patient's wife had stated that she felt that the Harps of Comfort visit helped lower her husband's blood pressure, and she herself appreciated the music – she made sure that each day they played and she was here at the hospital, that she was in the room the whole time for it as she found it comforting as well." "Still another patient had been very restless, anxious and short of breath for much of the shift; he agreed to try the Harps of Comfort playing for him and the bedside RN reported that the patient fell asleep within 5 minutes of them starting to play because he was so relaxed!" -Jennifer Popies, MS, RN, CCRN-K, ACNS-BC, Clinical Nurse Specialist in the CVICU

CONCLUSIONS

- Initial observations indicate that remote music sessions can provide symptom relief, increased relaxation and sleep, care and support for patients and their loved ones in isolation with COVID-19.
- More study of the impact of the music sessions will be forthcoming via validated research surveys before and after the music sessions.
- This research will include the effects of music on the well-being of ICU staff as well as loved ones attending the music sessions remotely
- Harps of Comfort may in the future collaborate with palliative care in addition to ICU
- Harps of Comfort's method of offering remote music sessions for isolated COVID-19 patients could be a model for other hospitals and nursing facilities in the community.

References

- "Investigating the physiological responses of patients listening to music in the intensive care unit" in The Journal of Clinical Nursing
- "Receptive music therapy to reduce stress and improve wellbeing in Italian clinical staff involved in COVID-19 pandemic: A preliminary study" in The Arts in Psychotherapy
- "Family members' views on the benefits of harp music vigils for terminally-ill or dying loved ones" in Palliative and Supportive Care

**Breakout
Room:**

3 - Creative Care for Vulnerable Populations

Title: Enhancing patient-centered medical care through life story work.

Authors: Sai Suma K. Samudrala, MCW; Justin Laridaen, MCW; Seth Jovaag, William S. Middleton Memorial Veterans Hospital; Thor Ringler, MFA, MS, William S. Middleton Memorial Veterans Hospital; Michael McBride, MD, MS, Zablocki Milwaukee VA Medical Center; Bertrand D. Berger, PhD, Zablocki Milwaukee VA Medical Center

Abstract: **BACKGROUND:** The patient-provider connection plays an essential role in patient-centered care, however, because of clinical time restraints, providers are often unable to engage in conversations that extend beyond the patient's presenting health concerns. Such conversations enable providers to understand their patients as a whole and improve quality of care. Veterans especially benefit from such practices as an understanding of their past experiences may uncover important clinical information that influences their overall health profile. One way to have these conversations is through life story work (LSW).

OBJECTIVE: We established the voluntary "My Life, My Story" (MLMS) program at the Zablocki Milwaukee VAMC to determine if LSW enhanced trainee empathy, fostered stronger patient-provider relationships, and contributed to effective patient-centered care.

METHODS: Veterans are recruited from the Zablocki VAMC and consented prior to being interviewed in-person or virtually by MCW medical student trainees. Veterans are encouraged to share any experiences that reflect their life story, including information they would like their providers to know. Post-interview, trainees write a short first-person narrative in the voice of the Veteran, which, after the Veteran's approval, is added to the electronic medical record and available to the patient's care team. The impact of the program is assessed through post-interview surveys given to Veterans and trainees.

RESULTS: MLMS program data from the Madison and Boston VAMCs identified that the Veterans, trainees, and providers unanimously benefitted from this LSW. Preliminary data from our program show similar results. All Veterans reported that they felt confident that their stories would enable providers to give better medical care. All trainees also reported increased comfort in speaking and connecting with Veterans.

CONCLUSION: Engaging in LSW outside of clinical visits improves trainee comfort and contributes to increased Veteran satisfaction. These stories further transform a VAMC into a community where Veterans feel accepted and understood.

Submitter: Samudrala, Sai Suma

Record ID: 119

Introduction

The patient-provider relationship plays an essential role in patient-centered care, however, because of clinical time restraints, providers are often unable to engage in conversations that extend beyond the patient's presenting health concerns.

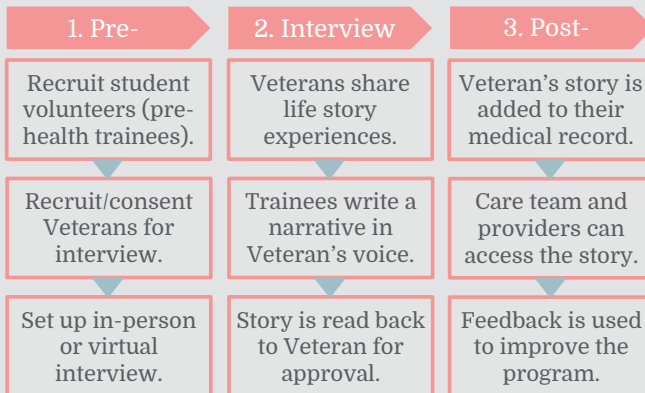
Veterans especially benefit from such practices as an understanding of their past experiences may uncover important clinical information that influences their overall health profile.

One way to have these conversations is through life story work (LSW).¹

Objective

The "My Life, My Story" (MLMS) program at the Milwaukee VAMC will be used to determine if LSW enhanced trainee empathy, fostered stronger patient-provider relationships, and contributed to effective patient-centered care.

Methodology



Results

Preliminary MLMS program feedback at the Milwaukee VAMC is similar to the feedback received by the Madison and Boston VAMCs' MLMS programs.

All Veterans reported that they felt confident that their stories would enable providers to give better medical care.

All trainees also reported increased comfort in speaking and connecting with Veterans.

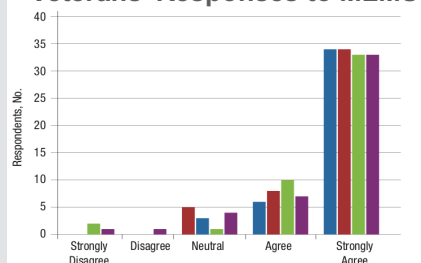
Conclusions

Engaging in LSW outside of clinical visits improves trainee comfort and contributes to increased Veteran satisfaction.

These stories further transform a VAMC into a community where Veterans feel accepted and understood.

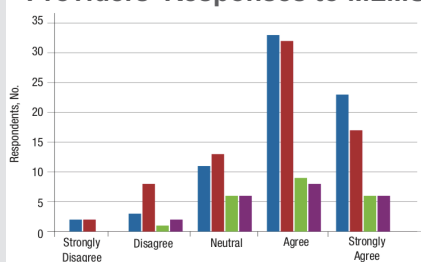
Madison VAMC Results²

Veterans' Responses to MLMS



Blue: I liked the visit from the interviewer today.
Red: I felt this visit gave me a chance to describe myself to my treatment team.
Green: I felt that my story was a helpful part of my care.
Purple: The Madison VA should continue this program.

Providers' Responses to MLMS

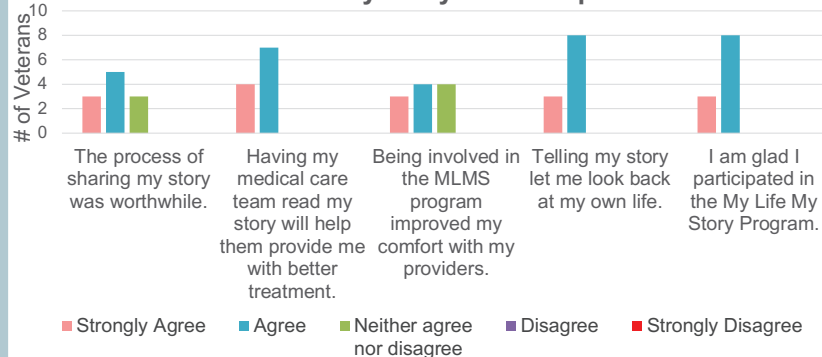


Blue: Reading the story was a good use of my clinical time.
Red: Reading the story will help me provide better treatment.
Green: Reading the PHI was a good use of my clinical time.
Purple: Reading the PHI will help me provide better treatment.

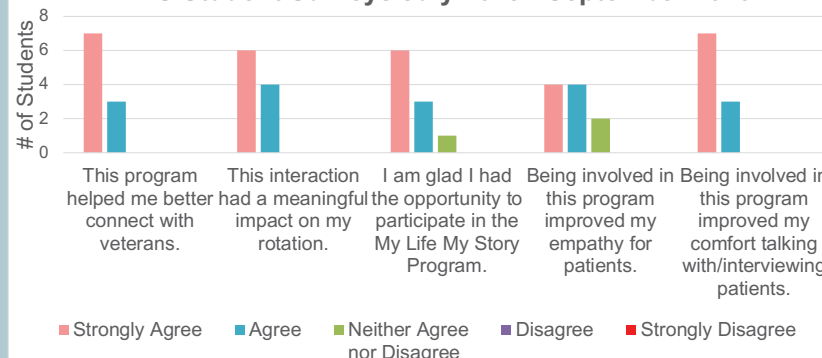
Feedback from other MLMS programs, including the Madison VAMC (pictured above)² and the Boston VAMC³ identified that Veterans, trainees, and providers unanimously benefitted from this LSW.

Milwaukee VAMC Results

MLMS Veteran Surveys July 2019 - September 2020



MLMS Student Surveys July 2019 - September 2020



Future Directions

- Recruit:** Encourage pre-health trainees and Veterans to participate in the program. Increase community awareness of MLMS.
- Feedback:** Optimize post-interview survey questions that are given to trainees and Veterans. Obtain feedback from healthcare providers.
- Goals:** Host regular Read-a-thons. Incorporate MLMS into trainee curriculum. Assess implementation of MLMS into other aspects of clinical care.

References

- Pennebaker, JW. Telling stories: the health benefits of narrative. *Literature and Medicine*, 2000.
- Ringler et al. Using Life Stories to Connect Veterans and Providers. *Federal Practitioner*, 2015.
- Nathan et al. My Life, My Story: Teaching Patient Centered Care Competencies for Older Adults through Life Story Work. *Gerontology & Geriatrics Education*, 2019.

**Breakout
Room:**

3 - Creative Care for Vulnerable Populations

Title: Evidence-Based Decision Making: Marathon County Pre-trial Project

Authors: Natalie Weeks, MCW-Central WI

Abstract: BACKGROUND: Decreasing recidivism rates and crime within the community are public health priorities in Marathon County. My goal in this project was to partner as a representative of the Medical College of Wisconsin with a team of local community members on the local Evidence-Based Decision Making Team in an effort to implement practices that improve the local justice system in Marathon County.

PURPOSE: The purpose is to help build a systemwide framework to guide the Marathon County justice system starting from the initial arrest through final disposition and discharge to result in more collaborative evidence-based decision making practices. My role was to score individuals to aid the team in making assessments about the amount of resources, services, and support needed to effectively reduce re-offending.

METHODS: Random subject sampling was taken from a list of recent offenders in Marathon County. These individuals were scored with the Public Safety Assessment Tool and Matrix. All information was gathered through CCAP. Level 1 individuals are at the lowest risk of re-offending and failing to appear to court. Level 4 are at the highest risk.

RESULTS: N=250 Maximum conditions recommended- 10% Level 1- 41% Level 2- 17% Level 3- 10% Level 4- 22%

CONCLUSION: The long-term goal is to implement this scoring system on each pre-trial detained inmate for evidence-based decision making on new cases. Decisions about whether to incarcerate can be tailored to the individual's needs and risk level, with the goal of being as least restrictive as necessary. The intervention should match the risk level of the individual. Evidence-based decisions help balance the need for public safety and the consequences for the individual being held while giving equal opportunity for pre-trial release to all persons, regardless of race, gender, and SES. Decreasing recidivism rates has harm reduction effects on the entire community.

Submitter: Weeks, Natalie

Record ID: 87



Evidence-Based Decision Making: Marathon County Pre-trial Project

Natalie Weeks

MCW Faculty Advisor: Dr. Corina Norrbom



Abstract

Marathon County is 1 of 6 Wisconsin counties chosen through an application process to partner with the Wisconsin Department of Justice and National Institute of Corrections (NIC) in the Evidence-Based Decision Making in State and Local Criminal Justice Systems Initiative (EBDM). Decreasing recidivism rates and crime within the community are public health priorities in Marathon County. My goal in this project was to partner as a representative of the Medical College of Wisconsin with a team of community members on the local Evidence-Based Decision Making Team to implement practices that improve the local justice system in Marathon County.



Background/Purpose

The purpose of this project is to help build a systemwide framework to guide Marathon County justice system starting from the initial arrest through final disposition and discharge to result in more collaborative evidence-based decision making and practices in state and local criminal justice systems. Recidivism is the tendency of a convicted criminal to reoffend. The pre-trial period is the time frame of the initial arrest to before the case disposition, and this is when key decisions are made about releasing, citing, detaining, charging, and bail. Even short periods of incarceration significantly impact health.

Information gathered through project knowledge can be applied to:

- reduce pre-trial misconduct and offender recidivism
- reduce harm in our communities
- meaningfully engage the public
- build true partnerships across jurisdictional boundaries

A 30% reduction in recidivism is possible if the justice system applies current knowledge consistently and with fidelity.³ The research also shows that application of this knowledge can produce significant cost benefits to cities, counties, and states.

Detaining low/moderate risk defendants in jail for even a short time can increase their risk for misconduct, while releasing high risk defendants without assessment is a public safety concern.³ Also, defendants detained pre-trial are more likely to be convicted and to receive longer sentences than defendants who are not detained.³

EBDM Framework Principles

EBDM Principle 1: The professional judgment of criminal justice system decision makers is enhanced when informed by evidence-based knowledge.

EBDM Principle 2: Every interaction within the criminal justice system offers an opportunity to contribute to harm reduction.

EBDM Principle 3: Systems achieve better outcomes when they operate collaboratively.

EBDM Principle 4: The criminal justice system will continually earn and improve when professionals make decisions based on the collection, analysis and use of data and information.

Methods

All the information gathered for my part of this project was obtained through public records on the WI Circuit Court Access (CCAP).

To get the best assessment of average need and level of risk for the Marathon County system, individuals with an offense that occurred recently in Marathon County were compiled into a list otherwise chosen by random sampling.

The individuals (n=250) were scored with the Public Safety Assessment Tool supplied by the Arnold Foundation and the PSA Matrix created by the State of Wisconsin. This matrix gave a score of 1– 4 after compiling all these factors used to score individuals:

- Age at current arrest
- Current violent offense and prior violent offenses
- Pending charge at time of offense
- Previous misdemeanors or felonies
- Prior failure to appear to court dates
- Prior jail sentence

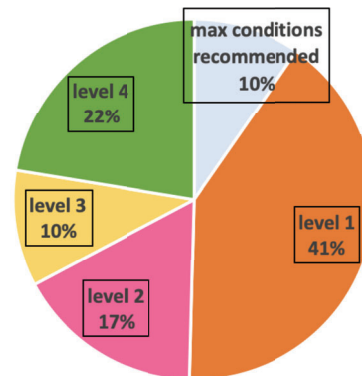


The scoring works based on the premise that level 1 individuals are at the lowest risk of reoffending and failing to appear to court. Level 4 is the highest risk. Some recommendations for supporting individuals based on their risk level include:

	Level 1	Level 2	Level 3	Level 4
Face-to-Face Contact	No	1x/month	Every other week	Weekly
Alternative Contact	No	1x/month	Every other week	No
Supervised Conditions	No	As Authorized	As Authorized	As Authorized
Court Date Reminder	Yes	Yes	Yes	Yes
Criminal History/CJIS	No	Yes	Yes	Yes

Results

Final Recommendation Score Breakdown



Conclusions

Decisions about whether to incarcerate can be tailored to the individual's needs and risk level, with the goal of being as least restrictive as necessary. The intervention should match the risk level of the individual.

Evidence-based decisions help balance the need for public safety and the consequences for the individual being held while giving equal opportunity for pre-trial release to all persons, regardless of race, gender, and SES.

Solid pre-trial support services improve court appearance rates, transparency and accountability in prosecutors' offices, and evidence-based workload limitations for public defenders. Decreasing recidivism rates has harm reduction effects on the entire community. It helps minimize the negative health outcomes of incarceration on individuals and their families.

Future Directions

The long-term goal of the EBDM team is to implement this scoring system on each pre-trial detained inmate for evidence-based decision making on new cases.

As more individuals are scored with the matrix, more information will be available about the amount of services and resources needed to best support those within the local justice system.

The results from the Marathon County Pre-trial Project will help guide additional Wisconsin counties in the future if they choose to implement a pre-trial program.

The outcomes/data/performance measures of this project should be monitored ongoing and considered in context of the unique defendant demographics in this project.



Acknowledgments

Yarie, L. and Kischel, D. of Marathon County Justice Administration
Marathon County EBDM team
National Institute of Corrections
Arnold Foundation

References

1. A Framework for Evidence-Based Decision Making in State and Local Criminal Justice Systems. National Institute of Corrections. https://info.nicic.gov/ebdm/sites/info.nicic.gov/ebdm/files/EBDM_Framework.pdf. Published June 2017. Accessed March 12, 2020.
2. Chilsen H. Record-breaking number of jail inmates in Marathon County. WSAW. <https://www.wsaw.com/content/news/Record-breaking-number-of-jail-inmates-in-Marathon-County-384:94391.html>. Published June 23, 2016. Accessed March 12, 2020.
3. Lowenkamp, C. T., VanNostrand, M., & Holsinger, A. (2013). The Hidden Costs of Pretrial Detention. National Institute of Corrections. <https://nicic.gov/hidden-costs-pretrial-detention>. Published 2013. Accessed March 12, 2020.

**Breakout
Room:**

3 - Creative Care for Vulnerable Populations

Title: Wisconsin Views on Addiction and Mental Health

Authors: Nathan R. Staidl, MCW-Green Bay

Abstract: INTRODUCTION: Growing up in a very rural and conservative portion of Wisconsin, I found addiction and mental health were traditionally ignored. Therefore, I have often wondered if there is a correlation to certain social demographics and views on addiction.

METHODS: Surveys were distributed via the Brown County Alcohol & Drug Coalition 4 Change, and collected using the online survey platform, Qualtrics. Data was interpreted to match answer patterns with self-proclaimed demographics.

RESULTS: Approximately 88% of participants agree that addiction is a mental illness. Less than 50% believe that factors like education level and income contribute to addiction, while more than 50% believe family history and where the person grew up do contribute to addiction. Approximately 90% of participants do not believe addiction is the result of a character flaw or personal choice.

CONCLUSION: The majority of people who were surveyed do see alcohol and drug addiction as a mental illness. Some people still fail to recognize social factors such as education and income as high risk determinants of addiction. There appears to be no correlation between any one demographic and views on addiction, however small sample size and lack of diversity among participants may be contributing to false representations, as well as participants selecting "self-proclaimed" demographics which may be subjective. Other limitations may include selection bias due to the organizations I worked with giving access to participants who may have already been seeking to change views and policies on substance abuse.

Submitter: Staidl, Nathan

Record ID: 68

Wisconsin Views on Addiction and Mental Health

Nathan Staidl, MS2

INTRODUCTION

- Growing up in a very rural and conservative portion of Wisconsin, I found addiction and mental health were traditionally ignored.
- I have often wondered if there is a correlation to certain social demographics and views on addiction.

PURPOSE

- Discover the people of Wisconsin's views as they pertain to substance abuse and mental illness.
- Evaluate opinions of varying demographics throughout Wisconsin, to compare with modern, widely accepted scientific research on addiction.
- This research may help lead to improved public opinion, state policies, and legislation with regards to how we care for people living with addiction.

METHODS

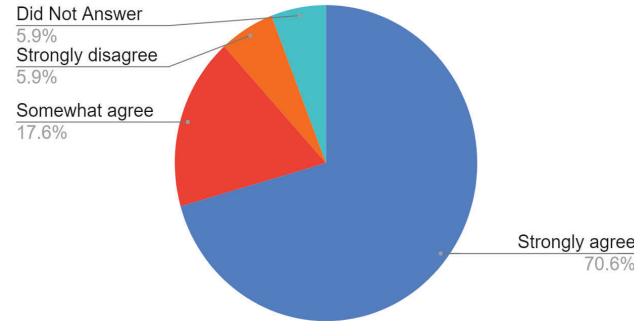
- Surveys were distributed via the Brown County Alcohol & Drug Coalition 4 Change, and collected using the online survey platform, Qualtrics.
- Data interpreted to match answer patterns such as whether they believed addiction was a mental illness, and what they thought were increased risk factors, with certain self-proclaimed demographics including whether they or someone they knew suffered from addiction, participant's age, education level, income, where they grew up/live now, and political views.

REFERENCES

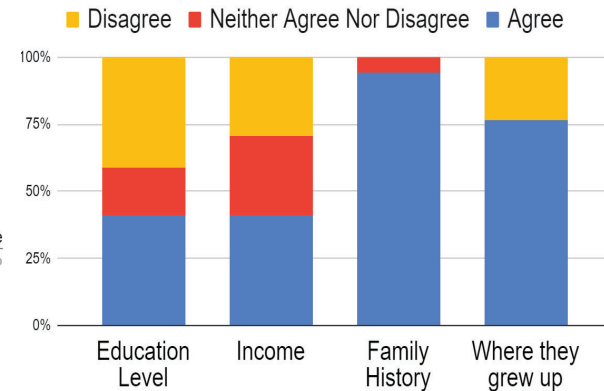
- Frankenfield J. Which Income Class Are You? Investopedia. <https://www.investopedia.com/financial-edge/0912/which-income-class-are-you.aspx>. Published December 11, 2019. Accessed December 24, 2019.
- Lane JB. *Addiction Medicine: Closing the Gap between Science and Practice*. New York, NY: National center on addiction and substance abuse (CASA); 2012.
- Spooner C, Hetherington K. *Social Determinants of Drug Use*. Sydney: National Drug and Alcohol Research Centre, University of New South Wales; 2004.

RESULTS

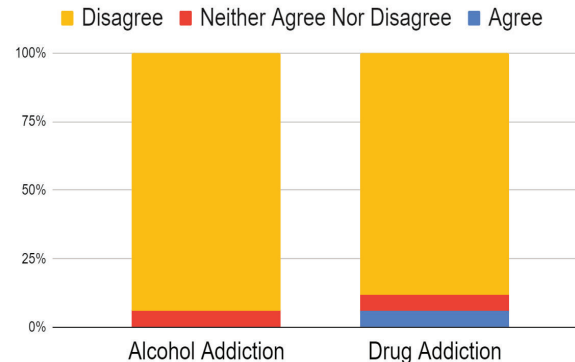
View Substance Addiction as a Mental Illness



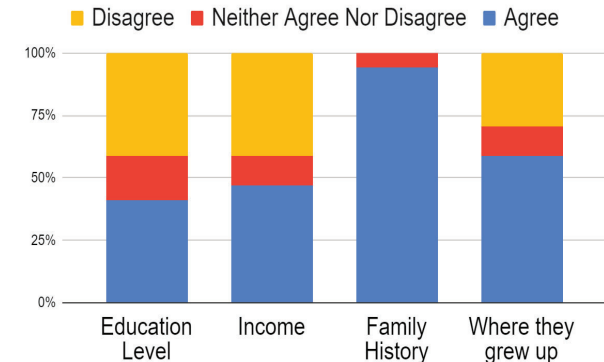
Increased Risk for Alcohol Addiction



Character Flaw/Personal Choice



Increased Risk for Drug Addiction



Average Participant*:

Age	
26-40	18%
41-65	76%
>65	6%
Did Not Answer	0%
Education	
Ass./Tech	18%
Bachelors	76%
Masters	6%
Did Not Answer	0%
Household Income	
< \$80k	29%
\$80 - 240k	53%
> \$240k	6%
Did Not Answer	12%
Area Raised/Live	
City/Suburban	88%
Rural	12%
Did Not Answer	0%
Political Views	
Very Liberal	6%
Moderate-Liberal	47%
Moderate	24%
Moderate-Conservative	12%
Very Conservative	0%
Did Not Answer	12%

*Approximately 88% of participants know someone who experiences addiction, 24% experience addiction themselves, and 6% do not experience nor know someone who experiences addiction

CONCLUSIONS

- The majority of people who were surveyed in Wisconsin do see alcohol and drug addiction as a mental illness.
- Some people still fail to recognize social factors such as education and income as high-risk determinants of addiction, while placing more influence on family history and where the person grows up.
- There appears to be no correlation between any one demographic and views on addiction, however the small sample size and general lack of diversity among participants may be contributing to false representations, as well as participants selecting "self-proclaimed" demographics which may be subjective.
- Other limitations may include selection bias due to the organizations I worked with giving access to participants who may have already been seeking to change views and policies on substance abuse. People with this stance may skew results towards a more progressive outlook.

**Breakout
Room:**

3 - Creative Care for Vulnerable Populations

Title: Factors Associated with Tobacco use in Homeless Adults; A Mixed Methods Study

Authors: Benjamin Wrucke, BS, MCW; Lauren Bauer, MD, MPH, MCW, Family and Community Medicine; Rebecca Bernstein, MD, MS, MCW, Family and Community Medicine

Abstract: BACKGROUND: Those who are homeless are four times more likely to smoke cigarettes than the general US population (Fazel et al., 2014). Previous studies have independently investigated quantitative factors associated with tobacco use in homeless adults (Arnsten et al., 2004; Baggett & Rigotti, 2010; Connor et al., 2002) and the personal experiences of homeless smokers (Okuyemi et al., 2006), but further investigation can link these two types of information. Students at the Medical College of Wisconsin have been conducting tobacco cessation educational sessions at a Milwaukee homeless shelter and service agency, and this mixed methods study investigates the interaction between quantitative factors and qualitative personal experiences associated with tobacco use in this population.

OBJECTIVES: The objectives of this study are to investigate factors associated with tobacco use and develop a theory for tobacco use and cessation in this population.

METHODS: This study is organized into two phases. Phase I is a quantitative cross-sectional analysis of the agency's counseling clinic data bank. Phase II will be qualitative grounded theory research conducted via interviews with the agency's clients and staff and analysis of interview content. For phase I, clients of the counseling clinic completed assessments via counselor interview. Data was collected from 2014 to 2019. Logistic regression was then performed to determine predictors of smoking status.

RESULTS: Phase I results show with significance that the odds of being a smoker decreased as education level increased. The odds of being a smoker was lower for those with state health insurance and greater for those with prior substance abuse treatment.

CONCLUSION: Smoking cessation programs could benefit from tailoring information to the education level of their audience; discussing health insurance, barriers to treatment, and affordable treatment options; and highlighting how smoking cessation could improve ability to quit other substances (Weinberger et al., 2017).

Submitter: Wrucke, Benjamin

Record ID: 105



Factors Associated with Tobacco use in Homeless Adults

Benjamin Wrucke (M2); Lauren Bauer, MD, MPH; Rebecca Bernstein, MD, MS
 Department of Family & Community Medicine, Medical College of Wisconsin, Milwaukee, WI



knowledge changing life

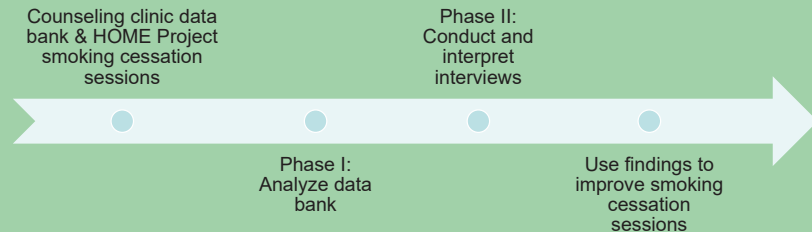
Introduction

Background:

- Those who are homeless are four times more likely to smoke cigarettes than the general US population [4]
- Previous studies have separately investigated quantitative factors and personal experiences associated with tobacco use in homeless individuals [1-3, 5]
- A more complete understanding of the interaction between these factors is needed in order to improve tobacco use prevention and cessation outreach

Objectives: Investigate factors associated with tobacco use and develop a theory for tobacco use and cessation in this homeless population

Hypothesis: Homeless smokers show lower self-efficacy, greater social isolation, poorer perception of therapy, and greater levels of chronic homelessness than non-smokers



Conclusions

Results suggest that smoking cessation programs could benefit from:

- Tailoring information to the education level of their audience
- Discussing health insurance, barriers to treatment, and affordable treatment options
- Highlighting how smoking cessation could improve ability to quit other substances. [6]

Reference(s)

- [1] Arnsten et al., (2004). *Addictive Behaviors*
 [2] Baggett & Rigotti, (2010). *American Journal of Preventive Medicine*
 [3] Connor et al., (2002). *Journal of General Internal Medicine*
 [4] Fazel et al., (2014). *The Lancet*
 [5] Okuyemi et al., (2006). *Nicotine & Tobacco Research*
 [6] Weinberger et al., (2017). *The Journal of Clinical Psychiatry*

Acknowledgements

Thank you to The Guest House of Milwaukee for being our community partner!
 Fellowship funded by the Department of Family & Community Medicine

Phase I Methods

Design: Quantitative cross-sectional analysis of a homeless shelter and service agency's counseling clinic data bank

Data Collection: Clients of the counseling clinic completed three assessments via counselor interview. Data was collected from 2014 to 2019.

Study Population: 97 individuals who indicated a history of homelessness

Statistical Methods: Logistic regression performed in RStudio using a generalized linear model. Independent variables were analyzed to predict a current status of smoker or non-smoker.

Phase I Results

Variable	OR (95% CI)	P-Value
Highest Level of Education (n = 97)		
Some high school or less	–	–
High school, GED, HSED	0.05 (0.002-0.39)	0.01
Technical training, some college or greater	0.07 (0.003-0.49)	0.02
Do you currently have health insurance provided by the state of WI? (n = 97)		
Yes	0.11 (0.005-0.91)	0.07
No	–	–
How many times have you received substance abuse treatment (before this time)? (n = 97)		
No prior tx	–	–
1 to 2	3.54 (0.90-15.27)	0.08
3+	4.17 (1.19-15.81)	0.03

Variable	OR (95% CI)	P-Value
Social isolation score (n = 97)	1.02 (0.95-1.10)	0.56
Self-efficacy score (n = 97)	1.41 (0.53-3.87)	0.49
I see the value in therapy (n = 95)		
Strongly agree	–	–
Agree	1.38 (0.43-4.76)	0.55
Neutral	2.18 (0.41-16.28)	0.40
Have you been homeless continuously for the last 12 months or more? OR Have you been homeless 4 or more times in the past 3 years? (n = 97)		
Yes	2.46 (0.79-8.02)	0.12
No	–	–

- The odds of being a current smoker was **higher** for those with a low level of education
- The odds of being a current smoker was **lower** for those with state health insurance
- The odds of being a current smoker was **higher** for those with prior substance abuse treatment
- Social isolation, self-efficacy, perception of therapy, and chronic homelessness did not seem to impact smoking status

Breakout Room: **4 - Health Communication and Messaging**

Title: EXAMINING THE SOCIAL NETWORK OF PATCH TEENS

Authors: Anna Bauman, MCW-Central WI; Paula Neiweem, PATCH Program; Corina Norrbom, MD, MCW-Central WI; Amy Prunuske, PhD, MCW-Central WI

Abstract: BACKGROUND: The Providers and Teens Communicating for Health (PATCH) program employs a group of teens to deliver workshops to peers and health care providers. The teens increase awareness of common adolescent healthcare barriers and through the workshops encourage open discussions between teens, their parents, and their health care providers.

PROBLEM STATEMENT: Although many aspects of PATCH have been studied, few have looked into the social network of the teens and whether it evolves during their participation in the program.

METHODS: A survey was administered to 10 PATCH teens via Qualtrics before, during, and after the 2019-20 PATCH program. The survey asked simple questions regarding their level of comfort with health-related topics, how many peers they provide resources or advice to, and what topics they are most frequently asked about.

RESULTS: The results of the survey revealed that while PATCH teens interact with a narrow spectrum of the teenage population, their social networks include adult community members in addition to their peers. The PATCH program was successful in broadening the healthcare and advocacy knowledge base of the 2019-20 cohort of teens.

CONCLUSION: Results will help us identify recruitment and curriculum gaps within the PATCH program. We hope to continue to improve the sustainability of PATCH Central WI and eventually develop a similar program for adults.

Submitter: Bauman, Anna

Record ID: 89

Background

The PATCH program employs a group of teens who are chosen to represent their peers, collaborate to increase awareness of teen health barriers, and encourage open discussions between teens, their parents, and their healthcare providers.

The PATCH program has two aspects: enrichment sessions and workshops. Biweekly enrichment sessions are designed to educate teens on relevant topics such as drugs and alcohol, sexual health, sex trafficking, LGBTQ care, and self-harm. Teens then have the opportunity to present to healthcare providers and peers in a workshop setting where they shed light on barriers commonly seen in adolescent care. Through PATCH to provider workshops, participants are able to understand adolescents' concerns, attitudes, and preferences in healthcare settings and will acquire the confidence and skills to communicate effectively and build relationships with teens. In contrast, peer to peer workshops are designed to empower teen participants to take a more active role in their healthcare and identify resources to maintain healthy lives. PATCH teens are encouraged to serve as a community resource and share their knowledge.



Purpose

Although many aspects of the PATCH program have been studied, few have examined the social networks of the teens before, during, and after PATCH. Through this project, we hope to...

Track:

- ❖ How many teens are utilizing PATCH teen's knowledge
- ❖ Who PATCH teens share their information with (i.e. age, gender, race)

Identify:

- ❖ Topics that teens frequently ask PATCH teens
- ❖ Topics that PATCH teens are unfamiliar with

Use this data to:

- ❖ Ensure PATCH is reaching all demographics represented in the area schools
- ❖ Guide recruitment for future PATCH teens
- ❖ Construct enrichment meeting topics to meet the needs of the teenage community

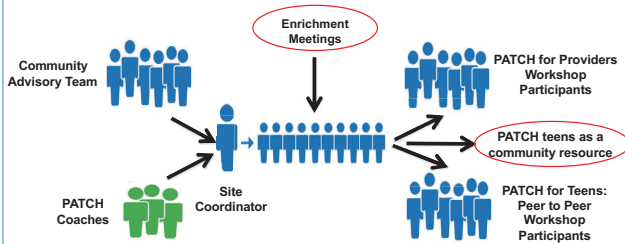


Figure 1: The PATCH Site Architecture illustrates the holistic and collaborative approach to program implementation.

Methods

MCW IRB Approval number: PRO00031805

Qualtrics survey

- ❖ 10 minutes
- ❖ Administered at the beginning (October 2019), middle (January 2020), and end (May 2020) of the 2019-2020 PATCH program
- ❖ Provide dinner when the survey is distributed

Survey Template:

- ❖ How many months have you been in PATCH?
- ❖ What is your gender/race/age?
- ❖ In the last 2-3 months...
- ❖ What is the most common question you have been asked by your peers?
- ❖ How many people have you given advice to regarding the topics covered in PATCH?
- ❖ What is the most common demographic who you have given advice to?
- ❖ At this point, what topic are you least comfortable with?
- ❖ At this point, what topic are you most comfortable with?
- ❖ Has this changed from the last survey?
- ❖ If so, why did it change?

Results

Demographics of participating PATCH teens

- ❖ n=10 teens from local high schools
- ❖ 8F and 2M
- ❖ 8 Caucasian/1 Asian/1 African American
- ❖ Average age: 16

In the last three months, what is the most common health related question you've been asked by your peers?

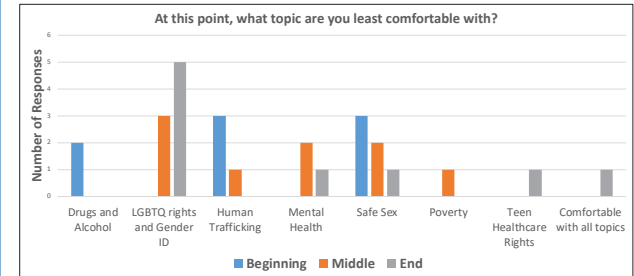
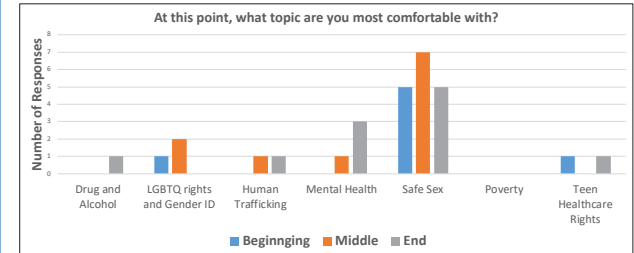
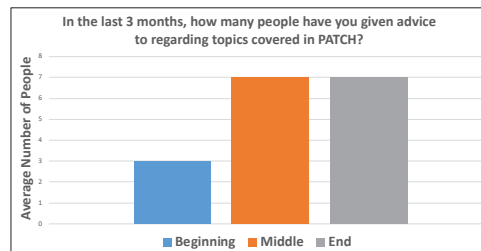
- ❖ "Where can I get free condoms?"
- ❖ "Why is vaping bad?"
- ❖ "Can I be on birth control and safely take plan B?"
- ❖ "How does health insurance work?"
- ❖ "Can I get pregnant on birth control?"
- ❖ "Where can I get free STI testing?"
- ❖ "Should I go to the doctor if I haven't had my period for a few months?"

In the last 3 months, what is the most common demographic that you've given advice to?

- ❖ "white high school students"
- ❖ "white teenagers"
- ❖ "late 40's, white, female (my mom's friends)"
- ❖ "white high school kids"
- ❖ "white females, age 16"
- ❖ "Asian girls"
- ❖ "15-16-year-old white or Asian boys"

Has your answer changed since your participation in PATCH?

- ❖ "Yes, I think I've gotten a lot more comfortable talking about sex health questions because they are so important in a teenager's life."
- ❖ "Yes, because I don't talk about this stuff much outside of PATCH."
- ❖ "As I go through PATCH, I find myself questioning healthcare."
- ❖ "No."
- ❖ "I don't remember."
- ❖ "Yes, I feel like my answers have changed because of the amount of my exposure to these topics the past few months."



Conclusions

After participating in this study, PATCH teens will:

- ❖ Reflect on who they share their knowledge with
- ❖ Be encouraged to reach out to groups not utilizing their knowledge

Survey results will help the PATCH program recognize who is seeking resources and which resources are being sought after the most. In turn, this will help PATCH identify potential recruitment and curriculum gaps within the program.

Key takeaways:

- ❖ PATCH teens interact with community members in addition to their peers
- ❖ PATCH teens interact with a narrow spectrum of the teenage population
- ❖ By the end of the program, PATCH teens doubled the number of people they gave advice to
- ❖ By the end of the program, PATCH teens were most comfortable with sexual health and least comfortable with LGBTQ rights and gender identity
- ❖ The PATCH program was successful in broadening the healthcare and advocacy knowledge base of the 2019-2020 cohort of teens
- ❖ PATCH has encouraged the teens to critically evaluate teen health barriers and brainstorm potential solutions

Future Directions

- ❖ Improve sustainability of PATCH Central WI
- ❖ Develop a similar program for adults
- ❖ Expand data collection to other PATCH sites

References

- ❖ Scott, John. (2017). *Social Network Analysis* (4th ed.). London, England: SAGE Publications.

Acknowledgements

- ❖ Elizabeth Wendt, PGY1
- ❖ Wisconsin Alliance for Women's Health
- ❖ PATCH Community Advisory Team
- ❖ MCW Community Engagement Grant
- ❖ United Way of Marathon County
- ❖ Advancing a Healthier WI

**Breakout
Room:**

4 - Health Communication and Messaging

Title: "A gay man and a doctor are just like, a recipe for destruction": How racism and homonegativity influence health care for young Black gay and bisexual men

Authors: Katherine G. Quinn, PhD, MCW, Psychiatry and Behavioral Medicine - CAIR; Broderick Pearson, MCW, Psychiatry and Behavioral Medicine - CAIR; Matthew Lewis, MCW, Infectious Disease

Abstract: **BACKGROUND:** Young Black gay, bisexual, or other men who have sex with men (YBMSM) are significantly less likely to use HIV pre-exposure prophylaxis (PrEP) to prevent HIV than their white counterparts, despite being at greater risk for HIV. These disparities may be attributable to experienced and perceived discrimination and stigma. A partnership between MCW, Diverse and Resilient, and Pathfinders sought to develop an understanding of how the intersection of racism and homonegativity manifests in the lives of YBMSM and how such experiences affect health care and PrEP uptake.

METHODS: In 2018, we conducted four focus groups with YBMSM (n=44) ages 16-25 in Milwaukee, WI. Focus group topics included experiences of discrimination and marginalization, perceptions and stereotypes about PrEP users and HIV, and general healthcare utilization patterns and behaviors. Focus groups were audio-recorded, transcribed verbatim, and coded using MAXQDA software. We used thematic content analysis to identify themes and patterns.

RESULTS: Racism and homonegativity collectively affected knowledge of PrEP and comfort and utilization of health care. As YBMSM, participants were subject to prejudice and discrimination in many areas of their lives, including in health care settings. Focus group discussions revealed how previous and anticipated negative interactions with physicians and skepticism about health care have alienated participants from the health care system and created significant barriers to PrEP. For example, anticipated homonegativity made it difficult to discuss sexual behaviors and disclose sexual identity to physicians, and historical and experienced racism influenced trust of providers. Similarly, experiences of racism in health care settings contributed to anxiety and discomfort accessing health care. These experiences contributed to anxiety, defensiveness, and low self-worth.

CONCLUSION: Efforts to increase PrEP uptake and must address negative and discriminatory interactions with providers and the healthcare system. Interventions are needed that create welcoming, inclusive environments for racial and sexual minority men.

Submitter: Quinn, Katherine

Record ID: 62

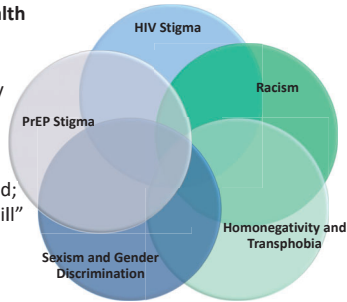
“A gay man and a doctor are just like, a recipe for destruction”: How racism and homonegativity influence health care for young Black gay and bisexual men

Katherine G. Quinn, PhD, Broderick Pearson, and Matthew Lewis
 Center for AIDS Intervention Research, Department of Psychiatry and Behavioral Medicine
 Medical College of Wisconsin, Milwaukee, WI

Background

- HIV pre-exposure prophylaxis (PrEP) uptake continues to lag among young Black/African American gay, bisexual, and other MSM
 - Of the 1.1 million persons estimated to benefit from PrEP, 45% are Black
 - In 2016, nearly 6 times as many white individuals were prescribed PrEP as were Black individuals

One possible reason for disparities in PrEP use is **Intersectional Stigma - the ways multiple stigmas interact and influence health and social outcomes**



Black gay and bisexual men may face racism and homonegativity in multiple areas of their lives

PrEP and HIV are also stigmatized; PrEP has been known as “the gay pill” and PrEP users have been called “Truvada whores”

Research Question:

What How do experiences of racism and homophobia affect perceptions of PrEP among young Black gay and bisexual men?

Methods

- 6 focus groups in 4 Milwaukee (N=44)**
 - Inclusion Criteria:** 16-25 years old; Black or African American men; identify as gay, bisexual, or otherwise having sex with men
- Focus Group Procedures:** Groups were held in community settings and lasted 90 minutes; focus groups were audio recorded and transcribed verbatim; participants received \$50
- Focus Group Content:** Willingness to use PrEP, perceptions and stereotypes of PrEP users, perceived barriers to PrEP use, healthcare utilization patterns and barriers
- Data Analysis:**
 - Transcribed focus groups were analyzed using MAXQDA qualitative analysis software
 - Team-based inductive and iterative approach to content analysis

Results

“Passive aggressive racism” in health care settings



P6: I feel like that long waiting time, that feeling neglected at the hospital, that just all go with the passive aggressive racism that happens in certain states like Wisconsin. Whereas like in the South there’s more direct racism, I feel like in Wisconsin it’s more passive aggressive. Smile in your face, ‘Hey, how you doin’?’ But I’m gonna hold you down, type of racism.

Structural inequities



P3: What about if you in a more, more like metropolitan area, and the majority of that community is White, then I feel like it’s more attention brought to it ‘cuz there’s more money going into these people. And, you know, it’s like if they have, you know, better doctors.

P4: They have more knowledge about PrEP. It’s theirs. More like presented to them that it is, and, you know, a clinic in the hood . . . there’s a lot going on in the hood. There’s so much that’s not going on in the hood. Like we don’t have, you know, access to a lot of things, like, you know, dentist places and hospitals. Like we just don’t have the resources that, that White people have basically.

Homonegativity



P1: I don’t want to say it’s all white doctors, ‘cause I’ve had some good ones, but it’s just that they treat gay men like we nasty. . . I even asked, “If you don’t wanna do it, you can bring a woman nurse in here if you want to.” Like, that’s how I felt. It was hemorrhoids, but it was just like, how come they assume that because I’m gay, I’m just nasty? You don’t know the half of it until you become a gay man.

P2: Yeah, I just feel like a gay man and a doctor are just like, a recipe for destruction. [Focus group five]

Patient-provider racial concordance



P4: I would feel more comfortable with like a minority as my doctor, like a Black over white. I just feel like, white people don’t know the tea. Like white people don’t know, like, what’s going on in this type of, like, you know, our group. It’s like, you’re not judgmental, but it’s just like they don’t know. Like it’s not easy talking to a white person about stuff that we go through, versus talking to a-

Facilitator: So when you say that, you’re meaning more like the stuff we go through, like the social, economic issues? Like I may have come from a single family and somebody may not, I may not have graduated?

P4: Yeah, they may not feel like they’re not judging, but you’re feeling judged, like, because, like you’re a doctor, you went to whatever school. Like shit, I’m just getting out here making this amount of money. You know what I’m sayin’? I came from the dirt. It’s like we, it’s the different fabrics. But yeah, we don’t understand each other. Like, we can’t.

Conclusions

- Racial disparities in PrEP may be partly driven by experiences of racism and homonegativity within health care settings.
 - Resistance to PrEP for many participants was rooted in prior experiences of and anticipated negative interactions with physicians and skepticism about the health care system.
 - These results highlight the need for several interventions:
 - Increase the diversity of health care providers
 - Partnerships with trusted community agencies where clinic services can be incorporated into existing services located within target communities
 - Change the narrative around PrEP to avoid targeting and stigmatizing young Black men
- To adequately address racial disparities in PrEP we must change the systems**

Breakout Room: **4 - Health Communication and Messaging**

Title: Anatomy-based Community Education Using Plastinated Organs

Authors: Ryan E. Hillmer, PhD, MCW, Cell Biology, Neurobiology, and Anatomy; Teresa N. Patitucci, PhD, MCW, Cell Biology, Neurobiology, and Anatomy

Abstract: **OVERVIEW:** Community outreach programs established at Medical College of Wisconsin (MCW) campuses largely target middle to high school-aged students, with a focus on understanding how the body works and fostering interest in healthcare-related careers. Using plastinated organs allows these programs to reach underserved students unable to travel to an MCW site.

OBJECTIVE: Plastic anatomical models and fixed specimens are set aside for educational programs. However, both have hindrances for use in community education. Here, we created a small library of plastinated organs and support materials to use during community outreach programs.

METHOD: Plastination consists of initial organ fixation followed by dehydration in acetone. Polymer is then infused into the organ via vacuum-pressure and cured using gas or UV-light. Resulting plastinated specimens are odorless, non-toxic, and do not decay. Furthermore, they can be easily transported and handled freely. For this project, 3 hearts, 3 kidneys, and 3 brains were harvested from body donors enrolled in MCW's Anatomical Gift Registry program. These organs were plastinated and sectioned to highlight internal and external anatomical features. Plastination kits consisting of a heart, kidney, and brain (along with educational pamphlets describing relevant anatomy) were distributed to each of MCW's 3 campuses. Following interaction with plastinated organs, program participants are asked to complete a survey about their experience. This project was approved by MCW's Institutional Review Board (PRO00036357).

RESULTS: These programs are ongoing throughout the year at all campus locations and have currently reached 352 students across Wisconsin. We are continuing collecting and analyzing user perception surveys to evaluate what students learned during their interactions with the plastinated organs, and their preferences for using plastinated vs. wet-fixed specimens.

CONCLUSION: Preliminary feedback has been positive, where program facilitators have expressed these plastinates provide a beneficial resource for community outreach programs.

Submitter: Hillmer, Ryan

Record ID: 71



Anatomy-based Community Education Using Plastinated Organs



Ryan E. Hillmer¹ and Teresa N. Patitucci¹

¹Medical College of Wisconsin, Department of Cell Biology, Neurobiology, and Anatomy, 8701 Watertown Plank Road, Milwaukee, WI 53226, USA

OVERVIEW

Community outreach is an institutional mission at the Medical College of Wisconsin (MCW), which has three campuses spread throughout the state. There are numerous outreach programs established at each location, which are largely run by medical students. These outreach programs are mainly targeted at middle and high school-aged students, focusing on promoting physical wellness and fostering an interest in healthcare-related careers. Extension of these programs to underserved students who may not be able to travel to an MCW site is of particular interest.

Although each MCW campus has plastic anatomical models and fixed anatomical specimens set aside for these programs, both have hindrances for use in community education. Plastic anatomical models are a step removed from actual specimens, and do not fully represent the potential for anatomical variations. Although most engaging, wet formalin-fixed specimens can be irritating to the eyes and respiratory system and must be handled in a well-ventilated environment. Using funding from the Medical College of Wisconsin and the American Association for Anatomy (AAA), we created a small library of plastinated organs to use during community outreach programs.

METHODS

Plastination was developed and made famous by Gunther von Hagens as a means to preserve biological tissue via polymer infusion. The infusion of polymer into tissues converts these tissues into non-toxic, odorless, long-lasting specimens. The plastination process consists of initial organ fixation in 10% formalin. Fixed organs are then dissected and hemisected to highlight relevant external and internal anatomy. Following dissection, organs are rinsed under running cold water for approximately 2-3 days. After adequate rinsing, organs undergo dehydration via submersion in acetone. Acetone purity is measured incrementally using an acetometer, until readings of $\geq 98\%$ purity are obtained.

Once appropriate dehydration readings are obtained, NCS10/NCS3 polymer¹ is infused into the organs via vacuum-pressure at -25°C . Pressure is slowly decreased daily until vacuum pump needle valves are completely closed. Infused organs are cured using NCS6¹, which is sprayed onto the organs and then vaporized in a curing chamber. Organ curing is complete when excess secretion of silicone and curing agent subsides (Figure 1).

Once plastination is completed, these organs are odorless, non-toxic hardened tissue specimens that do not decay and can be easily transported and handled freely at both on and off-campus environments. For this project, 3 hearts, 3 kidneys, and 3 brains were harvested from body donors enrolled in MCW's Anatomical Gift Registry program and plastinated.

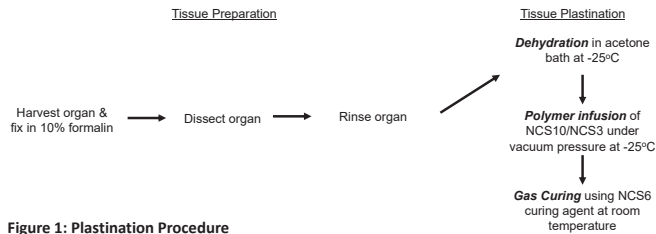
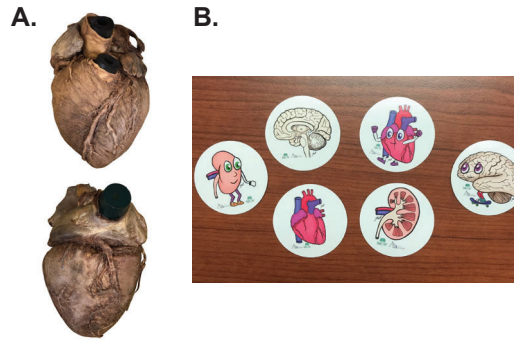


Figure 1: Plastination Procedure

PLASTINATION KITS

Kits consisting of a plastinated heart, kidney, and brain were compiled following completion of the plastination process. These kits also included educational pamphlets briefly describing the process of plastination and highlighting relevant anatomy of the heart, kidney, and brain at a level appropriate for a lay audience. Stickers of each organ were handed out following completion of community education programs (Figure 2). Pamphlet and sticker artwork by Teresa Patitucci, PhD.

Plastination kits were compiled at MCW-Milwaukee, and disseminated to MCW-Central Wisconsin and MCW-Green Bay regional campuses. Kits were used for community education events hosted by MCW students and faculty. This project was approved by MCW's Institutional Review Board (PRO00036357).



C.

PLASTINATION

The PLASTINATION technique was invented and made famous by Gunther von Hagens in his traveling Body Worlds exhibits. Plastination is a preservation technique used to infuse polymers such as silicone, epoxy, or polyurethane into body parts, which converts tissues into hardened, odorless specimens that do not decay.

These specimens are real human tissue and should be treated with the utmost respect. Specimens should be handled gently and photography is strictly prohibited.



The plastinated organs you see here were created from specimens generously donated to the Anatomical Gift Registry at the Medical College of Wisconsin (MCW). MCW has permission to keep organs or tissues from body donors used for this project. Through this program, individuals donate their body to the educational mission of the college, training healthcare professionals across multiple fields and disciplines.

For more information about MCW's Anatomical Gift Registry, please visit: <http://www.mcw.edu/department/cell-biology-neurobiology-and-anatomy/afac-registry>

Thank you for coming!

Please consider filling out a brief 5-minute survey telling us about your experience!

Follow the QR code below or visit <http://www.mcw.edu/plastination>

QR Code

From this survey you may be used for a research project to improve educational activities in the future. Your participation in this study is voluntary and your response to the survey will be kept confidential. Contact Teresa Patitucci teresa.patitucci@mcw.edu with any questions or concerns!

Organ artwork by Teresa N. Patitucci, PhD

Funds for this project provided by: American Association for Anatomy, Dean's Programmatic Dollars (MCW), and Learning Resources Fund (MCW)

Department of Cell Biology, Neurobiology, and Anatomy
Medical College of Wisconsin
8701 Watertown Plank Road
Milwaukee, WI 53226

<http://www.mcw.edu/department/cell-biology-neurobiology-and-anatomy>

HEART

The HEART is a muscular organ in the chest functioning to pump blood throughout the body. The heart is divided into four chambers: two atria and two ventricles. Deoxygenated blood from the body enters the right atrium from the superior and inferior vena cava. Then moves to the right ventricle before being pumped to the lungs to receive oxygen. Oxygenated blood from the lungs is returned to the left atrium and then moves to the left ventricle to be pumped to the rest of the body through the aorta. Coronary arteries supply oxygenated blood to the muscle of the heart itself!

KIDNEY

The KIDNEYS are two solid organs in the abdomen functioning to filter out waste products from the blood to create urine. Blood enters the kidney through the renal artery. This blood is then filtered in the renal cortex and the concentrated filtrate (urine) is collected in the renal pyramids. Urine moves through a minor and major calyx to the renal pelvis, and then is carried by the ureter to the urinary bladder for storage. Components of the blood that were not filtered out return to the body for circulation through the renal vein. Note that the term "renum" comes from the Latin root word for kidney!

BRAIN

The BRAIN is a complex organ within the skull. The brain is the seat of our thoughts, controls our movements, and interprets sensations from the body including all special senses. The cerebrum is the largest part of the brain, separated into two hemispheres and is divided into lobes (frontal, parietal, temporal, occipital, limbic, and insula). Information going to these lobes is processed first in the thalamus. The cerebellum functions in coordinating movements and balance. Information passing between the brain and body travels through the brainstem (midbrain, pons, medulla) and spinal cord.

Figure 2: Plastination Kits

Plastination kits were created at the MCW-Milwaukee campus and disseminated to MCW-Central Wisconsin and MCW-Green Bay campuses. (A) Each kit consisted of a plastinated kidney, brain, and heart. A plastinated heart is pictured with superior vena cava, aorta, and pulmonary arteries stuffed to maintain their open shape during the curing process. (B and C) Kits also contained varying sticker designs of each plastinated organ to appeal all ages of community participants, and trifold educational pamphlets briefly describing the plastination process and relevant organ anatomy.



Figure 3: Plastinate Use in Community Education Pictured here is an MCW anatomist demonstrating heart anatomy with a group of elementary school students at their school's "Science Day". The plastinated organs provided the opportunity to transport organs to this off-site community program, making it easier to interact with community students in multiple settings. This particular specimen shows pacemaker leads in the heart wall, demonstrating a common medical procedure alongside normal anatomy. These programs are ongoing at all MCW campuses throughout the year.

RESULTS: EVENTS & SURVEYS

To date, MCW community outreach programs showcasing the plastination kits have reached 438 elementary, middle, and high school students across Wisconsin. These programs are ongoing throughout the year at all MCW campus locations. At these events, an MCW anatomy faculty member or medical student highlights relevant anatomy on each organ with learners (Figure 3). There are opportunities for learners to touch or hold each organ and to ask questions.

Following interaction with plastinated organs, program participants are asked to complete a survey about their learning and interactions with these specimens. We are currently collecting and analyzing user perception surveys, evaluating what students learned during their interactions with the plastinated organs, and their preferences for using plastinated vs. wet-fixed specimens. Current survey response rates are low, as it has been a struggle to encourage middle and high schoolers to complete an online survey. However, preliminary feedback from program facilitators has been positive, commenting that plastinated organs provide a beneficial resource for community outreach.

CONCLUSIONS

- We have begun using plastination for the preservation of biological specimens to be used in MCW-sponsored community outreach programs. The process of plastination results in non-toxic, odorless, decay-resistant biological specimens which can be freely transported and handled outside of an anatomy laboratory.
- Plastination kits generated for use in community outreach programs consisted of a plastinated kidney, brain, and heart. These kits also contained educational pamphlets and stickers which are handed out to community learners.
- These kits were delivered to each of MCW's regional campuses for use in local programs, and have reached 438 students across the state of Wisconsin thus far.
- Although community student completion of surveys is low, preliminary feedback from outreach program facilitators indicates that these plastinates serve as a useful resource for use in community outreach. Given that the majority of our community students are middle and high school students, the lack of survey completion is not surprising. However, we are currently brainstorming ideas to engage students in providing feedback. In the future, we may need to transition to pencil and paper surveys with dedicated time to fill them out for these events.

REFERENCES

1. Henry, RW. (2007) Silicone Plastination of Biological Tissue: Cold-temperature Technique North Carolina Technique and Products. *Journal of the International Society for Plastination*, (22) 15-19.

FUNDING

This project is supported by funds from an Education Outreach Grant (AAA) and Dean's Programmatic Dollars (MCW).

**Breakout
Room:**

4 - Health Communication and Messaging

Title: COVID-19 in Wisconsin: A Qualitative Study Examining Wisconsinites Perceptions and Reactions

Authors: Maren Hawkins, UWM Joseph J. Zilber School of Public Health; Anne Dressel, PhD, MLIS, MA, CFPH, UWM College of Nursing; Lucy Mkandawire-Valhmu, PhD, UWM College of Nursing; Peninnah Kako, PhD, UWM College of Nursing; Lance Weinhardt, PhD, UWM Joseph J. Zilber School of Public Health

Abstract: OVERVIEW: In March 2020, the COVID-19 lockdown began in Wisconsin, and the Governor's Safer-at-Home order was instituted. The research team sought to capture Wisconsinites' experiences early in the pandemic. OBJECTIVE: Examine Wisconsinites' perceptions of and reactions to COVID-19 during the Safer-at-Home order and immediately after its end using a Community-Engaged Inductive Qualitative approach. METHODS: This was an exploratory qualitative pilot study. Through a partnership with the University of Wisconsin Milwaukee Joseph J. Zilber School of Public Health and University of Wisconsin Milwaukee College of Nursing, we worked with community partners, such as non-profit directors, religious leaders, and community stakeholders, to identify interviewees using a mixed purposive and snow-ball sampling approach. We received IRB approval, and we conducted individual semi-structured interviews with participants over the phone. A total of 25 interviews were conducted with residents of Southeastern Wisconsin between March and June 2020. The interviews were audiotaped and transcribed. We used an inductive thematic approach to analyze the data. RESULTS: Major themes that emerged were: (1) the role of COVID-19 in exacerbating health inequities; (2) following the Safer-at-Home order due to a sense of societal obligation; (3) changing impressions of public health; and (4) the adverse impact of COVID-19 on mental health. CONCLUSION: Understanding Wisconsinites' perceptions of the COVID-19 pandemic can help to inform health policy and future pandemic responses.

Submitter: Hawkins, Maren

Record ID: 86

COVID-19 in Wisconsin: A Qualitative Study Examining Wisconsinites Perceptions and Reactions

Maren M. Hawkins, RPCV, BA, CPT.

PhD Student, Community and Behavioral Health Promotion,
Joseph J. Zilber School of Public Health

Background

Overview: In March 2020, the COVID-19 lockdown began in Wisconsin, and the Governor's Safer-at-Home order was instituted. The research team sought to capture Wisconsinites' experiences early in the pandemic.

Objective: Examine Wisconsinites' perceptions of and reactions to COVID-19 during the Safer-at-Home order and immediately after its end using a Community-Engaged Inductive Qualitative approach.

Methods

- Approved by the University of Wisconsin IRB (#20.253)
- Qualitative → Semi-Structured Interviews
- Sampling & Recruitment**
- Purposive Snowball Sampling
- COVID-19 posed many unique challenges to recruitment. We worked with community stakeholders to identify interviewees and then incorporated a snowball approach.
- Stakeholder engagement was crucial in establishing trust. → Some participants would not speak with us until after they had spoken with their community leader about the trustworthiness of us and our study.

Consent Process

- This study only required verbal consent. However, we sent all participants a copy of the consent form ahead of time to review.
- This was to allow time for thorough review of the consent form and for answering any questions.

Semi-Structured Interview Guide

- Our semi-structured interview guide with built based on Aday and Cornelius's(2), and Blair et al.'s(3), recommendations for interview guide creation.
- There was a total of 20 questions.
- Our interview guide included two sections, one on COVID-19, we asked questions such as, "Describe a typical day while in self-quarantine?" In the second section we shifted the focus to COVID-19 in the context of public health, and we asked questions such as, "What did you think about public health before COVID-19?"
- All interviews were done other the phone and recorded using recording software (Yeti & Presonus).

Analysis

- We conducted a total of 25 interviews.
- We used an Inductive Thematic Analysis approach.
- All interviews were transcribe using Otter.ai, and were then verified by M. Hawkins.

Initial Results

- All participants resided in South-Eastern Wisconsin and 76% (n=19) of the participants resided in Milwaukee County.
- Major themes we identified were:
- **(1) the role of COVID-19 in exacerbating health inequities;**
- **(2) following the Safer-at-Home order due to a sense of societal obligation;**
- **(3) changing impressions of public health; and**
- **(4) the adverse impact of COVID-19 on mental health.**

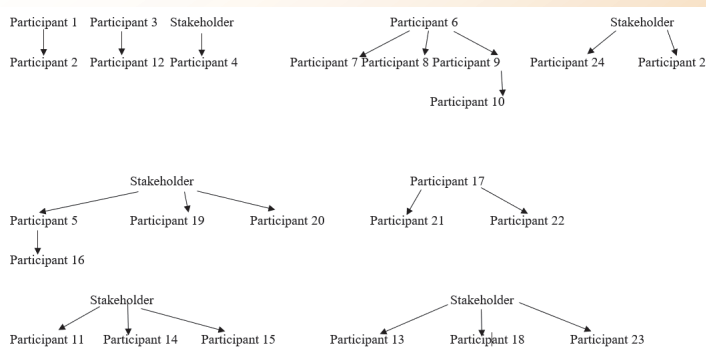
"so many of the people in the health department now have to focus on COVID, they realized that all these children that were spending, you know, six hours a day at school away from most likely the biggest place where they would get lead poisoning are now back in their homes and potentially being lead poisoned, so it's like this double-edged sword. You know, there's, there's these issues are just like piling on top of each other...But it's also that it's not been taken care of in the past until now. There's just like this kind of, you know, like, it's just piling up on top of each other layers of issues that they have to work through." - Participant 5

"To live in a society is to help each other" Participant 12

"I think we need to be self-correcting whether we have it (COVID-19) or not.... Let's really be really serious about this....A lot of people may see things differently, but we can have a strong economy but people are getting sicker and sicker. So it doesn't help you in the long run... We should be willing to sacrifice a little bit for the long future." - Participant 4

"I think that in the world of public health, yes, the AIDS epidemic, you know, lead poisoning in Milwaukee, those are things that might be kind of on the outskirts of your life. You've heard about it but never been like fully immersed in it. There is no avoiding public health right now for the general population." Participant 1

Figure 1. Snowball sampling referral chart.



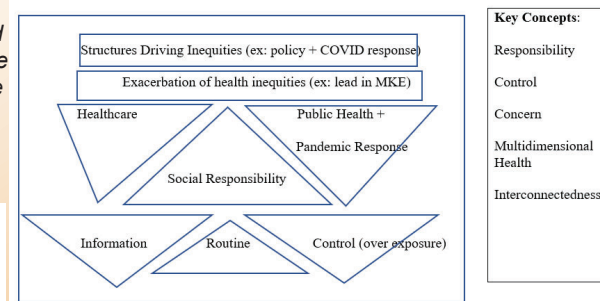
& Anne Dressel, PhD, MLIS, MA, CFPH, Lucy Mkandawire-Valhmu, PhD, RN, Penninah Kako, PhD, RN, & Lance Weinhardt, PhD

"Sometimes I just use a piece of paper of like what I need to get done for today. And I just tried to stay focus as much as I can. And then now what I've actually started like three days ago of like, setting a cutoff time of like, I don't know, let's say nine o'clock, and then I can like read and like meditate and start trying to like heal in a sense, you know, but prior to that I was just all over the place." -Participant 17

"Man, this is this is heavy, it's almost depressing to, to be stuck inside and not have that typical, you know, enjoyment of going out to a restaurant or maybe a concert or something like that, or sporting event to look forward to. And so there's that aspect of it that I think mentally weighs on people and that's been kind of tough." - Participant 23

Further Analysis

Figure 2. Thematic Diagram as the analysis continues.



References

1. Aday LA, Cornelius LJ. Designing and conducting health surveys: a comprehensive guide. John Wiley & Sons; 2006.
2. Blair J, Czajka RF, Blair EA. Designing surveys: A guide to decisions and procedures. Sage Publications; 2013.

Present Conclusions

- Understanding Wisconsinites' perceptions of the COVID-19 pandemic can help to inform health policy and future pandemic responses.

**Breakout
Room:**

4 - Health Communication and Messaging

Title: Implementation of Digital Strategy for Community-Based COVID-19 Clinical Trial Recruitment

Authors: Thomas Luo, BSE, MCW; Tom Jiang, PharmD, Ernest Mario School of Pharmacy

Abstract: **BACKGROUND:** Two-thirds of clinical trials never meet their enrollment goals. Not only do patients lose the opportunity to undergo life-altering therapies, but also patients with lower socioeconomic status or without access to large academic medical centers are disproportionately impacted. In particular, African American patients are 5.7 times more likely to die from COVID-19 in Wisconsin, while making up less than 20% of major clinical trial cohorts. Concurrently, the prominence of COVID-19 trials has revealed a need to address gaps in knowledge about the benefits and risks of participating in experimental treatments; the urgency to engage patients in clinical trials has never been greater.

OBJECTIVE: Our team seeks to develop an anonymous web-based search tool for patients to discover clinical trials for COVID-19 with unintimidating language adapted by healthcare professionals.

METHODS: After observing many physician-patient trial recruitment conversations, we compiled the information that patients most often request to make an informed decision. Information from selected clinical trials was extracted from the clinicaltrials.gov database. Complex concepts, such as mechanism of action and prior clinical safety data, were distilled into a unique library of easily understood concepts, completely eliminating medical jargon. We created a simple search engine website and distributed it using social media.

RESULTS: At the peak of the COVID pandemic, the website received 2,400 and 2,800 views in the months of April and May of 2020, respectively. Of the individual study pages, information regarding hydroxychloroquine studies and plasma donation received the most unique views. No identifying information was collected to protect patient privacy.

CONCLUSION: A patient-centered clinical trial recruitment strategy can alleviate disparities in clinical trial recruitment. We identified privacy and ease-of-use as pillars to developing a best-in-class solution. Continuing to engage patients and tracking the impact of our website remains a challenge with an anonymous platform.

Submitter: Luo, Thomas

Record ID: 90

Introduction

- Two-thirds of clinical trial go unfilled, while at the same time socioeconomically disadvantaged groups are underrepresented in trials
- Socioeconomic status, mistrust in the medical system, and lack of access to large trial centers have all been identified as reasons patients don't enroll
- Despite African Americans being at a 5.7 times greater risk of dying from COVID-19 in Wisconsin, they make up <20% of major clinical trial cohorts
- As clinical trials have become the only option for COVID-19 treatment, the urgency to engage communities with trials has never been greater
- Available online tools require either extensive collection of patient information or the advanced medical knowledge to interpret



Figure 1: Assessment of Current Digital Recruitment Tools

Objectives

- Assess pain points from the clinician perspective by speak to key physicians and observe their interactions with patients during clinical trial recruitment to identify most pertinent decision-making factors
- Complex concepts, such as mechanism of action and prior clinical safety data, for each trial need to be distilled into a library of easily understood concepts, completely eliminating medical jargon
- Website must protect patient data and not collect unnecessary information
- Paclintra.com was developed as an anonymous web-based search tool for patients to discover clinical trials for COVID-19 with unintimidating language adapted by healthcare professionals.

Paclintra

A web search platform to empower patients by:

- 1) providing an easy search function with succinct summaries
- 2) educating them about the experimental treatment
- 3) connecting themselves with an optimal clinical trial

Figure 2: Initial Functionality Parameters for Paclintra.com

Methods

- Physician-patient trial recruitment conversations were observed at Froedtert Hospital
 - We then compiled both the counseling points shared by physicians as well as the most common requests from patients for information
- Data from selected COVID-19 clinical trials were extracted from the clinicaltrials.gov database
 - Studies identified were limited to interventional studies recruiting for COVID-19 within the United States; observational trials were excluded
- A simple search engine website was then created and distributed using social media platforms (e.g. LinkedIn, Twitter, Facebook)
 - Complex concepts, such as mechanism of action and prior clinical safety data, were distilled into a unique library of easily understood concepts, completely eliminating medical jargon

Figure 3: Example Trial Information Page

Trial Name:

[Leflunomide in Mild COVID-19 Patients.](#)

Patients will be given leflunomide daily for a maximum of ten days while their symptoms are monitored. You will not receive placebo treatment. The active drug, leflunomide, used in this trial is for experimental use in COVID-19 and its effects in humans have not yet been fully established. However, leflunomide is approved by the U.S. Food and Drug Administration (FDA) for the treatment of adults with rheumatoid arthritis (RA). This study is to examine the safety of high doses of leflunomide in patients with COVID-19 who are not yet hospitalized, but are at risk for disease progression and complications.

Location

Although this study is being conducted and enrolled by the University of Chicago, follow-up/contact will be remote (through telehealth)

[University of Chicago](#)
Chicago, Illinois 60637
[United States](#)

Transportation Assistance: Contact Study Manager
Safety

- This trial is to test a previously U.S. Food and Drug Administration (FDA) approved rheumatoid arthritis (RA) medication for safety in COVID-19 patients
- Possible side effects seen with leflunomide include diarrhea, infection, headache and rash

Study Eligibility

- 18 years and older
- Men and women
- Confirmed COVID-19 (coronavirus) infection NOT requiring hospitalization
- Mild symptoms such as dry cough, sore throat, congestion, fatigue, muscle pain, and headaches
- Not have chronic kidney disease
- No history of liver or lung disease
- Not be pregnant

Note: You will not receive placebo treatment. You might not be eligible if you have certain medical conditions.

Results

- A social media launch created a transient large peak in users during the first wave of the COVID-19 pandemic, which quickly dropped off
- Of the trial summary pages, information regarding hydroxychloroquine studies and plasma donation received the most unique views, corresponding to national attention given to these therapies
- Finding invested community partners would draw a more stable group of users and allow survey-based patient feedback—invaluable to improving the design of the website and the addition of more features
- A more engaged user base would reduce the average bounce rate

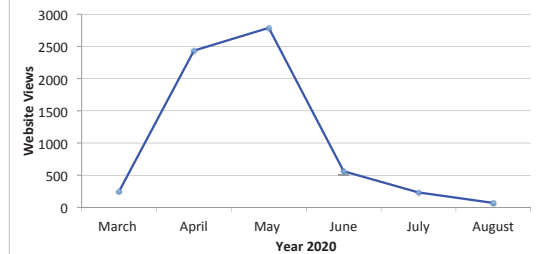


Figure 4: Website Usage Statistics Since Launch in March of 2020

Conclusions and Future Directions

- A patient-centered clinical trial recruitment strategy could alleviate disparities in clinical trial recruitment demographics
- We identified privacy and ease-of-use as pillars to developing a best-in-class solution.
- Continuing to engage patients and tracking the impact of our website remains a challenge with an anonymous platform.

Acknowledgments

- A special thank you to Brian Zhu—software engineer from Airbnb—for assisting with website development and funding the web hosting

Select References

1. Baquet C, Henderson K, Commiskey P, Morrow J. Clinical Trials: The Art of Enrollment. *Semin Oncol Nurs.* 2008;24(4):262-269. doi:10.1016/j.soncn.2008.08.006
2. Unger J, Cook E, Tai E, Bleyer A. The Role of Clinical Trial Participation in Cancer Research: Barriers, Evidence, and Strategies. *American Society of Clinical Oncology Educational Book.* 2016;36:185-198. doi: 10.14694/edbk_156688

**Breakout
Room:**

4 - Health Communication and Messaging

Title: MaskUpMKE: The Medical College of Wisconsin's Collaborative Response to the COVID-19 Pandemic in Greater Milwaukee

Authors: Jonathan C. Horng, BA, MCW; Michelle C. Horng, MPAS, PA-C, Marquette University; Mack G. Jablonski, BA, MCW; Zeno E. Franco, PhD, MCW, Family and Community Medicine; Adina L. Kalet, MD, MPH, MCW, Kern Institute; Christopher S. Davis, MD, MPH, MCW, Surgery

Abstract: INTRODUCTION: In March 2020, the COVID-19 disease outbreak was declared a national emergency by the United States. In a local response, the Milwaukee-based company Rebel Converting donated enough material to make 1 million face masks comprised of melt-blown polypropylene. Spearheaded by the early collaboration of a surgeon, students, and the Kern Institute at the Medical College of Wisconsin (MCW), the project would quickly be known as "MaskUpMKE", producing and delivering millions of masks to underserved and at-risk communities in Southeast Wisconsin.

METHODS: MaskUpMKE began with the partnership of Rebel Converting, local non-profits, and MCW as a local crisis intervention initiative in response to the COVID-19 pandemic. Applying a grassroots public health approach, MaskUpMKE quickly harnessed the energy of volunteers to assemble and distribute face masks and media messaging to underserved populations in Milwaukee where health literacy, understanding of disease prevention, and needed physical resources are often lacking.

RESULTS: Volunteer mask production began in the first week of April, 2020 and by the end of April, more than 600,000 masks had been delivered to over 100 government and social service agencies. As the private-public partnership grew to involve larger organizations, mask production and delivery grew exponentially. During May 2020 alone, MaskUpMKE engaged nearly 1,800 volunteers who, through more than 33,000 volunteer hours, delivered more than 1.5 million additional masks to more than 500 social services agencies throughout Southeast Wisconsin. By August 14, 2020 the total distribution of masks exceeded 3.2 million.

CONCLUSION: MaskUpMKE demonstrates a grassroots crisis intervention utilizing a public health approach to curb the spread of COVID-19. The project involved strategic partnerships, community engagement, intentional messaging, volunteerism, and first-hand leadership experiences for medical students, community researchers, and physicians. Additionally, MaskUpMKE highlights the importance of educating future health professionals about basic principles of public health, community engagement, legislation, and advocacy.

Submitter: Horng, Jonathan

Record ID: 100

MaskUpMKE: The Medical College of Wisconsin's Collaborative Response to the COVID-19 Pandemic in Greater Milwaukee

Jonathan C. Horng B.A, Michelle C. Horng PA-C, Mack G. Jablonski B.A, Zeno E. Franco PhD, Adina L. Kalet MD, MPH, Christopher S. Davis MD, MPH
 Medical College of Wisconsin, Robert D. and Patricia E. Kern Institute for the Transformation of Medical Education

Introduction

In March 2020, the disease outbreak caused by the novel strain of coronavirus (SARS-CoV-2) was declared a pandemic by the World Health Organization and a national emergency by the United States. The virus is transmitted person-to-person through respiratory droplet exposure, and infected individuals can spread the virus even when asymptomatic. Already, there was a shortage of personal protective equipment (PPE) for healthcare workers. After a CDC recommendation for the general population to wear face masks in public to help prevent the spread of COVID-19, the current supply was not going to be sufficient.

In a local response to the crisis, the Saukville-based company Rebel Converting donated enough material to make 1 million face masks comprised of melt-blown polypropylene. Spearheaded by the early collaboration of a trauma surgeon and students at the Robert D. and Patricia E. Kern Institute for the Transformation of Medical Education, the project would quickly be known as "MaskUpMKE.." After the immediate shortage of masks for healthcare workers was addressed, MaskUpMKE produced and delivered millions of face masks to primarily underserved communities and at-risk groups in Milwaukee and throughout Southeast Wisconsin.

Methodology

MaskUpMKE began with the partnership of Rebel Converting, local non-profits, Milwaukee businesses, and the Medical College of Wisconsin (MCW) as a local crisis intervention initiative in response to the COVID-19 pandemic. Applying a grassroots public health approach, MaskUpMKE strived to quickly harness the energy of volunteers to assemble and distribute face masks and social messaging (radio, television, newspaper, public service announcements, and flyers) to underserved populations in Milwaukee where health literacy, understanding of disease prevention, and needed physical resources are often lacking. In order to focus on preventing the spread of the virus through particularly vulnerable populations, MCW facilitated the prioritization of masks delivered to nursing homes/senior living facilities, homeless shelters, food pantries, food distribution sites, immigrant/refugee leaders, and neighborhood committees.



Results

Volunteer mask production began in the first week of April 2020 and by April 10th, 33,800 masks were delivered by MCW medical students and faculty to community health clinics, homeless shelters, rescue missions, religious centers, the public-school feeding locations, poll workers, and voters. By the end of April 2020, more than 600,000 masks had been delivered to over 100 government and social service agencies. As private-public community partnerships grew to involve the Milwaukee Bucks at Fiserv Forum, UNITEMKE, United Way, Milwaukee Habitat for Humanity, Code for Milwaukee, Just One More Ministry, and the City of Milwaukee Health Department (among others), mask production and delivery grew exponentially. During May 2020 alone, the formalized project called MaskUpMKE engaged nearly 1,800 volunteers who, through more than 33,000 volunteer hours, delivered more than 1.5 million additional masks to over 500 social services agencies throughout Southeast Wisconsin. By August 14, 2020, the total distribution of masks by MaskUpMKE exceeded 3.2 million.

April 3, 2020	April 10, 2020	April 20, 2020	April 30, 2020	May 30, 2020	August 14, 2020
Begin volunteer mask production (facilitated by Kern Institute at MCW)	33,800 masks delivered to community health centers and vulnerable populations by MCW students and faculty	Rebel Converting triples initial donation, commits to making 3.5 million face masks	600,000+ masks delivered to over 100 government and social service agencies.	2.1 million masks delivered to more than 500 social services agencies throughout SE Wisconsin.	3.2+ million masks delivered and counting

*Mask production and delivery grew exponentially as the private-public partnership grew to involve the Milwaukee Bucks, UNITEMKE, United Way, Milwaukee Habitat for Humanity, and the City of Milwaukee Health Department (among others)

Community partners that received masks from the MaskUpMKE initiative include:

- Federally Qualified Health Centers
- MPS school district – feeding sites
- Metcalfe Community Bridges
- UMOS/Latina Resource Center
- Sherman Park Community Association
- Milwaukee Housing Authority
- Meals on Wheels
- Community Advocates Women's Center
- Next Door Foundation, and many more



Conclusion

MaskUpMKE demonstrates a successful example of a grassroots crisis intervention initiative utilizing a public health approach in effort to curb the spread of COVID-19 in Milwaukee. The project involved many integral components including strategic partnerships, community engagement, intentional social messaging, volunteer efforts, and first-hand educational experiences for medical students. Additionally, it illuminates the unique ways in which medical students, community researchers, and even surgeons can use their leadership skills and approaches to influence their community by responding swiftly and methodically in the face of a crisis. Lastly, MaskUpMKE is a testament to the importance of educating our future health professionals about the basic principles of public health, community engagement, legislation, and advocacy which are often lacking in their curricula.

Acknowledgements

A special thank you to Joan Weiss, Venus Coates, Andrew Yasper, Dr. Ryan Spellecy, and Dr. Cassie Ferguson.

Thank you also to medical students Christian Hernandez, Na'il Scoggins, Nathalie Abenzoza, Jayla Watkins, and Drew Stein for volunteering your time and energy to early project coordination and mask deliveries!

MaskUp Coalition



**Breakout
Room:**

4 - Health Communication and Messaging

Title: COVID-19: Engaging Hmong and Hispanic Populations in Bi-Directional Communication
PART 1 of 2

Authors: Corina J. Norrbom, MD, MCW-Central WI; Dima T. Jaber, BS, MCW; Greta Berger, BA, MCW; Mariana Savela, BS, Wisconsin Institute for Public Policy and Service; Julie Bunczak, MEd, Wisconsin Institute for Public Policy and Service; Amy Prunuske, PhD, MCW-Central WI; Mang Xiong, BA, Hmong Wisconsin Chamber of Commerce; Tony Gonzalez, BA, Marathon County Health Department

Abstract: **This study's results focus on two distinct populations. To avoid repetition, 2 abstracts are being combined into one and will be presented over 2 timeslots.**

An informed public plays a significant role in preventing the transmission of SARS-CoV-2 and mitigating the spread of COVID-19. In a pandemic situation, the importance of reaching all populations is paramount. Immigrant communities are particularly vulnerable to negative health, educational and economic impacts, and different messaging strategies are necessary to consistently reach Hmong and Hispanic communities. The aim of this project is to strengthen communication channels and facilitate regular information exchange between public health officials, health systems and resource agencies and Hmong and Hispanic communities in Central Wisconsin.

With a shared goal of improving health in Hmong and Hispanic communities during the COVID-19 pandemic and beyond, a local collaborative effort was developed to approach communication challenges in an innovative way. The Wisconsin Institute for Public Policy and Service convenes representatives from collaborating organizations biweekly including: Medical College of WI-Central WI, Marathon County Health Dept, local health systems, E.A.G. Interpreters Hispanic Outreach, Hmong WI Chamber of Commerce, Hmong American Center, and United Way of Marathon County. The model employs respected and well-connected Community Coordinators (CC) from the Hmong and Hispanic communities, each of whom coordinates a network of community health workers (CHWs).

The project was implemented in mid May 2020. CHWs received training on basic COVID-19 prevention and mitigation strategies as well as information about accessing available community resources. CHW insights inform message adaptation, effective platforms and points of contact to receive and share information with their communities.

Continued on next page...

Submitter: Norrbom, Corina

Record ID: 116

COVID-19: Engaging Hispanic Communities in Bi-Directional Conversation

Corina Norrbom, MD, MCW-CW, WIPPS; Mariana Savela, BS, WIPPS; Julie Bunczak, MEd, WIPPS; Amy Prunuske, PhD, MCW-CW; Dima Jaber, BS, MCW-CW; Greta Berger, BA, MCW-CW; Tony Gonzalez, BA, Marathon County Health Dept

Background

An informed public plays a significant role in preventing the transmission of SARS-CoV-2 and mitigating the spread of COVID-19. Immigrant communities are particularly vulnerable to negative health, educational and economic impacts, and different messaging strategies are necessary to consistently reach Hmong and Hispanic communities. The Wisconsin Institute for Public Policy and Service (WIPPS) is leading a community effort to approach communication challenges in an innovative way. The model employs respected and well-connected Community Coordinators (CC) from the Hmong and Hispanic communities, each of whom coordinates a network of community health workers (CHWs). Collaborating organizations including MCW-CW, public health, health systems, resource agencies and community organizations meet at least biweekly with the CCs. Bidirectional communication through CCs and CHWs is occurring in both Hmong and Hispanic communities in Central Wisconsin, but the evolution of these networks has been different. There are similarities in challenges that are faced, but there is also uniqueness. This poster highlights project development and impact in Hispanic communities in Central Wisconsin from May through September 2020.

Objectives

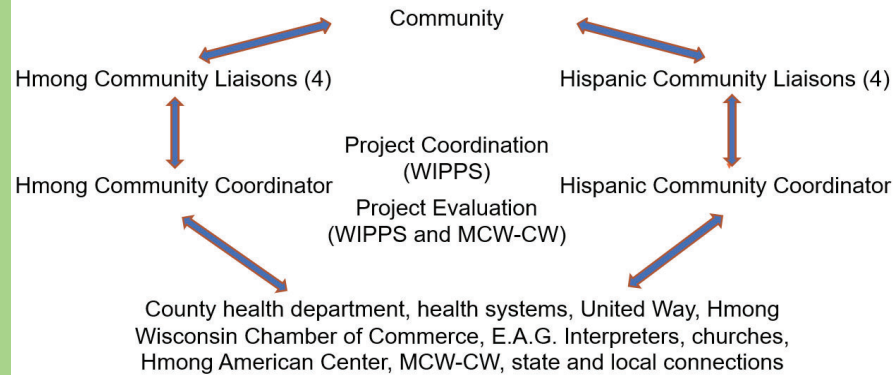
- Strengthen communication channels and facilitate regular information exchange between public health officials, health systems and resource agencies and Hmong and Hispanic communities in Central Wisconsin
- Establish a coordinated network of Hmong and Hispanic community health workers (Community Liaisons)
- Improve health in Hmong and Hispanic communities during the COVID-19 pandemic and beyond



Methods

May 2020 – Initial CHW training and information gathering
Project location - Marathon County and surrounding communities

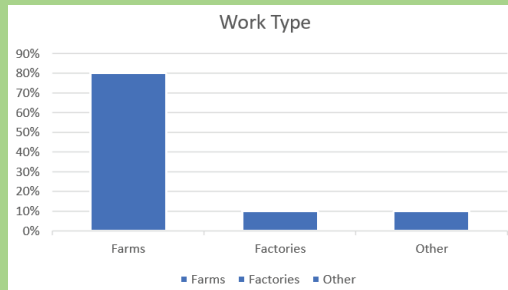
Communication Model



Data gathering - regular verbal data reports (uploaded into Qualtrics) and stories

Results

Community connections: farm visits, churches, food distribution events, grocery stores, mobile Mexican Consulate, and food box drop-offs for quarantined families. Assist Marathon County Health Department with trust building, contact tracing, and translation at COVID testing sites.



Average level of schooling for adults was 6th grade or lower

People live in the shadows and fear seeking medical care or other assistance.

"They are afraid to test positive for COVID-19 and lose their employment. The vast majority of Hispanic farm workers and their families live in housing provided by their employers. Being fired also means losing their home."

How are you being affected by COVID-19 (ex: financial, social, health, emotions, etc.)? *"In every single aspect."*

Do you know about resources in your community? 7% Yes (3) 93% No (40)

Impacts

- Dissemination of COVID-19 prevention tips and information in Spanish (verbal, video, and infographics)
- Grocery delivery to quarantined families
- Modelling mask use, handwashing, physical distancing
- Providing masks and hand sanitizer
- Helping families find resources to assist with rent, food, and more
- Follow-up to check in on families
- Assisted United Way of WI to improve 211 services to Hispanic families
- Gaining understanding of knowledge, behaviors, fears, attitudes and challenges of the community
- Over 500 people reached



Conclusions & Future Directions

Hispanic CHWs are trusted messengers, candidly spoken to and listened to because of their history with and connection to their communities. Interpersonal and non-written communication platforms are important in this setting of language, literacy and cultural barriers. CCs can be a bridge to facilitate bidirectional communication with the larger community.

- Wisconsin DHS Influenza Community Outreach
- Covering Wisconsin Open Enrollment & Public Charge Rule education
- Primary care access and health literacy
- Grocery store video initiative
- Continued intentional listening

Acknowledgements

Collaborating Organizations: Marathon County Health Dept, Aspirus, Ascension Wisconsin, Marshfield Clinic Health System, E.A.G. Interpreters Hispanic Outreach, Hmong WI Chamber of Commerce, Hmong American Center, United Way of Marathon County, Bridge Community Clinic, and First Presbyterian Church Free Clinic
Funding: Community Foundation of North Central Wisconsin/United Way of Marathon County COVID Relief, Aspirus, Ascension WI, AbbyBank Foundation, United Way of Wisconsin, Marshfield Clinic, Northcentral Area Health Education Center, Church Mutual Insurance

**Breakout
Room:**

4 - Health Communication and Messaging

Title: COVID-19: Engaging Hmong and Hispanic Populations in Bi-Directional Communication
PART 2 of 2

Authors: Corina J. Norrbom, MD, MCW-Central WI; Dima T. Jaber, BS, MCW; Greta Berger, BA, MCW; Mariana Savela, BS, Wisconsin Institute for Public Policy and Service; Julie Bunczak, MEd, Wisconsin Institute for Public Policy and Service; Amy Prunuske, PhD, MCW-Central WI; Mang Xiong, BA, Hmong Wisconsin Chamber of Commerce; Tony Gonzalez, BA, Marathon County Health Department.

Abstract: **This study's results focus on two distinct populations. To avoid repetition, 2 abstracts are being combined into one and will be presented over 2 timeslots.**

...Continued from previous page

Through September 2020, over 1000 Hmong and Hispanic people were able to share their concerns and ideas and receive information about COVID-19 and access to resources in their own language. CHWs are trusted messengers, candidly spoken to and listened to because of their history with and connection to the community. CCs are the bridge between CHWs and community collaborators, facilitating bidirectional communication. Bidirectional communication through CCs and CHWs is occurring in both Hmong and Hispanic communities in Central Wisconsin, but the evolution of these networks has been different. There are similarities in challenges that are faced, but there is also uniqueness. In each we have attempted to track the number and characteristics of people reached, knowledge about COVID, preventative behaviors, community needs, and how community members are accessing resources and health care information. During this session we will share two posters, one highlighting work in Hmong communities and the other highlighting work in Hispanic communities.

1) The Hmong network thus far has focused primarily on outreach through already-existing programs in the Wausau and Stevens Point metro areas. CHWs connect with individuals through the Hmong American Center, CAP Services, and the Hmong WI Chamber of Commerce. They have also provided outreach through extended families and social media. Data has been gathered through a Qualtrics tool filled out by the CHWs and through stories told in CC meetings.

2) Hispanic CHWs were chosen from Hispanic population pockets in Marathon County and surrounding communities, predominantly in rural areas. The Hispanic CC and CHWs are reaching community members through channels such as farm visits, churches, food giveaway events, grocery stores, mobile Mexican Consulate, and food box drop-offs for quarantined families. They have assisted the Marathon County Health Department with trust building, contact tracing, and translation at COVID testing sites. Data has been gathered through regular verbal data reports and stories (necessary due to literacy barriers).

Submitter: Jaber, Dima

Record ID: 117

COVID-19: Engaging Hmong Populations in Bi-Directional Communication

Dima T. Jaber, BS, MCW; Greta Berger, BA, MCW; Corina J. Norrbom, MD, MCW-Central WI; Julie Bunczak, MEd, Wisconsin Institute for Public Policy and Service; Amy Prunuske, PhD, MCW-Central WI; Mang Xiong, BA, Hmong Wisconsin Chamber of Commerce

Background

An informed public plays a significant role in preventing the transmission of SARS-CoV-2 and mitigating the spread of COVID-19. Immigrant communities are particularly vulnerable to negative health, educational and economic impacts, and different messaging strategies are necessary to consistently reach Hmong communities. The Wisconsin Institute for Public Policy and Service (WIPPS) is leading a community effort to approach communication challenges in an innovative way. The model employs respected and well-connected Community Coordinators (CC) from the Hmong communities, each of whom coordinates a network of community health workers (CHWs). Collaborating organizations including MCW-CW, public health, health systems, resource agencies and community organizations meet at least biweekly with the CCs. Bidirectional communication through CCs and CHWs is occurring in both Hmong communities in Central Wisconsin, but the evolution of these networks has been different. There are similarities in challenges that are faced, but there is also uniqueness. This poster highlights project development and impact in Hmong communities in Central Wisconsin from May through September 2020.

Objectives

- Strengthen communication channels and facilitate regular information exchange between public health officials, health systems and resources agencies and Hmong communities in Central Wisconsin
- Establish a coordinated network of Hmong community health workers (community liaisons)
- Improve health in Hmong and Hispanic communities during the COVID-19 pandemic and beyond



Methods

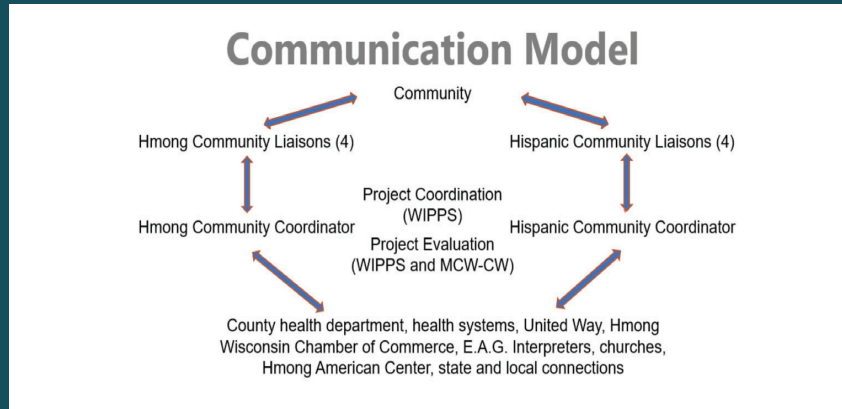
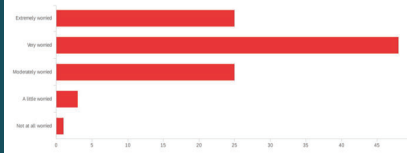


Figure 1

How worried are you about getting COVID-19?



How worried are you about a family member getting COVID-19?

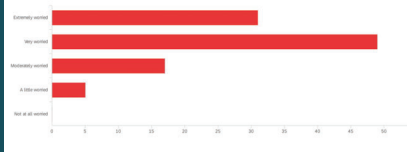


Figure 2

How are you affected by COVID-19?



Qualitative Data

Do you understand what COVID-19 is?

The majority stated that they understood what COVID-19 was. 16 stated that they did not understand COVID-19, but knew it was a "dangerous disease" or "scary." 3 individuals stated they had "okay understanding."

Where do you get your information about COVID-19?

Majority responded with Internet (unspecified), TV, or YouTube. Others responded with healthcare workers, CDC website, Hmong news, and Facebook.

Is there anything that is confusing about COVID-19?

15 - 20 respondents felt anywhere from very confused, to some confusion on topics such as what to do when they feel sick, where to go for a test, where to get a check up. Those that responded with no confusion to little confusion reported that they understand COVID-19 protocol, social distancing requirements, and where they would go if they were to feel sick. Many reported that they would go to the Emergency Department if they had symptoms.

"Money is starting to increasingly become in affect with bills rising, my family's well being is always on my mind, and it's becoming increasingly more difficult to keep myself updated on what's going on in today's society."

Are there additional community resources that would be helpful to you and your family?

Food assistance, local food pantry, rental assistance, "education help with my kids", internet at home, Foodshare funds, "where to go for a check-up if I don't have insurance", kids homework help, "where to get help in Hmong language", "food and money help", "RENT", and mental health resources.

"Aside from money ... I want to keep my family safe from any danger. My father and my youngest brother are both immunosuppressant and cannot handle this virus. My family is doing our best.."

Lessons Learned

- Importance of trusted sources
- Hesitancy to ask for help
- Resource are difficult to access
- Value of personal communication and non-written materials such as videos
- Shadow populations - undocumented
- Confusion about seeking care for COVID symptoms

Discussion

Early impacts

- Connecting with people where they are: businesses, HAC, assistance programs, food giveaways
- Modelling - masks, handwashing, physical distancing
- Stories & connection
- Gained understanding of knowledge, behaviors, fears, attitudes and challenges of the community
- Public Health



Future Directions

Wisconsin Department of Health Services Influenza Community Outreach grant

- Influenza and influenza vaccine outreach and education
- Connecting population to affordable and accessible vaccinations.

Open Enrollment & Health Insurance Outreach

Primary Care Access project

Health topic informational sessions

Acknowledgements

Partnerships: Marathon County Health Dept, Ascension WI, Marshfield Clinic Health System, Aspirus, E.A.G. Interpreters Hispanic Outreach, Hmong WI Chamber of Commerce, Hmong American Center, United Way of WI, and Bridge Community Clinic.
Funding Sources: Community Foundation of North Central Wisconsin/United Way of Marathon County COVID Relief, Aspirus, Ascension WI, AbbyBank Foundation, United Way of Wisconsin, Marshfield Clinic, North Central Area Health Education Center, Church Mutual Insurance.

**Breakout
Room:**

5 - Medical Student Education and Research

Title: Analysis of Focus Group Results for Teleophthalmology to Improve Eye Health Among Latinos Study

Authors: Megan D. Yee, BA, MCW; Militza Bonet Vázquez, MPH, United Community Center; Al Castro, MS, United Community Center; Velinka Medic, MS, MCW, Ophthalmology; Blanca Rodriguez, United Community Center; Judy E. Kim, MD, MCW, Ophthalmology

Abstract: BACKGROUND: Compliance to annual dilated eye exams is about half amongst diabetic patients and even lower in Latino populations. Telemedicine has been used to increase compliance in a cost-efficient manner while providing education about diabetic eye diseases.

OBJECTIVES: 1) Ascertain the attitudes and knowledge of urban Latinos in Milwaukee about diabetic eye disease (DED) and telemedicine and 2) assess their response to teleophthalmology screenings at a community center facilitated by Spanish speaking staff.

METHOD: Pre- and post- screening focus groups (FG) were held at United Community Center (UCC). FGs were in both English and Spanish to account for possible differences in acculturation levels and health beliefs. Participants also completed an Eye-Q test (National Eye Institute).

RESULTS: The number of participants pre-screening was 7 for Spanish and 7 for English while the post-screening FGs were 6 for Spanish and 4 for English. Both FGs had a low understanding of DED based on the Eye-Q test (English FG scored 57% versus 41% for Spanish FG). Poor emphasis on preventative care was noted when asked about attitudes towards DED and seeking care. Most participants perceived convenience and efficiency as advantages of telemedicine, but loss of physician-patient relationship and insurance coverage as disadvantages. 100% of participants who underwent teleophthalmology screening at UCC responded positively, expressing preference for the location, trust in the staff, and comfort with speaking Spanish as factors that would encourage them to seek annual eye exams.

CONCLUSION: FG participants had positive experiences with teleophthalmology screenings done at UCC and listed various factors that broke down barriers to preventive eye screening. Unlike most teleophthalmology studies in the literature, our study is unique for assessing screenings done in a community center versus at clinics. High acceptance of this novel teleophthalmology approach may help improve compliance to annual screenings in the urban Latino communities.

Submitter: Yee, Megan

Record ID: 72

Analysis of Focus Group Results for Teleophthalmology to Improve Eye Health among Latinos (TIEHL) Study



Megan Yee¹, Militza Bonet Vázquez, MPH², Al Castro, MS², Velinka Medic, MS¹, Blanca Rodriguez², Judy E. Kim, MD¹

¹Medical College of Wisconsin, ²United Community Center



INTRODUCTION

- Compliance with annual dilated eye exams is about half amongst diabetic patients and even lower in Latino populations
- Telemedicine has been used to increase compliance in a cost-efficient manner while providing diabetic eye disease education
- Using community-based approach, we established a teleophthalmology program at the United Community Center (UCC) in Milwaukee

AIMS

- To ascertain the attitudes and knowledge of urban Latinos in Milwaukee about **diabetic eye disease (DED)** and telemedicine
- To assess their response to teleophthalmology screenings at a community center facilitated by Spanish speaking staff

METHODS

- From 2014-2015, English and Spanish pre-and post-screening **focus groups (FG)** were held at UCC
- Baseline DED knowledge was gathered with National Eye Institute's Eye-Q test
- Two researchers independently analyzed FG transcriptions and common themes were coded and discussed

RESULTS



100% OF PARTICIPANTS WHO UNDERWENT TELEOPHTHALMOLOGY SCREENING AT UCC RESPONDED POSITIVELY

- Location preference
- Trust in staff
- Comfort speaking Spanish

DIABETIC EYE DISEASE KNOWLEDGE: EYE- Q TEST
 English FG: 57%
 Spanish FG: 41%
 p=0.20

Questions which were answered incorrectly by all
 - Spanish FG: **People who have good control of their diabetes are not at risk for DED**
 - English FG: **DED usually has early warning signs**

TELEMEDICINE

- | | |
|--|---|
| + | - |
| <ul style="list-style-type: none"> - Efficiency - Convenience - Not needing transportation - Early disease detection | <ul style="list-style-type: none"> - Loss of physician- patient relationship - Potential additional costs - Initial fear of technology |

ATTITUDES TOWARDS DED AND SEEKING CARE → **POOR EMPHASIS ON PREVENTATIVE CARE**

"If [my relative] didn't have diabetes, she might not have had an eye exam until she was losing her sight. Because only when you feel the problem is when you do something."

		SPANISH	ENGLISH
SAMPLE SIZE	PRE-SCREENING FG	7	7
	POST-SCREENING FG	6	4

HOW TO RAISE AWARENESS OF DIABETIC EYE HEALTH WITHIN LATINO COMMUNITY

FAMILY AS A MEANS OF HEALTH PROMOTION

- Video showcasing a multigenerational, single household affected by DED
- Education about diabetes in school so that children can bring concepts back home

"If there was something here at UCC, even though I feel like I don't need it, I never had it, I would completely do it, it makes it so easy. Convenience."

LIMITATIONS

- Initial Eye-Q test was the only quantitative assessment performed
- FG participants may not be representative of those who eventually received screening intervention
- Semi-structured interview format resulted in some discrepancies in FG questions

CONCLUSION

- FG participants had positive experiences with teleophthalmology screenings done at UCC and listed various factors that broke down barriers to preventive eye screening
- Unlike most teleophthalmology studies in the literature, our study is unique for assessing screenings done in a community center versus at clinics
- High acceptance of this novel teleophthalmology approach may help improve compliance to annual screenings in the urban Latino communities

REFERENCES

- Paz, S.H., et al. "Noncompliance with Vision Care Guidelines in Latinos with Type 2 Diabetes Mellitus: The Los Angeles Latino Eye Study". *Ophthalmology* 2006; 13(8):1372-1377
- Zhijian Li et al., "Telemedicine-Based Digital Retinal Imaging vs Standard Ophthalmologic Evaluation for the Assessment of Diabetic Retinopathy," *Connecticut Medicine* 76, no. 2 (February 2012): 85-90.
- "Ophthalmologists Encourage Making Your Eyes Part of a Healthy Aging Strategy," *American Academy of Ophthalmology*, August 19, 2016, <https://www.aao.org/newsroom/news-releases/detail/making-eyes-part-of-healthy-strategy>.

**Breakout
Room:**

5 - Medical Student Education and Research

Title: A community-engaged tool to bridge the gap in student ophthalmology education and inform student-led CHECK UP education sessions

Authors: Katerina Tori, MCW; Megan Cory, MCW; Wasif Osmani, MCW; Rebecca C. Lundh, MD, MCW, Family and Community Medicine; Annette L. Giangiacomo, MD, MCW, Ophthalmology and Visual Sciences; Deborah M. Costakos, MD, MS, MCW, Ophthalmology and Visual Sciences

Abstract: **BACKGROUND:** Lack of disease prevention and daily management education is seen in all patient populations, and especially among the underserved. Many reasons account for this, including reported accounts by physicians on lack of education on various health conditions and management. Creating Health Education for Constructive Knowledge in Underserved Populations (CHECK UP) is a student-led program to identify and address gaps in medical education to improve patient outcomes; this aspect of the program is focused on ophthalmic care. An understanding of the visual system, its interaction with other bodily systems, and the consequences of dysfunction are relevant for all medical practitioners, and especially primary care physicians (PCP) as they are the first line in ophthalmic care. Up to 10% of all patients who present to their PCP do so with eye-related conditions. It is paramount that we advocate for more ophthalmic education in medical school to prepare PCPs for this area of practice.

METHODS: A Qualtrics survey was sent to PCPs, internists, ED doctors, and 4th year medical students. 13 Likert scale questions aim to assess level of comfort with basic eye exam techniques; triaging, diagnosing and treating ocular disorders and injuries; and educating patients on prevention and management of common eye conditions.

RESULTS: We anticipate discomfort among general practitioners in basic eye exam techniques; triaging, diagnosing and treating ophthalmic conditions. We anticipate that current physicians and students will call for increased ophthalmic education in medical training.

CONCLUSION: Ophthalmic medical student education is a cornerstone to improving eye health care. This project engages the physician and student community to understand if more training is needed to equip medical students to have a formative impact on patient-engaged education for ophthalmic conditions. A student-delivered CHECK UP workshop will be offered for junior medical students to fill the gaps in ophthalmology medical education.

Submitter: Tori, Katerina

Record ID: 108

Bridging the Gap in Student Ophthalmology Education and Informing Student-led CHECK UP Community-Engaged Education for Providers and Patients

Katerina Tori¹, Megan Cory¹, Wasif Osmani¹, Rebecca Lundh MD²,
Annette Giangiacomo MD³, Deborah Costakos MD, MS³

1) MCW School of Medicine 2) MCW Department of Family and Community Medicine 3) Froedtert Eye Institute

Background

- Lack of disease prevention and daily management education is seen in all patient populations, and especially the underserved (1).
- CHECK UP is a student-led program to identify and address gaps in medical education to improve patient outcomes.
- An understanding of the visual system, its interaction with other bodily systems, and the consequences of dysfunction are relevant for all medical practitioners, and especially primary care physicians.
- Up to 10% of all patients who present to their PCP do so with eye-related conditions (2).

Methods

- A Qualtrics survey will be sent to primary care physicians (family and internal medicine), emergency medicine physicians, and 4th year medical students.
- Likert scale questions aimed to assess level of comfort with basic eye exam techniques, triaging, diagnosing, treating ocular disorders and injuries and educating patients on prevention and management of common eye conditions.

On a scale of 1-10 (1 = very poor, 10 = excellent) how would you rate your ophthalmology knowledge?

Not at all likely Extremely likely

0 1 2 3 4 5 6 7 8 9 10

What are the most common eye-related conditions you see in your practice? Medical Students please do not answer this question.

Which of the following do you wish you had received more training for in **medical school or in residency?** Please select all that apply.

	Diagnosis and screening	Prevention	Treatment
Allergic conjunctivitis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Age-related macular degeneration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Glaucoma	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diabetic retinopathy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cataracts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Retinal detachment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How comfortable do you feel triaging:

	Not at all	Somewhat comfortable	Comfortable	Very comfortable
Red Eye	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Swollen eyelid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Visual disturbances	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eye pain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Abnormal red reflex	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How comfortable do you feel treating:

	Not at all	Somewhat comfortable	Comfortable	Very comfortable
Conjunctivitis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Corneal abrasions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Red eye	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dry eyes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Swollen eyelid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How comfortable do you feel triaging the following traumatic eye injuries?

	Not at all	Somewhat comfortable	Comfortable	Very comfortable
Anisocoria	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Corneal abrasions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Subconjunctival hemorrhage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hyphema	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Blunt trauma of the orbit/eye	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Abusive head trauma (Shaken Baby Syndrome)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 1. Sample questions of needs-assessment survey

Results

- We anticipate discomfort among general practitioners in basic eye exam techniques, triaging, diagnosing, and treating ophthalmic conditions.
- We anticipate that current physicians and students will indicate need for increased ophthalmic education in medical training.
- We expect the need for continued education on referral recommendations to ophthalmology.

Conclusions

- Ophthalmic medical student education is a cornerstone to improving eye health care in the general population.
- This project engages the physician and student community to understand if more training is needed to equip medical students to have a formative impact on patient-engaged education for ophthalmic conditions.
- A student-delivered CHECK UP workshop will be offered for junior medical students to fill the gaps in pre-clinical ophthalmology medical education.

References

1. Garr, D. R., Lackland, D. T., Wilson, D. B. (2000). Prevention education and evaluation in US medical schools: a status report. *Academic Medicine*, 75(7), S14-S21
2. Spivey BE. Ophthalmology in medical student education. Philosophy, content, and process. *Ophthalmology* 1978; 85: 1299-308.

**Breakout
Room:**

5 - Medical Student Education and Research

Title: Implementing Telemedicine at a Student-Run Free Clinic: Adapting Operations to Continue our Mission During a Pandemic

Authors: Allison E. Whorton, MCW; Spenser T. Marting, MCW; Staci A. Young, MD, MCW, Family and Community Medicine; Rebecca C. Lundh, MD, MCW, Family and Community Medicine

Abstract: **BACKGROUND:** In response to the COVID-19 pandemic, healthcare systems sought alternatives to traditional care platforms, turning to telemedicine to provide the bulk of primary medical care. Prior to the pandemic, most medical care was provided in face-to-face visits; according to Telehealth Index: 2019 Consumer Survey, telemedicine was used by only 8% of Americans. Saturday Clinic for the Uninsured (SCU), the Medical College of Wisconsin (MCW) student-run free clinic, also made the transition to telemedicine in March 2020.

OBJECTIVE: When MCW medical students were removed from in-person care settings to ensure safety, SCU leaders were faced with the challenge of how to continue meeting patients' medical needs while safely engaging its student volunteers. A telemedicine program was developed to enable the clinic to meet its mission serving patients and furthering student education. Telemedicine appointments have been offered throughout the week since March 2020; face-to-face visits continue to be offered on Saturdays.

METHODS: Statistical analysis of volunteer involvement using application records and surveys. Patient visit data was obtained from clinic records.

RESULTS: Since implementation of telemedicine, total patient visits increased by 32% compared to 2019 for the same time period (March 21 to September 30). Of these visits, 72% were completed using telemedicine. There was a 2.6-fold increase in volunteers from the summer pilot program to the fall semester. 85% of volunteers from the summer pilot program re-applied for the fall semester. Further, of first-time applicants, 75% specifically requested to participate in telemedicine visits.

CONCLUSION: SCU's telemedicine program has increased access as evidenced by increased number of visits. This novel opportunity for clinical community service has given students more exposure to direct patient care, potentially enhancing their experience and development of clinical skills; high retention of student volunteers from the summer session, indicates its success in meeting student volunteer goals.

Submitter: Whorton, Allison

Record ID: 91



Implementing Telemedicine at a Student-Run Free Clinic: Adapting Operations to Continue our Mission During a Pandemic

Allison E Whorton¹, Spenser T Marting¹, Staci A Young, PhD², Rebecca C Lundh, MD²

¹School of Medicine, Medical College of Wisconsin, Milwaukee, WI, USA

²Department of Family and Community Medicine, Medical College of Wisconsin, Milwaukee, WI, USA

Background

In response to the COVID-19 pandemic, healthcare systems sought alternatives to traditional care platforms, turning to telemedicine to provide the bulk of primary medical care. Prior to the pandemic, most medical care was provided in face-to-face visits.

Saturday Clinic for the Uninsured (SCU), a Medical College of Wisconsin (MCW) student-run free clinic, solely provided in-person care prior to the pandemic. In March 2020, SCU leadership began developing a telemedicine program that was launched in July (Figure 1).

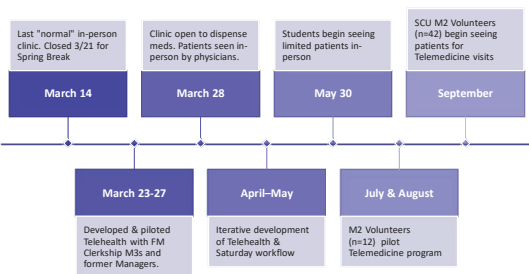


Figure 1. Timeline for Implementing Telemedicine Program

Methods

Statistical analysis of volunteer involvement using application records and surveys. Patient visit data was obtained from clinic visit schedules.

Student T-test was used to determine statistical significance.

Results

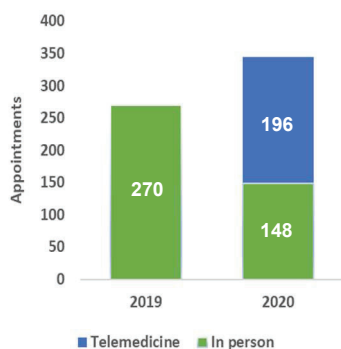


Figure 2. Total number of in person and telemedicine appointments for 18-week period between July-October

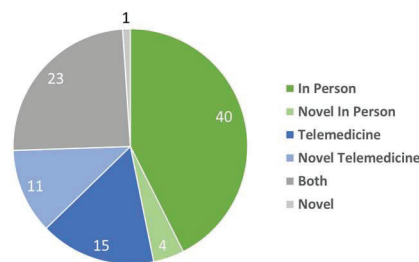


Figure 3. Distribution of interest in telemedicine & in person volunteerism among 94 M2 student applicants. Data displayed in absolute values.

M2 Student Volunteer Evaluation of the Program

An anonymous survey to obtain feedback on telemedicine experiences was sent to all 42 M2 Telehealth volunteers. Response rate 31%.

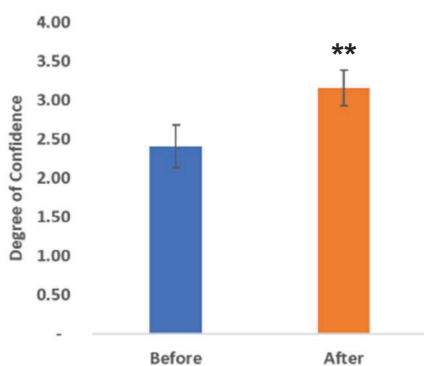


Figure 4. Self-rating of degree of confidence completing a patient interview before beginning program and after volunteering & training. Average rating by survey respondents (n=12) on a Likert scale 1-5, with 1 being not at all confident and 5 being extremely confident. ** p<0.01

Preliminary Qualitative Data

- Students believe the SCU Telemedicine experience has enhanced their medical training

Successes

- "I feel like the Telemedicine visits have been much more efficient than the in-person visits I conducted last year."
- "Telemedicine is a really great way [for patients] to get their meds without needing to come into clinic for an appointment."

Challenges

- Many patients still "end up being scheduled for an in-person visit" for a physical assessment.

Discussion & Conclusion

- SCU's telemedicine program has the potential to increase the clinic's capacity to provide care.
- Students are interested in developing their telemedicine skills and the program has been successful in meeting volunteer goals among individuals.
- Preliminary data suggests that students find this program a beneficial supplement to their clinical education.
- Preliminary data suggests that telemedicine volunteers complete an increased number of appointments compared to their counterparts volunteering in-person at the clinic.

Future Directions

- Further investigation is needed to determine how many individual patients were served via telemedicine rather than appointments.
- Develop a system for obtaining patient feedback.
- Improve volunteer training and program experience.
- Continue surveying volunteers for additional input and planning.

References

- AmericanWell. Amwell Telehealth Index: 2019 Consumer Survey 2019. <https://static.americanwell.com/app/uploads/2019/07/American-Well-Telehealth-Index2019-Consumer-Survey-eBook2.pdf>. Accessed March 30, 2020
- Phan RC, Le DV, Nguyen A, Mader K. Rapid Adoption of Telehealth at an Interprofessional Student-Run Free Clinic. PRIMER. 2020;4:23. <https://doi.org/10.22454/PRIMER.2020.241619>

**Breakout
Room:**

5 - Medical Student Education and Research

Title: Medical Student Competencies for Community Engagement Informed by Community Stakeholders

Authors: Amy Prunuske, PhD, MCW-Central WI; Lucas Mathson, BS, MCW; Haley Pysick, MCW-Central WI; Eric Giordano, PhD, Wisconsin Institute for Public Policy and Service; Jacob Prunuske, MD, MCW; Corina Norrbom, MD, MCW

Abstract: Medical student engagement in the community can be an important part of their professional development. To gain a better understanding of what students might gain from participating in these experiences, we interviewed 29 community stakeholders. Coding this feedback, we identified themes and four relevant character traits: perspective, trustworthiness, perseverance, and social intelligence. We piloted several feedback mechanisms for both students and community mentors, including the development of a Community Engagement Feedback Tool that was used to track students' progress over the two year experience. Focus groups were conducted with the medical students to help them reflect on their experiences and to inform future efforts. Community member feedback can help drive student learning experiences and can support the formation of the mutually beneficial relationships needed to drive positive community outcomes.

Submitter: Prunuske, Amy

Record ID: 94

Medical Student Competencies for Community Engagement Informed by Community Stakeholders

Lucas Mathson, Corina Norrbom MD, Amy Prunuske PhD, Haley Pysick, Jacob Prunuske MD, MSPH, Eric Giordano PhD
Medical College of Wisconsin-Central Wisconsin

Abstract

Medical student engagement in the community can be an important part of their professional development. To gain a better understanding of what students might gain from participating in these experiences, we interviewed 29 community stakeholders. Coding this feedback, we identified themes and four relevant character traits: perspective, trustworthiness, perseverance, and social intelligence. We piloted several feedback mechanisms for both students and community mentors, including the development of a Community Engagement Feedback Tool that was used to track students' progress over the two year experience. Focus groups were conducted with the medical students to help them reflect on their experiences and to inform future efforts. Community member feedback can help drive student learning experiences and can support the formation of the mutually beneficial relationships needed to drive positive community outcomes.

Methods

Interviews or focus groups were conducted with 31 community stakeholders with unique perspectives on health concerns in Central Wisconsin. Informed consent was obtained prior to each interview. A demographic survey was administered to each interview subject following their interview. Interviews were recorded, transcribed, and coded. The protocol was reviewed by the MCW IRB PRO: 00023096

	Stakeholders Interviewed	Marathon County Population
Female	58%	50%
Hmong Ethnicity	0%	6%
≥50years	48%	36%
Bachelor's degree or higher	94%	25%

Table 1. Stakeholder characteristics in comparison with Marathon County

Results

Identified Characteristics

Perspective

"I believe that it is so important that doctors understand the community, understand the culture of the community...you have to have your finger on the pulse."



Trustworthiness

Trustworthy people exhibit motivation and commitment to do what they have been tasked to do *and* possess the knowledge and competence to do it (Hardin 28-31).

Perseverance

The capacity to work and exert effort in spite of obstacles and challenges, demonstrating resilience to proceed and be continually engaged



Social Intelligence

"Your best doctors are doctors that understand their patients and are able to relate and engage."

Table 2: Characteristics and their respective stakeholder quotes. The definitions listed reflect a consolidation of various definitions to demonstrate how the traits are expressed in action

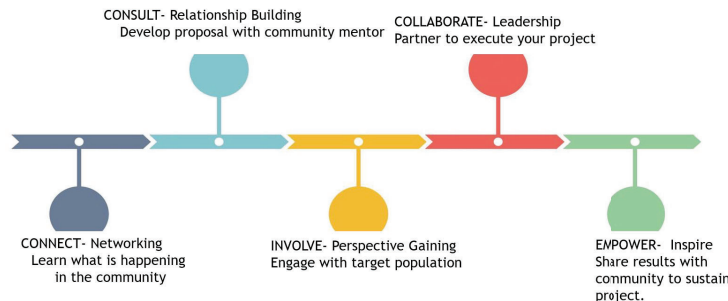


Fig. 1: Physician in the Community Feedback Tool used to assess community engagement

Conclusions and Future Directions

- Community engagement during medical school helps medical students to develop skills desired by community members
- Identified traits in future physicians can be quantified through reflection and monitoring to assess progress
- Collect feedback and connect with Hmong and other groups under-represented in this set of interviews.
- Assess the effectiveness of the Physician in the Community course in students' progression using the Community Engagement Feedback Tool

Acknowledgements

LM received funding from WI Area Health & Education Center through Community Health Internship Program. CN and AP received support from the Kern Institute. We would like to extend our thanks to all of our community partners and Nick Giordano for his assistance with the data analysis.

References

Marathon County Health Priorities. Accessed August 21, 2019. <http://marathoncountyhealthpriorities.org/>

"Trustworthiness." *Trust and Trustworthiness*, by Russell Hardin, Russell Sage Foundation, 2002, pp. 28–31.

United States Census Bureau. Accessed September 2, 2019. <https://www.census.gov/quickfacts/marathoncountywiscn>

**Breakout
Room:**

5 - Medical Student Education and Research

Title: Wisconsin Physician Gender Bias

Authors: Kristin Tischer, MCW-Green Bay; Brittany Shultz, MCW-Green Bay

Abstract: Physician gender bias has been shown to exist across the medical field. Numerous studies have shown that female physicians are likely to experience gender bias in regard to sexual harassment, compensation, promotion, and in relationships with patients and allied health staff. An electronic survey was sent out through the Wisconsin Medical Society's newsletter. The survey consisted of 12 questions asking about demographic information and gender bias. Responses to the statements were gathered using a Likert scale ranging from strongly agree to strongly disagree. The last question on the survey was a write in option if participants wished to share personal stories or opinions about physician gender bias. A total of 96 Wisconsin physicians responded to the survey. The results of this study show that physician gender bias exists in Wisconsin. Of the responses, 90.1% of female physicians reported having experienced gender bias, whereas only 29.4% of male physicians reported experiencing gender bias. In addition 64.7% of men answered that their pay was equivalent to other colleagues in their same specialty, whereas only 33.8% of female physicians reported that their pay was equal to colleagues in the same specialty. Overall, the results from the survey show that gender bias exists among Wisconsin physicians. Gender bias at the physician level may indicate a larger scale gender bias that exists in society. This study contributes to efforts to recognize that gender bias exists among communities and to help create a discussion about how Wisconsin communities can eliminate gender bias.

Submitter: Tischer, Kristin

Record ID: 96

A Survey of Wisconsin Physician Gender Bias

Brittany Schultz, MS3 & Kristin Tischer, MS3

INTRODUCTION

Over 70% of female physicians have reported experiencing gender bias in their career¹

Female physicians earn on average \$20,000 less than their male counterparts⁴

Female physicians make up over one-third of working doctors, 46% of residents, and over 50% of medical students, and yet they a very small portion of leadership positions in medicine and are less likely to be promoted³

Physician mothers report 90% gender discrimination they have experienced was related to pregnancy, maternity leave, and 50% reported disrespectful comments about breastfeeding on the job⁴

A 2018 study that surveyed 7,409 US general surgery residents found that gender discrimination was reported by 31.9% of residents, 65.1% of those residents were female and 10% were men⁵.

PURPOSE

To study how Wisconsin physicians view gender bias in the workplace.

To help create a discussion about how Wisconsin communities can eliminate gender bias.

METHODS

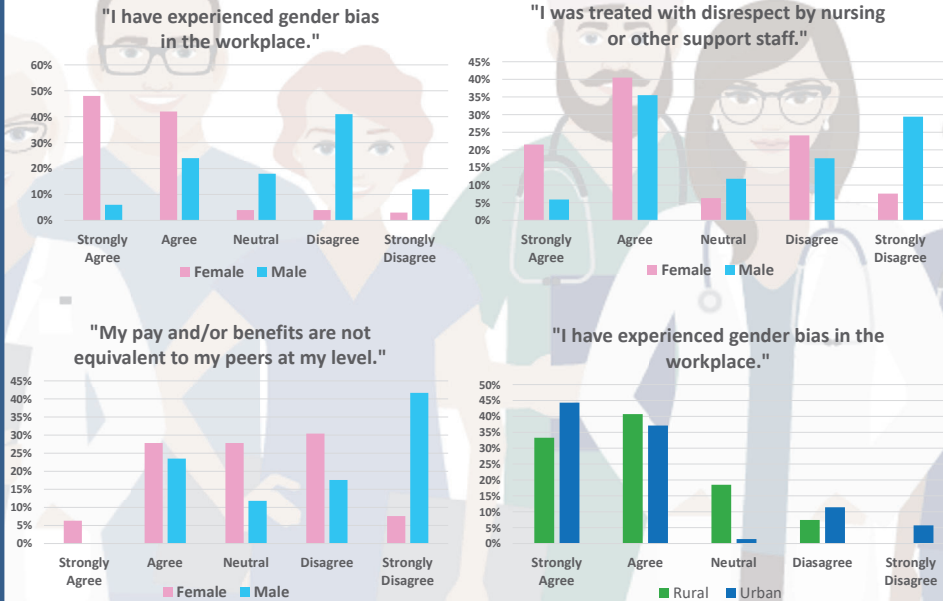
An electronic survey was distributed via a link in the Wisconsin Medical Society's online newsletter.

Demographic information such as age, gender, medical specialty, and location of practice was gathered.

Using a Likert scale, participants answered seven questions regarding their personal experience with gender bias.

Participants were given the option to share personal stories and/or their opinions on the subject.

RESULTS



"As a female physician I am constantly being assumed to be the nurse. Male patients have referred to me as 'sweetie' and 'honey'..." – Female, Family Medicine, Age 40–50

"...The gender bias over the course of my career was constant and pervasive. I am sure that I, too, am guilty of that bias, however much I resisted it when I could see it. I know that we all could do so much better." – Female, Internal Medicine, Age 60+

"One of my peers states that the reason there is a shortage of doctors in medicine is that there are too many women in medicine. He has done this on multiple occasions in front of me..." – Female, Age 50–60, Plastic & Hand Surgeon

"Gender bias exists primarily in the eyes of individuals looking to be offended...Women in the past have worked less than men in ortho, thereby making less money. That's not bias. A physician cannot 'have it all.' If one wishes to spend more time in non-medical activities, less money may be earned. Period." – Male, Orthopedics, Age 60+

"As a white male, if I have experienced gender bias, it would be in my favor. Most notably, my voice seems to be respected at meetings..." – Male, Family Medicine, Age 40–50

CONCLUSIONS

A total of 96 Wisconsin physicians responded to the survey; 79 females and 17 males.

Of the responses, 90.1% of female physicians reported having experienced gender bias, whereas only 29.4% of male physicians reported experiencing gender bias.

In addition 64.7% of men answered that their pay was equivalent to other colleagues in their same specialty, whereas only 33.8% of female physicians reported that their pay was equal to colleagues in the same specialty.

One limitation of the study was a low response rate from male physicians. In order to get a more representative understanding of male physicians' viewpoints on gender bias more male participants are needed.

Overall, the results from the survey show that gender bias exists among Wisconsin physicians and may indicate a larger scale gender bias that exists in society.

Future studies are needed to determine specific strategies hospitals and academic institutions can take to eliminate gender bias in medicine.

REFERENCES

- 1) Jaggi, R., K. A. Grith, R. Jones, C. R. Perumalswami, P. Ubel, and A. Stewart. 2016. Sexual harassment and discrimination experiences of academic medical faculty. *Journal of the American Medical Association* 315(19):2120–2121
- 2) Jena AB, Olenki AR, Blumenthal DM. Sex Differences in Physician Salary in US Public Medical Schools. *JAMA Intern Med.* 2016;176(9):1294–1304. doi:10.1001/jamainternmed.2016.3284
- 3) Templeton, K., C. Bernstein, J. Sukhera, L. M. Nora, C. Newman, H. Burstin, C. Guille, L. Lynn, M. L. Schwarze, S. Sen, and N. Busis. 2019. Gender-based differences in burnout: Issues faced by women physicians. *NAM Perspectives*. Discussion Paper, National Academy of Medicine, Washington, DC. <https://doi.org/10.31478/201905a>
- 4) Adesoye, T., C. Mangurian, E. K. Choo, C. Girgis, H. Sabry-Elnaggar, E. Linos, and Physician Moms Group Study Group. 2017. Perceived discrimination experienced by physician mothers and desired workplace changes: A cross-sectional survey. *JAMA Internal Medicine* 177(7):1033–1036
- 5) Hu, Y., Ellis, R. J., Hewitt, D. B., Yang, A. D., Cheung, E. O., Moskowitz, J. T., ... Bilimoria, K. Y. (2019). Discrimination, Abuse, Harassment, and Burnout in Surgical Residency Training. *New England Journal of Medicine*, 381(18), 1741–1752. doi:10.1056/nejmsa1903759

**Breakout
Room:**

5 - Medical Student Education and Research

Title: Impacts of a Service-Learning Health Education Program on Public Housing Residents and Medical Student Leaders

Authors: Eliana Sosa, MCW; Linda Meurer, MD, MPH, MCW, Family and Community Medicine; Staci Young, PhD, MCW, Family and Community Medicine

Abstract: **BACKGROUND and OBJECTIVE:** The correlation between lower health literacy and poorer health outcomes is well known. Low income elders are particularly at-risk. For nearly ten years, in partnership with successive community case manager organizations, MCW students have delivered monthly talks on healthcare topics of interest to residents of Highland Gardens (HG), a low-income apartment complex that predominantly serves elderly and disabled adults. The impact of this service-learning program on apartment residents and on student learners warrants further exploration.

METHODS: This research serves to evaluate the Health Education at Highland Gardens (HEHG) program by hosting a series of focus groups and interviews to collect and examine current Highland Gardens' residents' reasons for and barriers to attending, perceived benefits from attending the monthly sessions, and feedback for program improvements. A series of interviews was conducted with former student leaders of HEHG to assess long-term impacts of participating in this program. Qualitative analysis is being used to identify common themes in each group.

RESULTS: Two focus groups and three individual interviews of HG residents were conducted and analyzed. Participants enjoy the sessions and interactions with the students. Common themes include interest in being educated, importance of helping others, seeking social support, and generation of a community. Residents provided helpful suggestions regarding timing and advertising to improve reach. Five interviews of former students have been conducted to date; data analysis is underway. Preliminary results suggest that the experience enhanced students' communication skills and contributed to career development, particularly by fostering interest in community education.

DISCUSSION: The results of this analysis will inform improvements to the current program so that it may best benefit the interests and needs of the community it serves. The results may also have greater implications about the impacts of community-based health education programs on both recipients and student learners.

Submitter: Sosa, Eliana

Record ID: 114

Impacts of a Service-Learning Health Education Program on Public Housing Residents and Medical Student Leaders

Eliana Sosa, MCW 2021
Linda Meurer, MD, MPH
Staci Young, PhD



Urban and Community Health Pathway,
Department of Family and Community Medicine

Introduction and Goals

- Low-income populations and the elderly are at-risk for low health literacy and poor health outcomes.
- SET Ministry (and later Lutheran Social Services), Highland Gardens (HG) public housing apartments, and the Medical College of Wisconsin (MCW) have partnered since 2010 to:
 - Improve health literacy among mostly elderly residents of public housing
 - Educate diverse populations to make informed health decisions
 - Provide community engaged scholarship opportunities for medical students
- MCW students plan and lead monthly presentations on health topics selected by the HG residents.

This study aims to solicit HG resident feedback and assess long-term impacts of student participation to inform goal-directed program improvements and best meet the needs of both students and residents.

Methods

Public Housing Residents	Medical Student Leaders
1. Compiled attendance since 2017	1. Compiled names of medical student leaders since program initiation in 2011
2. Collected medical student field notes & reflections, since 2018	2. Conducted 6 interviews asking reflective questions about participation and potential impacts on self and career
3. Conducted 2 focus groups and 3 interviews of HG residents, asking questions regarding motivations/barriers, benefits, areas for improvement	3. Recorded and transcribed
4. Recorded and transcribed	4. Coded transcriptions using pre-identified codes with multiple coders to ensure reliability
5. Coded transcriptions using pre-identified codes with multiple coders to ensure reliability	



Results

Public Housing Residents

- 45 distinct residents attended since January 2017.
- Residents attended (mean) 5 sessions (range 1-20)
- On average, 10.8 residents attended per session
- 11 (24.4%) participated in a focus group (n=8) or individual interview (n=3)
- 1 student provided field notes on 8 sessions

Qualitative Analysis revealed four primary themes (Table 1):

Theme	Representative Quotes/Observations
1. Desire to Learn	• "We need to learn those things about our body."
2. Dedication to Helping Others	• "We can spread the words of what we learned from these meetings."
3. Generation of a Community	• "We're a group, we trust each other."
4. Frustrations with Healthcare	• "The doctors don't have the time like they used to explain the things that you really need to know and want to know"

Barriers to Attendance: personal obligations, lack of interest, speculated laziness or lack of care about one's health
Areas for Improvement: increasing advertising and activities

Table 1

Results (continued)

Medical Student Leaders

- 9 total identified graduated student leaders
- Typically 2-3 years of participation
- Two represented specialties: Internal medicine (5), pediatrics (1)

Qualitative analysis revealed five primary themes (Table 2):

Theme	Representative Quotes/Observations
1. Communication Skills	• "I really liked learning how to talk about things in a nonmedical way"
2. Seeing Healthcare in Community Setting	• "You come away learning much more about how medicine works and how people feel about medicine"
3. Resident Relationships	• "Looking forward to seeing those people and having those conversations"
4. Fostering a Love of Community Work	• "Solidified my goal to serve whatever community I ended up in...and really to make community talks and topics part of my outreach."
5. Making a Difference	• "Felt like we were actually helping people who needed help"

Table 2

Areas for Improvement:

- Incorporating more activities
- Further collaborating with specialists, faculty, or other health professional students (i.e., dentistry)



This study was limited by:

- Generally low number of participants in both surveyed groups
- Some voices/viewpoints may not be represented
- Risk of social desirability and selection biases

Discussion

- For Highland Gardens Residents:**
- The sessions seem to have mental, social, and emotional benefits beyond acquiring health information.
 - The program provides a safe space where members from marginalized communities can interface with individuals in healthcare
- For Medical Student Leaders:**
- The program allows students to finesse clinically-applicable skills while fostering understanding, appreciation, advocacy, and admiration for at-risk communities.

**Breakout
Room:**

5 - Medical Student Education and Research

Title: Implementing a Medical Student Community Engagement Summer Immersion Program

Authors: Bryan Johnston, MD, MCW, Family and Community Medicine; Sarah O'Connor, MS, MCW, Community Engagement; Kelsey Heindel, MCW, Community Engagement; Myah Pazdera, MS, MCW, Community Engagement; David Nelson, PhD, MS, MCW, Family and Community Medicine; Leslie Ruffalo, PhD, MCW, Family and Community Medicine; Syed M Ahmed, MD, MPH, DrPH, FAAFP, MCW, Family and Community Medicine

Abstract: **OVERVIEW:** In order to provide an opportunity for medical students to learn about community engagement (CE) and community engaged research (CEnR), the MCW Office of Community Engagement (OCE), in collaboration with the Medical Student Summer Research Program (MSSRP), offered a virtual Medical Student Community Engagement Summer Immersion Program.

PROBLEM: Understanding CE and CEnR is important to address social determinants of health (SDOH) and resulting health disparities. Medical professionals are more likely to meet the challenges of societal issues when they understand CE. Thus, it is critical that medical education is infused with CE in order to understand SDOH and address health disparities.

METHODS: A virtual immersion program was developed and led by the OCE. 150 MCW MSSRP participants, as well as the University of Nebraska Medical Center (UNMC) medical students, were invited to apply for the 3-session immersion program. Application questions focused on CE interest and experience; prior CE experience was not required. 30 medical students from MCW and UNMC participated in the program. The 3 sessions focused on principles of CE. MCW faculty co-led each session in partnership with a community partner. After each of the 3 sessions, participants were asked to provide survey feedback about the session, their learning, the speakers, and further interest.

RESULTS: Survey results were analyzed. Response rates varied: session 1 (67%), session 2 (33%), session 3 (47%). At least 90% of respondents strongly or somewhat agreed that each session was worthwhile. 100% of respondents strongly or somewhat agreed they learned something they will use in practice/profession. At the conclusion of the immersion program, some students expressed interest in a CE journal club, occurring in fall 2020.

CONCLUSION: It is important to offer medical students an opportunity to learn about CE and to engage with other medical students, faculty, and community partners around their interest.

Submitter: O'Connor, Sarah

Record ID: 115

Implementing a Medical Student Community Engagement Summer Immersion Program

Bryan Johnston, Sarah O'Connor, Kelsey Heindel, Myah Pazdera, David Nelson, Leslie Ruffalo, Syed Ahmed
Medical College of Wisconsin, Milwaukee, WI

BACKGROUND

In order to provide an opportunity for medical students to learn about community engagement (CE) and community engaged research (CEnR), the MCW Office of Community Engagement (OCE), in collaboration with the Medical Student Summer Research Program (MSSRP), offered a Medical Student Community Engagement Summer Immersion Program. Due to the COVID-19 pandemic, the program was virtual.

Understanding CE and CEnR is important to address social determinants of health (SDOH) and resulting health disparities [1]. Medical professionals are more likely to meet the challenges of societal issues when they understand CE [2]. Thus, it is critical that medical education is infused with CE in order to understand SDOH and address health disparities.

METHODS

A virtual immersion program was developed and led by the OCE.

- MCW second year medical students (M2) who participated in MSSRP attended a required didactic session: "Community Engagement: A key component of medical education."
- MCW MSSRP students & medical students from University of Nebraska Medical Center (UNMC) were invited to submit applications for a 3-session immersion program.
- Application questions focused on CE interest and experience; prior CE experience was not required.
- Immersion program sessions focused on principles of CE & CEnR. MCW faculty & community partners co-led each session. Post-session evaluations asked participants to provide feedback about the session, their learning, the speakers, and further interest.

Overall, I thought that this program was great for establishing a theoretical framework for Community Engagement. I thought the guest speakers from outside organizations & the small groups were especially useful. In terms of improvement, more sessions would have been nice, along with more small group discussions.

More time for discussion! I always feel like our small group has so much to say/ share with one another and I love hearing everyone's perspectives and I feel like there's not enough time for everyone to fully contribute if they wanted.

SESSION 1

Equitable Power and Responsibility

SESSION 2

Strong Community-Academic Partnership & Capacity Building

SESSION 3

Effective Dissemination Plan

This was an amazing experience! I learned a lot and it introduced me to a new side of medicine that I had not thought much about before! It was very interesting to learn about community engagement at the same time I was doing my research this summer.

RESULTS

- 75% (n=153) of all M2 students at MCW participated in MSSRP & the CE didactic session
- 30 students applied to & participated in immersion program: 13 from MCW & 17 from UNMC
- Survey response rates varied: Session 1 (67%), Session 2 (33%), Session 3 (47%)
- At least 90% of respondents strongly or somewhat agreed that each session was worthwhile
- 100% of respondents strongly or somewhat agreed they learned something they will use in their practice/profession
- 40% of immersion participants expressed interest in CE journal club

CONCLUSION

It is important to offer medical students an opportunity to learn about CE and to engage with other medical students, faculty, and community partners around their interest.

References

1. Ahmed SM, Palermo AG. Community engagement in research: frameworks for education and peer review. *Am J Public Health*. 2010;100(8):1380-7.
2. Goldstein, Bearman. Community engagement in US and Canadian medical schools. *Advances in Medical Education and Practice*. 2011:43.



**Breakout
Room:**

5 - Medical Student Education and Research

Title: Tiered Mentoring At JMAC: Evaluation of a Medical Student-Led Health Careers Outreach Program

Authors: Morgan Ashley C. Craft, MCW; Kyle Welhouse, MCW; Suzanne Letellier, MEd, MCHES, Milwaukee Area Health Education Center; Linda Meurer, MD, MPH, MCW, Family and Community Medicine

Abstract: INTRODUCTION: According to The Sullivan Commission, systemic inequality has severely restricted enrollment of minority groups in medical schools, creating physician workforce that does not represent the U.S. population. Health profession pipeline programs target underrepresented youth to promote interest in healthcare fields, provide mentoring, and support their paths to medicine. The Tiered Mentoring program is a collaboration among the Milwaukee Area Health Education Center Youth Health Service Corps, the Medical College of Wisconsin (MCW), and James Madison Academic Campus (JMAC), a Milwaukee public high school predominately serving African Americans.

METHODS: Each Fall, interested JMAC students enroll in the YHSC program, receive basic training and commit to attending monthly sessions and conducting community service. Monthly, hour-long healthcare related sessions and field trips are designed and delivered by MCW students, based upon input from the students, their teachers and YHSC partners. The program is evaluated through presenter field notes (process), session evaluations (satisfaction, learning), and pre/post surveys of attitudes toward pursuing a postsecondary education, and their knowledge of healthcare career options (learning, attitudes).

RESULTS: Since 2014, 54 JMAC students have enrolled in the program, delivered by 9 MCW student leaders and other volunteers. Evaluation data are being compiled and analyzed; preliminary results suggest JMAC students have high satisfaction and learning from the sessions, especially those that allowed for more individualized mentoring. Students also become more knowledgeable of postsecondary education requirements and the variety of healthcare careers.

DISCUSSION: By creating an environment in which students are provided with a strong sense of self-efficacy and social support, students show increased motivation and self-worth in pursuit of difficult tasks and may increase success in pursuing health careers.

Submitter: Craft, Morgan Ashley

Record ID: 118

Tiered Mentoring At JMAC: Evaluation of a Medical Student-Led Health Careers Outreach Program

Morgan Ashley Craft^{MCW '22}, Kyle Welhouse^{MCW '22}, Suzanne Letellier^{MAHEC}, Linda Meurer MD, MPH
Department of Family and Community Medicine, Medical College of Wisconsin

Background

- African Americans comprise approximately 13% of the US population, but comprise only 7% of recent medical school graduates and 4% of physicians.¹
- Racial and ethnic concordance of physicians and patients may reduce health disparities among underrepresented groups.²
- Pipeline programs target underrepresented youth and promote their interests in healthcare fields through mentorship and creating an environment of social support.³

Purpose: Academic Year 2019 - 2020

- To increase high school students' knowledge of healthcare careers and postsecondary education requirements
- To increase high school students' participation in summer enrichment programs
- To increase medical students' cultural awareness and abilities in intercultural communication

Community Partners

- Milwaukee Area Health Education Center's Youth Health Service Corps (YHSC)** engages high school students interested in pursuing health careers through instruction and field activities.
- James Madison Academic Campus (JMAC)** is a Milwaukee public high school predominately serving African Americans.
- The Urban and Community Health Pathway** at MCW began a partnership with YHSC at JMAC in 2010 and has continued through successive classes of YHSC participants and MCW student mentors.



Methods



- Participants/Recruitment for 2019-2020:** 15 JMAC sophomore through senior students enrolled in YHSC; 3-5 MCW medical student leaders/volunteers.
- Intervention:** Hour-long, healthcare-focused monthly sessions were explored based on students' interests. Students were guided and supported by the MCW leaders.
- Service learning:** New partnership with Milwaukee Firehouse to document Automated External Defibrillator (AED) locations
- Evaluation:** Session surveys by the JMAC students on session satisfaction/learning; reflective observation evaluations by the MCW leaders. YHSC pre- and post-surveys.

Discussion

- Students reported high satisfaction and learning from the sessions.
- Sessions that allowed students to be divided into smaller groups and that were hands on were more enjoyable to the YHSC participants; there was maximum engagement on field trips to MCW and the Milwaukee Firehouse/Cadet School.
- Challenges faced:**
 - Limited access to technology for research, summer applications, etc.
 - Creating an intimate environment with limited MCW volunteers
 - COVID 19 school closure prevented distribution of YHSC post-survey and completion of program
 - Loss of communication with teachers & YHSC participants during COVID 19



Future Directions

- Continue field trips to MCW and other health-related facilities.
- Earlier implementation of a service learning project.
- Implement methods to maintain participant engagement throughout the year and to build more one-on-one mentoring.
- Engage new cohort of medical students to maintain program.
- Collaborate with JMAC to implement virtual program if schools remain closed

References:

- Alsan, M, Garrick, O, Garziani, G. Does Diversity Matter for Health? Experimental Evidence from Oakland. *American Economic Review*. 2019; 109(12):4071-4111.
- Merchant JL, Omary MB. Underrepresentation of Underrepresented Minorities in Academic Medicine: The Need to Enhance the Pipeline and the Pipe. *Gastroenterology*. 2010;138(1):19-26.e3.
- McKendall SB, Kasten K, Hanks S, Chester A. The Health Sciences and Technology Academy: An Educational Pipeline to Address. Health Care Disparities in West Virginia. *Academic Medicine*. 2014;89(1):37-42.

Results

Planned Topic	Attendance	Mean Satisfaction (1=low; 5=high)	Mean Learning (1=low; 5=high)
Career Planning	15	3.73	4.6
Firehouse/Cadet School Field Trip	12	4.5	4.3
Social Determinants & Maternal Health	9	4.22	4.33
Intro to AED Project/ Summer Programs	6	4.83	4.67
Trauma Bay Tour*	-	-	-
AED Project F/U*	-	-	-
Celebration*	-	-	-

*Sessions were not completed due to the COVID 19 pandemic

**Breakout
Room:**

6 - Taking Care and Giving Care

Title: The Impact of Adaptive Garden Tools in Central Wisconsin

Authors: Hannah Phelan, MCW-Central WI; Corina Norrbom, MD, MCW-Central WI; Amy Prunuske, PhD, MCW-Central WI; Elise Schuler, Monk Botanical Gardens; Brianna Wright, UW-Extension Marathon County

Abstract: PURPOSE: Gardening is an activity that individuals can enjoy their entire life and has been shown to have many positive health impacts. However, individuals of advanced age or with disabilities are often faced with barriers to fully experience gardening activities. The goal of this project was to establish a collection of adaptive garden tools for individuals to use during community programs and to try out in their own garden. The hypothesis was that if we improve access of garden tools designed for people with reduced or limited physical ability, then individuals will utilize the tools and be positively impacted by removing a barrier to activity.

METHODS: At multiple locations in Central Wisconsin, I presented about all aspects of adaptive gardening. From garden design and plant selection to the types of tools available and how to maintain our health while gardening. Next I introduced and demonstrated the tools, then participants were able to come try them out. At the end of the program, I offered a survey to anyone that wanted to participate.

RESULTS: Through this project, I have presented to over 200 people. Of those who completed a survey, 95% have said that the programming had value to them and 85% are interested in adaptive garden tools as a result of the program and would utilize a collection of tools.

CONCLUSION: There are two complete sets of adaptive garden tools, one at Marathon County Public Library that can be loaned out like any other library resource and the second at Midstate Independent Living Choices where it will be available to anyone in the state of Wisconsin through the assistive technology program, AT4ALL. The tool collection will come with a booklet that gives information about the tools and a cleaning protocol to prevent spread of disease by the tools.

Submitter: Phelan, Hannah

Record ID: 88

Background

Gardening has a wide variety of benefits that can improve our overall health and wellbeing². It has been shown to reduce pain⁵, improve our mental health¹, and increase social interaction³. Gardening is a physical activity that can also improve our nutrition with fresh fruits and vegetables, both of which help to reduce the risk of chronic diseases such as obesity, diabetes, and heart disease⁴.

However, being faced with physical limitations can make gardening stressful and even painful at times. Individuals of advanced age and with disabilities often encounter barriers to accessing a garden or having the ability to fully experience garden activities. The aim of this project was to provide adaptive tools and techniques to make gardening more accessible to these individuals.

Adaptive gardening is the practice of changing the way we garden so that it can be performed by individuals of any age or mobility level. Adaptive garden tools are ergonomically designed to make gardening easier on our body and more enjoyable. They're made to reduce the stress and strain that we experience while working in a garden. Adaptive gardening also includes utilizing innovative gardening techniques such as raised garden beds to elevate our garden surface and reduce the burden on our body.

Project Goals

The goal of this project was to establish a collection of adaptive garden tools for individuals who are physically limited, including those of advanced age or those with injury or disability, to use during therapeutic horticulture programs and to try out at home in their own garden.

If we improve access to garden tools designed for people with reduced or limited physical ability, then individuals will utilize the tools and be positively impacted by removing a barrier to activity. By providing therapeutic horticulture programming and an adaptive set of garden tools, we can help individuals gain the skills needed to garden for life.

Tool Examples

- Long handled and telescoping tools can be used from a seated position to prevent hip and back strain.
- Gloves with Velcro straps can hold the tool in your hand if you've lost any hand strength due to a spinal cord injury, stroke, or carpal tunnel.
- Tools with forearm cuffs are useful if you have arthritis and experience wrist pain.
- Several kneeling pads are available to protect our lower extremity joints.



Methods

1. Participants were presented information about adaptive garden tools and therapeutic horticulture:
 - a. Health benefits of gardening and therapeutic horticulture
 - i. Social, intellectual, physical, emotional, and spiritual benefits
 - b. Garden design, plant selection, effort reduction techniques
 - c. Ergonomic and adaptive garden tools
 - d. Cost effective ways to improve current tools
 - e. Injury prevention and healthy gardening habits
2. The tools were introduced and demonstrated, then participants had the opportunity to handle the tools and try them out
3. The project was explained along with the informed consent and any questions were answered
4. Survey was distributed and data was analyzed

IRB Approved: PRO00034676



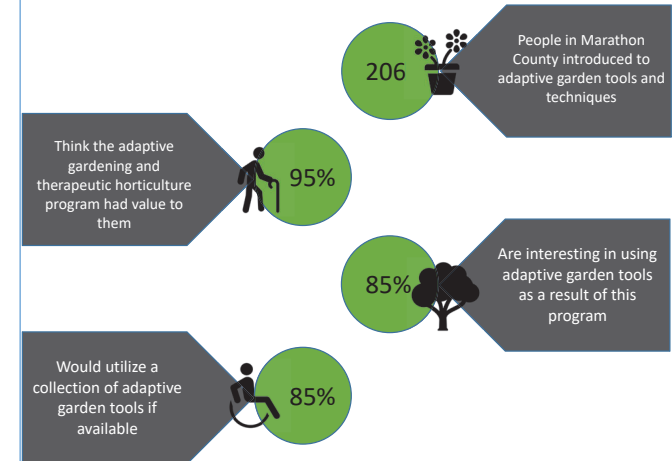
Participant Comments

"I wasn't aware of so many tools which assist us in gardening."

"I bought the ergonomic watering can from your presentation and it's already helped my back pain"

"I've been trying to make gardening easier so I can continue to garden for a long time in the future – these tools will help"

Results



Future Directions

- There are two complete sets of adaptive garden tools. One will be stored at Marathon County Public Library and tools can loaned out by individuals, just like other library resources. The second set will be at Midstate Independent Living Choices and available for loan by anyone in the state of Wisconsin through the assistive technology program, AT4ALL.
- Informational booklets will be included with each set that details the tool uses, health benefits, cost, and where each item in the set can be purchased.
- A cleaning protocol will also be included with each set of tools to prevent disease spread between gardens.

Acknowledgements

Funding: Incredible Bank, Master Gardeners of Northcentral Wisconsin
 Presentation locations: UW-Stevens Point at Marathon County, The Landing, Marathon County Public Library, Wausau Garden Club, Monk Botanical Gardens
 Future tool storage and distribution: Marathon County Public Library, Midstate Independent Living Choices

References

- [1] Gonzalez, M. T., Hartig, T., Patil, G. G., Martinsen, E. W., & Kirkevold, M. (2009). Therapeutic Horticulture in Clinical Depression: A Prospective Study. *Research and Theory for Nursing Practice*, 23(4), 312–328. doi: 10.1891/1541-6577.23.4.312
- [2] Robson, Jr. James P., and Meredith L. Troutman-Jordan. "Back to Basics: Health and Wellness Benefits of Gardening in Older Adults." *Activities, Adaptation & Aging*, vol. 39, no. 4, Feb. 2015, pp. 291–306., doi:10.1080/01924788.2015.1089709.
- [3] Schmutz, U., Lennartsson Turner, M., Williams, S., Devereaux, M., & Davies, G. (2014). *The benefits of gardening and food growing for health and wellbeing*. Ryton and London: Garden Organic and Sustain.
- [4] Soga, M., Gaston, K. J., & Yamaura, Y. (2017). Gardening is beneficial for health: A meta-analysis. *Preventive Medicine Reports*, 5, 92–99. doi: 10.1016/j.pmedr.2016.11.007
- [5] Verra ML, Angst F, Beck T, et al. Horticultural therapy for patients with chronic musculoskeletal pain: results of a pilot study. *Altern Ther Health Med* 2012;182:44–50

**Breakout
Room:**

6 - Taking Care and Giving Care

Title: Avanzando Juntas: Adapting an Evidence-based Weight Loss Program for Hispanic Breast Cancer & Gynecological Cancer Survivors

Authors: AnaKaren Manriquez Prado, BA, MCW; Staci Young, PhD, MCW; Sailaja Kamaraju, MD, MCW; Patricia Sheean, Loyola University at Chicago; Kathleen Jensik, MSW, MCW; Melinda Stolley, PhD, MCW

Abstract: **BACKGROUND:** Obesity increases risk for recurrence for many cancers. Hispanic breast and gynecological cancer survivors (HBGCS) are more likely than Non-Hispanic White survivors to have overweight/obesity. Weight management is challenging for many Hispanics due to a complex interaction of environmental, societal and policy-related factors. These factors also contribute to disparities in cancer recurrence risk, quality of life and comorbidities. This study informed the adaptation of the evidence-based Moving Forward weight loss intervention for HBGCS.

METHODS: Intervention adaptation was done with continuous engagement of HBGCS and Community Advisory Board (CAB). HBGCS with BMIs ≥ 25 kg/m² and completed treatment ≥ 3 months prior participated in two focus groups: FG I and FG II. FG I informed initial adaptations around lifestyle, support, interests, needs and family/community attitudes. FG II participants reviewed intervention topics/materials to inform program refinement. All groups were audio-recorded and transcribed. Multi-faceted content analysis used inductive and deductive approaches, leading to codes compiled into overarching themes.

RESULTS: 30 HBGCS participated in FG I. We conducted 4 focus groups (3 English, 1 Spanish) with 14 survivors. The other 16 HBGCS completed individual interviews, an approach found to be more accessible to these predominately Spanish-speaking women. During FG II 24 of the same 30 women participated, with 8 completing interviews. Content analysis revealed 3 major themes: Relationships & Support, Wellness, and Advocacy & Empowerment. Acculturation was found cross-cutting across themes. FG II provided additional details including foods and cooking methods, values, community assets/needs, and family roles/responsibilities. All collected data informed intervention adaptations.

CONCLUSION: Level of acculturation was a defining factor for participants' relationship and support dynamics, access to wellness resources, and self-advocacy versus relying on others to advocate for them. Next steps are to pilot the adapted program. Outcomes will include weight, metabolic syndrome risk factors and cancer recurrence biomarkers.

Submitter: Manriquez, AnaKaren

Record ID: 82

Background

Hispanic breast and gynecological cancer survivors (BGCS) are more likely than Non-Hispanic White BGCS to have overweight/obesity.

- Obesity increases recurrence risk for many cancers.
- Weight management is a complex interaction of environmental, societal and policy-related factors.
- These factors also contribute to disparities in cancer recurrence risk, quality of life and comorbidities.

The current study leverages the successful efforts of the Moving Forward (MF) weight loss trial with African American Breast Cancer Survivors and seeks to adapt MF for Hispanic BGCS.

Methods

Intervention adaptation was done in an iterative process with continuous engagement of Hispanic BGCS and a Community Advisory Board (CAB).

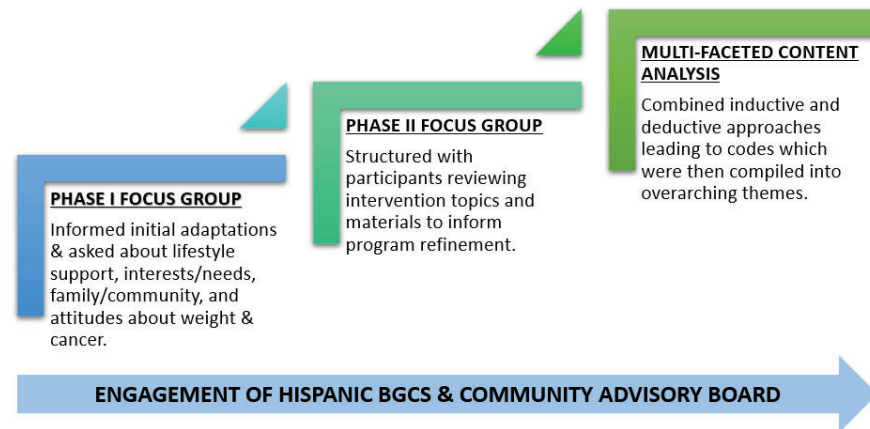


Figure 1: Adaptation Process Methodology

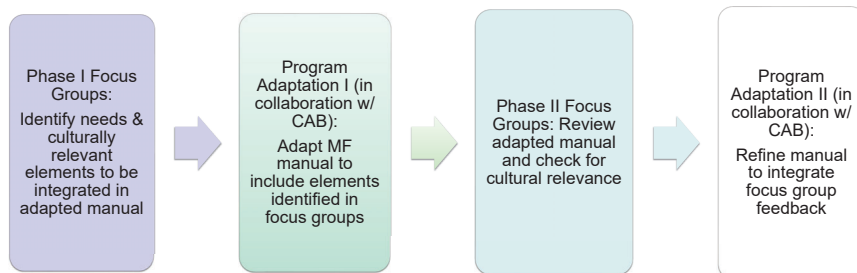


Figure 2: Adaptation Process Timeline

Funding provide by NCI R21CA215668 and NIH Diversity Supplement

Results

Cross Cutting Themes and Categories Across Experience

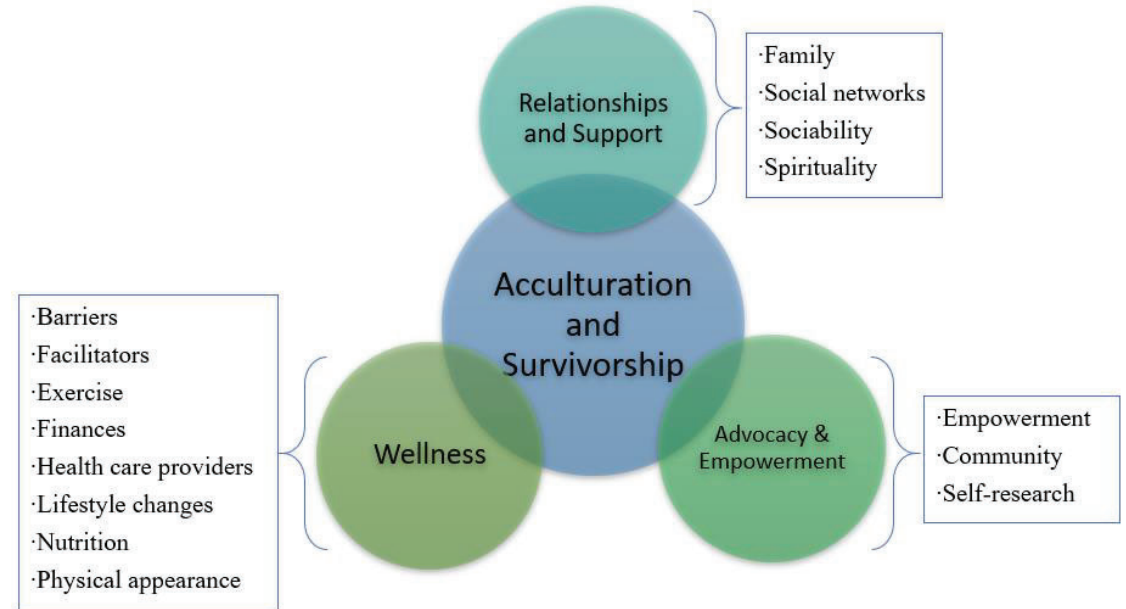


Figure 3: Focus Group and Interview Content Themes & Categories

Phase I Data Collection: 30 HBGCS

- 4 focus groups
 - 1 Spanish
 - 3 English
- 16 individual interviews*
 - 12 Spanish
 - 4 English

*more accessible to predominately Spanish-speaking women

Phase II Data Collection: 24 HBGCS

- 5 focus groups
 - 2 Spanish
 - 1 English
- 8 individual interviews*
 - 3 Spanish
 - 5 English

*as trust-building practices increased more predominately Spanish-speaking women participated in focus groups

Key Findings & Next Steps

- Participants with **lower acculturation** were more reliant on family, more likely to identify barriers over facilitators, and heavily relied on community advocacy as a source of empowerment.
- Those **more acculturated** to the US host culture were more independent and autonomous, placed greater emphasis on physical appearance concerns, and were more likely to incorporate self-research in provider-patient conversations.
- Currently** we are piloting the Avanzando Juntas quality of life and weight loss program with COVID-19 accommodations
 - Primary outcome is weightloss
 - Secondary outcomes include metabolic syndrome markers, fear of cancer recurrence, quality of life and self-efficacy
 - COVID-19 accommodations include screenings, virtual attendance options and smaller class groups
 - Exploratory aims will assess the relationship between level of acculturation and self-advocacy in Hispanic cancer survivors.

**Breakout
Room:**

6 - Taking Care and Giving Care

Title: A framework for transformed community-academic partnerships to reduce cancer disparities: A Case Study

Authors: Tobi Cawthra, MPH, MCW, Cancer Center; Laura Pineseault, PhD, Evaluation Plus; Beth Brunner, Wisconsin Cancer Collaborative; Deborah Thomas, DD, House of Grace Kingdom Ministry; Carol Williams, PhD, MCW, Pharmacology and Toxicology; Melinda Stolley, PhD, MCW, Medicine

Abstract: To meaningfully impact cancer disparities, scientists and community must work together differently. The Community Cancer Science Network (CCSN) is an initiative of the MCW Cancer Center to reduce breast and lung cancer disparities statewide. CCSN offers a framework for transformed community-academic partnerships that expands on community-based participatory research (CBPR) principles to include equity and justice, setting the stage for adaptive and equitable collaboration. Through engagement with stakeholders across WI, a multi-disciplinary, multi-sector design team identified several hurdles impeding authentic community-academic partnerships. These included: 1) solutions which place the primary responsibility for change on community; 2) significant mistrust due to racism and oppression; 3) misunderstandings and misinformation about community priorities; and 4) structures hindering authentic collaboration. CCSN seeks systems change. Thus, our first-year process included developing a guiding framework, managing resistance to change, and putting into practice an anti-oppression model to support co-learning, innovation, and engaging community and researchers as equitable partners. We demonstrate our process through a case study of the Research-Community Scholar project, an initial CCSN effort. This case study features application of our framework grounded in principles of deep equity, biology to policy and systems thinking, as well as the program team's capacity to self-reflect, to leverage resiliency to move through set-backs, to expand their circles of influence, and to work through systems change. The Research-Community Scholar project brings together early career investigators and community to participate in a nine-month shared curriculum designed to reduce mistrust, misunderstandings, and shift differences in power and privilege. **CONCLUSION:** Eradicating cancer disparities requires novel ways to facilitate authentic community and academic medicine collaborations. An adaptive framework and iterative processes provide the opportunity to quickly identify challenges and successes and to pivot strategies for successful outcomes.

Submitter: Cawthra, Tobi

Record ID: 113

A framework for transformed community-academic partnerships to reduce cancer disparities: A Case Study

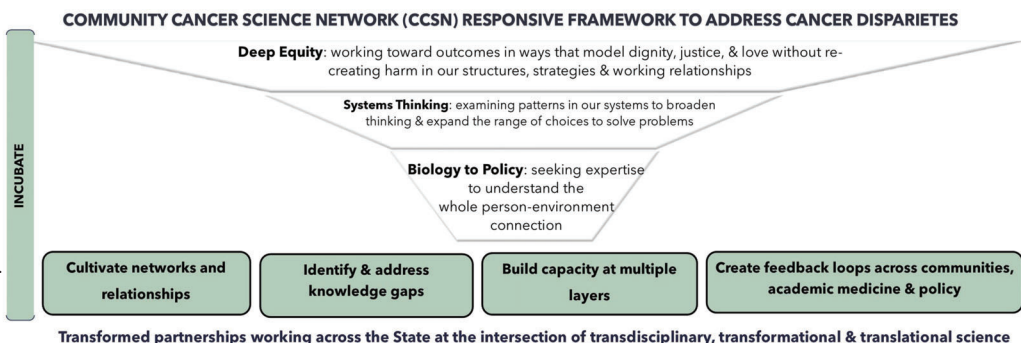
Authors: Tobi Cawthra, MPH, MCW, Cancer Center; Laura Pinsonneault, PhD, Evaluation Plus; Beth Brunner, Wisconsin Cancer Collaborative; Deborah Thomas, DD, House of Grace Kingdom Ministry; Carol Williams, PhD, MCW, Pharmacology and Toxicology; Melinda Stolley, PhD, MCW, Medicine

BACKGROUND

To meaningfully impact breast and lung cancer disparities, scientists and community must work together differently.¹ The Community Cancer Science Network (CCSN) offers a framework for transformed community-academic partnerships that leverages more recent applications of community-based participatory research (CBPR) principles to include equity and justice.² The framework contains three distinct phases: Incubate, Innovate, and Integrate.

In this case study, we showcase how CCSN supports its first funded project, the *Cancer Disparities Curriculum for Research and Community Scholars*, through the Incubation stage of the framework (Figure 1) to establish a trusted partnership between community-academic co-investigators and shared vision of solutions to address cancer disparities. The Incubation phase led to the co-designing of a curriculum for early career basic science researchers and community members to co-learn, share perspectives on health and research and offers a new way for community and academic medicine to work together.

Figure 1: CCSN Framework Incubation Phase



METHODS

The Research-Community Scholar project team consisted of an academic and a community Co-PI and the CCSN Leadership team. Over a 15 month period of weekly 60-90 minute meetings, the CCSN Leadership team supported the Research-Community Scholar Co-PIs through the Framework to co-create the project and funding proposal. The CCSN Program Manager and a Developmental Evaluator framed meeting agendas, discussions and next steps through the Framework's guiding principles and strategies (Figure 2).

Figure 2: Application of Framework

Application of Framework	
Deep Equity	<ul style="list-style-type: none"> Co-developed vision Equal decision-making authority Consulted diverse expertise Examined the context perpetuating the problem and named it Created space to be vulnerable/build trust
Systems Thinking	<ul style="list-style-type: none"> Focus results for institutions not only scholars Paused process to ask what we are learning Designed curriculum to address barriers identified in early research
Biology to Policy	<ul style="list-style-type: none"> How we defined our learners – bench science with broader interest of incorporating community responsibility in their professional identity
Cultivate Networks	<ul style="list-style-type: none"> Meeting time and structure to allow time for relationships
Identify & Address Knowledge Gaps	<ul style="list-style-type: none"> Agendas focused on exploring ideas and identifying learning needs as opposed to tasks and activities Willingness to admit opinions/ideas/beliefs were wrong
Build Capacity	<ul style="list-style-type: none"> Gradual shifting of ownership from CCSN Hub Program Manager to Co-PIs Deployed rapid evaluation methodologies to iteratively answer design questions
Develop Feedback Loops	<ul style="list-style-type: none"> Develop comfort in early sharing of ideas in conversation with wide audience of stakeholders representing MCW and potential community scholars and their networks

FINDINGS

1) Evidence of Transformed Partnerships

A third-party evaluator conducted journey mapping interviews to better understand how the co-investigator team was moving towards a transformed partnership.³ CCSN's concept of transformed partnership looks at three dimensions:

- Individuals develop a growth mindset, understanding of the connection between science and quality of life, sense of humility & capacity to examine and work with one's bias
- Relationship between partners allows for trust, vulnerability, and belonging
- Interactions are based on shared power, decision making, and resources.

Co-PIs reported that they felt:

- Part of something bigger
- Growth from understanding different perspectives
- Strong, trusting, equitable relationships
- Required significant time commitment
- Learned something new
- Create lasting connections
- Confused and frustrated at times but ultimately worth time investment
- Engaged in an unique experience

2) A Principles-Grounded Solution to Disparities

The funded result of this process is an initiative intentionally designed to support academic medicine in earning community trust by bringing together Milwaukee community members ("Community Scholars") and MCW early-stage biomedical researchers ("Research Scholars") in a shared curriculum that will address the origins, causes, and potential solutions to the many factors that promote cancer disparities.

The curriculum will be delivered in 9 months using multiple ways of engaging with content, personal exploration/reflection, and opportunities to apply learning through small team assignments and projects. Core elements of the curriculum will include:

- Course content delivered in lecture format by faculty from both academic medicine and the MetroMilwaukee community
- Opportunities for collaboration within and across sectors
- Project-based team learning where a Community Scholar and Research Scholar work together and disseminate to both community and academic audiences
- Tools for assessing personal and professional growth
- Recognition for completing the curriculum and continuation with the alumni network

CONCLUSION

An adaptive framework and iterative processes provide the opportunity to quickly identify challenges and successes and to pivot strategies for successful outcomes. **Even when individuals experienced emotions which might lead them to give up the work or return to a more traditional approach, the supportive CCSN structure and the transformed partnership allowed the team to push beyond uncertainty.**

ACKNOWLEDGEMENT

CCSN is funded by the Advancing a Healthier Wisconsin Endowment.

REFERENCES

¹ Rebbeck, T, Paskett, E, Sellers, R. (2010) Fostering Transdisciplinary Science. *Cancer Epidemiol Biomarkers Prev* May 1 2010 (19) (5) 1149-1150; DOI: 10.1158/1055-9965.EPI-10-0266
² Minkler, M., Garcia, A., Rubin, V., & Wallerstein, N. (2012). *Community-Based Participatory Research: A Strategy for Building Healthy Communities and Promoting Health through Policy Change*. Available at: <https://www.policylink.org/sites/default/files/CBPR.pdf>
³ Taddy-Sandino, S., Whyte, C., & Sangalang, B (2018, Oct 31). Moments of Truth: Visualizing Beneficiary Experience through Journey Mapping. American Evaluation Association Annual Meeting.

**Breakout
Room:**

6 - Taking Care and Giving Care

Title: Prescription Medication Disposal Methods in Marathon County Among the Aging

Authors: Shannon D. Faehling, MS3, MCW-Central WI; Corina Norrbom, MD, MCW-Central WI

Abstract: BACKGROUND: Opioid abuse is a public health priority in Marathon County. Access to expired and/or unused prescription medications are a major source of opioids available for abuse. Medications can be disposed of properly in various ways including permanent drop-box locations and Detera Pouches, which are single-use bags that deactivate drug ingredients rendering them safe for discard via regular at-home trash disposal. This method may be particularly effective in the aging population, who may have limited ability to access permanent drop-boxes due to travel constraints.

OBJECTIVES: The goal of this study was to evaluate current medication disposal methods, while making disposal methods more available to the aging in Marathon County.

METHODS: Participants included permanent residents of Marathon County who received 'Meals on Wheels' benefits from the Aging and Disability Resource Center of Central Wisconsin. There were 175 participants in this study. Participants were provided with Detera Pouches, infographics about drop-boxes, and a survey. The survey assessed current disposal methods, Detera Pouch use, and availability of expired medications at home.

RESULTS: 35.3% of participants had expired and/or unused medications at home. Prior to receiving Detera Pouches, taking medications to drop-box locations was the most popular method of disposal (58.1%) followed by throwing in the trash (22.6%) and flushing down the toilet (12.9%). 100% of participants who reported having expired/unused medications at home also reported that they used their provided Detera Pouch to dispose of said medicines.

CONCLUSION: Among the aging and disabled in Marathon County, drop-box locations are frequently used for drug disposal. If provided, Detera Pouches have a very high likelihood of being utilized for disposal as well. Since 41.9% of participants disposed of medications in a way that may be harmful to the environment, themselves, or others, continuing education on safe disposal practices among this population should be considered.

Submitter: Faehling, Shannon

Record ID: 85

Prescription Medication Disposal Methods in Marathon County Among the Aging

Shannon Faehling, MS3; Corina Norrbom, MD

Medical College of Wisconsin- Central Wisconsin



Abstract

The opioid epidemic is a multifaceted crisis that continues to impact communities in the United States both large and small. The Midwest saw a 70% increase in opioid overdoses from July 2016 through September 2017¹. As many as 80% of heroin users first misused prescription medications². It is evident that limiting access to expired and unused prescription medications in Marathon County is an important element in preventing future opioid overdoses.

The purpose of this study was to evaluate the use of current medication disposal practices, as well as the use of new prescription medication disposal methods (i.e. Deterra Pouches), among the aging in Marathon County.

As part of educating the community on proper drug disposal methods, Deterra Pouches were distributed with infographics detailing the county's permanent drop box locations and the importance of proper medication disposal methods. This study aimed to help decide if future investments in Deterra Pouches would be a worthwhile allocation of funding to reduce prescription medication abuse, and if permanent drop box locations are sufficient. This study found that **100%** of participants who reported having expired/unused medications at home also reported using their Deterra Pouch.



Background

Research has shown that access to healthcare, specifically the amount of pharmacists and dentists, is directly associated with increased rates of opioid abuse³. Therefore, it can be concluded that the abuse of prescription opioids is partly an iatrogenic epidemic.

The opioid crisis has been recognized by several federal agencies. In 2011, the Office of National Drug Control Policy launched the Prescription Drug Abuse Prevention Plan (The Plan) to expand the National Drug Control Strategy from the Obama Administration. The Plan identified several elements to reduce the abuse of prescription drugs, including requiring prescription drug "take-back" programs and drop box locations. Drop boxes allow community members to return unused and/or expired prescriptions, including opioids, in a legal and environmentally conscious manner. In the Wausau area, there are currently eight permanent drop box locations, with the possibility of more to be added in the future.

Deterra Pouches are another newer method of safe drug disposal. These are small, disposable bags that allow community members to safely, effectively, and conveniently deactivate and dispose of medications in their home, without needing to travel to a permanent drop box location. The bags work by placing medications in the pouch with warm water. The water dissolves an inner pod which releases activated carbon to deactivate the drugs. The single-use bag can then be thrown away through regular at-home trash disposal. These bags are beneficial since they render drugs (including opioids) unavailable for abuse. They also remain safe for landfill disposal and reduce watershed contamination. This disposal method may be particularly effective in the aging population, who may have limited ability to access permanent drop box locations, making them an ideal target population for this study. The aging and disabled populations historically have several risk factors related to expired or unused medications. These potential risks can include a higher quantity of prescriptions, caregivers with access to their medications, and children and/or grandchildren in their home who could abuse or accidentally ingest their medications.

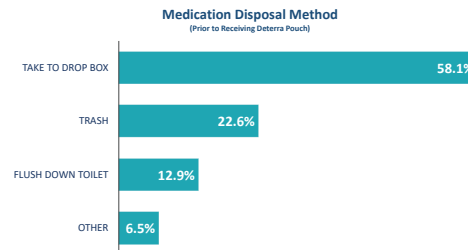
Methods

This was a cross-sectional study consisting of a printed anonymous survey. The survey was distributed at the same time as all study materials, which included a Deterra Pouch, infographics concerning proper medication disposal, and information detailing the permanent medication drop-box locations in Marathon County.

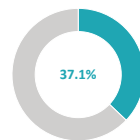
Participants for this study were selected based on being permanent residents of Marathon County who received 'Meals on Wheels' benefits from the Aging and Disability Resource Center of Central Wisconsin. To be considered for 'Meals on Wheels', one must be 60 years old or older and essentially homebound due to illness or disability. There were 175 participants in this study.

All study materials were distributed to the participants in their homes by volunteer drivers for 'Meals on Wheels' during regularly scheduled meal delivery services. Participants were instructed to review the materials, complete the survey, and seal the survey in a provided envelope to ensure anonymity. After two weeks, 'Meals on Wheels' drivers collected the completed surveys.

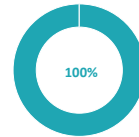
Results



Participants Who Used Deterra Pouch



Participants with Expired/Unused Medications at Home Who Used Deterra Pouch



- 39 surveys were returned.
- On a scale of 1 to 5 (1 being difficult and 5 being easy) participants rated the Deterra Pouches with a mean score of **4.24** in ease of use, with a standard deviation of **1.10**.
- **35.3%** of participants had expired/unused medications at home.
- **100%** of participants who reported that they did not have expired/unused medications at home also responded that they did not use their Deterra Pouch.

Conclusions

- More 'Meals on Wheels' participants utilize the drop box disposal locations than compared to the general population of the Wausau Metro Area aged 18+ (**58.1%** vs. **47%**)⁴
- Deterra Pouches, if provided, have a very high likelihood to be utilized, and are very unlikely to sit in participants homes unused if they have expired/unused medications. Hence, Deterra Pouches may be a worthwhile allocation of funds in the future.
- Deterra Pouches are an effective method of prescription medication disposal among the aging and/or disabled population with expired/unused medications in their home when considering perceived ease of use.
- 62.9% of participants reported that they did not use their Deterra Pouch. However, since 100% of these participants also reported that they did not have expired/unused medications at home, it can be concluded that the lack of Deterra Pouch use can be attributed to participants who did not own expired/unused medications.

Future Directions

- For the 2020 grant year, the Marathon County Health Department received additional Deterra Pouches that can be used to further this project and/or for other areas of distribution.
- Consider incentivizing surveys to increase return rate.
- Since **41.9%** of participants disposed of their expired/unused medications in a way that may be harmful to the environment, themselves, or others, continuing education on safe disposal practices among this population should be considered.



Acknowledgements

Special thanks to:

- Melissa Moore - Marathon County Health Department/AOD Partnership
- Ronda James, RD - Aging and Disability Resource Center of Central Wisconsin
- Meals on Wheels drivers

References

1. Vivolo-Kantor, AM, Seth, P, Gladden, RM, et al. *Vital Signs: Trends in Emergency Department Visits for Suspected Opioid Overdoses--United States, July 2016-September 2017*. Centers for Disease Control and Prevention
2. Muhuri PK, Gfroerer JC, Davies MC. Associations of Nonmedical Pain Reliever Use and Initiation of Heroin Use in the United States. *CBHSQ Data Rev*. August 2013.
3. Wright, E. R., Kooreman, H. E., Greene, M. S., Chambers, R. A., Banerjee, A., & Wilson, J. (2014). The iatrogenic epidemic of prescription drug abuse: County-level determinants of opioid availability and abuse. *Drug and Alcohol Dependence*, 138, 209–215. <https://doi.org/10.1016/j.drugalcdep.2014.03.002>
4. *Marathon County Pulse: Indicators - Residents Who Utilized Medication Disposal Sites - Region - Wausau Metro Area*. Retrieved March 24, 2020, from <http://www.marathoncountypulse.org/indicators/index/view?indicatorId=7631&localeId=281243>

**Breakout
Room:**

6 - Taking Care and Giving Care

Title: Geriatric Perceptions of Weight and Weight Loss in a Community Clinic

Authors: Elise Kahn, BA, MCW; Leslie Ruffalo, PhD, MS, MCW, Family and Community Medicine

Abstract: **BACKGROUND:** Obesity levels and the number of people over the age of 65 are increasing in the US. In addition to being associated with high mortality conditions such as cardiovascular disease and cancer, obesity and aging lead to higher medical costs. The elderly community utilize programs such as exercise and cooking classes to help maintain their health. In order to provide appropriate care, providers must understand the perceptions the elderly community have on their weight.

OBJECTIVE: Identify how elderly patients' understanding of weight impacts weight management.

METHODS: Subjects were 60 and older and recruited from All Saints Family Residency Clinic. Guided interviews were audio recorded, transcribed, and analyzed in Dedoose, a qualitative analysis program. The interview data was analyzed using grounded theory with open-coding being used to develop themes. Transcripts were reviewed to refine themes until thematic saturation occurred. This study was approved by the MCW Institutional Review Board.

RESULTS: Due to the influence of COVID-19, the project is in its preliminary stages. 4 interviews were conducted with the following demographic data: 3 female, 1 male; 2 White, 2 African American; average age of 71.75. Additionally, 4 transcripts from previous research with participants over 60 were also used. Of the interviews conducted, participants noted increased attention given to their weight in their older years due to increasing health concerns. Additionally, participants described social influences and historical eating habit influences.

CONCLUSION: Preliminary results show the most important factors contributing to weight management in geriatric populations are the relationship between health and weight and eating habits. This knowledge can be used by providers to help tailor weight management to the elderly. The next step is to conduct interviews with providers caring for the elderly. This will be done in order to better understand how provider perceptions influence weight management in the elderly.

Submitter: Kahn, Elise

Record ID: 109

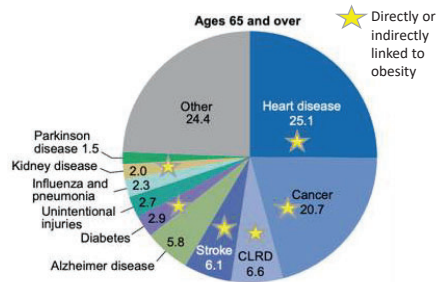
Geriatric Perceptions of Weight and Weight Loss in a Primary Care Clinic

Elise Kahn, Leslie Ruffalo, PhD
Department of Family & Community Medicine, MCW

Background

- Both obesity and the number of people over the age of 65 continue to rise in the United States.
- By 2060, the number of U.S adults over the age of 65 is expected to double.
- By 2030, the national prevalence of adult obesity is expected to rise to 48.9% from 44.8% in 2018.
- Both obesity and aging contribute to increased health services, putting an augmented financial strain on our health system.
- Obesity has shown significant links to several leading causes of death in people aged 65 and older.

Figure 1. Percent distribution of the 10 leading causes of death, by age group: United States, 2017



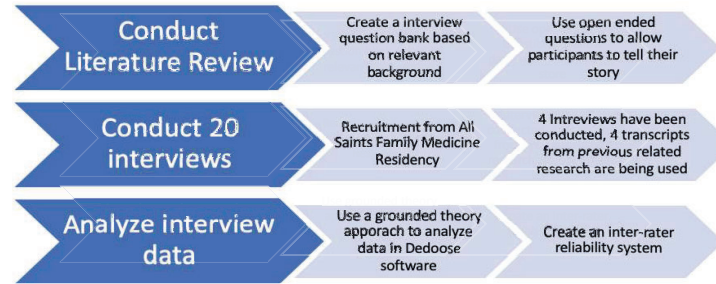
CDC National Vital Statistics Reports; Deaths: Leading causes for 2017

- In order to provide necessary care for obese elderly patients as well as help prevent the future strain on our healthcare system, providers must understand the factors that influence weight in a geriatric population.

Aims

Through examining elderly patients' perceptions of the way in which the aging process impacts weight, we will develop a model to better support patients in a clinical environment.

Methods



Results

Demographics:

Age: 65-79, M: 70.625*
Race: 2 Caucasian, 2 African American
Gender: 6 female, 2 male *
*data incorporates 4 transcripts from previous research

Social Factors:

Living status: 2 lived alone, 1 lived with husband, 1 lived with daughter
Relationship status: 1 divorced, 1 married, 1 single, 1 widowed

Influence of Age:

1. Amplified with age
2. Changes in perceptions over time
3. History with food
4. History with weight
5. Physical activity and aging
6. Weight changes

"They say that walking is the best exercise for just about everything. But we can't always walk in this climate. If it's icy out I can't walk because of my balance."

Patient Context/Personal Perceptions:

1. Comfort in discussing weight
2. Coping strategies
3. Diet modifications
4. Emotional Connection to weight
5. Eating habits
6. Motivating factors
7. Perception of food
8. Physical activity habits
9. Temptation/ self-control

"My daughter [is my motivation]. I've got one child and I got her at a late age, I was 50 when she was born. I want to be able to see her life. I want her to understand not to gain the weight like I did."

Themes

External Context/ Social Influence:

1. Comparison to others
2. Barriers
3. Factors affecting weight/diet
4. Influence of COVID-19
5. Perceptions of normal/weight loss
6. Social Influences
7. Triggering circumstances

"Food is a big part of our lives, it's a big part of socializing and a big part of every day. No matter who you're with someone will say 'do you want a piece of cake or a cookie' or 'let's get together we'll have a meal at the community room tonight'"

Health Influences

1. Health Literacy
2. Connection between health and weight
3. Clinician relationship
4. Advice
5. Weight management approach

"I have a lot of back problems and I know a lot of it is due to my weight and I would feel better with my back and legs if I would lose some weight. I have high blood pressure and cholesterol so [losing weight would help with that too]."

"I want to be healthy. Healthy is my motivation"

Discussion

- Preliminary results show that elderly patients perceptions of weight fall within 4 major themes: the influence of age, patient context, external context, and health influences.
- The connection between health and weight becomes more prevalent as one ages
- Health literacy and comfort using technology play a large role in a patients ability to self-manage their diet
- Participants expressed interest in learning how the physiology of aging affects their body and weight

Q: What advice would you give your physician?

A: "I guess talk more about the changes of your body as you get older and the different things you need to do to maintain weight and be healthier"

- Currently the largest limitation is the small data set

Future Work

Expand interview pool to include health providers caring for elderly patients. In doing this we will be able to better understand what influences weight management from a clinical standpoint.

Acknowledgements

Thank you to Dr. Ruffalo for her mentorship and the National Institute On Aging for funding this project under Award Number T35AG029793.

References

- Fakhouri Ph.D, MPH, T. Ogden Ph.D, MRP, C., Carroll MSPH, M., Kit MD, MPH, B., & Flegal Ph.D, K. (2019, June 10). *Products - Data Briefs - Number 106 - September 2012*. www.cdc.gov/nchs/products/databriefs/db106.htm#ref2
- Heron, M. (2019). *Deaths: Leading causes for 2017*. National Vital Statistics Report; Vol. 68, No. 6. In *cdc.gov* (p. 11). National Center for Health Statistics. https://www.cdc.gov/nchs/data/nvsr/nvsr68/nvsr68_06-508.pdf
- The Health Effects of Overweight and Obesity. (2019). Centers for Disease Control and Prevention. <https://www.cdc.gov/healthyschools/effects/index.html>
- Ward, Z. J., Bleich, S. N., Cradock, A. L., Barrett, J. L., Giles, C. M., Flax, C. M., Long, M. W., & Gortmaker, S. L. (2019). Projected U.S. State-Level Prevalence of Adult Obesity and Severe Obesity. *New England Journal of Medicine*, 381(25), 2440-2450. <https://doi.org/10.1056/nejmsa1909301>

**Breakout
Room:**

6 - Taking Care and Giving Care

Title: Healthcare System Support for Caregivers of Elderly Adults Through the Lens of the Medical Community

Authors: Annie Tuman, MCW; Leslie Ruffalo, PhD, MCW, Family and Community Medicine

Abstract: In the U.S. there are millions of unpaid, family caregivers who help elderly adults navigate care across multiple medical specialties. These caregivers report regularly being listened to by medical providers but less commonly asked if they need help, despite experiencing significant psychosocial stress from caregiving. This project aims to explore medical professional perspectives on the role of providers to support family caregivers in navigating multi-specialty care and identify opportunities to improve that support. We used purposeful sampling to identify and invite medical professionals to participate in a one-time virtual interview. Participants were asked a series of semi-structured questions regarding their experience in caregiver and elderly patient support and completed a demographic survey. Interviews were transcribed and qualitatively analyzed in Dedoose. Themes were generated using open coding techniques and grounded theory. 12 medical professionals were interviewed: 50% primary care, 25% geriatric care, and 25% specialists who routinely care for elderly adults. Four themes emerged as significant factors for caregiver support. These included: 1) Caregiver-Patient Dynamic, 2) Caregiver-Provider Dynamic, 3) Multi-Specialty Dynamics, and 4) Healthcare Gaps & Changes. Caregiver support was widely understood to be a primary care and social worker responsibility. While all participants identified resource connection as a caregiver support strategy, medical professionals providing longitudinal care were more likely to empathize with and address caregiver stress during patient visits. The ability of providers to support caregivers was often inhibited by time constraints, inter- and intra-specialty communication, billing, and insurance coverage limitations. Medical professionals unanimously agreed that systematic changes are needed to improve caregiver support, but the exact nature of those systematic changes was variable. Pending IRB approval, we will interview care-coordinating caregivers of elderly adults to investigate how caregiver perceptions of the healthcare system are similar and/or different from medical professional perspectives.

Submitter: Tuman, Annie

Record ID: 110

Introduction

Community-academic partnership with Eras Senior Network, the ADRC, and Froedtert Health to improve support for unpaid family caregivers of elderly adults

Caregivers who navigate complex, multi-specialty care often need support

Aim: explore provider perspectives on the role of medical professionals to ensure the caregiver is considered in patient's care

Methods

Participants: purposeful sampling of medical professionals who regularly interact with elderly patients

Study Design: qualitative interview study

1. Semi-structured virtual interviews and demographic survey
2. Interviews were audio recorded and transcribed verbatim
3. Open coding of transcripts using Dedoose to identify codes and develop themes

Results

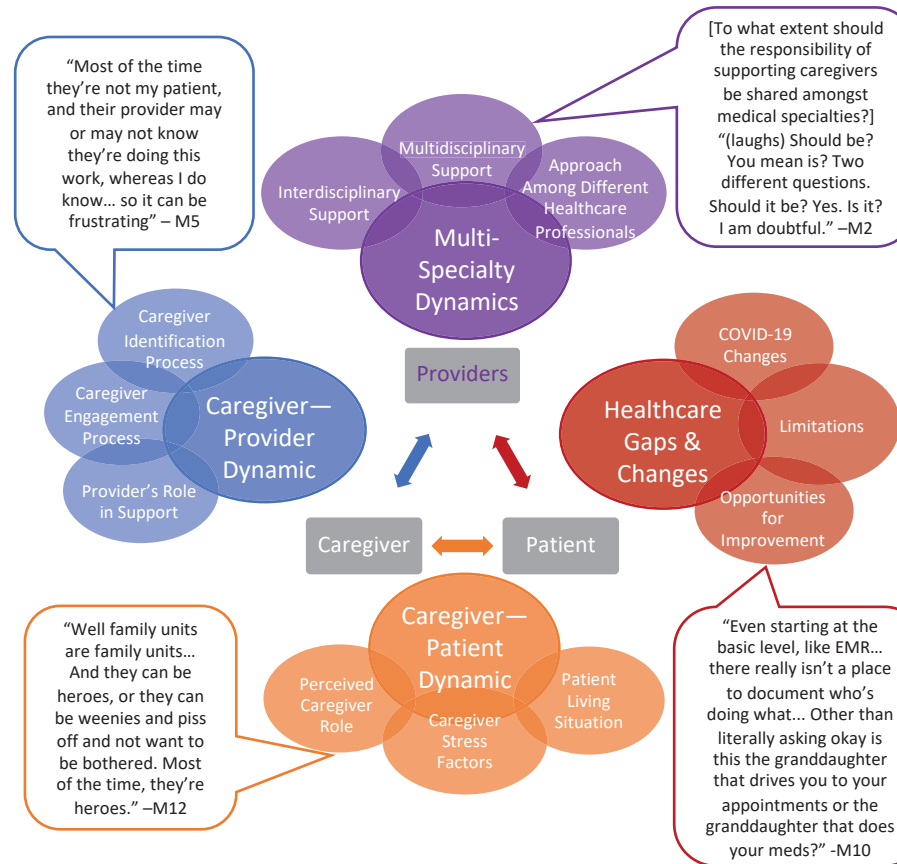
Participant Demographics (N=12)

Gender	67% female 33% male
Years of Experience	Mean: 16.9 years Range: 1-42 years
Specialty	50% primary care 25% geriatrics 25% PM&R, Neurology, SAR
Personal Caregiving Experience	75% yes 25% no

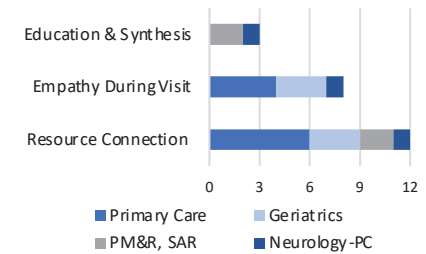
Mean interview duration: 33.9 min (21.8-70.7 min)
Pooled Cohen's Kappa = 0.68

Results

Factors Contributing to Caregiver Support in Healthcare System



Caregiver Support Strategies by Specialty



Discussion

Caregiver support is not equitably shared amongst medical professionals; widely understood to be primary care or social worker responsibility

All providers understood their role to include connecting caregivers with hospital personnel and/or community resources, additional roles less consistent

Limitations for support include time constraints, inter- and intra-specialty communication, billing, insurance coverage and professional boundaries

Unanimous agreement for systemic changes, nature of changes was variable

Study limitations: small sample size and semi-structured interview style limit generalizability of results

Next Steps

Conduct interviews with caregivers to investigate how perceptions differ from that of medical professionals

Explore system changes that best support family caregivers, patients and providers

Acknowledgments

Supported in part by the National Institute On Aging of the National Institutes of Health under Award Number T35AG029793. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health

Breakout Room: 6 - Taking Care and Giving Care

Title: Brain is Time

Authors: Abdulghani Mounir, MCW-Green Bay; Timothy Guthrie, MCW-Green Bay

Abstract: Strokes are the fifth leading cause of death in America and contrary to belief up to 80% of strokes are preventable with early recognition and intervention. We partnered with the Aging and Disability Resource Center (ADRC) and decided that we wanted to work with stroke awareness and prevention in the local community as they recognized there was a knowledge gap that we could address. We were able to work with the community to educate on basic stroke prevention and detection so that strokes can be detected earlier. Our project involved having a two presentation dates held at the ADRC that were advertised in the local community newsletter. Presentations were given on stroke signs, symptoms and risk factors, with a pre-test gauging knowledge, and a post-test assessing improvement using questions that were researcher derived. No personal medical records or personal identifiers were used in the project. We labelled the tests with numbers and made sure they were matched up with the pre and posttest for statistical analysis after the project was presented. We compared the overall performance change (n=22) on the 10-question test. Mean test scores rose from 64% (pre seminar) to 84% (post seminar). Statistical analysis using a paired t-test computed a p-value of 0.0063. Overall the presentation was effective at raising awareness of stroke symptoms and prevention in the local Green Bay community.

Submitter: Mounir, Abdulghani

Record ID: 92

Brain is Time

Tim Guthrie MS2 and Aboudi Mounir MS2

INTRODUCTION

- Strokes are the 5th leading cause of death in America and up to 80% are preventable
- Stroke results from lack of blood to the brain (Hemorrhagic and Ischemic)
- Without oxygen the brain cells will quickly begin to die resulting in potential lifelong deficits (paralysis/loss of muscle movement, difficulty talking and memory loss)
- With this in mind, it is essential that the community is aware of this disease and understands both the symptoms that present with stroke and the predisposing factors that puts individuals at greater risk.

PURPOSE

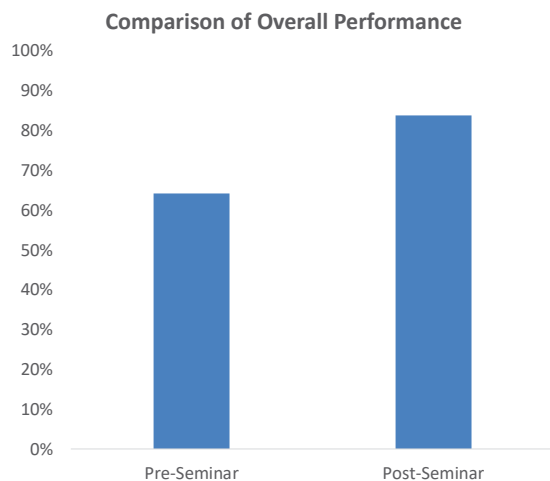
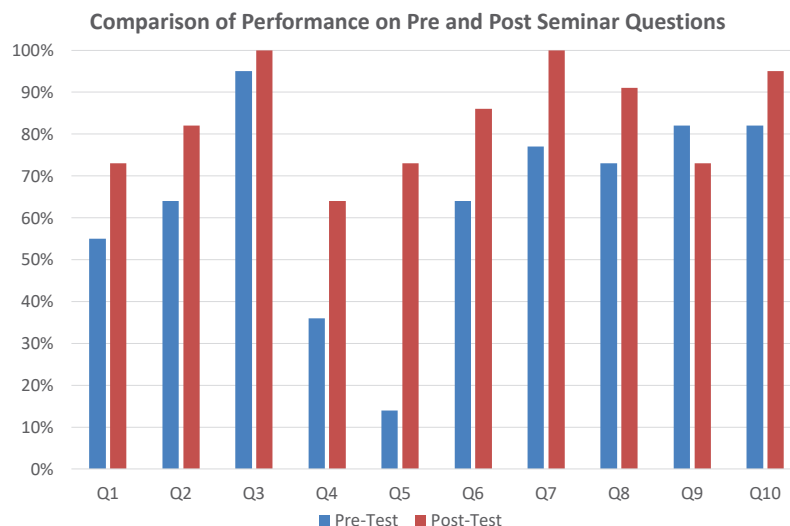
Our goal for this project is to educate the Brown County population on basic stroke prevention and detection so that strokes can be caught early on. Studies have shown up to 80% of strokes are preventable with early recognition and intervention. We conducted a presentation on signs, symptoms, and risk factors for strokes in hopes that we help people learn how to identify and prevent a stroke. Having this information in your back pocket could save a life one day.

METHODS

- Our project had two presentation dates that were advertised in the local community
- Pre and post presentation surveys were created to assess understanding of the content and check for statistically significant improvement in scores
- Pre and post surveys were labelled with matching numbers to avoid using personal medical records or other personal identifiers
- Project was limited to those that can read English

RESULTS

22 members of the ADRC were our participants for this study. They completed pre and post surveys. Survey performance is demonstrated via the figure below.



We then compared the overall performance change on the 10-question test. Mean test scores rose from 64% (pre seminar) to 84% (post seminar). Statistical analysis using a paired t-test computed a p-value of 0.0063 meaning there was a statistically significant difference between the two groups.

CONCLUSIONS

- Prior to seminar, stroke awareness among participants of the ADRC was higher than expected
- The average of our pre-test scores was 64%, demonstrating the high baseline knowledge of participants
- Although baseline knowledge was high, every participant left with new knowledge (demonstrated by an increase in test scores)
- The average of our post-test scores was 84%, demonstrating an increase in knowledge of participants after the seminar
- There was a statistically significant difference (p-value = 0.0063) in the test scores when comparing baseline knowledge to post-seminar knowledge
- There was an increase in confidence in stroke situational awareness expressed by participants of the ADRC

FUTURE DIRECTIONS

- Our goal is to continue our partnership with the ADRC to provide similar stroke awareness talks and attempt to reach a broader population within Brown County
- Future studies could aim for a larger population to make the results more statistically significant

ACKNOWLEDGEMENTS

- We would like to thank everyone at the ADRC for their support throughout this project

REFERENCES

- [J Stroke Cerebrovasc Dis. 2014 May-Jun;23\(5\):1040-5. doi: 10.1016/j.jstrokecerebrovasdis.2013.08.021. Epub 2013 Oct 2.](#)
- [Stroke. 2015 Feb;46\(2\):572-4. doi: 10.1161/STROKEAHA.114.007907. Epub 2014 Dec 18.](#)
- [J Stroke Cerebrovasc Dis. 2014 Jul;23\(6\):1623-7. doi: 10.1016/j.jstrokecerebrovasdis.2014.01.001. Epub 2014 Mar 27.](#)
- [Lopez AD, Mathers CD, Ezzati M, et al. Global and regional burden of disease and risk factors, 2001: systematic analysis of population health data. Lancet 2006; 367:1747.](#)
- [Patel SA, Winkel M, Ali MK, et al. Cardiovascular mortality associated with 5 leading risk factors: national and state preventable fractions estimated from survey data. Ann Intern Med 2015; 163:245.](#)

**Breakout
Room:**

6 - Taking Care and Giving Care

Title: Assessing Efficacy of Pre-Hospital Providers in Correctly Identifying CVA in De Pere and Ashwaubenon WI - A Retrospective Study

Authors: Jayme S. Nelson, MCW-Green Bay; Patrick D. Best, MCW-Green Bay

Abstract: Cerebrovascular accident (CVA) has long been a significant cause of morbidity and mortality in humans. Because of its insidious nature and acute presentation, it is a silent killer that places a large amount of financial and industrial burden on the healthcare system. There has been considerable work done in recent decades to improve the outcomes of CVAs via earlier identification and development of more effective therapeutics. The Los Angeles Motor Scale (LAMS) is a pre-hospital stroke scale developed for the purpose of earlier identification of CVA. Aurora BayCare Medical Center (ABMC) is the only Level 1 Comprehensive Stroke Center in the greater Green Bay area and is thus the standard destination for suspected CVAs. This study sought to investigate the efficacy of the LAMS scale in identifying CVAs in the pre-hospital setting in De Pere and Ashwaubenon WI from 2016-2019 through the cross-referencing of de-identified patient records from the respective pre-hospital EMR's with those of ABMC. Our community partners for this project included the respective Chiefs of De Pere Fire Department and Ashwaubenon Public Safety, the common Medical Directors between the two programs, and the Neuroscience Market Manager at ABMC to aid in de-identifying the data. All parties are contributing to this project in the pursuit of research to optimize pre-hospital care of patients with CVAs. This study demonstrated an 80% sensitivity for CVA across both departments, in line with the 81% national average. Furthermore, our study demonstrated very similar efficacy of the LAMS tool in both De Pere and Ashwaubenon. The positive and negative predictive values of LAMS were 84.2% and 42.9%, respectively. The results provide further support for both the efficacy and utility of the LAMS stroke scale in pre-hospital stroke identification. As such, continued use of the LAMS stroke scale is recommended and will likely lead to more positive outcomes for patients presenting with possible CVA in the Green Bay community.

Submitter: Nelson, Jayme

Record ID: 122

Assessing the Efficacy of Pre-Hospital Providers in Correctly Identifying Cerebrovascular Accident in De Pere & Ashwaubenon WI- A Retrospective Analysis

Patrick D. Best and Jayme S. Nelson

INTRODUCTION

Stroke, or cerebrovascular accident (CVA), has long been a significant cause of morbidity and mortality in mammalian species. Because of its insidious nature and acute presentation, it is a silent killer that places a large amount of financial and labor burden on the healthcare system in this country.

A CVA simply means that because of some mechanism, the brain is no longer getting the right amount of blood flow. There are two main types:

- Ischemic stroke, in which an embolus occludes portions of the blood vessel distal to the catch point. (85% of CVAs)
- Hemorrhagic, in which the patient has a ruptured blood vessel in the cerebral tissue, lessening blood delivery to tissues distal to the bleed. (15% of CVAs)

CVAs often cause sensory and motor defects, as well as altered mental status and occasionally death.

There have been vast improvements in the field lately, including:

- Mechanical thrombectomy (MT)
- Thrombolytics
- Imaging modalities
- Rapid identification of strokes because of pre-hospital stroke scales
- FAST ad campaign

Earlier treatment, solid handoffs between providers, and history taking are all known to be important determinants of positive vs. negative outcomes in CVA patients.

However, there is still the question of how efficiently we are identifying strokes in vivo as they are occurring.

This study is seeking to establish how efficient the LAMS prehospital stroke scale is at identifying CVAs in our community.

Purpose

We are proposing the present study to investigate the efficacy of the LAMS Assessment Tool in identifying CVAs in the prehospital setting in both De Pere and Ashwaubenon Wisconsin in recent years. Our goal is to either:

- Determine that the LAMS score is accurately identifying CVAs
- Determine that LAMS is not accurately identifying CVAs and propose a superior alternative

METHODS

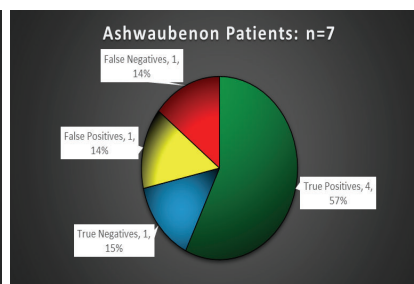
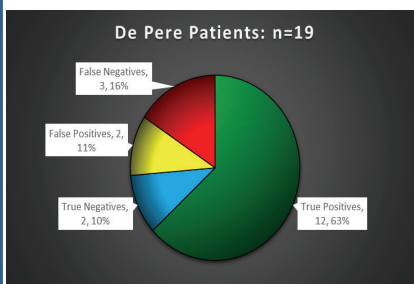
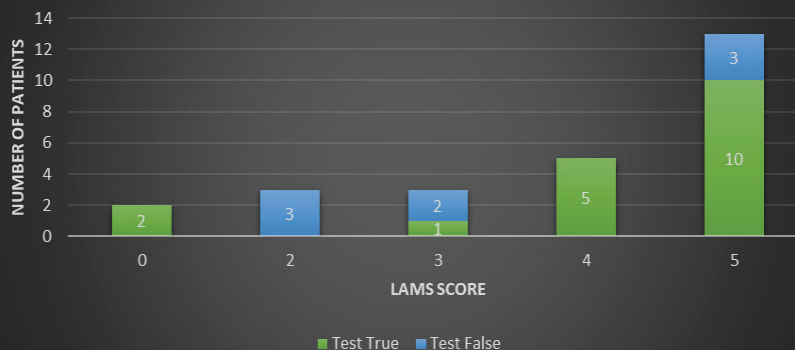
This study was performed in a few distinct steps:

- Pulling deidentified records from De Pere Fire Dept, Ashwaubenon Public Safety, and Aurora BayCare. These records ranged from Jan. 2016-Nov. 2019.
- Look at cases where De Pere Fire or Ashwaubenon Public Safety concluded that a CVA was the patient's primary MOI/NOI, and transported them to Aurora BayCare Medical Center.
- Determine how many of those suspected CVAs were confirmed via imaging studies. By following patients and linking the EMT's initial impression with the M.D.'s final diagnosis, we can gain an appreciation for the accuracy of prehospital CVA evaluation tools.

Patients will **only** be included if they were suspected to have a CVA by De Pere Fire or Ashwaubenon Public Safety. They are automatically excluded if CVA was not the primary impression of the EMS crew, or if they were transported to a facility with which we do not have a records release agreement.

RESULTS

Test Accuracy by LAMS Score



		CVA		84.2%	PPV
		Positive	Negative		
Test-LAMS	Positive	16.0	3.0	42.9%	NPV
	Negative	4.0	3.0		
		80.0%	50.0%		
		Sensitivity	Specificity		

CONCLUSIONS

- It is important to note that the LAMS tool was originally designed for a more precise role of detecting large vessel occlusion (LVO) ischemic strokes. We have expanded the scope of our interpretation to include all instances of cerebral hypoperfusion (ischemic and hemorrhagic events) to be in line with the clinical judgment of EMS professionals, as this was a major aspect of our inclusion criteria. This step was taken because ischemic and hemorrhagic CVAs cannot be differentiated solely by clinical exam findings.
- EMS clinical judgment confound:
 - Only patients who were deemed likely to be having CVAs by EMS personnel were included in this study. As a result, patients representing true negatives may have been excluded. Inclusion of these patients would increase the specificity of the test.
 - Additionally, some true positives are also left out as a result. Namely, patients with positive LAMS results but who were deemed unlikely to be having a CVA by EMS personnel who were brought to a facility other than Aurora BayCare Medical Center and were found to be having a CVA.
- LAMS scores of 4 or 5 are deemed positive for severe stroke (LVO likely) that requires acute treatment. LAMS scores of 0-3 are deemed positive for mild or moderate stroke (LVO less likely) that may benefit from acute treatment.
 - For the purposes of this project, we have defined a Positive Test as a 4 or 5 LAMS and Negative to be <4, in order to align best with the clinical confidence of the test.
- The LAMS data that we collected from De Pere and Ashwaubenon Public Safety was very similar to the national data that has been collected in the past.
 - The pre-hospital stroke identification protocols for De Pere Fire and Ashwaubenon Public Safety were developed by the same medical director and instituted at the same time. Interestingly, the two departments LAMS outcomes were very similar to each other.
- Sensitivities for the LAMS scale are projected nationally at 81%; in our data it was 80%. Our calculated specificity value was low due to our small number of data points (6) that went into that formula, with only two true negatives included, a factor that can be explained by the EMT's clinical judgement.
- We discovered that the positive predictive value (PPV) of LAMS was considerably higher (84.2%) than the negative predictive value (NPV, 42.9%). This is important to keep in mind when interpreting the results of the LAMS assessment tool in the pre-hospital setting.

Acknowledgements

Aurora BayCare- Rachel Reas, BSN, RN
De Pere Fire Department- Chief Al Matzke
Ashwaubenon Public Safety- Chief Brian Uhl
Aurora BayCare- Drs. Bob Zemple, Darren Heesacker, and Steve Stroman
Aurora Health Care- Dr. Aaron Bubolz

REFERENCES

- Noorian, Ali Reza, et al. "Los Angeles Motor Scale to Identify Large Vessel Occlusion." *Stroke*, 19 Feb. 2018, www.ahajournals.org/doi/full/10.1161/STROKEAHA.117.019228.
- Kim, Joon-Tae, et al. "Field Validation of the Los Angeles Motor Scale as a Tool for Paramedic Assessment of Stroke Severity." *Stroke*, 13 Jan. 2017, www.ahajournals.org/doi/full/10.1161/strokeaha.116.015247.
- English, Stephen W, et al. "Rethinking Prehospital Stroke Notification: Assessing Utility of Emergency Medical Services Impression and Cincinnati Prehospital Stroke Scale." *Journal of Stroke and Cerebrovascular Diseases*, vol. 27, no. 4, Apr. 2018, pp. 919-925, doi:10.1016/j.jstrokecerebrovasdis.2017.10.036.

Acknowledgements

*Special thanks to all who were involved in our 6th annual Community Engagement Poster Session.
We appreciate your hard work, expertise and time investment!*

Syed Ahmed

Associate Provost & Senior Associate Dean for
Community Engagement
Department of Family & Community Medicine
Office of Community Engagement
Medical College of Wisconsin

Jennifer Brown

Manager Research Operations
Office of Research
Medical College of Wisconsin

Jay Cameron, PhD

Associate Professor
Kinesiology
University of Wisconsin-Whitewater

Kelsey Heindel

Program Coordinator
Office of Community Engagement
Medical College of Wisconsin

Mandy Kastner

Program Director
Department of Medicine
Medical College of Wisconsin

Kajua Lor, PharmD, BCACP

Founding Chair, Associate Professor
MCW School of Pharmacy
Medical College of Wisconsin

Rebecca Lundh, MD

Assistant Professor
Family and Community Medicine
Medical College of Wisconsin

Sarah O'Connor

Program Manager
Office of Community Engagement
Medical College of Wisconsin

Myah Pazdera

Program Coordinator
Office of Community Engagement
Medical College of Wisconsin

Erika Petterson

Program Coordinator
Office of Community Engagement
Medical College of Wisconsin

Amy Prunuske, PhD

Associate Professor
MCW-Central Wisconsin
Medical College of Wisconsin

Leslie Ruffalo

Associate Professor
Department of Family & Community Medicine
Community Engagement Core
Medical College of Wisconsin

Christopher J. Simenz, PhD, CSCS

Clinical Professor
Physical Therapy
Marquette University

Ashleigh Sanchez

Communication & Administrative Support Specialist
Office of Research
Medical College of Wisconsin

Karri Stock

Communications Consultant
Communications and Brand Strategy
Medical College of Wisconsin

Sally Vliet

Administrative Manager
Center for Disease Prevention Research
Medical College of Wisconsin

Christine Zeller

Program Manager
Office of Community Engagement
Medical College of Wisconsin

Glossary of Terms

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 (National Association of County & City Health Officials, 2008, Section II: Building Collaboration, para. 2).

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 (Centers for Disease Control and Prevention, 1997).

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" (Israel, Schulz, Parker, & Becker, 1998, p. 177). "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" (W.K. Kellogg Foundation, 2009, para. 1).

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" (Labonte & Laverack, 2001, p. 114).

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" (Ahmed & Palermo, 2010, p. 1383). 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" (Ahmed & Palermo, 2010, pp. 1383 - 1384).

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" (Carnegie Classification for Community Engagement at Brown University Swearer Center for Public Service, n.d., para. 1).

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 (CU-Boulder Council of Deans, 2010, para. 1).

Community Service is co-curricular or extra-curricular service that is done apart from or in addition to academic or professional duties (Eastern Illinois University, n.d.).

Health is broadly defined as a "state of complete physical, mental, and social well-being, and not merely the absence of disease" (World Health Organization, 1948, para. 1). 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" (World Health Organization, 1986, Health Promotion section, para. 1).

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” (U.S. Department of Health and Human Services, 2010, p. 28).

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” (Braveman, Arkin, Orleans, Proctor, & Plough, 2017, Executive Summary, p. 1).

Population Health is “the health outcomes of a group of individuals, including the distribution of such outcomes within the group” (Kindig & Stoddart, 2003, p. 380).

Public Health has the mission of “fulfilling society’s interest in assuring conditions in which people can be healthy” (The Institute of Medicine, 1988, p. 7). “Public health promotes and protects the health of people and the communities where they live, learn, work and play” (American Public Health Association, n.d.a, para. 1). “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” (American Public Health Association, n.d.a, para. 3).

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” (World Health Organization, n.d., para. 1).

Social Justice “is the view that everyone deserves equal rights and opportunities — this includes the right to good health” (American Public Health Association, n.d.b, para. 1).

Translational Science is “the field of investigation focused on understanding the scientific and operational principles underlying each step of the translational process” (U.S. Department of Health and Human Services, National Institutes of Health, National Center for Advancing Translational Sciences, 2015, Translational Science section).

Translational Science Spectrum “represents each stage of research along the path from the biological basis of health and disease to interventions that improve the health of individuals and the public. The spectrum is not linear or unidirectional; each stage builds upon and informs the others. At all stages of the spectrum, NCATS develops new approaches, demonstrates their usefulness and disseminates the findings. Patient involvement is a critical feature of all stages in translation” (U.S. Department of Health and Human Services, National Institutes of Health, National Center for Advancing Translational Sciences, 2015, para. 1).