



MCW ENGAGE

Cultivating Capacity. Strengthening Partnerships.
5th Annual Community Engagement Spring Conference

May 2 & 3, 2019



Community Engagement



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Welcome

Welcome to MCW Engage 2019!

Our theme this year is “Cultivating Capacity. Strengthening Partnerships” and we are thrilled to offer special sessions focused on project planning, shifting the traditional mindset of leadership, and navigating complex relationships. We are especially excited to welcome our Keynote Speakers Susan Lloyd, PhD (Lloyd Consulting, Inc.) and Darlene Russell (Greater Milwaukee Foundation) as they discuss how *Process is the New Program*.

We continue to be honored as a trusted partner by our community leaders and organizations. We value having the opportunity to gather together during these events to learn how we can be better partners, improve our programs, and have greater impact on health. With the many challenges faced by our healthcare system and by our communities alike, 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.

We hope these sessions and the connections that will happen throughout this event will nurture partnerships and catalyze new projects and partner opportunities. Thank you for contributing to a tradition of Cultivating Capacity and Strengthening Partnerships in Community Engagement!

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*

Day 1: Thursday, May 2

Peck Welcome Center at the Milwaukee County Zoo

Time	Event
8:30 – 9:00 a.m.	<p>Registration, Breakfast and Networking</p> <p>Connect with other attendees over breakfast!</p>
9:00 – 10:20 a.m.	<p>The Idea Exchange</p> <p>Kick off the morning with a fun and intentional networking session where you'll meet your fellow conference attendees and be able to share and discuss areas of interest and affinity around community engagement. You'll have the chance to expand your circle, exchange business cards and grow your network.</p> <p>Facilitators:</p> <ul style="list-style-type: none">• Sarah O'Connor, MS, Program Manager, Community Engagement Core (Medical College of Wisconsin)• Christine Zeller, MA, Program Manager, Office of Community Engagement (Medical College of Wisconsin)• Jessica De Santis, MA, Program Coordinator, Community Engagement Core (Medical College of Wisconsin)• Kelsey Heindel, Program Coordinator, Community Engagement Core (Medical College of Wisconsin)• Erika Petterson, MA, Program Coordinator, Community Engagement Core (Medical College of Wisconsin)
10:20 – 10:30 a.m.	<p>Office of Community Engagement Video Premiere</p>

Time	Event
10:30 – 10:55 a.m.	<p>Welcome</p> <p>Syed Ahmed, MD, DrPH, MPH, Associate Provost and Senior Associate Dean for Community Engagement (Medical College of Wisconsin)</p>
10:55 – 11:00 a.m.	<p>Keynote Introduction</p> <p>Sarah O’Connor, MS, Project Manager, Community Engagement Core (Medical College of Wisconsin)</p>
11:00 – 12:00 p.m.	<p>Keynote: Process is the New Program</p> <p>Susan Lloyd, PhD (Lloyd Consulting, Inc.) and Darlene Russell (Greater Milwaukee Foundation)</p>
Noon – 12:45 p.m.	<p>Grab some lunch and visit with other attendees</p>
1:00 – 2:15 p.m.	<p>Concurrent Breakout Sessions</p> <p>Session A: How to Eat an Elephant: Project Planning One Bite at a Time</p> <p>This workshop explores project planning and development with a focus on making timely decisions around key project details that support effective implementation. Attendees will gain an appreciation of building trust, clarifying goals and committing appropriate resources to support successful project execution. Community engagement principles of mutual respect and effective communication ring throughout this session designed to cultivate capacities that strengthen partnerships.</p> <p>Facilitators:</p> <p>Emily Connors, MS, Research & Planning Analyst (ProHealth Care) and Laura Pinsoneault, PhD, Founder and CEO (Evaluation Plus)</p>

Time	Event
1:00 – 2:15 p.m.	<p data-bbox="479 289 1084 321">Session B: It’s a Zoo Outside, Lead from the Inside</p> <p data-bbox="479 352 1393 709">This workshop explores the traditional dynamics of power and authority in positional leadership and demonstrates how successful leaders don’t require a title or org chart to make an impact. By shifting the traditional mindset about leadership to one of influence that cultivates relationships and builds capacity from an inner coherence of values and action, reliance on power-over tactics is not necessary. Join this session to gain a better understanding of your inner sources of influence to reach the goals you want to achieve, whether that be organizational change, community engagement or personal transformation.</p> <p data-bbox="479 741 625 772">Facilitators:</p> <p data-bbox="479 804 1393 919">Nancy Blair, PhD, Professor Emerita of Doctoral Leadership Studies (Cardinal Stritch University) and Mark Gesner, PhD, Executive Director, The Stritch Hub for Innovation and Community Engaged Learning (Cardinal Stritch University)</p> <p data-bbox="479 1003 1385 1077">Session C: Understanding Ruffled Feathers in Your Flock: Using True Colors to Navigate Complex Relationships</p> <p data-bbox="479 1108 1377 1266">Through the application of True Colors personality types, this workshop will help attendees to understand how people absorb information, engage differently on a team, communicate, and how they can use this knowledge to better navigate relationships.</p> <p data-bbox="479 1297 613 1329">Facilitator:</p> <p data-bbox="479 1360 1206 1392">Anthea Bojar, PhD, Dean Emerita (Cardinal Stritch University)</p>
2:15 – 2:30 p.m.	<p data-bbox="479 1476 686 1507">Group Reflection</p> <p data-bbox="479 1549 1263 1623">Zeno Franco, PhD, Associate Professor, Department of Family and Community Medicine (Medical College of Wisconsin)</p>

Day 2: Friday, May 3 at the Medical College of Wisconsin

Time	Event
9:30 – 10:00 a.m.	<p>Registration and Breakfast</p> <p>Connect with other attendees over breakfast!</p>
10:00 – 11:30 a.m.	<p>MCW Engage 2019 Poster Session</p> <p>Location: Cafeteria Lobby and Kerrigan Hallway</p> <p>The MCW Engage 2019 Poster Session highlights community-academic partnerships, community centered projects, and community-engaged and translational research. Posters will be presented by one or more authors who will be available to talk through their work, answer questions and expand the dialogue around community engagement.</p>
11:30 – 11:55 a.m.	<p>Select a lunch and gather in the HRC Auditorium</p>
12:00 – 12:15 p.m.	<p>Community Engaged Scholars Mentoring Network Recognition</p> <p>Location: HRC Auditorium</p> <p>The Community Engaged Scholars: Mentoring Network program is offered to researchers interested in building capacity in community engagement and Community Engaged Research (CErR) practices. The program is currently in its third cohort and has enrolled 18 mentees and 8 mentors throughout its course. This ceremony recognizes the mentors and mentees and their service to community engagement, and certificates are presented to those who have completed the program.</p>

12:15 – 2:00 p.m.

President's Community Engagement Award Ceremony

Location: HRC Auditorium

The President's Community Engagement Award recognizes exemplary community-academic partnerships, community-engaged research and community outreach activities and programs of MCW faculty, staff, students and community partners. Join us over lunch to honor this year's awardees and learn about their remarkable work.

Community Partner Award

- Al Castro, Program Director (United Community Center)
- Beth Thorson, Director (Free and Community Clinic Collaborative)

MCW Faculty Award

- Zeno Franco, PhD, Associate Professor, Department of Family and Community Medicine
- Robert Gouthro, MD, Assistant Professor, Department of Psychiatry,

MCW Student Award

- Megan Cory, Class of 2021
- Christian Hernandez, Class of 2021
- Na'il Scoggins, Class of 2021

MCW Staff Award

- Toni Gray, Program Coordinator, Office of Diversity and Inclusion
- Broderick Pearson, Research Associate, Center for AIDS Intervention Research
- Tiffany Frazer, Manager, Office of Global Health

2:30 – 4:30 p.m.

***Invisible Lines* Film Screening and Panel Discussion**

Location: HRC Auditorium

Join us for a showing of *Invisible Lines*, a new film from 88Nine Radio Milwaukee. In the feature-length documentary, ten Milwaukee residents of color share their personal stories of segregation, racism, and prejudice. No narrator. No script. Just conversations between people. The film will be followed by a panel that will discuss the topics and issues explored in the film.

Keynote Biographies



Susan Lloyd

Susan Lloyd, PhD, helped establish the Zilber Family Foundation, starting as a consultant to philanthropist Joe Zilber in 2008 and ending her tenure as an advisor to board and staff in 2018. In 2008 the Foundation began a 10-year, \$50 million grants program to support residents and local nonprofits as they developed and carried out plans for improving the quality of community life in three Milwaukee neighborhoods.

Susan resumed consulting in 2019. In the past, Lloyd Consulting, Inc. teams developed and supported grant programs, and documented and evaluated them, for clients such as The Atlantic Philanthropies, Chicago Community Trust, Chicago Housing Authority, Greater New Orleans Foundation, The Joyce Foundation, LISC National, the Mertz Gilmore Foundation, the Pritzker Traubert Foundation, and The MacArthur Foundation. Susan currently consults in Chicago and Milwaukee, where she works with three foundations on grantmaking design and evaluation; with a social enterprise that generates revenue for workforce development programs; and with a collaborative of neighborhood nonprofits working on housing issues.

Previously Susan directed grant programs at The MacArthur Foundation for 13 years; conducted academic research on the persistence of concentrated poverty and on the causes and consequences of violence for six years; and worked in human services agencies for ten years. While at the MacArthur Foundation, she developed and managed major initiatives in community development and public housing transformation; conceived of and created intermediary arrangements for MacArthur's arts and culture grantmaking; and served as a resource on evaluation for the domestic program staff.

As executive director for the Zilber Family Foundation, Susan activated and supported a board of directors; established systems and policies; recruited and managed staff; designed and implemented grantmaking programs; and served as spokesperson for the organization. She helped organize, and served as the founding chairperson, of Milwaukee's cross-sector Community Development Alliance. A published author and frequent public speaker, Susan holds master's and doctoral degrees in human development and social policy from Northwestern University, where she also was a National Science Foundation fellow on race and urban inequality.

Susan volunteers with two youth development organizations, is an avid reader, and loves to cook (and eat) spicy food.



Darlene Russell

Darlene, MS, is a trusted, talented and accomplished professional with excellent communication skills and a dedication second to none. She is experienced in philanthropy, leadership development, relationship management, and project and contract management.

In her current role as a senior program officer for the Greater Milwaukee Foundation, she leads the foundation's leadership development and place-based strategies as well as its philanthropic investments designed to strengthen neighborhoods and provide economic opportunities for children and families.

She provides leadership to the Foundations Thriving Communities efforts, a place-based investment strategy that aims to catalyze community-driven change in neighborhoods that have historically faced barriers to revitalization. In addition, she directs several grant programs designed to respond to community needs; a partner in the true sense of the word. She works with diverse stakeholders to support local community and economic development and is sought out nationally as a thought leader.

Prior to joining the foundation in 2011, Russell worked with a number of organizations to help increase college access to students throughout the state of Wisconsin. In her role as senior outreach consultant at Great Lakes Higher Education Guaranty Corporation, she helped low-income, first-generation college students' access postsecondary education by partnering with nonprofits that helped students and families prepare and pay for college.

Darlene co-authored "On the Edge," a publication aimed to stimulate a national dialogue about middle neighborhoods. The declining middle class and growing income segregation and inequality in the United States is the backdrop for this publication. The authors of "On the Edge" provide fresh ideas for action and advocate for new and innovative community, housing, and education policies to better support on-the-edge neighborhoods—and create opportunities for the millions of people who live in them.

Darlene is an honored alumna of the Cardinal Stritch African American Leadership Program. She holds a Master of Science in Management from Cardinal Stritch University and a Bachelor of Arts in Community Leadership and Development from Alverno College.

In her free time, she recharges through the practice of mindfulness, enjoys time with her family and always looks forward to connecting with friends. Darlene enjoys savory dishes and loves to munch on fresh fruits and veggies from the garden. Realizing time is her most precious commodity; her mission is to Do More, Say More and Be More. She inspires and encourages others to do the same.

Presenter Biographies

Nancy Stanford Blair

Nancy Stanford Blair, PhD, Professor Emerita of Doctoral Leadership Studies, Cardinal Stritch University, Milwaukee, Wisconsin, is a consultant in leadership formation and sustainability. She has co-authored five books: *Connecting Leadership to the Brain*, *Leading with the Brain in Mind*, *Mindful Leadership*, *Leading Coherently: Reflections from Leaders Around the World*, and *Your Life is Your Message: Discovering the Core of Transformational Leadership* (to be released fall of 2019).

Nancy consults locally, nationally and internationally with K-12 schools, institutions of higher education, non-profits and business. Her mission is to fuel the powerful transformation of leaders who serve the world around them in ways that support the similar transformation in others.

Nancy earned her Bachelor's and Master's Degree from the University of Wisconsin, Madison and her PhD from the University of Illinois. From the start, her research, teaching and life work has focused on building human capacity to serve the world. Nancy has received a variety of awards for her work and service, including being honored with the award for Teaching Excellence and Campus leadership at Cardinal Stritch University, Distinguished Service for the Advancement of the Profession by the Association of Wisconsin School Administrators, the award for National Leadership for the American Cancer Society, the American Occupational Therapy Association Award for Excellence in the Advancement of Occupational Therapy, and Special Recognition for Leadership from the Wisconsin Association of Supervision and Curriculum Development.

Anthea Bojar

Dr. Anthea (Tia) Bojar, PhD, is an educator, leader, author and consultant who is recognized for her ability to work with individuals, groups and entire organizations in a way that builds their capacity to lead and to achieve their goals, mission, and vision. A former K-12 teacher, deputy superintendent, curriculum director, university faculty, dean and executive vice president for academic affairs; she has excellent leadership experience and skills. Dr. Bojar co-authored a book with Nancy Stanford Blair, Ph.D. and Michael Dickmann, PhD, on *Brain Compatible Leadership Strategies*. She models and mentors others. Tia has presented and consulted both nationally and internationally. Her sessions are based on best practices and are interactive and empowering. She has facilitated the visioning and planning for numerous non-profit and for-profit organizations. In August 2014, she was awarded Dean Emerita at Cardinal Stritch University.

Emily Connors

Emily Connors, MS has more than 8 years of evaluation, project management, strategy and applied research experience. She brings a strong collaboration and participatory approach to her work and has experience working with diverse sets of stakeholders across the healthcare and nonprofit industries. As a research and planning analyst at ProHealth Care, a community-based health system in Waukesha, WI, Emily supports leaders throughout the organization in meeting their research and planning needs. She supports the development and implementation of the organization's strategic plan, collaborates on business plan development, and works closely with the leadership team on evaluating new market and growth opportunities for the organization. Emily brings to the organization experience in design thinking and innovation, change management and data-driven decision making.

Before joining ProHealth Care, Emily was the Director of Evaluation and Research Analytics for the Clinical and Translational Science Institute at the Medical College of Wisconsin, where she led the evaluation of a \$20 million NIH research infrastructure grant. Emily is a founding Board Member of Milwaukee Evaluation!, a state-based affiliate of the American Evaluation Association (AEA). The primary mission of the affiliate is to develop a pipeline of evaluators from underrepresented communities and build field practices including collaborative, participatory and culturally competent approaches to evaluation. Ms. Connors attended graduate school at Illinois State University, where she received her MS in sociology, with a focus in community and economic development. She is a Returned Peace Corps Volunteer (RPCV – Turkmenistan, 06-09) where she aided teachers in improving students' English and supported local community development projects.

Mark L. Gesner

Mark L. Gesner, PhD, serves as the Executive Director of the Hub for Innovation and Community Engaged Learning at Cardinal Stritch University in Milwaukee, Wisconsin. His current role includes hosting the Mission-Driven Leader Speaker Series, leading campus efforts for the Project Pitch It television show featuring Wisconsin entrepreneurs, and directing Mission Fuel, a business accelerator for nonprofit leadership teams. During his seven years at Stritch, Mark has also served as the Associate Vice President for Academic Affairs, and the College of Business and Management Faculty Chair of Community Engaged Learning and Leadership. Before Stritch, Mark was the Director of Community Development at the University of Wisconsin – Parkside, and prior to his career in higher education, he was a leader on the local, regional, and national levels for Hostelling International–USA, an organization promoting cross-cultural understanding through world travel.

Mark is actively engaged in the community and has served on various boards of directors, including recently joining the board of Campus Compact for Wisconsin. He teaches and presents locally and globally about innovation, leadership formation, cross-cultural management, and civic action. His first book, co-authored with Dr. Nancy Stanford Blair, is entitled *Your Life is Your Message: Discovering the*

Core of Transformational Leadership (to be published in fall of 2019). Mark earned his Bachelor's in Communication and Journalism from the State University of New York at Albany, a Master's in Education from Harvard University, and his doctorate in Leadership for the Advancement of Learning and Service in Higher Education from Cardinal Stritch University.

Laura Pinsoneault

Laura Pinsoneault, PhD has more than 20 years of evaluation, philanthropic strategy, organizational development, and leadership experience. Over the course of her career, Laura has worked on a wide range of issues to advance equity and build resilience for people in the communities where they live, work and play. Her approach prioritizes assets and engagement as drivers of solutions in areas of health, education, economic security, environment, and social entrepreneurship. As the Founder and CEO of Evaluation Plus, Laura brings to the organization extensive experience in strategy, evaluation design, organizational learning, change management and capacity building. She has helped partners translate complex change efforts into meaningful results. Laura supports emerging leaders from underrepresented walks of life in evaluation and organizational learning practices so that they are ready to support meaningful change.

Before founding Evaluation Plus, Laura was the Director of Evaluation at Spark Policy Institute, an evaluation and strategy consultant firm working to support social innovation through research, learning and evaluation. Prior to her leadership at Spark Policy Institute, she was a Senior Evaluator at the Advancing a Healthier Wisconsin Endowment where she helped shaped strategy and evaluation efforts to generate systems change and improve health in Wisconsin. As the Director of Evaluation and Research at the Alliance for Strong Families and Communities, she led research and strategy efforts around national initiatives and programs that seek to strengthen the evaluation and leadership capacity of high performing community-based organizations in reaching their impact goals.

Some of Laura's most recent projects include serving as Co-PI on a Patient-Centered Outcomes Research Initiative (PCORI) project to understand the effectiveness of peer-to-peer support in helping keep aging adults at home, a community-driving collaborative writing project Recipes for Rising Neighborhoods that shared the experiences and practice of place-based organizations in authentically engaging their communities around the U.S., and designing the overall evaluation approach for Change In Mind, an initiative to integrate learning from neuroscience into human service practice. Laura was an invited speaker to the Askwith Forum and facilitator for Harvard's Graduate School of Education's Leadership Institute to advance understandings and applications of equity for collaborative community action work.

Community Engaged Scholars: Mentoring Network

The Community Engaged Scholars: Mentoring Network program is offered to researchers interested in building capacity in community engagement and Community Engaged Research (CEnR) practices. The program is currently in its third cohort and has enrolled 18 mentees and 8 mentors throughout its course. This ceremony recognizes the mentors and mentees and their service to community engagement, and certificates are presented to those who have completed the program.

MENTORS

- **Syed Ahmed**, MD, MPH, DrPH, Associate Provost and Senior Associate Dean for Community Engagement; Professor, Department of Family and Community Medicine (Medical College of Wisconsin)
- **Leonard Egede**, MD, MS, Chief of General Internal Medicine; Director of the Center for Patient Care and Outcomes Research; Professor, Department of Medicine, (Medical College of Wisconsin)
- **Zeno Franco**, PhD, Associate Professor, Department of Family and Community Medicine, (Medical College of Wisconsin)
- **Marlene Melzer-Lange**, MD, Professor, Department of Pediatrics, (Medical College of Wisconsin)
- **John Meurer**, MD, MBA, Professor and Director, Institute for Health and Equity, (Medical College of Wisconsin)
- **David Nelson**, PhD, MS, Associate Professor, Department of Family and Community Medicine (Medical College of Wisconsin)
- **James Sanders**, MD, MPH, Professor, Department of Family and Community Medicine (Medical College of Wisconsin)
- **Staci Young**, PhD, Associate Professor and Director, Center for Healthy Communities and Research, Department of Family and Community Medicine (Medical College of Wisconsin)

MENTEES

- **Dan Bergen**, PhD, Executive Director, Office of Community Engagement, Marquette University
- **Kathleen Boyle**, PhD, Research Scientist II, Department of Microbiology and Immunology, (Medical College of Wisconsin)
- **Michael DeBisschop**, PharmD, Professor, MCW School of Pharmacy
- **Jeff Fritz**, PhD, MA, MS, Assistant Professor, Department of Cell Biology, Neurobiology and Anatomy, Medical School Regional Campuses (Medical College of Wisconsin)
- **Mary Homan**, DrPH, MSHCE, MA, Assistant Professor, Center for Bioethics and Medical Humanities, Institute for Health and Equity (Medical College of Wisconsin)
- **Kristina Kaljo**, PhD, MA, Assistant Professor, Clerkship Co-Director, SPARCC Program Co-Director, Department of Obstetrics and Gynecology, (Medical College of Wisconsin)

- **Heidi Keeler**, PhD, RN, Assistant Professor, Director of Continuing Nursing Education, Director of Office of Community Engagement, College of Nursing, University of Nebraska Medical Center
- **Jacquelyn Kulinski**, MD, Assistant Professor, Department of Medicine, (Medical College of Wisconsin)
- **John “Mac” Longo**, MD, Assistant Professor, Department of Radiation Oncology, (Medical College of Wisconsin)
- **Kajua Lor**, PharmD, BCACP, Director of Ambulatory Care Practice Advancement, Associate Professor & Founding Faculty Member, School of Pharmacy (Medical College of Wisconsin)
- **Lindsay Nelson**, PhD, Assistant Professor, Departments of Neurosurgery & Neurology, (Medical College of Wisconsin)
- **Jessica Olson**, PhD, Assistant Professor, Department of Institute for Health and Equity, Division of Epidemiology, (Medical College of Wisconsin)
- **David Ombengi**, PharmD, MBA, MPH, Associate Professor, Department of Clinical Science; School of Pharmacy (Medical College of Wisconsin)
- **Amy Prunuske**, PhD, Faculty Curriculum Program Manager, Associate Professor, Department of Microbiology and Immunology (Medical College of Wisconsin-Central Wisconsin)
- **Katherine Quinn**, PhD, MA, Assistant Professor, Department of Psychiatry and Behavioral Medicine, Center for AIDS Intervention Research (Medical College of Wisconsin)
- **Leslie Ruffalo**, PhD, Associate Professor, Department of Family and Community Medicine (Medical College of Wisconsin)
- **Ryan Spellecy**, PhD, Ursula Von der Ruhr Endowed Professor of Bioethics, Professor, Center for Bioethics and Medical Humanities and Institute for Health and Equity (Medical College of Wisconsin)
- **Andrew Yaspán**, MS, Programmer Analyst III, Clinical Translational Science Institute (Medical College of Wisconsin)
- **Rebekah Walker**, PhD, Assistant Professor, Department of Medicine, Center for Advancing Population Science (Medical College of Wisconsin)
- **Joni Williams**, MD, MPH, Assistant Professor, Center for Advancing Population Science, Department of Medicine (Medical College of Wisconsin)

Poster Abstracts

Poster Abstract #1

Student Health Literacy & American Health Insurance

Kyle Bakken, MCW-Green Bay

The landscape of American health insurance is in flux. As options to obtain coverage expand, consumers face mounting pressure to make decisions relying on accurate interpretation of complex insurance language and cost-benefit analysis. Low health literacy is associated with distrust of providers and higher cost to the patient. College undergraduates represent a unique window into a population soon to enter the health insurance marketplace. Some students will receive insurance through professional employment while others may age out of parental coverage, prompting many to choose their own plan possibly for the first time. Prior to and following a presentation on popular health insurance models, students completed surveys reporting their interest in understanding and confidence in managing various health insurance-related tasks on a 10-point scale. Select questions were identical on the before and after surveys to assess the impact of the intervention in enhancing health insurance knowledge as a measure of health literacy. The greatest changes in response data suggest this basic introduction produced the largest impact on student confidence when working with the more literal aspects of health insurance, including evaluating plans and comparing costs. These results indicate a favorable outcome in the self-assessed capacity of students to manage health insurance-related tasks in situations when a fundamental knowledge of the subject would be essential, such as when purchasing a plan or discussing coverage while scheduling an appointment.

Poster Abstract #2

Reimagining Community-University Partnerships Using Systems Mapping: Challenging Systems of Inequality

Eleanor Barr, MSP, University of Wisconsin-Milwaukee; Laura Hermanns, MSP, University of Wisconsin-Milwaukee; Dulmini Jayawardana, MSP, University of Wisconsin-Milwaukee

As many universities expand their presence and mission into their surrounding communities through service-learning, research, and partnerships, it is paramount for these institutions to understand the system they are working in and how those systems have perpetuated inequality. This project explores opportunities for UW-Milwaukee to create systemic social and environmental change by reimagining the role of university-community partnerships. A systems-map is used as a visual tool to identify vicious cycles and leverage points identified through a literature review and interviews of campus and community stakeholders. By mapping the historical context of inequality in Milwaukee, the vicious cycles of campus-community disconnect and mistrust, and the non-profit industrial complex, the map reveals “deep structures” or underlying forces that are driving the system. From there, leverage points for change are identified which can potentially stop the vicious cycles of inequality and the barriers to transformative and equitable partnerships in a neoliberal context. The map reveals the solutions landscape which includes shifting power towards the community, institutional critical reflection, adaptive learning, advocating for policy change, and building community capacity.

Poster Abstract #3

Use of Intra-articular Hyaluronic Acid for Symptomatic Management of Knee Osteoarthritis in the Primary Care Setting

Charles Gusho, BS, MCW-Green Bay

Background: Supartz FX has been investigated as a therapeutic for knee osteoarthritis due to its claimed preservation of viscoelastic joint properties and improvement in pain and physical function. US prescribing information suggests patients may experience benefit with as few as three of five injections given once weekly.

Research Aim: Do patients experience statistically and/or clinically significant improvement in disability scores following three injections?

Methods: 32 patients with a mean age of 66 ± 14 years receiving Supartz FX were reviewed in a prospective, observational study. Functional outcome data via Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) scores for pain, stiffness, and physical function were collected at 0, 1, 2 and 3 weeks, and means were analyzed via paired t-test.

Results: Three injections at one-week intervals resulted in statistically significant improvement across all sub scores ($p < 0.05$). Confidence intervals (CIs) of treatment effects (ES, 95% CI) for pain (0.27, 95% CI 0.99, 1.26), stiffness (0.17, 95% CI 0.50, 0.67), and function (0.55, 95% CI 2.79, 3.35) were recorded.

Conclusion: Current recommended guidelines do not support injectable hyaluronate due to controversial results of randomized controlled trials. Despite mean score reduction, CIs of treatment effects for WOMAC sub scores fail to satisfy minimum clinically important improvement thresholds: pain (0.39), stiffness (0.39) and function (0.37), meaning these changes are not clinically significant. Nonetheless, the results contribute to a preventative medicine database that encourages exploration of non-surgical and non-opiate modalities for osteoarthritis. Further studies including placebo with longer follow-up intervals are needed to validate the above findings.

Poster Abstract #4

Efficacy of the GRIT Rubric for Educators

Erin Duffy, MCW-Green Bay

With communities currently experiencing a shortage of mental health providers, educators are called to identify early symptoms of mental illness and create intervention programs. Additionally, in coordination with the Department of Justice's Office of School Safety Grant, area schools are now required to become trauma-sensitive to provide increased access to behavioral health services and to create policies and practices that generate resilience. Grit (courage and resilience) can be promoted by educators as a healthy coping mechanism in the face of failure. Researchers predict that students with more grit have better coping strategies and will be more successful as adults. This study aimed to train educators to foster grit in students to help improve their overall mental well-being and chances for success. Previous investigators developed a Generating Resilience through Integrative Teaching (GRIT) Rubric along with an in-class training program to help educators instill grit within their students. This year, participating educators of grades 1-5 were observed and scored on three separate occasions using this GRIT Rubric. The current investigator also created a student self-assessment survey, which was distributed before and after the educator training sessions. Each teacher's overall GRIT rubric score increased from the first to last observation session. Student self-assessment responses also demonstrated an increased "gritty" attitude compared to before the educational grit training. Overall, this study demonstrated that this grit program allowed educators to increase their effectiveness of inspiring grit development in the classroom. In correlation, students also self-identified an increase in their own internalization of a "gritty" attitude.

Poster Abstract #5

Health Tutors: A partnership for bi-directional learning

Carmen Cobb, MD, Internal Medicine and Pediatrics, MCW; Peter Cote, MD, Pediatric Medicine Residency Program (PMRP), MCW; Krista Tuomela, MD, PMRP, MCW; Gabriel De Vela, MD, PMRP, MCW; Sonia Mehta, MD, PMRP, MCW; Leann Arcori, MD, PMRP, MCW; Jaimee Hall, DO, PMRP, MCW; Cynthia Zarazua, International Learning Center/Neighborhood House; Caitlin Kaeppler, MD, Pediatrics - Hospital Medicine, MCW

Objective: Our project focuses on forming a longitudinal partnership between Medical College of Wisconsin students and residents and an organization in our community, the International Learning Center Program (ILCP) which provides adult learning for refugees in Milwaukee. Together, we are in the process of creating a health literacy curriculum tailored to the ILCP.

Background: Refugees have many trepidations regarding medical visits. We envision that medical trainees could contribute to familiarizing the refugee learners with our healthcare system and working with refugees will enhance skills of the medical trainees.

Methods: MCW faculty, residents, and students met with refugees, interpreters, and teachers during class at the ILC in a small focus group setting to identify topics of interest and began monthly health tutor sessions at the ILC. We are in the process of designing a 12-month health literacy curriculum.

Results: We have completed the first 7 sessions of the curriculum. The topics identified by refugees and community members were: Primary Care vs Emergency Care, Health History and Symptoms, Children's Health, Dental Care, Mental Health, Diabetes, and Sexual Health.

Future directions: We plan to continually reevaluate the applicability and delivery of the topics using focus groups and surveys to assess learner satisfaction with the sessions. In addition, we plan to start mock medical visits where medical trainees will play the role of physicians and refugees as patients. We also intend to package and disseminate these materials for broader use in other communities.

Poster Abstract #6

The United Community Center Hypertension Program: Blood Pressure Control in a Hispanic Community in Milwaukee

Mark Kaeppler, MD, Medicine, MCW; Claire Knaus, MCW; Neil Shah, MD, Medicine, MCW; Matthew Weber, MCW; Inez Pabian, School of Pharmacy, MCW; Margaret Pertzborn, School of Pharmacy, MCW; Al Castro, MS, BSW, United Community Center; Tim Balke, United Community Center; David Gutterman, MD, Medicine, Cardiovascular Center, MCW

Hypertension (HTN) is a major risk factor for myocardial infarction and stroke. HTN occurs more frequently in underserved populations and commonly remains undiagnosed and/or undertreated because it is usually asymptomatic. As such, patients may not seek medical care. We tested the feasibility and compliance of a novel strategy for assessment of blood pressure (BP) within a Hispanic community in Milwaukee. 20 high school students were recruited through a partnership with the United Community Center. They were educated about HTN and proper technique for measuring BP. They were issued automated BP cuffs and 15 students completed measurements of 3 separate BPs on willing participants over a 3-month period. Of the 46 subjects approached, 100% agreed to participate. The mean age of participants was 38 years: 30 were women and 16 were men. The systolic BP among participants averaged 118 ± 15 (mean \pm SD) mm Hg, and diastolic BP was 77 ± 9 mm Hg. 11% of participants (n=5) had a previous diagnosis of HTN. 74% of participants (n=34) reported seeing a doctor within the past year. All high school students reported an improved understanding of HTN and voiced that participation in this program fostered interest in pursuing study or a career pertaining to healthcare delivery. This pilot project demonstrates the feasibility and positive impact of this community-based program, which

successfully recruited minority participants for blood pressure screening and engendered knowledge and interest in medicine among high school students who are underrepresented in medical fields.

Poster Abstract #7

Fetal Magnetocardiography (fMCG): A New Technology to Reduce Stillbirth in Milwaukee

Elham Sadeghi, PhD, Children's Hospital of Wisconsin; Ronald J. Wakai, PhD, University of Wisconsin - Madison; Janette Strasburger, MD, Children's Hospital of Wisconsin; Caroline Nesheim, RN, Children's Hospital of Wisconsin - Delafield Clinic; Gretchen Eckstein, RN, Children's Hospital of Wisconsin

Overview: Cardiac asystole is the final common pathway leading to death in all patients at all ages, but little is actually known about the electrophysiological state of the fetal heart in the weeks leading up to fetal demise. Stillbirth is affecting roughly 1 pregnancy in 100 at 20 weeks or later of pregnancy (24,000 stillbirth babies/year). Nine percent of stillbirths are linked to unrecognized arrhythmia conditions, which, if it was recognized could be treated. Appropriate treatment of the fetal cardiac arrhythmia requires awareness of arrhythmia characteristics and potential associations.

Objective: Fetal Magnetocardiography (fMCG), a non-invasive and safe diagnostic tool, detects and records the natural magnetic signals in the fetal heart. FMCG diagnostic tool provides fetal heart rhythm patterns and variability at 20 weeks of pregnancy which is impossible to detect with current obstetrical diagnostic tools (ultrasound and non-stress test).

Methods: A novel mobile fetal Magnetocardiography (fMCG) Unit was developed by a rural Wisconsin mobile technologies company. To facilitate this NIH-funded project, the rural and academic partners have worked with the City of Delafield's Planning Commission, local management company, Fire Department, and the CHW Delafield Clinic medical staff to establish an fMCG mobile Clinic at Delafield.

Results: Under our previous NIH research protocols almost 900 pregnant women across the country were evaluated in Wisconsin by using fMCG diagnostic tool. Life-threatening fetal arrhythmias were detected which could lead to fetal demise if it was not detected and acted upon.

Conclusion: Abnormal heart rhythm patterns can cause sudden, uncontrollable, dangerous heart rhythm that can lead to fetal death. The fMCG diagnostic tool is a reliable machine to detect heart rhythm patterns.

Poster Abstract #8

PATCH (Providers and Teens Communicating for Health) Program: Successes and Challenges of Implementation in Central Wisconsin

Elizabeth M. Wendt, MPH, MCW-Central WI; Amy Prunuske, PhD, MCW-Central WI; Corina Norrbom, MD, MCW-Central WI; Nicole Thill, MPH, North Central Area Health Education Center; Kimberly Pufahl, The Women's Community, Inc.

Adolescents demonstrate a need for access to sexual health, mental health, and substance use counseling, but many report never having discussed these sensitive health topics with a healthcare provider. Healthcare providers are a reliable source of knowledge, but there is a critical gap in communication with adolescent patients. The PATCH (Providers and Teens Communicating for Health) Program aims to bridge communication gaps between adolescent patients and healthcare providers by facilitating open and honest conversations about sensitive health topics. In collaboration with the North Central and Northern Highlands Area Health Education Centers, The Women's Community, Inc., and local high schools, we were able to implement the PATCH program in Central Wisconsin. To do this, Teen Educators, a diverse group of students selected from local high schools, were hired to lead two types of workshops - one targeting peers and the other healthcare providers - in order to increase utilization of healthcare resources by young people and improve

communication in the provider's office. After participating in a PATCH workshop, providers demonstrated increased knowledge of adolescent concerns and preferences and of best-practices to ensure honest conversations about health history. Their understanding of minors' rights increased significantly. Teens demonstrated greater understanding of the importance of patient/provider communication and increased self-efficacy. Overall, there was significant improvement in the areas of provider and teen knowledge, self-efficacy, and behavioral intentions to seek and provide quality healthcare. Further, providers report actual behavior change in how they interact with teen patients.

Poster Abstract #9

Assessing Parental Engagement in a School Nutrition Education Program

Megan Cory, MCW; David Nelson, PhD, MS, Family and Community Medicine, MCW

"Doctors as Teachers" developed the program Food Doctors in which medical students provide nutritional education to socioeconomically underserved elementary students in Milwaukee. Food Doctors has partnered with two local elementary schools to deliver an established evidence-based nutrition education curriculum to their 3rd grade students. This program successfully teaches students about nutrition, but the practical impact on nutrition behaviors at home has not been studied. Research shows strong parental impact on their child's nutritional habits and the importance of parental involvement in nutrition education programs. Therefore, the objective of this project was to assess parental awareness of Food Doctors, views on nutrition education, and nutritional behaviors as reported by parents and students who participated in Food Doctors. This aim was accomplished by surveying parents and student participants after completion of the Food Doctors program. Students completed a short survey asking if they told their parents about the program and their nutrition related behaviors at home. Parents were also asked to complete a survey assessing their awareness of the program, views of nutrition education, interest in receiving Food Doctors materials, and nutrition related behaviors at home. Additionally, parents received a lesson summary for reference. About half of parents reported awareness of Food Doctors, while 73% of students reported telling their parents about the program. Moreover, results showed discrepancies between the parents and student self-reported health behaviors. In conclusion, we will devise and discuss methods to best engage parents in health education programs based on their communication preferences and analysis of survey results.

Poster Abstract #10

Cultural Sensitivity Education when Working with the Refugee Population of Milwaukee

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Background: According to the ACGME, "residents are expected to demonstrate sensitivity and responsiveness to a diverse patient population...", an important requirement for trainees in a diverse city. Because of the unique experiences of refugees, conventional medical education may not adequately prepare trainees to provide culturally sensitive and effective care to this population.

Objective: To understand trainees' confidence in caring for refugees and address a gap in medical education.

Method: We designed a pilot seminar with presentation and panel discussion covering key aspects of refugee resettlement and health. Medical College of Wisconsin residents and students attended the seminar. Pre- and post- surveys were administered to obtain a baseline assessment and to measure the effect of this education.

Results: 51% of trainees report they have had no dedicated class time covering medical issues unique to immigrants and refugees and only 19% report they are usually confident in providing culturally sensitive care to

refugees. We analyzed pre- and post-seminar survey data using a Wilcoxon signed-rank test. This test helps to rule out that differences in survey responses were due to chance. We found statistically significant increases in trainees' comfort providing medical care to non-English speaking patients ($p=.023$), awareness of the process of refugee resettlement in the US ($p=.025$), awareness of the medical intake procedure refugees undergo upon resettling in the US ($p<.01$), and confidence in providing culturally sensitive care to refugees ($p<.01$).

Conclusion: Exposure to refugee health topics is lacking in medical education. Trainees responded that this pilot seminar benefited their awareness, comfort, and confidence with refugee health care. Seminars provide an opportunity to teach these important concepts, but further research is needed to determine the most effective and standardized modality.

Poster Abstract #11

Engagement of Middle School Students in Lyme Disease Presentation and Tick Testing Analysis

Vang Yang, Biology, University of Wisconsin-Stevens Point; Chao Yang, Biology, University of Wisconsin-Stevens Point; Amarpreet Brar, Biology, University of Wisconsin-Stevens Point; Cole Fisher, College of Pharmacy, University of Minnesota-Duluth; Ryan Ragland, PhD, Biomeme Philadelphia; Amy Prunuske, PhD, Microbiology and Immunology, MCW-Central WI

There has been an increase in tick-borne illnesses including Lyme disease and Anaplasmosis in Wisconsin. Testing ticks for the presence of the pathogens *Borrelia burgdorferi* and *Anaplasma phagocytophilum* can be challenging and time-consuming since it requires individuals to submit ticks to research laboratories. With advances in technology, a portable device developed by Biomeme provides easy access so that more people can conduct tick-testing analysis themselves. The purpose of this research is to engage middle school students in a presentation that include tick testing analysis and the opportunity to learn about Lyme disease prevention strategies. A total of 78 schools in North-Central Wisconsin participated in the outreach presentations delivered by UW-SP undergraduates. The middle school students took photos of the ticks and differentiated the ticks by species, life stage, and sex. These tick samples were collected by the undergraduate students or donated by community members to generate a diverse tick bank. The students used the Biomeme 1-minute field prep extraction kit to extract DNA from the tick and the portable device to confirm the tick species and to determine if the pathogens were present. The majority (66%) of the ticks prepped worked in the experiment and the results were used to generate a map of the risk of Lyme disease. New technologies allow for more community members to contribute to data collection and opportunities to share insights about endemic diseases.

Poster Abstract #12

An Explanation of the Methodology Used to Develop a Systematic Implementation Plan for “Stop the Bleed” in Wisconsin

Thomas Hove, MHA, MPO, Comprehensive Injury Center, MCW; Marshall Beckman, MD, Surgery, MCW; Lewis Somberg, MD, Surgery, MCW; Christopher Davis, MD, MPH, Surgery, MCW

Background: Developed in response to the Sandy Hook Elementary active shooter disaster, “Stop the Bleed” is a national campaign teaching all citizens how to control life-threatening hemorrhage should they be a bystander to injury. Although various implementation plans for the “Stop the Bleed” campaign exist, none discuss the resources necessary to implement the campaign across a large population. In Wisconsin the campaign lacked the coordination necessary for it to be adopted state-wide, resulting in an inefficient effort for the limited number of its champions. The purpose of this report is to explain the methods used in determining the resource requirements and evaluation criteria for the development of a “Stop the Bleed” implementation plan in Wisconsin.

Methods: An Operational Design (OD) methodology was used to develop the implementation plan. This approach involved the creation of measurable goals and multiple lines of effort which provided a comprehensive framework of actions, effects, conditions, and objectives.

Results: The OD process yielded three clearly defined goals: (1) ZERO preventable deaths from hemorrhage; (2) approximately 4.9 million Wisconsin citizens aged 9 years and older are skilled in basic hemorrhage-control techniques; and (3) 329,614 bleeding control kits are distributed throughout primary school classrooms, public spaces, event spaces, ambulances, and in law enforcement vehicles (1:20 kit-to-citizen ratio based on average classroom size and published guidelines). Our approach also produced three lines of effort: Equipping and Educating, Partnering and Policy, and Data Collection. Equipping and Educating was designated as the Center of Gravity, while the remaining lines of effort were deemed to be Supporting Efforts.

Conclusions: A plan with focused goals and unity of effort across numerous stakeholders has the potential for Wisconsin to quickly achieve unmatched “Stop the Bleed” results. Further, “Stop the Bleed” training should decentralize and be championed by local fire, police, and community hospital personnel.

Poster Abstract #13

FarmLink: A community-engaged research approach to addressing food insecurity through a regional food hub

Melissa DeNomie, MS, Family and Community Medicine, MCW; Jeff Joslyn, Feeding America of Eastern Wisconsin; David Nelson, PhD, Family and Community Medicine, MCW; Carletta Rhodes, MBA, Family and Community Medicine, MCW; Leslie Ruffalo, PhD, Family and Community Medicine, MCW; Alex Tyink, Feeding America of Eastern Wisconsin

Introduction: Academic researchers and a food bank (Feeding America Eastern Wisconsin-FAEW) have partnered to establish the FarmLink food hub to foster a more equitable food system by improving access to fresh local produce (and other healthy food) for individuals who rely on emergency hunger relief.

Approach: The partnership aims to transform the food bank’s existing infrastructure into a community food hub to improve the health of communities. This approach requires a shift from traditional food bank practices, aiming to create a business model that focuses on improving availability and affordability of healthy food, and engages key players in innovative ways: local producers demonstrate interest not just in sales/profit, but in altruistic approaches to serving food bank clientele; FAEW is shifting to an approach that prioritizes health benefits of fresh locally grown food over ready availability of processed shelf stable options.

Results: FarmLink is currently a wholesale marketplace virtually connecting local producers with wholesale buyers (schools, hospitals, restaurants, small grocers); food is also available to the food bank hosting FarmLink. We will provide an overview of metrics being captured: data describing food hub producers/buyers; quantities/categories of food distributed through FarmLink; sales trends since FarmLink’s inception; maps demonstrating locations of engaged buyers, producers, and hunger relief agencies.

Discussion: FarmLink aims to innovate emergency food relief processes to more equitably serve food insecure populations who rely on food pantries but receive food that too often lacks nutritional value. FarmLink addresses this inequity through a mutually-beneficial business model connecting buyers, producers, and underserved populations.

Poster Abstract #14**School Based Mental Health Care Positively Impacts Academics for Children in Marginalized Communities**

David Cipriano, PhD, Psychiatry and Behavioral Medicine, MCW; Samuel Maurice, MS, Educational Psychology, University of Wisconsin-Milwaukee; Charles Bauernfeind, MSW, Milwaukee Public Schools; Jayla Watkins, MCW

It is estimated that 20% of U.S. children have a mental illness and close to two-thirds of these do not receive care for it. These numbers are worse for disadvantaged kids. Such health disparities contribute to achievement gaps between middle-income and low-income children. Barriers to accessing mental health care are greater in marginalized communities and include cost/insurance, scheduling, transportation and shortage of providers in the area. School Community Partners for Mental Health (SCPMH) is a public-private partnership which places psychotherapists in schools serving some of Milwaukee's neediest children. The objective of the present study is to explore whether school-based mental health services will impact academic functioning as well as emotional/behavioral functioning. We followed 349 children within the 22 partner schools across academic years 2015-2016 and 2016-2017 and gathered data on their emotional functioning, attendance and disciplinary referrals as well as academic outcomes. Within this number was a group of 131 children we used as a comparison group. Children in the treatment group did indeed show greater improvement on a measure of mental health functioning compared to the control group. Students in the treatment group also had a more positive trend in school related behavior problems than those not in treatment. Finally, children who were receiving the mental health services were more likely to show growth on a standardized measure of math performance than those in the comparison group. School-based mental health services can reduce accessibility barriers and level the playing field in terms of well-being and achievement.

Poster Abstract #15**LENA Start Marathon County: A Community Project to Close Achievement Gaps Before They Start**

Corina Norrbom, MD, MCW-Central WI and Wisconsin Institute for Public Policy & Service; Amy Prunuske, PhD, MCW-Central WI; Nicole Tank, Children's Hospital of Wisconsin Community Services

Background: Exposure to language during early childhood is important in brain development and can be used to predict future literacy skills and school success. Parents and caregivers are key in creating optimal early language learning environments. A local workforce shortage inspired community action and investment in parents and young children. LENA Start is a parent group model that utilizes LENA's "talk pedometer" to support interventions that improve early language exposure.

Objectives: Advance language development and early literacy skills in children before age 3; improve the quantity of talk and quality of parent-child interactions; promote parent engagement in the community and in early-childhood education programs; support employees as parents, thereby attracting and retaining productive workers locally.

Method: 4 community partners emerged to implement LENA Start Marathon County: Wisconsin Institute for Public Policy and Service; Children's Hospital of Wisconsin Community Services; Marathon County Public Library; MCW-CW.

Results: In year one, 60 families participated in the 13-week program. 49 met graduation requirements, an 82% program completion rate. Families whose first recording fell below the 50th percentile showed the greatest gains. Language development gains of 1.5 months per 1 month were noted. Families reported increased reading minutes and positive influence on interactive behaviors.

Conclusion: Pilot year results are promising in terms of parent and child benefits and in the development of an expanding public-private community partnership to close achievement gaps by supporting parents and their

young children through language. Further quantification of data will follow as the number of participant families increases.

Poster Abstract #16

The Effects of a Community Awareness Event Entitled: “Dare To Know: The Truth About Vaping, Juuling... And Your Child” Organized by Multiple Community-Based Organizations

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Over the past few years, there has been an upward trend of vaping and e-cigarette use in children in both middle and high school. Multiple concerned community groups came together to plan and host an evening event at the local high school which focused on the effects of vaping in our youth. These groups include an internist and Parent Teacher Organization Board member, the local school district’s Parent Teacher Organization and the local public health department. Since this is a public health problem in many other surrounding communities as well, we collaborated with the Tobacco Free Suburban Milwaukee and Ozaukee County, Washington and Ozaukee County Department of Public Health, Starting Point, Inc., and the Wellness Committee at the Mequon Thiensville School District. All had representatives and formed a committee that met regularly to plan the event. The committee integrated other partners such as Children’s Hospital of Wisconsin and Rogers Behavioral Health within the Health Resource Fair where a “mock teen bedroom” was set up for parents to see how children can hide devices, e-cigarettes, and other substances. A keynote speaker who specializes in Pediatric Adolescent Medicine from Children’s Hospital of Wisconsin gave a presentation about the facts of vaping and e-cigarette use. This was followed by a break out session for the students with peer-based discussion in a question/answer format and a separate panel discussion for the parents with the keynote speaker, addiction specialist, public health advocate, and pediatric pulmonologist in a questions/answer format. Surveys were distributed afterward to evaluate if the event raised awareness and various questions based on knowledge of vaping in general. The results of the survey will be shared.

Poster Abstract #17

Improving Immunization and Health Literacy Through a Community-Based Approach

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Background: Immunization coverage rates in Milwaukee have been documented to be as low as 45% for the age-appropriate series, significantly below the Healthy People 2020 target of 80%. CHIMC (Community Health Improvement in Milwaukee’s Children) Project was established in 2005, guided by CBPR principles, to address immunization disparities in Milwaukee, while following a Knowledge-To-Action Framework.

Methods: CBPR approach guided the development of health literacy materials in the Project, and Wisconsin Immunization Registry was used to track immunization status. Community residents were involved in all aspects of the research design and intervention. Modalities used to enhance immunization health literacy: 1) CHIMC-TCI! Toolkit; 2) social marketing campaign; and 3) intervention using the theory of planned behavior. Results 1,651 parents/caregivers were enrolled in dissemination phases (n=1,335 Black cohort, n=316 Hispanic cohort). A statistically significant increase in WIR-verified UTD immunization rates was seen from baseline to project completion for children in the Black cohort (Ages 19-35 mos. Pre: 63%; Post: 70%; p<0.001, and 36-59 mos. Pre: 62%; Post: 86%; p<0.001). The Hispanic cohort experienced an increase in UTD immunization status

from baseline rates (Ages 19-35 mos. Pre: 63-70%; Post: 75-77%). Data in the Hispanic cohort was not statistically significant, likely due to limited size of population enrolled and shorter time period of study. Both cohorts demonstrated statistically significant increases in health literacy, immunization knowledge, and positive relationship with healthcare providers.

Conclusions: A culturally-tailored CBPR approach, using a multilayered intervention, was effective at decreasing immunization disparities and increasing health literacy in Black and Hispanic populations.

Poster Abstract #18

The acceptance of teleophthalmology in community health settings in Milwaukee

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Introduction: The TeleEye Health Collaborative is a partnership between the Milwaukee Health Department, UCC, MCW and local institutions that brings free diabetic retinal screenings to disadvantaged communities in Milwaukee. This combines telemedicine, community-based screening, and bilingual community-based personnel to break down barriers to care.

Methods: Satisfaction surveys were given to participants after completing the retinal screening process in either Spanish or English. Surveys were completed by 400 participants and input into an Excel spread sheet where 8 multiple choice responses were analyzed. There were three free response questions that were input and general themes and common responses were identified.

Results: 83% of the responses strongly agreed that they were comfortable during the session and that location was convenient. 80% strongly agreed they would use telemedicine again and they would recommend this to their friends and families. 66% strongly agreed that telemedicine helped them get more involved with their health. 50% strongly agreed that it helped having bilingual/Spanish staff do the screening. 20% of the respondents strongly agreed that privacy was a concern, while 55% were not concerned with their privacy at all.

Conclusions: The screenings had an overwhelmingly positive response and high acceptance. Surveys show that bringing retinal screenings to communities with bilingual staff allows for participants to overcome language, time, and cultural barriers. Participants were also more likely to be engaged with their health. These findings show that teleophthalmology in community settings by community workforce may lead to improved eye screening rates and better health outcomes.

Poster Abstract #19

Evaluating the Long-Term Impact of a Health Care Pipeline Program at James Madison Academic Campus

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Background: The demographics of healthcare professionals do not reflect those of the general population. Certain ethnic and racial groups are considered underrepresented in medicine (URM). Cultural barriers between provider and patient can lead to care disparities and poorer outcomes for patients. The Youth Health Service Corps (YHSC) program at James Madison Academic Campus (JMAC) is a community partnership between the Medical College of Wisconsin (MCW), JMAC and the Milwaukee Area Health Education Center (AHEC) that aims to foster interest in healthcare careers in URM high school students. Each year, MCW medical students design and deliver monthly sessions related to health careers. Since 2010, this partnership has involved over 50 JMAC students and 13 medical student leaders.

Objective: To determine the long-term impact of the YHSC program on participants.

Method: A survey was designed and sent to 55 past YHSC members to determine how involvement in YHSC affected these students' career paths. Information was also gathered from publicly available social media websites.

Results: Data was collected from a total of 18 participants (33%). 8 responded to the survey while 10 had information publicly available on social media. Of those 18, 83% went to college and 50% pursued healthcare careers. 83% of completed surveys reported that involvement in YHSC strengthened or solidified their plans of going into healthcare and 83% agree or strongly agree that YHSC had a positive impact on their lives.

Conclusions: Though limited, the available data point to YHSC making an impact on students' lives and career paths. To achieve the goal of increasing healthcare interest in underrepresented minorities, the YHSC program will continue with JMAC and MCW student involvement and yearly re-evaluation to improve the program.

Poster Abstract #20

Protocol of the Prevent Anal Cancer Study of Self-Swabbing and Novel Biomarkers

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Men who have sex with men (MSM), especially MSM who are HIV-positive, are at increased risk for anal cancer which is primarily caused by persistent human papillomavirus (HPV) infection. Evolving anal cancer screening recommendations may involve molecular or cytological markers that identify men at increased risk of cancer. These men can then be assessed by high-resolution anoscopy (HRA)-directed biopsies. It is possible men may be more likely to screen using home-based self-swabbing of anal canal exfoliated cells compared to clinic-based swabbing; therefore, we will test compliance with home-based versus clinic-based swabbing among 400 Milwaukee MSM and transwomen. Participants will provide swabs at 0 and 12 months and then provide HRA-directed biopsies. Swab-collected specimens will be used to assess two biomarkers for anal precancers: persistent HPV infection and host DNA methylation + HPV DNA methylation). Computer-assisted self-interviews will collect demographic and experiential data from study participants. A community advisory board comprised of Milwaukee gay and bisexual men and transwomen will provide guidance on the conduct of the study including recruitment, self-swab kit design and interpretation of results. Study findings will increase knowledge about anal cancer screening and help contribute to reduced morbidity and mortality from anal cancer.

Poster Abstract #21

Improving colposcopy adherence through increased understanding of barriers and facilitators

Leslie Ruffalo, PhD, Family and Community Medicine, MCW; Maria Barker, Planned Parenthood of Wisconsin

Introduction: 12,000 women are diagnosed annually with cervical cancer, and 4,000 will ultimately die from the disease. Once a leading cause of death for American women, improved screening has reduced cervical cancer mortality by more than 50%. Regular Papinicolaou ("pap") tests are a crucial first step in the screening process, with abnormal results often indicating a need for additional evaluation in the form of a colposcopy. Despite the effectiveness of this process in detecting/preventing cervical cancer, women often fail to obtain recommended colposcopies; in 2016, at the clinical sites participating in this project, fewer than 50% of women obtained

physician-recommended colposcopies. The issue is compounded by ethnic disparities in cervical cancer prevention, screening, diagnosis, treatment and survival. To better understand the topic, researchers partnered with Planned Parenthood of Wisconsin and a family medicine clinic to conduct a community-engaged research project to explore barriers/facilitators to colposcopy. Researchers engaged a community advisory board to provide multi-sector insights.

Methods: We recruited patients according to adherence/nonadherence to past colposcopy recommendations. We conducted interviews (n=41) and used open coding to generate grounded theory related to barriers/facilitators.

Results: Identified themes were mapped to the social ecological framework for health. Women reported facilitators/barriers at individual, interpersonal, organizational, community, and policy levels. Recommendations for improved adherence include adjustments to clinical practices and improved communication.

Discussion: Cervical cancer is a preventable cancer yet many women fail to adhere to colposcopy recommendations. Insights from interviews, and discussion with the project's community advisory board have informed recommendations to improve adherence.

Poster Abstract #22

Health Advocacy in Pregnancy & Infancy (HAPI): Providing Perinatal Education and Advocacy to Homeless Pregnant Women Through a Patient-Centered Community-Engaged Partnership

Tegan Ake, MCW; Melissa Stagg, MCW; Ashton Fitzgerald, MCW; Stefan Kostelyna, MCW; Lindsay Howard, MCW; Emily Farias, MCW; Sabina Diehr, MD, Family and Community Medicine, MCW

Introduction: Women who experience homelessness during pregnancy have poorer birth outcomes than the general population. The results of a previous needs assessment informed the design of the Health Advocacy in Pregnancy and Infancy Program (HAPI), a patient-centered service-learning program for medical students and homeless pregnant women.

Objective: Implement a service-learning program consisting of educational modules on perinatal health and a student partnership program evaluated by participant debriefing surveys, mother retention, and health of infants.

Methods: One-hour education modules including topics on nutrition, mental health, infant care, breastfeeding, and contraception were taught weekly at a Milwaukee homeless shelter. Debriefing forms were completed following each session evaluating participant satisfaction and suggestions for improvements. Mothers were invited to participate in a 1:1 student partnership program where 4 mother/infant health questionnaires were completed from pregnancy through age one. The partnership program was evaluated by mother retention and health of infants.

Results: Following the 26 sessions presented, 74 unique analyzable comments were provided. Of those comments, 85.2% were positive and 26.2% included requests for additional information or educational materials with several themes identified. Six women joined the student partnership program and two women remain engaged, have completed appropriate health questionnaires and have delivered three healthy infants.

Conclusion: The HAPI program has provided well-received education on perinatal health with actionable areas for improvement in the future. The student partnership welcomed three healthy infants, however, retention in the student partnership program continues to be a challenge with reliable communication means as a significant barrier to be addressed.

Poster Abstract #23**MCW Community Partnership Development Between Medical Students and Individuals with Intellectual and Developmental Disabilities**

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Background: The MCW Friends for Special Needs (FFSN) student organization aims to strengthen medical education of community members who have intellectual and developmental disabilities (IDD). It is one of many such organizations working to develop and integrate robust cognitive disability sensitivity and engagement content into the nationwide medical school curriculum; however, implementation of such engagement in the local community is lacking. Therefore, in 2017 FFSN initiated community-academic partnerships with the Down Syndrome Association of Wisconsin (DSAW) and Autism Society of Southeastern Wisconsin (ASSEW).

Methods: FFSN consulted with DSAW and ASSEW leadership to establish interest and conduct a needs assessment for desired programming. FFSN worked with DSAW to develop a health maintenance education and clinical skills practice workshop for persons with Down Syndrome. Additionally, medical students volunteer in the DSAW Young Leaders Program. Collaboration with ASSEW culminated in a socialization and self-development Game-Night for persons with Autism.

Results: 2 DSAW workshops were held in 2017-2018, with a combined attendance of 13 self-advocates (ages 18-33), 11 parent representatives, and 33 medical students. 10 self-advocates and 2-4 medical students regularly attend the Young Leaders Program. 21 teenage community members and 15 medical students attended the ASSEW Game-Night.

Conclusion: Our pilot provided engagement between community members with IDD and MCW medical students. Attendance at events has been favorable, with repeat attendance by both community members with IDD and medical students. We are currently surveying medical students and community members regarding satisfaction, skill ascertainment, and further use of engagement strategies learned in the facilitated sessions.

Poster Abstract #24**"Oh, the Things You Can Do that Are Good for You!" Parents Learn about Positive Parenting While Their Children Learn about Health from Pediatric Residents**

Melissa Chiu, MD, MCW Affiliated Hospitals; John Schimek, MD, MCW Affiliated Hospitals; Lauren Titus, MD, MCW Affiliated Hospitals; Karen Chao, MD, MCW Affiliated Hospitals; Constance Gundacker, MD, MPH, Pediatrics, MCW/Children's Hospital of Wisconsin; John Meurer, MD, Institute for Health & Equity, MCW; Lisa Zetley, MD, Pediatrics, MCW

Background: Triple P is an evidence-based Positive Parenting Program that provides parenting strategies to prevent and address behavioral and social problems in children under age 12 years. Children's Hospital of Wisconsin provides this program to greater Milwaukee. The program is ongoing in suburban communities; however, there have been challenges implementing the program within Milwaukee. We hypothesized lack of childcare to be one contributing barrier to parents not participating in Triple P seminars.

Objective: To provide age-appropriate health activities for children of Triple P participants.

Method: While parents participated in Triple P, pediatric residents provided activities for their children based on curriculum developed from Wisconsin's Department of Public Instruction guidelines for health education. Activities were focused on helping children "develop age-appropriate cognitive understanding of health

promotion concepts to improve health behaviors.” Activities included introducing medical equipment used in pediatric offices, discussing germ and infection concepts, reviewing body parts and their function, and learning about nutrition according to MyPlate standards.

Results: Seventeen Milwaukee parents participated in the Triple P pilot session at COA Youth and Family Centers; their 12 children participated in the health education program. Parent reception was overwhelmingly positive, and more sessions have been requested. Children enjoyed the health education.

Conclusion: Health stations run by volunteer pediatric residents provide a safe, affordable, and educational option in lieu of traditional childcare for parents interested in participating in Triple P. Further research is needed to determine the effect of health activities and other barriers to attending seminars.

Poster Abstract #25

The Impact of Cadaver Education on High School Anatomy Students in Southeastern Wisconsin

Andrew Kleven, MCW; Briana Rodriguez, MCW; Logan Andryk, MCW; Andrea Moyer, MCW; Kevin Pinney, MCW; Justin Chen, MCW; Allison McCurdy, MCW; Jeffery Houck, Nicolet High School; Todd Hoagland, PhD, Cell Biology, Neurobiology and Anatomy, MCW

The MCW Cadavers as Educators (CAE) program offers high school students from Southeastern Wisconsin a unique opportunity to supplement their anatomy curriculum with a visit to the gross anatomy laboratory at MCW. The program, originally developed in collaboration with high school students and faculty, is interactive, with students rotating through 6 different stations where they review gross anatomy specimens, reinforce anatomical learning, and discuss important health-related behaviors. We host 6-8 events per year, typically with 100+ high school students in attendance at each event. On February 14, 2019, 105 students from Nicolet High School and the Kettle Moraine High School of Health Sciences attended a CAE event and were subsequently asked about their experience via an online survey. Of these 105 students, 80% (84) agreed that their experience made them more interested in a future career in healthcare. Additionally, 92% (97) agreed that their experience enhanced their high school anatomy curricula, and 88% (92) indicated that their experience helped them learn more about ways to improve their health. These figures indicate that a large majority of these students considered CAE to be a valuable experience which supplemented their high school anatomy curricula, promoted excitement surrounding healthcare careers, and reinforced positive health-related behaviors. The CAE program has been a successful community outreach program that has been continuously running since 2012, and we estimate that 4,000 high school students have attended an event. Additionally, at least one student who attended a CAE event in 2012 is now a medical student at MCW!

Poster Abstract #26

Parent perspectives on a 5-year school-based physical activity intervention

David Nelson, PhD, Family and Community Medicine, MCW; Melissa DeNomie, MS, Family and Community Medicine, MCW; Marie Wolff, PhD, Family and Community Medicine, MCW; Paula Silha, Health La Crosse County

Background: A need exists for increased physical activity as youth and adults fall short of CDC recommendations. This project partners researchers, a local health department, a school district, and Head Start sites to implement a 5-year project to increase physical activity among students and staff in La Crosse, Wisconsin. The goal is to create a community-wide culture of physical activity.

Methods: To guide this project and future projects, the team conducted a listening session with parents. Attendees were members of the district parent advisory committee and represented schools at all levels.

Results: The following themes were identified: 1) physical activity (during/outside the school day) is prioritized by parents not because of BMI, weight, fitness, athletic ability, but for its impact on behavior, conduct, academics, socialization, mental health; 2) families embrace opportunities to be active together and would welcome school/community programming promoting family-based physical activity; 3) parents are keenly aware of trends toward decreased recess/gym time during children's school days; 4) in light of reduced recess/gym, parents request that schools/teachers recognize that some students need opportunities for movement within the classroom, and that nontraditional classroom accommodations might result in improved conduct by students who are unable to remain seated for extended time periods.

Conclusions: Parents supported the physical activity program and recognized the importance of daily physical activity. Weight management/loss and fitness were not mentioned as reasons for physical activity; instead parents valued physical activity for its ability to improve conduct, support socialization, promote family cohesiveness, and positively affect mental health.

Poster Abstract #27

Development and Distribution of School-Based Concussion Curriculum for Wisconsin Schools

Grace M. Glowniak, BS, MCW; Danny Thomas, MD, MPH, Pediatrics - Emergency Medicine, MCW/Children's Hospital of Wisconsin

Overview: There has been an increased awareness of concussions given the high prevalence of the injury and the potential for lifelong complications. A population of particular concern is students. The historical treatment has been avoidance of all mental stimulation. However, this can cause more harm in the long run. Given these concerns, experts have created Return to Learn (RTL) guidelines, which provide guidance for students to return to the classroom after a concussion.

Objective: To increase awareness about RTL in Wisconsin schools to ensure the best possible recovery after a child receives a concussion.

Methods: Local public schools from Children's Hospital of Wisconsin's direct catchment area were surveyed via phone calls to ask if information about concussion management in the classroom is something that they would find useful, and if so, what information would they want to see included. Next, many RTL educational resources were reviewed, including the CDC's "Heads Up" initiative and the Rocky Mountain Sports Institute "Reduce Educate Accommodate Pace" (REAP) program, before it was settled to use "Get Schooled On Concussions" (GSOC) as the primary resource to guide the education. We developed an RTL curriculum that summarized the important recommendations in a single document that is easily distributable and readable. This curriculum was emailed to 2132 Wisconsin public schools, grades K-12.

Results: 67 schools responded, 67 found the information helpful, and 42 stated they planned on implementing changes at his/her school(s) because of the presentation.

Discussion: This suggests that there is a need for RTL information in schools and providing this information may directly improve patient care. However, this also suggests that emailing schools is not the most effective way to distribute information given the low response rate, so further investigation into the best methods for contacting schools is necessary.

Poster Abstract #28**The Captain John D. Mason Veteran Peer Outreach Program: A Veteran-Engaged Program to Increase Healthcare Access in the Wisconsin Veteran Community**

Sadie Larsen, PhD, Psychiatry and Behavioral Medicine, MCW/Milwaukee VA Medical Center; Steve Heiges, MD, PMP, CPS, Psychiatry and Behavioral Medicine, MCW; Jon Lehrmann, MD, Psychiatry and Behavioral Medicine, MCW; Bert Berger, PhD, Milwaukee VA Medical Center; Bob Huberty, LCSW, Psychiatry and Behavioral Medicine, MCW; Susan Smykal, Psychiatry and Behavioral Medicine, MCW; Mike Orban, HonDH, orbanfoundationforveterans.org; Mark Flower, Veterans Health Coalition; Jon Christensen, MS, LPC, CSAC, SAP, CEAP, Healing Warrior Hearts, MCW Warrior Partnership

Background: Veterans comprise a disproportionate number of US suicide deaths. Approximately 70% of Veterans who die by suicide do not regularly use VA healthcare. Only 28% of Veterans use VA healthcare; many Veterans not using VA healthcare either are not aware of – or do not know how to apply for – VA health care benefits (National Veterans Survey, 2010). Yet the VA does not focus on outreach or advertising. Thus, there is a need to help Veterans connect with VA healthcare.

Objective: In 2018, MCW and VA Milwaukee collaborated to create a peer specialist outreach program to address the crisis of Veteran suicides among non-VA-utilizers.

Methods: The program focuses on outreach, specifically employing a Veteran peer specialist to best engage a sometimes hard-to-reach Veteran population. Though the VA has started to employ peer specialists, this was the first ever peer hired by MCW.

Results: Now in its second quarter, the program has focused on creating a network of peers and Veteran-run organizations to mobilize in helping Veterans access VA healthcare. This also involved creating an advisory board composed of Veterans engaged in the local community and identifying Veteran collaborators who can expand the reach of the program's message. The peer specialist has started to connect individual Veterans with VA healthcare, and the focus in the 3rd and 4th quarters of the project will be in engaging individual Veterans.

Conclusion: This novel project engages a unique model of outreach, utilizing the lived expertise of community Veterans to determine outreach practices. This poster will describe lessons learned and practice implications.

Poster Abstract #29**Community-Based Participatory Research: Access to Diagnosis and Services for Parents of Adult Children with Autism Spectrum Disorders**

Susan A. Bonis, PhD, RN, College of Nursing, University of Wisconsin-Milwaukee; Emily Levine, BA, Autism Society of Southeastern Wisconsin; Julie Quigley, MA, Autism Society of Southeastern Wisconsin; Kathleen Hahn, Autism Society of Southeastern Wisconsin

Background: One in 59 children are diagnosed with autism spectrum disorder (ASD). Their parents measure higher levels of stress than other groups of parents. This stress is primarily attributed to their child's challenging behaviors. However, little is known about how these challenges vary and affect parents as the child transitions to adulthood.

Purpose: Three members of the Autism Society of Southeastern Wisconsin comprised a parent advisory group and were involved in development of the research question: What are the experiences for parents accessing a diagnosis and services for their child with autism spectrum disorder?

Method: The advisors are parents of children with ASD and were involved in all aspects of the study except for interviews and data analysis. Challenges were faced with parents' ability to attend focus groups due to behavioral and care issues for their children. The parent advisory group recommended face-to-face interviews with a telephone interview option. The final sample included an ethnically, educationally and

socioeconomically diverse representation of 24 parents of children with ASD. Of 24 participants, 22 were mothers and 2 were fathers. Both fathers participated in interviews with their wives.

Results: Thematic analysis revealed 8 themes related to their adult children that pose as risk factors for parent stress self-management: Violence, Transition, Diagnosis, Socialization, Expectations, Protected Independent Living, Education, and Employment.

Conclusion and Implications: Parents across all ethnic, educational, and socioeconomic backgrounds shared similar challenges. However, little is known about these challenges. Through reflecting on their experiences, several of the parents have been empowered to seek strategies to manage violence, socialization, expectations, protected independents living and employment for their children. Further research is needed to find evidence-based approaches to affect the identified themes, parental stress self-management, improve quality of life for adults with ASD, and lessen the burden of caregiving and support.

Poster Abstract #30

Community & Internet-Based Development of the Spanish Language Version of the Injured Trauma Survivor Screen (ITSS)

Amber M. Brandolino, BA, Surgery, MCW; Joshua C. Hunt, PhD, Surgery, MCW; Lucas Torres, PhD, Psychology, Marquette University; Terri A. deRoon-Cassini, PhD, Surgery, MCW

Introduction: Despite significant Spanish-speaker representation in the US population, healthcare barriers like lack of language-appropriate resources persist. One remedy is translating existing English resources in a culturally-meaningful way. This translation study targets the 9-item Injured Trauma Survivor Screen (ITSS) which assesses for posttraumatic stress disorder (PTSD) and depression risk after traumatic injury.

Methods: Urban community members of bilingual, LEP or Spanish-only status completed the translation at a local clinic. A linguistically similar group from Amazon's MTurk survey platform also translated the screen. The clinic outcomes manager decided appropriate dropbox location and timeframe. Researchers were otherwise hands-off to not interfere with clinic flow or overburden employees or clientele. Study design accepted partial translations to allow for differences in education level and degrees of bilingualism. Spanish translations were assessed for common wording per ITSS question. Translations were looked at using pattern and in-vivo coding. This meant that the analysis used the wording of the participants and not that of the researchers. The most common wording was selected. The Spanish version was then back translated to English with 5 pre-determined bilingual individuals from the community to discover areas of disagreement between the two languages.

Results: Only two changes were made following the back translations before finalizing the ITSS-S. This work revealed that this methodology represents a way to approach future translation work with pre-existing clinical screeners. This screen provides consistency in clinical care and the opportunity for use at other trauma centers.

Conclusion: The ITSS-S(panish) constitutes a strong translation from the Spanish-speaking community.

Poster Abstract #31

Development and implementation of a community-based, pharmacist-led health screening service in Milwaukee

Michael DeBisschop, PharmD, School of Pharmacy, MCW; David Ombengi, PharmD, MBA, MPH, School of Pharmacy, MCW; Kelly Cornelius, MS, School of Pharmacy, MCW

Background: The MCW School of Pharmacy created a partnership with Next Door, an early childhood education center in an underserved neighborhood of Milwaukee, with the goal of increasing community members' access to health care and impacting chronic diseases. Pharmacists have the training and ability to perform physical

assessment, conduct screening tests, and educate patients on the prevention and treatment of many disease states.

Objective: Develop a community-based, pharmacist-led health screening program in an underserved area of Milwaukee to increase health care access and awareness of common chronic diseases.

Methods: School of Pharmacy faculty and staff engaged with Next Door staff and community members to determine the health care screening services that would most benefit the community. Through listening sessions, one-on-one meetings, and review of existing literature, it was initially determined to screen and educate participants for four conditions: obesity, diabetes, high cholesterol, and high blood pressure. Referral partnerships were developed with free and low-cost clinics within the community for participants needing further care. Collaborations are also being developed with various community health resources to strengthen ties within this area.

Results: The screening service began at Next Door in March 2019. This poster will provide details on the planning and implementation of the service. Over the next several years, long-term economic, humanistic and clinical outcomes in the participants will be assessed.

Conclusion: Pharmacists can work to impact the health of a community in ways other than traditional dispensing roles through screening, education, and referral networks.

Poster Abstract #32

Overcoming Individual and Institutional Barriers to Care in a Tele-Ophthalmology Screening Program

Andrew Zolot, MCW; Nathalie Abenoza, MCW; Jenna Maurer, MCW; Velinka Medic, MS, Ophthalmology, MCW; Judy Kim, MD, Ophthalmology, MCW; Kayla Davis, MCW; Jay Romant, RN, Milwaukee Health Department; Al Castro, MS, United Community Center

While much is known about the effectiveness of tele-ophthalmology, less has been studied regarding the successes of follow up care once diabetic retinopathy or other abnormalities have been detected. We assessed adherence and barriers to recommended diabetic eye care and the issues encountered by case managers in the Tele-Eye Health Diabetic Retinopathy Screening Program. This program was created in close collaboration with the United Community Center and Milwaukee Health Dept from inception and through every stage of the program's development. UCC staff, Milwaukee Public Health nurses and other community volunteers worked with Eye Institute staff and medical students who provided guidance and image interpretation. This program brings retinal screenings to community organizations and events through the use of mobile camera. Trained community members and MHD nurses provided free screening for over 1200 participants with and without diabetes during an eighteen-month period. Images were analyzed for retinal disease and results were sent out. Those with urgent findings received calls from MHD nurses or Spanish language fluent UCC staff members to coordinate care. Call logs were reviewed to identify follow up status, required interventions, and barriers to care. Seventy-six participants required follow up care within 3 months. Cited barriers included lack of insurance (32%), overwhelming health issues (7%), language barriers (30%), and difficulty scheduling appointments. Thirty of these participants were documented as having seen an eye care specialist and many others saw their PCP for diabetes management. Case managers called 62 (82%) of these participants more than once, but 19 were never contacted despite multiple attempts. 24 (32%) of those requiring follow up did not have insurance. Culturally appropriate screening, personalized education, and extensive case management is needed to ensure participants follow eye care recommendations. Even with coordination, only 40% were documented as having seen an eye care specialist within three months.

Poster Abstract #33

Residents Engaged in Data for Amani

Milton Byers, Safe & Sound; Kathleen J. Pritchard, PhD, Data You Can Use, Inc.; Bro. RiceBey, Amani United; Theresa Scott, Safe & Sound

Amani means “peace” in Swahili. It is the aspirational name given by residents to a Milwaukee neighborhood that is too often characterized by poverty and violence. This poster session is about a place-based effort to engage residents’ voice in plans to reduce crime and strengthen the Amani neighborhood. It is a cross-sector effort involving residents, Amani United, the Police Department, the Dominican Center, Safe & Sound, local churches, the District Attorney’s office, LISC- Milwaukee and others. Data You Can Use serves as the research partner and gathered neighborhood data and developed a “data quiz” about neighborhood conditions as a knowledge-leveraging and engagement tool among partners and residents. “Neighborhood Ambassadors” helped in the creation of a resident survey, pre-tested the instrument and were trained (and paid) to administer the survey door-to-door. Crime trends and hot spots data were paired with the resident-conducted survey about public safety and police legitimacy. Unexpectedly, the survey found that residents felt secure with police presence in the neighborhood, were willing to call police to report crime, and overall, they were more concerned about traffic safety than violent crime. Community organizers shared the survey results back in “data chats” and offered evidence-based strategies to reduce violent crime. Responding both to survey data and the mapping of traffic accidents, the residents organized the production and distribution of slow-down signs that were placed at the intersections demonstrated to be most dangerous and plan to monitor change. Lessons in using data as a community engagement tool are offered.

Poster Abstract #34

Advancing Behavioral Health Wisconsin: A Flexible and Coalition-driven Community-Academic Partnership

Michelle Broaddus, PhD, Psychiatry and Behavioral Medicine, MCW

Advancing Behavioral Health Wisconsin is a strategic initiative to improve behavioral health across the state at a population level. It is funded by the Advancing a Healthier Wisconsin (AHW) Endowment and represents an eight-year investment in sustainable statewide impact.

Overview: Advancing Behavioral Health Wisconsin represents a unique community-academic partnership. Ten Community Coalitions across the state have been created, led by a Coordinator/Director and assisted by a Community Evaluator. Each coalition partners with an MCW-based Academic Partner Team consisting of five faculty members and a program manager. These partnerships were started in 2016 with the creation of a Learning Community of Coalition Staff and the Academic Partner Team, aimed at developing structural strategies to improve behavioral health. In 2017 coalitions began implementation of these strategies, which will continue into 2022. After the implementation phase, there will also be a 2-year phase dedicated to ensuring sustainability and dissemination of successful strategies.

Objective: We will describe how putting coalitions “in the driver’s seat” resulted in a flexible community-academic partnership driven by each coalition’s specific needs.

Methods: An implementation log documents the interactions between coalition staff and the Academic Partner Team, as well as Coalitions’ successes, challenges, and lessons learned.

Results: Using the implementation log, we provide examples of how these community-academic partnerships have functioned, including: extensive collaboration on survey design, collection of existing measures, access to and training in online surveying platforms (such as REDCap) that allow for more advanced data collection efforts than previous platforms (e.g., surveymonkey), statistical analysis of yearly trends in YRBS data, training in advanced statistical software (such as SPSS) for analysis of results and refinement of measures, training in

basic qualitative coding and analysis, exposure to systems change models and development of interview guides to capture qualitative data to map systems, and ethical considerations in human subjects research.

Poster Abstract #35

The Art of Coping: Using the arts to increase physical activity among young men with Spinal Cord Injury due to gun violence

Moriah A. Iverson, MS, Physical Medicine and Rehabilitation, MCW; Shalina S. Ali, True Skool; Harvey Ross, Independence First; Paul Kjelland, ReciproCITY; Michelle Wesline, RN, Froedtert Hospital; Fidel Verdin, True Skool; Merle Orr, MD, Physical Medicine and Rehabilitation, MCW

Spinal cord injury (SCI) stemming from gun violence primarily affects young Black men in economically distressed neighborhoods, who also experience post-injury health disparities. Physical activity can narrow health disparities among individuals with SCI but there are currently no resources specifically designed to assist this population in overcoming barriers to participation. Our study seeks to modify an existing trauma informed class (Art of Coping) to increase physical activity among Black men with SCI due to gun violence. 5 Black men ages 18-35 with SCI due to gun violence were recruited from a Level 1 trauma center. The intervention is a 2-hour, 8-week class at a community organization including guided discussion, physical activity education, and art creation. The Physical Activity Recall Assessment for persons with Spinal Cord Injury (PARA-SCI) was given at baseline, at the last class, and at 1- and 2-months post-intervention. Fitbits tracked cardio fitness and active minutes throughout intervention. Intervention is ongoing. On average, participants reported <20 minutes of physical activity/day at baseline. Fitbit compliance is 100% to date. Participants expressed trusting the study team, including referring to the community partner location as “like home”. This study has revealed limited physical activity at baseline, with physical activity outcomes pending completion. Participants report this intervention “is life-changing” and that they have “never felt heard in this way.” These qualitative findings reveal critical needs to respect this population as informed partners in healthcare and demonstrates the essential role community partners play innovating wellness in populations historically marginalized in the medical community.

Poster Abstract #36

Proyecto A.L.M.A. (Apoyo, Liderazgo, Movimiento, Acción): Engaging Latino Men in Preventative Violence Frameworks

Christian Hernandez, MCW; Mariana Rodriguez, UMOS Latina Resource Center; Carmen Maysonet, UMOS Latina Resource Center; Alejandro Torres, MCW; Constance Gundacker, MD, MPH, Pediatrics, MCW

Introduction: 1/3 of U.S. women are victims of intimate-partner violence (IPV), with men being the major perpetrators. Latina immigrants have increased vulnerability due to reluctance in using formal services, such as health care or legal systems. Current interventions focus on remediating men who have already perpetrated, with limited to no programs targeting men prior to violent acts. There is a need for culturally-relevant primary IPV prevention models that address unique risk factors for Latino men.

Objective: To develop a culturally relevant IPV prevention curriculum for Latino men.

Methods: In collaboration with United Migrant Opportunity Services (UMOS) Latina Resource Center in Milwaukee, Wisconsin, a primary IPV prevention curriculum targeting Latino men was developed. This curriculum, Proyecto A.L.M.A. (Apoyo, Liderazgo, Movimiento, Accion) was developed from participant feedback and combinatory literature reviews from models such as: Reaching Men: Strategies for Preventing Sexist Attitudes, Behaviors, and Violence; Asi Aprendimos A Ser Hombres; and Hombres Trabajando con Hombres.

Results: Pilot testing of the curriculum occurred in 2018. Ten 2.5-hour sessions of culturally-relevant IPV prevention education were conducted with topics such as: Power and Control; Gender Roles in Latino Culture; Relationship-Building and Ally-ship in Violence Prevention; Role-Model Fathering; Supporting Victims; and Bystander Intervention. 16 men participated in the pilot curriculum, with high participant satisfaction (all sessions rated 4.5-5 on 5-point scale (5=excellent, 1=poor)).

Conclusions: Through collaboration with UMOS, we successfully created an IPV prevention curriculum for Latino men. Next steps include examining how the curriculum impacts knowledge, attitudes, and beliefs of men; potential impact on women; and fostering sustainability.

Poster Abstract #37

Heart Healthy Neighborhood: Preliminary results of a randomized controlled yoga and mindfulness intervention to reduce stress and address cardiovascular disease

Jared Olson, MS, Family and Community Medicine, MCW; Melody McCurtis, Metcalfe Park Community Bridges; Melissa DeNemie, MS, Family and Community Medicine, MCW; Danell Cross, Metcalfe Park Community Bridges; Kirsten Beyer, PhD, Institute for Health & Equity, MCW

Cardiovascular disease is a public health burden and the source of stark racial and socio-economic health disparities, particularly between White and Black Americans. Racial disparities in cardiovascular health are rooted in the stress experienced by African Americans, including racial segregation, financial stress, lack of perceived safety, and stress from discrimination. Perceived stress can encourage maladaptive health behaviors like smoking, being less physically active, consumption of calorie-dense foods that pose cardiovascular risk and reduced self-efficacy for healthy eating. Reduced stress and increased self-efficacy are crucial for facilitating health behavior changes to reduce cardiovascular illness risk. Yoga and mindfulness interventions are well-documented and demonstrate efficacy in reducing stress and addressing psychological/physiological health metrics compared to control groups. Mindfulness programs are associated with increased self-efficacy. Our project aims to recruit 50 residents of a primarily Black neighborhood in Milwaukee, and to randomly assign each to either the yoga and mindfulness training (treatment) or standard care (health literature on stress management and physical activity plus basic yoga equipment). Data analysis will not be completed at the time of presentation. Our team will present progress to date in conducting and evaluating a community-engaged research project employing yoga and mindfulness to address stress in efforts to address cardiovascular disease. We will share priorities guiding the project and the partnership, and anticipated next steps for this promising initiative.

Poster Abstract #38

Mistrust, the Obstruction of Medicine: Repairing the Breach between Medical Research and the African American Community in Milwaukee

Ghaffaar Clark, MS, MCW; Mikel Holt, Black Research Organization; Deborah Thomas, House of Grace Ministries; Clarence Thomas, House of Grace Ministries; Anne Mathias, Cancer Center, MCW

Participation rates in cancer clinical trials among African Americans are unacceptably low. While the reasons for this in Milwaukee are currently unknown, such low participation raises ethical concerns related to not only justice, but also respect for persons if refusals to participate are not informed refusals. To address this, we conducted focus groups with pastors and church members from African American churches in Milwaukee to understand and document the reasons for low participation in cancer clinical trials in the African American Community. 12 pastors were included in the study and 24 church members were interviewed. There was one focus group with pastors and 3 with church members. In addition, we documented the factors that participants believed would positively influence their participation in cancer clinical trials. We found that 1) Trust is key for

positive interactions with the healthcare system, including participation in clinical research. 2) There is an enduring fear that abuse, mistreatment and dishonesty still exist in healthcare and research. 3) The community recognizes the value of being included in research, and how it may improve cancer screening, diagnosis, treatment and overall health for them. Lastly, 4) Many participants were not aware of what clinical trials are. We also found that the language used in education and discussion around clinical trials is very important. Moving forward, the conversation about clinical trials must be part of a larger, holistic focus on building a healthy community and overall health equity in Milwaukee. Focusing the conversation only on research, to the exclusion of a focus on holistic and community health, will cause more mistrust.

DRIVE PROGRAM STUDENT POSTERS

DRIVE stands for *Delivering Research Innovation Via Experience* and is a program launched by the Medical College of Wisconsin that pairs high school students from Milwaukee Academy of Sciences and the High School of Health Sciences in Kettle Moraine with MCW scientists to engage in public health research.

Poster Abstract #39

From Twinkies to Turnips; Cultivating Wisconsin's Food Deserts

David Nelson, PhD, Family and Community Medicine, MCW; Amy Rymaszewski, PhD, MCW; Jacob Voyles, MCW; Jaclyn Utrie, MCW; Ashley Brown, MCW; Mara Bottomley, MCW; T.J. Harvey, High School of Health Sciences; Elizabeth Mantey, High School of Health Sciences

Economic deficiencies in populations can lead to poor access to healthy foods, otherwise known as a food desert. In these food deserts, populations have poor diets because of the inadequate access to healthier foods. A cause of breast cancer lays in the diet of populations. Women who engage in a healthy diet and participate in regular physical activity are 88% less likely to die from breast cancer than women who have poor diets and do not actively engage in physical activity. We will be looking at breast cancer patient's food stories during and after cancer diagnosis. During a two hour session, the patient will be asked to share a story of a time during his/her cancer treatment surrounding their food experience. After they share their story, the interviewer will continue to ask further questions that arise during the story about family and cultural influences. This experiment can benefit society and the respondent through raising awareness to the connection between going through cancer treatment and food consumption, and by stimulating potential solutions to resolve underlying issues seen. Although there is research present on how food deserts correlate with breast cancer incidences, having stories of ways food has impacted patients can emphasize the focus of diets during cancer diagnosis.

Poster Abstract #40

Therapy dog with patients that have Alzheimer's disease

Tian Kunkel, High School of Health Sciences; Aidan Monture, High School of Health Sciences; Michael Stubenvoll, BS, PharmD, MCW; Jane Obradovich, BS, PharmD, MCW; Rachael Jaszczenski, BS, PharmD, MCW

Background: The effects on therapy dogs with patients that have Alzheimer's disease will improve social behavior, depression, and anxiety. *Objective:* We are conducting a meta-analysis to determine if therapy dogs improve quality of life of Alzheimer's Disease (AD) patients by looking at the effect of therapy dog exposure on depression, social behavior, and anxiety. The purpose of this study is to investigate if dog therapy improves the quality of life in patients that have Alzheimer's disease. We want to understand how dog therapy helps Alzheimer patients' well being and the effectiveness of dog therapy.

Methods: We are conducting a meta-analysis to find on therapy dogs with patients that have long term Alzheimer's. First, we will determine how many times patients get with the therapy dogs and how long the patient should be with the dogs. We intend to understand how therapy dogs affect Alzheimer's patients. We will be using data that we have collected from research studies. We are using this method because we do not have the resources to conduct our own research. This type of education is more useful for my research because using information from other researchers who will be more accurate. We need to follow the procedure of therapy dogs and understand the fundamental parts of the methods we are looking for on how dog therapy improves the quality of life for patients with Alzheimer's disease.

Results: We have collected the data from about ten articles and observed that the patients that have interacted with the dogs showed improvements in social behavior, depression, and anxiety. The participants range from 55 to 80 years old.

Conclusion: Therapy dogs have shown that the participants that have Alzheimer's disease have improved on the symptoms.

Poster Abstract #41

Improving Students' Perceived Stress, Productivity, and Moods During Class through the Integration of Plants into Classrooms

Samantha Baldwin, High School of Health Sciences; Jordyn Roby, Milwaukee Academy of Science; Hannah Worden, High School of Health Sciences; Megan LaCroix, MCW; Nisreen Mobayed, MCW; John Tierney, School of Pharmacy, MCW

Background: The belief that interacting with nature has a positive influence on human well-being has been proven in a variety of different ways. It is a well-known fact that spending time in natural spaces contributes to improvements in concentration and overall stress-relief. It is for this reason that research about the positive effects of natural elements on overall health and well-being is becoming more and more prevalent. The purpose of this project is to determine whether or not implementing plants into high school classrooms improves the students' perceived stress, productivity, and mood levels during that class.

Methods: Two classrooms were used: one from Kettle Moraine High School (KMHS) and one from the Milwaukee Academy of Science (MAS) campus. Pre-surveys were given before the plants were put into the classrooms to determine a baseline for the students' stress, productivity, and mood. Following which, a post-experimental survey will be administered to evaluate changes in students' perceptions.

Results: Seventy nine MAS students and forty nine KMHS students completed pre-experimental surveys. Preliminary results were analyzed for significance. The majority (41%) of students at both institutions believe that it is not difficult for students to pay attention in their current classroom environments with 25% of students disagreeing with this statement. Meanwhile, the majority of students (41%) responded "neutral" to the classroom environment contributing to student apprehension, 36% responded in agreement to this sentiment, and 23% responded in disagreement.

Conclusion: While finalized data is still pending, preliminary data demonstrates that students have an overall positive perception about their classroom environment. Post-experimental data will be critical in determining the impact of classroom plant integration on student perceptions.

Poster Abstract #42

Socially Aware; Medically Unaware

Teague Peterson, High School of Health Sciences; Divyank Sharma, High School of Health Sciences; Christopher Goetz, Biochemistry, MCW; Tucker Keuter, Institute for Health & Equity, MCW; Samuel Polhemus, MCW; Jacqueline Schaefer, MCW

In the US, about 1.3 million people identify as transgender. Identifying as transgender in the US presents a unique set of difficulties, particularly in healthcare. It is widely accepted that transgender patients feel uncomfortable approaching healthcare providers due to lack of confidence and comfort in their providers. This, potentially due to discrimination, which approximately 65% of transgender people report experiencing. Thus, only 30-40% of transgender patients seek medical attention and utilize available resources. Additionally, 70% of the transgender population have reported not having access to adequate medical care, leading to health disparities, and further amplifying transgender healthcare problems. To further interrogate these issues, we decided to conduct a literature review to identify whether healthcare providers (nurses) were comfortable and/or confident when providing care to transgender patients. Through our research, we have concluded that the majority of nurses are not comfortable or confident when treating transgender patients. Therefore, it is imperative to better educate our medical professionals such that they are both comfortable and confident when caring for transgender patients. Thus, we propose developing a curriculum aimed at improving transgender health education, and as a result, relations between healthcare providers and transgender patients will improve.

SUPREMES PROGRAM STUDENT POSTERS

SUPREMES stands for *Students Understanding Principles of Research Education through Medicine, Engineering, and Science*. SUPREMES is an academic year program that provides high school students with an educational experience in biomedical research, clinical research, and technology development in laboratories at the Medical College of Wisconsin (MCW), Marquette University (MU), Children's Hospital of Wisconsin Children's Research Institute (CRI), and the Veteran's Affairs Medical Center in the Milwaukee metro area. Students are introduced to new technologies, cutting-edge research, and exciting laboratory practices, guided and taught by highly skilled, established faculty investigators.

Poster Abstract #43

The Design and Fabrication of Force Forceps

Bonnie P. Freudinger, ME, Office of Research, MCW; Hannah Franzblau, University Lake School

For many patients with arthritis, treating pain is important to help them live a more fulfilling life. An important step to developing effective analgesic treatments is using methods to quantify arthritic pain in experimental animal models that accurately represent human arthritic pain. The goal of this project was to design, fabricate, and test a force forceps system that converts an output voltage from a bridge circuit to grams of force as a method to quantify arthritic knee pain in rats. The resulting system provides quantifiable data for the assessment of pain for researchers who are currently studying arthritic knee pain in the rat model. This will also allow researchers at the Medical College of Wisconsin to test novel therapeutics to treat this type of pain.

Poster Abstract #44

Characterizing motor neurons from identical twins discordant for ALS

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Amyotrophic lateral sclerosis (ALS), also known as Lou Gehrig's disease, is a neurodegenerative disorder affecting approximately 30,000 Americans. In ALS, motor neurons in the brain and spinal cord degenerate, causing progressive paralysis and death within 3-5 years. While two therapies are approved for the treatment of ALS, neither is a cure. Therefore, much work is still needed to be done in order to understand the disease progression and identify drug-able targets. However, since most cases occur without a family history, what triggers disease development is unclear, which has made modeling ALS in the lab challenging. Through MCW's SUPREMES high school outreach program, I am assisting with research in the Ebert Lab using induced pluripotent stem cells (iPSCs) to model ALS. iPSCs are made by genetically manipulating patient blood cells to revert them to a primitive state. Once reprogrammed, we can use various compounds to produce any cell type, including the motor neurons affected by ALS. In the present study, we generated iPSCs and then motor neurons from identical twins, one with ALS and the other in good health. We then sought to identify any differences between the twins' motor neurons in their survival, morphology, and molecular processes that might explain the development of ALS. While we found no differences in survival or morphology, we found that the affected motor neurons have decreased expression of proteins important for maintaining molecular health and preventing cellular toxicity. We are now investigating how this change contributes to motor neuron loss and disease pathology.

Poster Abstract #45**Investigating the effect of nitric oxide treatment on HCMV replication**

Mia H. Deaven, High School of Health Sciences; Rebekah L. Mokry, Microbiology and Immunology, MCW; Scott Terhune, PhD, Microbiology and Immunology, MCW

Human cytomegalovirus (HCMV) is the leading cause of viral-mediated birth defects in the United States, the most common being hearing impairment. Nitric oxide is a free radical produced by immune cells in response to infection via inducible nitric oxide synthase (iNOS). Preliminary data from our lab showed that treating HCMV infected cells with a molecule that releases nitric oxide, Diethylenetriamine NONOate (DETA/NO), decreased HCMV replication. However, in these experiments, the cells were plated subconfluent and most of the cells were infected (high multiplicity of infection; MOI). We wanted to investigate the effect of nitric oxide in conditions where the majority of cells were uninfected (low MOI). We grew human fibroblast cells to confluency and infected with a high and low MOI. We treated the cells at 2 hours post infection and every 24 hours with either DETA/NO or vehicle, and collected cells at various time points. Viral replication was evaluated by quantifying viral DNA levels and examining protein levels. Using these conditions, we found that viral DNA levels are not significantly decreased in the DETA/NO treatment group during a high MOI infection. Results from the low MOI infection demonstrated that viral DNA levels, immediate early, and early protein levels are not decreased during DETA/NO treatment. These contrasting results from past data using a high MOI could be due to the changed conditions, and warrant a more thorough investigation of the effect of nitric oxide on HCMV replication.

Poster Abstract #46**The Heterodimeric Enzyme Glucosidase II (GII) and the mannose 6-phosphate homology (MRH) domain of the β -subunit**

Abigail C. Crupi, High School of Health Sciences; Linda J. Olson, PhD, Biochemistry, MCW

The goal of this study is to identify and develop lead compounds targeting the specific binding subunit of Glucosidase II (GII) rather than the currently targeted glucose binding site. In turn this will reduce side effects. Through their interactions with GII, these compounds will be investigated as potential therapeutics against cancer, specifically breast cancer. To regulate cell proliferation it must control the synthesis of new proteins needed to build cells. Approximately one third of cellular proteins will travel through the folding process located in the endoplasmic reticulum (ER) and almost 80% of these proteins will be modified with an oligosaccharide. Previous studies have shown the importance of their role in secretory protein folding, glucosidases in particular, of the ER becoming a valuable source of therapeutic targets. We hypothesize that by targeting the highly specific mannose binding, mannose 6-phosphate homology (MRH) domain, of the β -subunit of GII, we can find a potentially druggable target with limited off target effects. In this study a HPLC system as well as an AKTA START system will be used to express and purify GII-MRH from *E. coli*. ¹⁵N-labeled GII-MRH will be prepared for x ray crystallography screenings. Current efforts are focused on a class of compounds called iminosugars which are small organic molecules which mimic monosaccharides and disaccharides. Glucose resembling iminosugars targeting glucosidases have been used as antivirals with some success; however, not without side effects. This research proposes that it will be able to produce therapeutics with fewer off target effects, for they are targeting a specific glycan binding module on a specific enzyme.

Poster Abstract #47**The role of dynamin gene in beta cells**

Connor J. Cheever, High School of Health Sciences; Fan Fan, MD, MCW; Xuelin Lou, PhD, Cell Biology, Neurobiology and Anatomy, MCW

Insulin secretion from pancreatic β cells is vital in maintaining systematic glucose homeostasis. Furthermore, complications involving this process is observed in the body and the interruptions of insulin secretion have been linked to diseases such as type 1 and type 2 diabetes. These interruptions may result from impaired exocytosis and endocytosis via the alterations of material exchange and cell signaling. Recent studies from us and others have shown that proper regulation of these membrane trafficking steps is crucial to cell function. Thus, it is important to learn more about what could be causing these disturbances. Dynamin is a large GTPase involved in endocytosis. More specifically, there are three dynamin genes in mammals: dynamin-1, -2, and -3, which are found in different locations throughout the body. Previous studies have found that these genes regulate endocytosis pathways and neurotransmission in neurons. In this study, we use the genetically-modified mice earlier created with Cre-LoxP approach to examine the role of dynamin-2 and -3 in beta cells. The results of this study showed the connection between dynamin and beta cell trafficking. This project helps improve our understanding on the role of dynamin in insulin secretion.

Poster Abstract #48**Investigating the genotype and phenotype of Zebrafish (*Danio rerio*) genetic mutants in ciliary ift proteins (ift81, ift88, and ift172)**

Brynn E. Wozniak, Menomonee Falls High School; Ramani Ramchandran, PhD, Pediatrics, Children's Research Institute, MCW; Shahram Eisa-Beygi, PhD, Radiology, Children's Research Institute, MCW

Cilia are microtubule-based organelles, which protrude from the endothelial cell surface into the lumen of vessels. Intraflagellar transport (ift) within the cilium is key to both the development and maintenance of cilia. When genetic abnormalities in intraflagellar transport and ciliogenesis occur, the resulting ciliopathies can induce a host of problems in the Zebrafish. Our lab has utilized zebrafish to image and study cilia in brain endothelial cells. Previous work identified a potential relationship between primary cilia and patterning of the brain vasculature in Zebrafish. The overall goal of this project was to genotype and phenotype intraflagellar transport gene (ift81, ift88, and ift172) expression in developing zebrafish embryos. We investigated the genotype and phenotype of zebrafish genetic mutants in ciliary ift proteins through temporal expression, fluorescent imaging, and comparative gene expression analysis. Specific characteristics of investigation were the presence or absence of exon 11 in ift88, if maternally deposited proteins played a role in embryonic development (suggesting an incomplete knockdown of the gene), and phenotypic characteristics of blood flow in the brain. This study aims to better understand genotypic and phenotypic characteristics of ift81, ift88, and ift172 *Danio rerio* mutants for future use in ciliopathic vasculature studies.

Poster Abstract #49**Purification and Characterization of Alpha-amylase Trypsin Inhibitor, A Dietary Activator of Innate Immunity**

Morgan K. Martin, Divine Savior Holy Angels High School; Mark F. Roethle, Pediatrics, MCW; Mary L. Kaldunski, Pediatrics, MCW; Martin J. Hessner, PhD, Pediatrics, MCW

Type One Diabetes (T1D) is an autoimmune disease that arises through T-cell mediated destruction of the insulin-producing pancreatic β cells. A significant increase in T1D incidence has been observed in recent decades, now affecting 1.25 million Americans. The epidemiological changes in T1D have been too rapid to be attributed to genetic shifts, supporting the idea that the observed changes are due to increased environmental pressure. Some non-genetic factors involved may include increased antibiotic use, consumption of the highly processed western diet, food additives, and birth by cesarean section. These factors all potentially influence the composition of the gut microbiota, which influences immune function. Wheat products are a significant part of the modern diet, and gluten, the main protein found in wheat, is now associated with several autoimmune diseases. Alpha-amylase/trypsin inhibitors (ATI), proteins that co-purify with gluten, have recently been shown to activate toll like receptor 4 (TLR4) on immune cells. TLR4's most noted function is to bind bacterial endotoxin which in turn triggers innate inflammation. As such, ATI may exacerbate an antigen-specific adaptive immune response in those susceptible to autoimmune diseases. Current evidence points to ATI as a driving force for intestinal inflammation, suggesting a link between diet and the innate inflammation observed in both the T1D Bio Breeding (BB) rat model and T1D families. In addition, the TLR4 receptor pathway seems to be more activated in T1D BB Rats and T1D families. The first focus of this study will be to isolate ATI from wheat products and produce ATI using a recombinant protein expression system. Purified ATI will be checked for the predicted molecular weight (SDS PAGE), and then functionally tested using genetically engineered HEK293 cells that express measurable alkaline phosphatase upon activation of TLR4 pathways. Findings should help define environmental factors that affect T1D pathogenesis and treatment.

Poster Abstract #50**Inflammatory response in Spinal Cord Injury**

Carolina Perez, New Berlin Eisenhower High School; Nicolas Pelisch, MD, PhD, Neurosurgery, MCW; Antje Kroner-Milsch, MD, PhD, Neurosurgery, MCW

Spinal cord injury (SCI) is a severe condition with tremendous impact on the health and quality of life of SCI patients and caregivers. Current treatment options of SCI are still very limited. By targeting the inflammatory response after SCI we aim to reduce the secondary damage, which occurs after the acute injury and is caused by inflammation and other processes in the tissue. Finding a method to specifically reduce harmful immune reactions could potentially lead to better functional outcome for SCI patients. The first step is to understand the composition of the tissue lesion is the use of various staining techniques. Hematoxylin and Eosin (H & E) and immunohistochemical staining allows us to detect cells such as microglia, blood derived macrophages and astrocytes. This analysis helps us to identify the overall size and shape of the lesion as well as the change in presence of various cell types. In a more severe lesion, there is expected to be an increase in the number of astrocytes, activated microglia and macrophages. These findings will increase our understanding of SCI and could give rise to a treatment that targets these inflammatory cells.

Poster Abstract #51**The Implications of Acesulfame Potassium on Insulin Signaling Pathways Following Chronic Consumption**

Maanya Kashyap, Hamilton High School; Dhanush Haspula, PhD, Biomedical Engineering, MCW/Marquette University; Brian Hoffmann, PhD, Biomedical Engineering, MCW/Marquette University

The negative implications of consuming high dietary sugar have long been linked to systemic health problems. As these concerns have grown, non-caloric artificial sweeteners (NCAS) were introduced as an alternative to dietary sugar; however, supporting scientific data regarding the safety of these food additives is limited and controversial. We have shown that the specific NCAS acesulfame potassium accumulates in the blood plasma of a diabetes susceptible BioBreeding (DD-DR) rat model at $21.6 \mu\text{M} + 10 \mu\text{M}$ (N=6) following three weeks of chronic consumption. The BB-DR rats consuming acesulfame potassium also had a significant increase in blood glucose versus those receiving a normal diet, suggesting a potential disruption of the insulin signaling pathways. Upon further evaluation, we saw that acesulfame potassium caused dysfunction and altered the glucose regulation pathways in the endothelial cells that line blood vessels. To further examine how acesulfame potassium influences pancreatic signaling pathways important for glucose regulation, we performed quantitative gene expression analysis of the pancreas from BB-DR rats chronically consuming acesulfame potassium to monitor mechanisms of regulation related to insulin signaling and diabetes. Additionally, we examined the ability of the NCAS to contribute to the stimulation of inflammation pathways that are related to pancreatic dysfunction. Outcomes of this study will help our understanding of the molecular mechanisms of glucose regulation in the pancreas influenced by the accumulation of acesulfame potassium.

Poster Abstract #52**Endothelialization of Novel Magnetic Flow Diverters Using Magnetically-Labeled Endothelial Cells**

Joseph N. Cherny, Nicolet High School; Akankshya Shradhanjali, PhD, Biomedical Engineering, MCW/Marquette University; Raphael Sacho, MD, Neurosurgery, MCW; Brandon J. Tefft, PhD, Biomedical Engineering, MCW/Marquette University

This study serves to determine if novel magnetic flow diverters can rapidly capture endothelial cells labeled with superparamagnetic nanoparticles. Flow diverters are surgical devices used to treat cerebral aneurysms by reducing blood flow to the aneurysm. Blood clots can form on flow diverters until they are endothelialized, and the slow endothelialization of flow diverters is associated with the risks of restenosis and thrombosis. To mitigate these risks, patients who receive flow diverters must be given an anti-platelet therapy until the flow diverter has been endothelialized. The use of anti-platelet therapies poses a multitude of risks for patients, especially in those with conditions that would predispose them to internal bleeding, and such therapies may cause severe bleeding in those who need emergency surgery. To determine the cell toxicity of the novel flow diverters, we cultured endothelial cells on the flow diverters and completed a live/dead stain. In addition, we performed cell capture and retention studies on the magnetic and traditional flow diverters. The magnetic properties of the two types of stents were determined using a three-dimensional gauss meter. Eventually, this study should be continued with a large animal model to test the efficacy of the flow diverters in vivo. If this research is successful, there will be a safer and more successful treatment for cerebral aneurysms.

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 (CErR) 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).

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Community Engagement Spring Conference Affiliated Events

Make a Lunch

On June 18, the Medical College of Wisconsin will again host the “Make a Lunch” event. Faculty, staff and students are invited to volunteer and make sandwiches to be delivered to United Way agency partners. Last year, in one short hour, volunteers at MCW made enough sandwiches to feed thousands of hungry individuals in Milwaukee. Join us and help make this year even bigger!

Thanks to the MCW Office of Communications for organizing this successful event in collaboration with the Office of Community Engagement.

Medical College of Wisconsin’s Urban & Community Health (UCH) Pathway

On April 18, the Medical College of Wisconsin’s Urban & Community Health (UCH) Pathway held its final session of the year, focused on discussion with students about health care access and insurance coverage in the greater Milwaukee community. Students discussed the health care delivery systems and resources for patients and families, including health systems, hospitals, clinics, community resources, and other support services. As part of the MCW Community Engagement Conference activities, the Office of Community Engagement sponsored a “Connections Reception” following the Pathway session, so that students, faculty, staff, and partners could mix and mingle over refreshments.

Thanks to Dr. Linda Meurer, Professor in the Department of Family & Community Medicine and Director of the UCH Pathway for leading this informative event in collaboration with the Office of Community Engagement.

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