

17TH ANNUAL RESEARCH SYMPOSIUM
IMMIGRANT & REFUGEE JOURNEYS:
HEALTHCARE ISSUES & OPPORTUNITIES



MONDAY, APRIL 8, 2024 | 12:00 - 4:30 P.M.
MERCY COLLEGE OF HEALTH SCIENCES, SULLIVAN CENTER - 102

SPONSORED BY: Mercy College of Health Sciences Research Advisory Council




MERCY COLLEGE
OF HEALTH SCIENCES



It is my pleasure to welcome you to the 17th Annual Research Symposium at Mercy College of Health Sciences. Knowledge is one of our core values here at the College, and this symposium is a living embodiment of our commitment to pursuing truth through critical inquiry. We articulate the value of knowledge as “The ability to instill in our college community a thirst to continually study, observe, and investigate the world for facts and ideas that can improve the health and well-being of humankind, as well as create a love for learning.”

Through this symposium, participants will be challenged to consider collaborative strategies for supporting immigrants and refugees, specifically with regards to healthcare access. This topic is particularly dear to us as a college community rooted in the legacy of the Sisters of Mercy. In line with our Catholic Mercy heritage, we seek to welcome those who come from other lands and to reverence the dignity of every human life. We invite you to join in the dialogue with our presenters and each other as we investigate this vital topic.

This symposium would not be possible without the hard work and dedication of the Research Advisory Council. Thanks to Dr. Joe Moravec, Linda Knowles, Dr. Jeannine Matz, Adrienne St. Clair, Dr. Rebecca Steidl, Dr. Ryan Marr, Dr. Jennifer Wing, Dr. Rita Million, Dr. Archana Indira, and Dr. Victor Babich. Special thanks to our presenters, whose names can be found in the program, and especially to Mak Suceska, who was instrumental in helping us identify a theme for the event and in recruiting speakers.

Dr. Tim Laurent
Provost, Mercy College of Health Sciences

Agenda

12:00 - 1:00 pm

Registration, Poster Viewing

1:00 - 1:05 pm

Welcome

1:05 – 2:00 pm

AMAYA ALEXANDRA RAMOS (Alexandra), MSW. CPH, MA

Founder & Chair, HazRav

Ecosystemic Factors Impacting Equitable Access to Healthcare Services Among Immigrants and Survivors of Forced Migration

Ms. Ramos will examine how specific circumstances and exposures in the migration experience, systemic limitations within the national and international healthcare regimes, and other factors within the broader U.S. social service environment converge to reduce foreign born populations' access to equitable healthcare.

2:00 – 2:20 pm

Poster Session & Break

2:20 – 3:15 pm

SARA ZEJNIC

Deputy Director of Programs, International Rescue Committee (IRC)

VILMA BRAMASCO

Health Clinical Director, Proteus

EMILY MENDEZ

Director of Development, Proteus

Supporting Immigrants and Refugees Along Their Journeys

This session will discuss the unique challenges and opportunities in delivering healthcare to migrant, immigrant, and refugee farmworkers in Iowa. Through an examination of the intersection of cultural, linguistic, and socioeconomic factors, they will share reflections and strategies on increasing equitable access to healthcare services, addressing barriers to care, and promoting preventative health care among farmworkers and their families.

3:15 – 3:30 pm

Break

3:30 – 4:20 pm

Stephanie Moris (Moderator)

Director, Refugee Alliance of Central Iowa, Des Moines, IA

Jodi Bowden-Fuentes

Domestic Violence Program Coordinator, Latinas Unidas por un Nuevo Amanecer (L.U.N.A)



Barwaqo Aden

Assistant Director, Nisaa African Family Services

Carly Ross

Executive Director of Dental Connections, Delta Dental

The Healthcare Journey: Issues and Opportunities, In Focus (Panel Discussion)

This interactive segment will delve deeper into the nuances of healthcare inequities among foreign-born populations, as well as the challenges and strategies associated with delivering healthcare services to immigrant and refugee communities.

4:20 – 4:30

Question & Answer Panel

4:30 pm

Adjourn



SYMPOSIUM PRESENTERS



AMAYA ALEXANDRA RAMOS, MSW, CPH, MA

Founder and Chair

HazRav.

Amaya Alexandra Ramos (Alexandra), MSW, CPH, MA, is an interdisciplinary researcher focusing on mental/public health programming for survivors of forced migration, torture, and targeted violence.

Committed to bridging the gap between research and practice, Alexandra advocates for ethnography as a vehicle for institutional learning, the enforcement of human rights, and the furtherance of equitable access to integrated health systems. Multilingual and proficient in all levels of engagement, she has supported humanitarian and development efforts from direct service provision through to administration for global bodies, including national and international-level: psychosocial program design and related research; crisis stabilization; immigration policy alignment; communications; monitoring and evaluation; education; and curriculum development. Alexandra has also worked in anti-human trafficking, post-disaster gender-based violence, and infectious disease research. Certified in Public health, Alexandra holds Masters degrees in Social Work, International Affairs (Middle East and modern languages emphasis), and Music (Ethnomusicology emphasis). Her regional specialization is working with Persian-speaking populations, as well as the broader Middle East/Central Asian regions. In addition to her work in research and social services, Alexandra is a lifelong visual and performing artist and seeks to incorporate the arts into holistic human rights practice. Alexandra is the founder and Chair of HazRav, non-profit displacement health/mental health research organization and information-sharing professional network that supports integrated wellbeing for both humanitarian beneficiaries, as well as their providers and advocates by mobilizing and synthesizing diverse sources of knowledge across a variety of interconnected sectors. Alexandra also holds an adjunct position teaching graduate coursework in Diversity and Social Justice in the University of South Florida's school of Social Work.

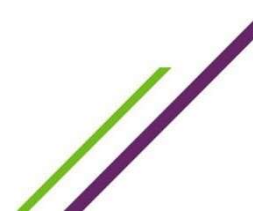


SARA ZEJNIC

Deputy Director of Programs

International Rescue Committee (IRC)

Sara Zejnic is the Deputy Director of Programs for the International Rescue Committee (IRC). She is responsible for leading the design and implementation of all direct service programs in the IRC Iowa office; including programming focused on refugee resettlement, economic empowerment, support to Ethnic and Community-Based Organizations (ECBOs) to deliver education and youth services, and health initiatives.





VILMA BRAMASCO

*Health Clinical Director
Proteus, Des Moines, IA*

Vilma Bramasco is the Health Clinical Director at Proteus, a 501(c)3 non-profit organization that provides job training, health care, and education assistance to those who work in agriculture in Iowa, Nebraska, and Indiana. She and her husband enjoy watching their son participate in sporting activities.



EMILY MENDEZ

*Director of Development
Proteus, Des Moines, IA*

Emily Mendez is Director of Development at Proteus. Emily has dedicated her career to public health initiatives, particularly supporting and working with immigrant and refugee communities. With experience spanning maternal child health, mental health, oral health, and primary care, she has worked at Al Razi Academy, Catholic Charities, EveryStep, and Dental Connections. Currently serving as Director of Development at Proteus, Inc., Mendez raises funds to ensure healthcare access for marginalized individuals, including immigrants and refugees. A graduate of Central College in Pella, IA, she serves on the Board of Directors for the Iowa Rural Health Association and as the Membership Chair for the Latino Trade Network. In her spare time, she enjoys spending time with her husband, children, and extended family. Her family's favorite activities are bike rides, watching movies, playing cards, and eating tacos together.



STEPHANIE MORIS

*Director
Refugee Alliance of Central Iowa, Des Moines, IA*

Stephanie Moris is the Director of the Refugee Alliance of Central Iowa. She has been involved with the Alliance since 2013 and has worked with refugee and immigrant communities in education, employment, and wrap-around direct case management before joining RACI. Stephanie obtained a Bachelor of Arts from Iowa State University and after lived in the Dominican Republic where she met her husband. Outside of work Stephanie is very passionate about empowering our refugee and immigrant communities, immigration rights, and connecting our community together. She volunteers as a mentor and teaches Spanish. She is a mother of two and also loves creating art, reading, hiking, and swimming.





JODI BOWDEN-FUENTES

Domestic Violence Program Coordinator

Latinas Unidas Unidad por un Nuevo Amanecer (L.U.N.A.), Des Moines, IA

Jodi Bowden-Fuentes is the Domestic Violence Program Coordinator at Latinas Unidas por un Nuevo Amanecer (L.U.N.A). Jodi began working with survivors of gender-based violence as a Bilingual Shelter Advocate at Children and Families of Iowa, Domestic Violence Services. In that role, she had the opportunity to work closely with the Latino community and gain a practical understanding of immigration law, as well as extensive knowledge related to working with survivors as they navigate recovery from their victimizations. She received both her Associates Degree in Communications and a Bachelor of Science in Human Services Management from the University of Phoenix. Jodi's educational background focused on trauma-informed interventions, diversity and cultural competency, and women's issues.



CARLY ROSS

Executive Director

Dental Connections, Des Moines, IA

Carly is the Executive Director of Dental Connections, a private, non-profit community health center focused on providing dental care to all. Carly is also a public member of the Iowa Board of Dentistry. Carly has an extensive background working with the refugee and immigrant population in Des Moines. From 2015 – 2019, she was the Field Office Director for the U.S. Committee for Refugees and Immigrants. In this role, she also served on the Steering Committee of the Refugee Alliance of Central Iowa. Previously, she worked in East Africa for a non-governmental organization contracted by the U.S. State Department to help determine refugee eligibility for resettlement to the United States. Prior, she worked as a refugee resettlement case manager for Lutheran Services in Iowa, coordinating their high-need medical programs. She has a graduate degree from the Asian Institute of Technology where she conducted research on race and equity in Thai society.



BARWAQO ADEN

Assistant Director

Nisaa African Family Services, Des Moines, IA

Barwaqo is the Assistant Director at Nisaa African Family Services, an organization that serves survivors of domestic violence and sexual assault in African communities in Iowa. Barwaqo is a Somali-American who grew up in Kenya and is dedicated to serving African communities. She has been an advocate at Nisaa since 2014 and through her role she oversees, implements projects and conducts community outreach. She is also responsible for organizing education programming, conducting trainings, and supervising advocates. Barwaqo has previously volunteered with immigrant populations in South Africa and the United States. Barwaqo is passionate about women's global health and empowerment projects.



POSTER ABSTRACTS

Professional

Supporting the Health, Wellness, and Well-Being of an Aging Refugee Community

Rachel Allen-McHugh
Drake University, Des Moines, IA

As part of the OTD 207 Health Wellness and Well-Being Course work, first year OTD students partnered with Lutheran Services of Iowa's refugee community group. This partnership involved the 25 OTD Students presenting 8 wellness sessions with topics related to the 8 Dimensions of Well-being. The sessions included an icebreaker where students sat with the group members and completed a craft activity or played a game with participants. The students then shared wellness information on topics such as stress reduction, gratitude, fall prevention, and nutrition. This provided the opportunity for students to practice building health literacy skills, rapport building, professional behaviors, and ultimately their 'Therapeutic Use of Self'. Each week a small group of OTD students facilitated a group of up to 30 participants from the LSI refugee community group. Following the completion of the groups, OTD students shared that working with the LSI community was a meaningful and educational experience that supported their confidence in working with diverse populations.

Comparative Analysis of Gun Violence associated with Mental Health, Alcoholism and Substance Abuse among Rural and Urban Adolescent to Adult Populations

Joelle M Stolte, PhD, Jeannine Matz, PhD, Rita Million, PhD
Mercy College of Health Sciences, Des Moines, IA; Warren County Health Services, Indianola, IA

More than 100 Americans are killed, injured, or wounded by firearms each day. Past research has contradicted whether the prevalence of firearm incidents occur predominantly in rural areas or urban areas. Gaps in research leave unanswered questions as to determining underlying causes of gun violence related to mental health, alcoholism, and/or substance abuse issues. This is a retrospective study that used data provided by the National Violent Death Reporting System (NVDRS) to provide a quantitative comparative analysis that examines gun violence incidents among rural and urban areas and underlying factors associated with domestic violence, intimate partner violence, and suicides across the United States.

Exploring Health and Wellbeing among Afghan and Congolese and Latino Immigrants to Inform Programs and Services

Kimberly Greder, PhD, Veronica Ouya
Iowa State University, Ames, IA

Immigration accounts for 40 percent of Iowa's population growth since 2010. Iowa's Latino population grew 46.4% during this time and is projected to double (14.8%) by 2060. The Congolese population is the second largest Black population in Iowa, and during 2021-2022, over 900 Afghan refugees made Iowa home. Refugees and immigrants in Iowa face numerous obstacles to health equity (e.g., language proficiency, cultural adaptation, access to health care, livable wages, transportation, child care). Experiences and perspectives of first-generation Latino immigrants and Afghan and Congolese refugees in Iowa were explored to help inform programs and services to promote health and wellbeing.



In 2023, 13 focus groups were conducted with Congolese, Afghan and Latino parents across three Iowa communities by trained community members who had strong communication skills and were trusted by parents. Participants received a \$50 gift card to compensate them for their time and expertise. Interviews were transcribed verbatim and translated to English. Seven themes were identified through the process of thematic analysis that aligned with two areas of interest: (1) Accessing and navigating resources, and (2) Cultural influences. Summary reports will be prepared to serve as resources to guide programs and services for refugee and immigrant parents.

Single nucleotide polymorphisms in the non-coding regions of the calcineurin homologous protein associated with hypertension

¹Brandon Marth MS DO'25, ¹Francesca Di Sole PhD and ^{1,2}Victor Babich PhD.

¹Department of Physiology and Pharmacology, Des Moines University, Des Moines, IA

²Mercy College of Health Sciences, Des Moines, IA.

Hypertension impacts 47 percent of adults (116 million) in the US and contributed to the death of 516,955 people in 2019. Family history of high blood pressure is a non-modifiable risk factor for hypertension; however, specific genetic polymorphisms associated with it have not been elucidated. In a genome-wide association study, single nucleotide polymorphisms (SNPs) in non-coding regions of the calcineurin homologous protein (CHP) genes correlated with increased blood pressure. CHP is a binding partner of the Na⁺/H⁺ exchanger-3 (NHE3), a major regulator of salt and acid-base homeostasis in the kidney, and regulatory signal of NHE3 protein expression. Using a luciferase assay, we showed changes from major to minor allele in one of the identified SNPs that caused significant increases in CHP promoter activity. We hypothesize that the switch to minor allele in the SNP introduced novel transcription factor binding sites (TFBS) in CHP gene, resulting in stimulation of CHP transcription and, hence, increase in NHE3 activity and blood pressure. We predicted, using JASPAR2022 TFBS database, several novel TFBS and estimated strength of binding using position frequency matrices. An electrophoretic mobility shift assay was performed with gene region containing SNP of interest; we detected that nuclear extract from human embryonic kidney cells has transcription factors specifically binding with this sequence. Further research includes the identification of transcription factors specifically binding with the minor allele of the identified SNP. Achievement of this study will identify a relationship between hypertension and a genetic polymorphism and establish new molecular target for hypertension treatment.

Graduate

Sticking to Basics: Assistive ADL Devices

Krissy Prine, Jessica Garza

Drake University, Des Moines, IA

An individual case study was completed while on a J-Term course in rural Loni, India. We worked alongside the physiotherapy students in the Spinal Cord Injury clinic at Pravara Institute of Medical Sciences. Our patient was a 22-year old female with an ASIA level A and neurological level of T11. After completing a full chart review, an occupational therapy profile was conducted to gain a comprehensive understanding of the patient's role, habits, and routines. This provided us insight into the goals of the patient, which was also taken into consideration when developing our device. Additionally, client factors and performance skills were identified throughout treatment sessions which highlighted the patient's areas of strengths and weaknesses. From there we created multiple assistive devices using available resources in India to enhance the client's

ADL abilities specifically in dressing and bathing. These devices were a dressing stick, leg strap, and leg lifter.

Reflecting on Skin Integrity: Utilizing an Extendable Mirror

**Haylee Rasmussen, Brooke Dannenfeldt, Dr. Rachel Allen-McHugh
Drake University, Des Moines, IA**

An individual case study was completed during a J-Term course to rural Loni, India. We partnered with physiotherapy students at Pravara Institute of Medical Sciences in the Spinal Cord Injury clinic. We worked with a 24-year-old patient who had a spinal cord injury at level T4/T5. We completed a chart review and interview where we found promotion of skin integrity as an area to address. A low-cost extendable mirror using local materials was created for increased independence with skin integrity.

The World in Your Hands: Supporting Fine Motor Development in Patients With C7 Level SCI

**Hannah Behunin, Dr. Rachel Allen-McHugh, PP-OTD, MS, OTR/L, RYT, CEIM
Drake University, Des Moines IA**

A single case study was done in rural India during the Drake 2024 J-Term this January. Through various experiences provided by Pravara Institute of Medical Sciences, I was able to develop more insight into different occupational values within local's daily lives, as well as barriers someone may face in rural India. These opportunities allowed me to give the most culturally appropriate interventions to my patients that were both meaningful, cost-effective, and culturally appropriate. I was able to work with a patient with a C7 level SCI who had been a farmer prior to his accident. After addressing strengths and deficits, I was able to utilize occupational therapy framework to develop a fine motor toolkit appropriate for my patient to utilize along with his current rehabilitation program.

Undergraduate

CRISPRi Screen on Astrocytes Reveals Potential Mediators of Tau Uptake

**Jordan Hook, Kimberly Flock, Marco Hefti, MD
Mercy College of Health Sciences, Des Moines, IA; The University of Iowa, Iowa City, IA**

Tau protein helps to stabilize microtubules in cells, which are essential for intracellular transport and structure. When an abnormal accumulation of tau protein develops, the internal cytoskeleton falls apart. This process eventually leads to cell death which can spread throughout the brain. Neurodegenerative diseases caused by tau are called tauopathies and include Alzheimer's Disease (AD) and frontotemporal lobar degeneration, among others. Recently, the role of astrocytes has been studied in the context of neurodegenerative disease. Astrocytes are the most abundant cell type in the central nervous system and maintain homeostasis within the brain and provide nutrients to neurons. Tau protein accumulation has been extensively studied in neurons in the context of AD, but the mechanism that drives this same process in astrocytes is poorly understood.

Using human embryonic stem cell-derived (hESC) astrocytes, we sought to identify potential mediators of tau uptake in astrocytes. We utilized CRISPR-Cas 9 gene editing technology to knock out thousands of genes that transcribe membrane proteins in astrocytes. We then sorted these astrocytes into two groups, astrocytes that maintained their ability to take up tau and those that did not. The screening revealed 29 genes that,



when inactivated, prevented tau uptake, with 8 of those genes having known interactions with tau. This CRISPRi screen showed numerous potential mediators of tau uptake in astrocytes and introduced a promising pathway through epidermal growth factor receptors.

Immigration Effects on Education

Amela Dolic, Jeannine Matz, PhD

Mercy College of Health Sciences, Des Moines, IA

The purpose of this study is to document the experiences of first-generation immigrants, refugees, or those with immediate family who have immigrated to the United States. This study is based on residents in the Des Moines metro area, over the age of 18, and have gone through the United States education system. Through this study, we see that there is an effect on social status and material possessions, which in turn affects the education received. This study was also used to analyze how we can close the gaps in the education system with first-generation immigrants or even those with immediate family who have immigrated here and propose change.

The effects of free fatty acids and leptin on renal cell lipid accumulation

Kadefa Suljic, Victor Babich, PhD

Mercy College of Health Sciences, Des Moines, IA

The growing concern over increasing rates of metabolic syndrome is linked to the worldwide rise in obesity rates. Metabolic syndrome is characterized by a combination of conditions that put individuals at risk of developing heart disease, stroke or type 2 diabetes. Additionally, metabolic syndrome is associated with accumulation of lipids in non-adipose tissue, causing activation of apoptosis in non-adipose cells. This accumulation of lipids in the kidney results in renal lipotoxicity, which negatively impacts kidney function. Leptin is a hormone produced by adipose cells that plays an important role in the regulation of energy balance and preventing accumulation of lipids in non-adipose tissue. The aim of the study was to determine the effect of leptin on lipotoxicity caused by accumulation of fatty acids in renal proximal tubule cells. We used a well-characterized renal proximal tubule-like cell model to study this effect. Our results indicate that the incubation of cells with fatty acids results in an increase of rate of apoptosis compared to control. However, the cells incubated with fatty acids and leptin exhibited a lower apoptosis rate. These findings suggest that presence of leptin prevents the accumulation of lipids in non-adipose tissues and reversing lipotoxicity.

