

# MOLA 5<sup>th</sup> Annual Latino Health Symposium, 2021

## Poster Presenters and Abstracts (in alphabetical order by presenter last name)



**ROCÍO BARRIGA GUZMÁN, MD:** she/her

- International Medical Graduate
- NorthShore University Health System, Evanston, IL, USA and Universidad Autónoma Gabriel René Moreno “Facultad de Medicina”, Santa Cruz, Bolivia
- **Mortality risk prediction using validated thromboembolic risk scores in patients with severe covid-19, a midwest urban hospital experience.**

**ABSTRACT: Background:** Severe COVID-19 has been responsible for more than 582 thousand deaths in the U.S. with unequally higher impact in underserved populations. Considering the coagulation dysregulation accompanying severe clinical disease, we hypothesize that existing and validated VTE risk scores have prognostic ability in this cohort.

**Methods:** A retrospective observational study of patients with severe COVID-19 from March to July 2020. Patients were >18 years of age, had PCR-confirmed COVID-19, and met Intermediate or Intensive Care Unit (UCI) level care criteria when ventilatory support required. The international Medical Prevention Registry on Venous Thromboembolism (IMPROVE) and Caprini scores were calculated. Student’s t-test, Chi-square, Cox proportional-hazards model used, ROC and Kaplan-Meier curves were plotted.

**Results:** 184 patients with severe COVID-19 were included, age 63(24-101) years, 63.6% men, 26.1% Hispanic, and 57.1% requiring ICU care. Patients spent on average 7(2-68) days hospitalized and were followed for 52(2-108) days. A total of 86 patients (46.7%) died, 95 patients (51.6%) were discharged, and 3 patients (1.6%) were still hospitalized at the time of the censoring. In univariate, then multivariate analysis both scores were significantly associated with mortality when classified as "Moderate VTE risk" and "High VTE risk" by IMPROVE score: (HR 5.68; 95% CI:2.93- 11.03; P<0.001) and (HR 6.22; 95% CI:3.04- 12.71; P<0.001) respectively, with sensitivity of 87%, specificity of 63% (AUC 0.752, p <0.001), and “High risk for VTE” by Caprini score (HR 17.6; 95% CI:5.56- 55.96; P<0.001) with sensitivity of 96% and specificity of 55% (AUC of 0.843, p < 0.001).

**Conclusion:** The IMPROVE and Caprini VTE risk scores were independent predictors of mortality in this cohort with severe COVID-19, a third of which were Hispanic. With large-scale validation, readily available prognostic information can be of value.



**IOVANA BONFANTE GONZÁLEZ:** she/her

· Medical student, \*2021 MOLA-MRF Scholar\*

· Loyola University Chicago Stritch School of Medicine

· **Identifying the Mental Health Impact of Migration & Housing Instability in the Latinx Community: A Systematic Literature Review**

**ABSTRACT: Background:** Most minority groups in the United States experience homelessness at higher rates than Whites. In Chicago, Black Americans represent almost one-third of the population but are over 75% of those facing homelessness. Similarly, those identifying as Hispanic/Latino (and possibly another race) represents 30% of the population but make up about 11% of those facing homelessness & 33% of the homeless community living doubled-up. While those identifying as White make up roughly 50% of the population in Chicago but represent only 15-20% of those facing homelessness. The national racial demographics of homelessness tell another story with 47.1% White, 40.6% Black & 19% Hispanic/Latinx facing homelessness. The contrasting difference is questionable and concerning.

**Objectives:** It is important to consider what factors contribute to increased risk of homelessness experienced by the Black & Latinx communities in Chicago and to determine if these risks differ nationwide contributing to contrasts between an urban city, like Chicago and the nation.

**Methods:** To conduct this research, an extensive systematic literature review on racial disparities in homelessness in the United States will be conducted to identify factors contributing to homelessness in urban cities, like Chicago. Additionally, qualitative interviews with Chicago homeless organizations will be conducted.

**Results:** Results are pending summer Scholar project.

**Conclusion:** Results should allow us to understand why there are contrast differences in urban communities compared to the nation as a whole and consolidate information on racial disparities faced by minority groups in the homeless population. The impact of this project would be to identify policies that need to be reevaluated by our legislators as well as a list of identifiable risk factors and an updated culturally sensitive model screening tool that health workers can use to screen minority groups at risk of homelessness that include racial/cultural components. Future research goals would be to conduct interviews of this protected population to feature their stories and recognize additional elements not highlighted by a systematic literature review.



**LAURA BOU DELGADO:** she/her

- Medical student
- Universidad Central del Caribe School of Medicine
- **Nuestra Experiencia: A look at the impact of recent natural disasters on cumulative stress in Puerto Rican communities since 2017**

**ABSTRACT: Background:** Puerto Rican families across the island had social, behavioral and environmental factors drastically change following 2017 hurricanes Irma and María, 2019-2020 earthquakes and the COVID-19 Pandemic since March 2020. Basic health statistics in Puerto Rico indicate that the island faced significant health disparities prior to these disasters. There is concern that the stress level of Puerto Ricans has severely increased with the exposure to these major consecutive disasters. While literature on stress due to natural disasters stress is available; there is a paucity of literature related to cumulative stress due to multiple consecutive disasters.

**Objective:** The main objective of this project is to identify and define cumulative stress from a community perspective in Puerto Rico after experiencing multiple disasters in a relatively short period of time.

**Method:** Six focus groups of 10-12 participants will be completed June–July 2021. Community leaders will assist with recruitment of a convenient sample representing communities across the island. Participants ages 21–65 years of age will complete informed consent, a demographic, and behavioral survey prior to the focus groups. We will complete two groups from the Metro region (largest impact due to COVID-19), two groups from Caguas region (high hurricane impact) and two groups from Ponce region (located closest to earthquakes’ epicenter). The 2-to-2.5-hour session will be via WEBEX and moderated by the research investigators. All sessions shall be in Spanish and will be recorded and transcribed professionally to complete qualitative coding and data analysis for generation of summary reports and development of a cumulative stress framework to guide future research.

**Results:** To date, the IRB has been submitted, the flyers are drafted, and community partners are identified for recruitment. Once focus groups are held, we will complete analysis and reporting.

**Conclusions:** We hypothesize that the greater the number of disasters exposed, the higher the level of cumulative stress of individuals in the Puerto Rican community. With these results, we hope to contribute towards the body of knowledge for disaster response improvement and recuperation of the Puerto Rican as well as other Latino populations with disparate burdens of illness and stress.



**KATHERINE BRITO:** she/her

· Medical Student, M4; \*2021 MOLA-MRF Scholar\*

· University of Chicago Pritzker School of Medicine

· **Implementation of a medical school OSCE that screens for Intimate partner violence in Spanish speaking patients**

**ABSTRACT: Background:** Intimate partner violence (IPV) is a public health concern and human rights violation. Intimate partner violence includes physical violence, sexual violence, stalking and psychological aggression by a current or former intimate partner which can result in sexual, physical, psychological, and reproductive injuries including negative pregnancy outcomes, chronic disease, mental health problems and death. In the US, more than one-third of Hispanic women (37.1%) have experienced rape, physical violence, or stalking by an intimate partner in their lifetime. Latina women, especially those who are immigrants, have an increased vulnerability to intimate partner violence, yet they also have a low rate of using formal services.

**Objective:** There is limited research looking at how the medical school curriculum incorporates screening for IPV. Despite this limited research, there is even less information regarding a medical Spanish OSCE focused on IPV screening. This project aims to address this gap by creating a medical Spanish OSCE for bilingual medical students focused on IPV screening.

**Method:** The OSCE will center around culturally nuanced aspects that one might encounter in screening Latinas for IPV. These cultural nuances will be based on those seen in the literature and through a collaboration with the Chicago community organization Mujeres Latinas en Accion. This community partnership will provide valuable feedback on the validity of the OSCE scenario. A teaching module on IPV and how it pertains to the Latinx community will be available to students before they participate in the OSCE. A grading rubric to assess competency will be developed. Once medical students put into practice this OSCE with standardized patients, pre and post assessments of learners will be used to evaluate the effectiveness of the teaching module and OSCE.

**Results:** Pending MOLA Scholar Project

**Conclusions:** This project is the first that focuses on using medical school OSCEs to screen for IPV for Spanish speaking populations. When medical professionals are intentionally being trained to effectively screen for IPV in Latinx communities, they have the opportunity to provide resources and education that could positively impact the life of those affected by IPV, and potentially save lives.



**ALEJANDRO CARRILLO**

- Occupational Therapy Student, \*2021 MOLA-MRF Scholar\*
- University of Illinois at Chicago
- **Investigating the efficacy of self-testing methods among the Latinx community**

**ABSTRACT: Background:** COVID-19 has rapidly emerged as the most prevalent and deadly respiratory infection within the State of Illinois, with 175,124 total confirmed cases and 7,462 deaths. Challenges due to the pandemic have led to delays in needed COVID-19 diagnosis and care and have likely resulted in increased COVID-19-related complications and deaths, even among children and adults without pre-existing conditions.

**Objective:** The primary objective is to reduce COVID-19 transmission, morbidity, and mortality in a medically underserved Latinx community.

**Methods:** Participants will be recruited through an established partnership at the Mexican Consulate. Participants will receive a COVID-19 testing kit, and data will be collected on site. Participants will complete necessary consent forms and baseline forms with an initial Day 1 report, followed by a 28 day follow up via phone call and email.

**Results:** Pending Summer project.

**Conclusions:** The impact of this study is that it will increase COVID-19-related knowledge and self-care agency via COVID-19 literacy and outreach.



**YESENIA M CHÁVEZ:** she/her

· Undergraduate student, \*2021 MOLA-MRF Scholar\*

· **The impact of air pollution on mental health and neurodevelopmental conditions in children: A community-based study in Chicago**

**ABSTRACT: Background:** The city of Chicago ranks 18th as the most polluted city in the United States. Air pollution contributes to a mounting 7 million deaths per year because of exposure to polluted air. Due to its composition and size, ambient particulate matter air pollution <2.5µm in

aerodynamic diameter (PM2.5) has the ability to induce oxidative stress and inflammation, which may induce neuroinflammation. Thus, PM2.5 suggests a critical factor in cerebral oxidative stress and neurological disorders. Increased exposure to PM2.5 has been associated with long-term neurodegenerative consequences, but studies are scarce among minority children. Air pollution is a critical impediment to public health progress in Chicago and has been designated a priority concern by residents of Chicago's Southeast Side, a community with a large population of African American and Latinx families.

**Objectives:** This study aims to characterize the relationship between exposure to air pollution and concentrations of particulate matter pollutants, mental health, and neurodevelopmental conditions in Chicago children.

**Methods:** This cross-sectional study will analyze surveys administered to adult caregivers of children attending two local high schools, one on the Southeast Side and the other in Lincoln Park. Logistic regression will be used to compare levels of air pollution between groups. Data will be analyzed to determine the prevalence of mental health and neurodevelopmental conditions.

**Results:** Results are pending completion of the summer scholar project.

**Conclusions:** Examining the impact of air pollution and higher concentrations of particulate matter pollutants on mental health and neurodevelopmental conditions can aid in efforts to reduce emissions and air particle pollution. It will allow us to evaluate potential factors associated with mental health and neurodevelopmental conditions in the most vulnerable populations. Ultimately, this study seeks to highlight the need to support and develop interventions at the community levels to preserve and improve pediatric health overall.



**DIANA DE OLIVEIRA, MD:** she/her

- International Medical Graduate
- Foundation for Clinic, Public Health, and Epidemiology Research of Venezuela (FISPEVEN INC), Caracas, Venezuela.
- **High Prevalence of Anxiety Symptoms in Venezuelan Adults during the Beginning of the Venezuelan Crisis. Data from a National Representative Sample. The EVESCAM Study**

**ABSTRACT: Background:** Anxiety and depression are highly influenced by the exposure to chronic stressors. The prevalence of anxiety and depressive symptoms in Venezuela using a national representative sample has not been evaluated, despite a heightened interest in the mental health of Venezuelan adults. Since 2014, this population has been exposed to a severe and long-lasting humanitarian crisis rooted in political and economic turmoil, high violence, severe shortage of food and medicines, hyperinflation, migration, and the collapse of the healthcare system. This environment exposes the population to chronic stressors that increase allostatic load, unhealthy behaviors, psychiatric disease, and cardiometabolic risk. This study aims to determine the prevalence of anxiety and depressive symptoms and factors related in a nationally representative sample of adults and factors that might affect this prevalence during the beginning of the humanitarian crisis of Venezuela (years 2014 to 2017).

**Methods:** The EVESCAM (Estudio Venezolano de Salud Cardio - Metabólica) used a multi-stage stratified sampling method to select a representative sample of the general population of Venezuela. Participants were recruited from randomly selected samples in the eight regions of Venezuela. Initially, 23 cities from the eight regions – one to four cities per region – were chosen. A customized questionnaire was used to collect information on demographics, family and personal history, type 2 diabetes and cardiovascular risk, socioeconomic status (SES), use of health care facilities, tobacco history, and depression and/or anxiety symptoms. Questionnaires, anthropometrics, and other physical measurements were obtained by trained and certified health personnel.

**Results:** 3,241 adults were evaluated with a mean age of  $41.1 \pm 15.7$  years. Anxiety prevalence was 14.7% (women 19.3% and men 9.5%;  $p < 0.001$ ) and depression prevalence was 3.1% (women 4.0% and men 2.2%;  $p < 0.001$ ). Independently of age and gender, anxiety was associated with hypertension and tobacco use, and depressive symptoms was associated with smokeless tobacco use, and sedentary lifestyle. Compared to subjects with university degrees, subjects with secondary or primary education were 30% and 80% more likely to have anxiety symptoms, respectively, and those with primary education were 290% more likely to have depression. Compared to subjects with high/middle socioeconomic status (SES), those with poor and extremely poor SES were 100% and 180% more likely to have anxiety, and 150% and 340% more likely to have depression, respectively.

**Conclusion:** There was a relatively elevated prevalence of anxiety, compared with a low prevalence of depressive symptoms. Further study is required to determine the effects of more chronic exposures to these adverse conditions.

## **Social Determinants, Health Care Access and Utilization in Detroit, Michigan LatinX Community**

Authorship team: The Amigos Medicos Clinic team (7 authors, listed following the abstract)

**ABSTRACT: Background:** The Amigos Médicos Clinic is a Wayne State School of Medicine Latino Medical Student Association (LMSA) project started formally in June of 2021, that aims to bridge the healthcare gap faced by the uninsured/underinsured Latinx community of Detroit by providing free medical screenings and education to this community. According to a 2018 survey conducted by the University of Michigan’s Detroit Metro Area Community Study (DMACS), 22% of Latinx residents reported lacking insurance, and 14.2% of Latinx residents utilize hospital emergency rooms as their usual place of medical care when they are sick. Along with providing blood glucose and blood pressure readings, refilling prescriptions, and providing person-to-person education along with educational resources, the clinic will conduct a survey to further assess the existing disparities facing this population.

**Objective:** Assess social determinants contributing to health disparities among the LatinX community in Detroit, Michigan; Identify and facilitate utilization of existing local resources that address the lack of social support to combat health disparities among the Detroit LatinX community

**Method:** A survey assessing social determinants of health will be completed by each patient with the assistance of the clinic staff and will be offered in English and Spanish. The questions cover determinants such as transportation, ethnicity, language, health insurance, health status, and health accessibility. Data will be collected from June to September 2021. The survey is anonymous and does not include any identifying information. Data will be compiled on a Microsoft Excel file for analysis.

**Results:** Pending summer project outcomes

**Conclusions:** We anticipate that the data collected will help to identify social determinants of health impacting the LatinX community in the Detroit area. Understanding these factors can help inform future efforts to improve care for members of the Detroit LatinX community and others like it.

Authors:



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## **Teaching Medical Students to Work Effectively with Interpreters: A Strategy to Improve Linguistic Minority Health**

Authorship team: University of Illinois College of Medicine Language & Health team (3 authors, listed following the abstract)

**ABSTRACT: Background:** The use of professional medical interpreters improves healthcare utilization, satisfaction, and outcomes for the U.S. population with limited English proficiency (LEP), but underutilization remains a significant challenge. Lack of clinician training and knowledge about how to access and effectively work with medical interpreters is a recognized barrier resulting in the underutilization of professional medical interpreting.

**Objectives:** The purpose of this study was to implement and evaluate a training module to teach medical students how to work effectively with medical interpreters.

**Methods:** We designed and implemented a 4-hour educational module for all rising third year medical students participating in the Doctoring and Clinical Skills curriculum at an urban medical school. The session aimed to teach learners to describe types, risks, and benefits of medical interpretation, identify hospital policies and practical logistics related to language use and interpreting, analyze common pitfalls in medical interpreting, and apply strategies to work effectively with medical interpreters. Voluntary pre- and post-surveys assessed learners' non-English language skills, previous experience working with LEP patients, and attitudes and confidence regarding medical interpreter use.

**Results:** Of 170 attendees, 124 students (73%) responded to the pre and/or post-survey, and 73 students (43%) completed both surveys. Of pre-survey respondents, 86 (82% of 105) students reported speaking a non-English language, with a total of 26 languages represented. Although 86 (82% of 105) students reported some experience with the care of LEP patients, the majority (64 of 105, or 61%) reported never having received training on working with interpreters. Post-survey results showed a significant increase in learner knowledge about the health impact of professional interpreter use, the common pitfalls of medical interpreting, the logistics of requesting language services, as well as an increase in confidence in working with medical interpreters (all  $p < .01$ ).

**Conclusion:** A training module to teach medical students to work effectively with medical interpreters can be realistically implemented within existing medical school curricula. Such a module can be effective at improving knowledge and confidence with caring for linguistically diverse populations, thereby improving health equity for this growing population.

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**NICOLÁS FRANCONI:** he/him

- Medical Student, M4, \*2021 MOLA-MRF Scholar\*
- Northwestern University Feinberg School of Medicine
- **Effectiveness of a Medical Spanish Genitourinary Module**

**ABSTRACT: Background:** There are significant barriers to equitable care for Spanish-speaking patients seeking prevention and treatment of genitourinary concerns. Spanish language concordance between provider and patient has been shown to significantly improve the patient experience, education, and outcomes in multiple areas of genitourinary care, including reproductive health.

Many medical students have an interest in improving and applying Spanish language skills to patient care, yet students, faculty, and institutions often struggle with identifying a structured curriculum.

**Objective:** We sought to provide a flexible, organ system-based approach to teaching and learning genitourinary Spanish terminology, patient-centered communication skills, and sociocultural health contexts.

**Method:** Medical students participated in a novel 8-hour educational module created to teach genitourinary medical communication skills in Spanish within the Hispanic/Latinx cultural context. Forty-seven fourth-year medical students at an urban medical school with a starting minimum Spanish proficiency at the intermediate level were enrolled in the course. Throughout the course, faculty provided feedback to each learner on speaking, listening, and writing performance of medical Spanish skills. Medical students completed assessments before and after the course to assess various communication domains such as vocabulary, grammar, and comprehension as well as self-reported confidence levels.

**Results:** After completion of the module, there was a significant increase in performance in vocabulary, grammar, and comprehension of genitourinary topics ( $p < .001$ ). Additionally, students' ability to assess a female and male genital exam, obtain a sexual history, and understand the cultural impact of LGBTQ health and unplanned pregnancies in the Hispanic community increased significantly ( $p < .001$ ). Hispanic ethnicity and Spanish proficiency was not significantly associated with improvement in any outcome measures.

**Conclusions:** The genitourinary medical Spanish module was effective in improving medical Spanish skills among various domains for students regardless of Spanish-proficiency level beyond intermediate proficiency. This suggests that a focused module can be suitable for teaching new knowledge as well as building upon previous Spanish skills. Medical schools can implement this flexible module to teach genitourinary topics and take actionable steps to curb inequities in communication for Spanish-speaking patients seeking care for genitourinary concerns.



**YESENIA GAMERO:** she/her/hers

· Student Researcher, Undergraduate student

· University of Wisconsin - Madison

· **Attitudes, Beliefs, Behaviors, and Barriers to Hearing Care Among the Hispanic Adult Population: A Qualitative Study**

**ABSTRACT: Background:** Hearing loss is a prevalent chronic illness in the United States; yet limited research has been done on the Hispanic adult population. Understanding the experiences of hearing care and services among the Hispanic adult population will identify gaps in care.

**Objective:** This study's purpose is to understand the experiences of Hispanic adult patients with hearing loss and their caregivers. Specifically, our aim is to understand Hispanic patients with hearing loss and their caregivers' attitudes, beliefs, behaviors, and barriers to hearing care.

**Method:** A descriptive qualitative study was conducted. Participants were recruited through community organizations, magazines, and word of mouth. The interview questions focused on understanding participants' attitudes, beliefs, behaviors, and barriers to hearing care. Interviews were recorded, transcribed, and analyzed using directed content analysis.

**Results:** Results reported here are preliminary results of a summer project. Twelve participants (age 35-92, 83.3% female) comprising 7 patients, 3 caregivers, and 2 identified as both a patient and caregiver participated in this study. Patients and caregivers believed that hearing loss is a part of aging. Some patients who were diagnosed with hearing loss at a younger age reported not understanding the cause of their hearing loss. While most patients and caregivers shared that hearing loss is unspoken in their community, some patients felt embarrassed about having hearing loss. Some patients have difficulty accepting the severity of their hearing condition and/or reframed their hearing condition. Barriers to hearing care and services included high cost, lack of insurance, low health literacy, language barrier, poor patient-provider interaction experiences, and poor understanding of the healthcare system. Such barriers resulted in poor access to hearing tests and hearing aids.

**Conclusions:** The Hispanic community were significantly impacted by hearing loss and tended to not seek care due to multiple barriers. The findings suggest the need to improve access to low cost hearing services and increase education on hearing loss in the Hispanic community. Culturally tailored hearing interventions are urgently needed to promote hearing health in the Hispanic adult community.



**RAFAEL GINER:** he/his

· Medical student

· Universidad Central de Venezuela, Escuela de medicina Luis Razetti

· **Malaria and COVID-19 in an Indigenous patients, overlapping two febrile illnesses.**

**ABSTRACT: Background:** Coronavirus disease 2019 (COVID-19) is an illness caused by a novel coronavirus called severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) which is primarily transmitted by respiratory droplets and airborne particles. Malaria is a parasitic infection caused by the parasite genus *Plasmodium* transmitted by *Anopheles* mosquitoes. Both entities are capable of producing acute life-threatening diseases and are currently notable global health threats. COVID-19 infection has several epidemiological and clinical similarities with malaria. They share symptoms such as: fever, myalgias, fatigue, headaches and gastrointestinal symptoms. According to studies, both can induce a cytokine storm that can induce a procoagulant state. The unprecedented global COVID-19 pandemic has rapidly spread to all continents, turning into a major setback in elimination campaigns against existing infectious and non-infectious diseases, including malaria.

**Case description:** We present a clinical case of a 69-year-old male indigenous patient who lives in Amazonas, Venezuela who presented with fever, cough, loss of taste and smell, diarrhea and an oxygen saturation of 93%, for which he was hospitalized. A SARS-CoV-2 PCR test was positive and treatment with Dexamethasone and Remdesivir was started. Days later, his general conditions worsened, presenting fever preceded by chills and followed by profuse sweating with myalgia. A blood smear and ELISA were performed, resulting positive for *Plasmodium falciparum* and treatment was started with Chloroquine, Artesunate and Artemether, presenting clinical improvement.

**Conclusions:** In patients living or coming from endemic areas, such as Venezuela and other Latin American regions, Malaria should be considered as a differential diagnosis in patients with acute febrile illness, even in the presence of a positive SARS-CoV-2 PCR test. This is one of the first cases of malaria and COVID-19 coinfection in a patient from Latin-America.



**SERGIO GONZÁLEZ:** he/him

· Medical student, \*2021 MOLA-MRF Scholar\*

· University of Illinois College of Medicine

· **Patient Advisory Boards: A Model for Advancing Patient-Centered Care at Student-Run Free Clinics**

**ABSTRACT: Background:** Patient advisory boards are a standard practice in Federally Qualified Health Centers. However, there is limited data on patient advisory board models for free clinics. A patient advisory board has the potential to reduce structural barriers that may have historically disenfranchised the feedback of Spanish-speaking Latinx patients with low socio-economic status—who are statistically least likely to be engaged in patient feedback.

**Objective:** The purpose of this study is to design and implement a patient advisory board model based on publicly available data on structure and functioning, and to implement and evaluate a model at a large community free clinic in Chicago.

**Methods:** We will conduct a literature review on patient advisory board models, design a model to be implemented in a large community free clinic in Chicago, and evaluate the model's effectiveness. We will evaluate effectiveness by means of a survey of patient advisory board members following each board meeting. After survey analysis, we will implement quality improvements to the model via the tool Plan-Do-Study-Act cycle.

**Results:** Pending MOLA Scholar summer project.

**Conclusions:** This study is expected to impact the 15 student-run free clinics dispersed throughout the city of Chicago, which could potentially benefit from a patient advisory board model [5, 6]. On a national level, student-run free clinics would have the opportunity to implement a similar model for their clinics. If effective, this project aims to facilitate a patient-centered medical home for Latinx patients who frequently fall through the cracks of the United States healthcare system.





**CHRISTIAN GONZÁLEZ**

- Medical student
- University of Chicago Pritzker School of Medicine
- **Medical Spanish Endocrinology Educational Module**

**ABSTRACT: Background:** Hispanic/Latinx individuals experience inequities regarding endocrine health and healthcare access, including higher rates of mortality due to diabetes mellitus than Whites. Studies have also shown a trend toward decreased prevalence of insulin use among Spanish-speaking patients compared with English-speaking patients (30% vs 42%, respectively;  $P = .07$ ).

**Objective:** To evaluate effectiveness of a medical Spanish endocrinology educational module in improving medical student confidence and skills regarding endocrine health communication with Spanish-speaking patients.

**Methods:** A standalone medical Spanish endocrine module was structured as an 8-hour curriculum targeting language and cultural skills acquisition. Forty-seven fourth-year medical students with intermediate or higher general Spanish skills participated in the module, which was implemented 4 times at one medical school.

**Results:** The confidence level of students increased for all learners in the endocrine focused interview and exam in Spanish. Students improved on obtaining a past medical history, obtaining a medications history, providing and explaining a diagnosis, explaining discharge instructions, and understanding sociocultural issues regarding endocrine health.

**Conclusions:** The medical Spanish endocrine module is effective at improving the skills of students with a starting intermediate through advanced Spanish proficiency. Educational strategies to address endocrine medical Spanish education have the potential to improve health and reduce health disparities related to the endocrine organ system.



**SUSANA GUTIÉRREZ:** she/her

- Doctor of Physical Therapy student, \*2021 MOLA-MRF Scholar\*
- Northwestern University
- **Fall-prevention interventions for older Latino adults and their cultural characteristics**

**ABSTRACT: Background:** In the United States, 94.7 million people are over the age of 65 and 25% of them fall every year. The rate of older adults who will fall is expected to increase to a rate of 7 deaths per hour by 2023. Falls in older adults may occur due to various risk factors such as muscle weakness, balance issues, cognitive deficits, and impaired gait patterns. To decrease the rate of falls in older adults, previous research has focused on balance interventions designed towards one or more of the previous risk factors. Falls in older Latino adults have unique risk factors that must be addressed including language, cultural beliefs and practices, and social circumstances (e.g., multigenerational households, immigration status). There is a need for culturally tailored interventions that target the older Latino community.

**Objective:** The purpose of this study is to conduct a scoping review to describe and compare the published fall prevention rehabilitation interventions targeting the older Latino community and their effectiveness for preventing falls, summarize evidence-based recommendations for best practice of fall prevention in Latino adults, and identify gaps where further study is needed.

**Methods:** Scoping review methodology will apply the following search terms as inclusion criteria: fall prevention, fall prevention intervention, fall prevention training, physical therapy, rehabilitation, balance training, older adult, older Latino adult, Latino, Latinx etc. Sources of Evidence will include PubMed, CINAHL, and EconLit databases. The search strategy will use a combination of keywords and controlled vocabulary (MeSH) for PICO components, yielding the broadest possible search, with no date of publication restriction.

**Results:** Pending MOLA Scholar summer research project.

**Conclusion:** By describing and comparing the cultural characteristics of published fall prevention rehabilitation interventions, a summary of recommendations for older Latinos will be compiled that can be implemented by physical therapists in their balance treatments. The outcomes of this study will be used to inform actionable strategies to reduce the incidence of falls in the older Latino community.



**IRIDIAN ALEXANDRA GUZMÁN, MPH:** she/her/ella

· Public health specialist

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· **Association between Pre-Pregnancy Diabetes Mellitus and Preconception Folic Acid Supplement Use by Hispanic Ethnicity: Findings from Georgia, New York City and Puerto Rico PRAMS 2016-2018**

**ABSTRACT: Background:** In the US women of reproductive age are recommended to consume 400 mcg of folic acid daily to prevent neural tube defects (NTDs). Both Hispanic ethnicity and pre-pregnancy diabetes are associated with increased risk of NTDs. Preconception folic acid supplement use has been shown to attenuate the risk of NTDs among women with pre-pregnancy diabetes.

**Objective:** The purpose of this study was to assess the association between preconception folic acid use and pre-pregnancy diabetes particularly among Hispanic women in the US.

**Methods:** Using data from three-state-based Pregnancy Risk Assessment Monitoring System (PRAMS) 2016-2018, we examined the association between preconception folic acid supplement use and pre-pregnancy diabetes mellitus stratified by Hispanic ethnicity. We used multivariable logistic regression to estimate the adjusted odds ratio (aORs) and 95% confidence intervals. All analyses accounted for PRAMS complex survey design.

**Results:** Our study found that 44% of non-Hispanic women with pre-pregnancy diabetes and 29% of Hispanic women with pre-pregnancy diabetes reported recommended intake of folic acid supplements (4-7 times/week) before pregnancy. There was no significant association between pre-pregnancy diabetes and preconception folic acid supplement use overall. The prevalence odds of not taking preconception folic acid supplements were lower for women with pre-pregnancy diabetes compared to women without pre-pregnancy diabetes (aOR=0.39; 95% CI, 0.05, 3.25) among Hispanics who received preconception folic acid advice from a health provider and among those who did not receive preconception folic acid advice the odds were higher (aOR=1.50; 95% CI, 0.27, 8.52). In our site-specific analysis, we noted that Hispanic women in Puerto Rico had a higher prevalence odds of not taking preconception folic acid supplements when they had pre-pregnancy diabetes compared to when they did not (aOR=7.60; 95% CI, 1.73, 33.46).

**Conclusion:** Overall, there was no association between pre-pregnancy diabetes and preconception folic acid supplement use. However, some differences were noted by advice from a health provider and site. Mandatory fortification of corn masa products should be implemented and culturally tailored education on preconception folic acid supplement use from providers or community health workers needs to expand to reach Hispanic women in the US and Puerto Rico.



**ALICIA MARIE LOZADA HAYDON**

- Research Assistant, Undergraduate student
- Department of Radiation and Cellular Oncology, The University of Chicago
- **Readability of a Radiotherapy Graphic Narrative Patient Education Guide Series in English and Spanish**

**ABSTRACT: Background:** Communicating the External Beam Radiotherapy Experience (CEBRE) and Communicating the Gynecologic Brachytherapy Experience (CoGBE) are novel graphic narrative patient education guides developed to facilitate doctor-patient communication for patients undergoing radiotherapy care for cancer.<sup>1</sup> Given the need for improved radiotherapy education resources for Spanish-speaking patients in the United States, we sought to develop versions of CEBRE and CoGBE in Spanish.<sup>2</sup>

**Objectives:** Outline how patient education tools can be translated and adapted into Spanish while meeting national readability standards.

**Methods:** Seven guides were translated into Spanish by a certified medical translator and then reviewed by a second translator. The translations were then revised by a multilingual team of designers and clinicians for cultural and linguistic adaptation of translation to the target population and to integrate the text into the guides. To assess readability, the core text from each guide was extracted and analyzed using previously validated indices that provide grade level equivalents. Readability analysis in English was conducted using Degrees of Reading Power (DRP), Flesch-Kincaid (FK), Ford-Caylor-Stitch index (FORCAST), Fry score, Gunning Fog (GF), Läsbarhetsindex (Lix), Rate Index (Rix), Raygor estimate, Simple Measure of Gobbledygook (SMOG). Analysis in Spanish was conducted using Gilliam-Peña-Mountain (GPM), Lix, Rix, and Spanish Simple Measure of Gobbledygook (SOL).

**Results:** Preliminary analysis of the CEBRE generic (non-site-specific) guide had a mean readability of 6.8 (DRP, FK, FORCAST, Fry, GF, Lix, Rix, Raygor, SMOG; 6.3, 5.7, failed, 7.8, 6, 6, failed, 8.8) in English. The Fry and Raygor tests failed due to excessive high syllable and 6+ letter words, respectively. The analysis of the Spanish translations demonstrated a mean readability of 6.8 (GPM, Lix, Rix, SOL; 5, 8, 7, 7.2). Further results are pending summer research project.

**Conclusion:** Mean readability was the same for English and Spanish versions. Importantly, the Spanish adaptations met the National Institutes of Health's 8th grade standard. Through iterative revisions, readability can be improved to meet the American Medical Association's 6th grade recommendation. Professional translation and cultural adaptation of existing patient education tools can maintain readability levels while helping improve health literacy for an increasingly linguistically and culturally diverse United States population.



**MELANIE IZQUIERDO:** she/her

· Medical student, M1

· University of Illinois College of Medicine in Chicago

· **The Role of Laminin Alpha-4 and Mitochondrial Biogenesis**

**ABSTRACT: Background:** Approximately two billion patients across the world have been clinically diagnosed with obesity. Obesity, characterized by excess adipocytes in the body, has been linked to greater predisposition towards developing type II diabetes, chronic hypertension, worsening quality of life, and mortality. Moreover, obesity significantly impacts the Latinx patient population in the US, affecting nearly 48% of adults in this demographic.

**Objectives:** Recently, we have developed a technique to produce “brite” or “brown in white” adipocytes by utilizing the basement membrane during adipocyte development. Upon deletion of extracellular glycoprotein laminin  $\alpha$ -4, we observed an upregulation in UCP-1, a thermogenesis protein located in the mitochondrion, resulting in higher metabolic function, insulin sensitivity, and ability to resist weight gain compared to wild type (WT) mice.

**Methods:** QRT-PCR was initially used to verify the existence of mitochondrial expression differences between brown adipose tissue (BAT) and subcutaneous (SQ) adipose tissue in laminin  $\alpha$ -4 KO and WT mice fat depots. Subsequently, mitochondrial quantity and membrane potential were recorded by using fluorescent microscopy and plate reader analysis.

**Results:** The preliminary data indicated increased expression of selected markers for mitochondrial genes ND2 and MTCO2 in laminin  $\alpha$ -4 KO compared to WT, in BAT.

KO SQ adipose tissue reported higher mitochondrial activity, measured via MitoTracker Fluorescence, in the plate reader experiment when compared to WT, supporting the hypothesis in question; however, once microscopy images were quantified, WT SQ tissue reported higher mitochondrial quantity and membrane potential changes in numerical fold as compared to the KO values.

**Conclusion:** The data collected is essential toward understanding the role of laminin  $\alpha$ -4 in mitochondrial biogenesis and obesity. Future work will involve further identification of biological targets for developing new therapeutics for patients diagnosed with obesity, especially for Hispanic populations.



**ZACH JAEGER:** he/him

- Medical student
- Washington University School of Medicine
- **Interactive Clinical Cases for Medical Spanish Learners**

**ABSTRACT: Background:** As the Spanish-speaking population in the United States continues to grow, it is ever more important for physicians to deliver competent care to these populations. Medical Spanish (MedSpan) programs teach various linguistic and cultural competency objectives, but there are limited resources to practice clinical skills in Spanish in a controlled, simulated setting. To address this need, we designed an interactive clinical case study series for MedSpan learners at our institution.

**Objectives:** By the end of this activity, learners will feel more confident in their abilities to:

1. Apply history-taking strategies to elicit patient concerns in Spanish through a virtual format;
2. Summarize and synthesize pertinent information from the history and physical exam to construct an accurate differential diagnosis in Spanish;
3. Evaluate differential diagnoses and justify the reasoning in Spanish;
4. Propose a diagnostic and therapeutic plan in Spanish; and
5. Engage in patient-centered explanations of complex Nephrology, Pulmonary, and/or Gastroenterology concepts in Spanish.

**Methods:** Faculty facilitators prepared complete mock patient cases, while students embodied the role of physician and asked questions of the facilitator to develop the case from chief complaint to diagnosis and plan. Pre- and post-surveys measured levels of learners' confidence in ability for each objective on a five-point Likert scale from 0 (no confidence) to 4 (complete confidence). This educational intervention addressed level 2 of the Kirkpatrick pyramid (learning), as we assessed knowledge, skills, and attitudes formed through our intervention.

**Results:** As all data were normally distributed based on visual inspection, we used the two-tailed, paired-samples t-test to find mean differences between pre- and post-intervention responses. Students demonstrated statistically significant improvements in their confidence in achieving objectives 2-5, with a non-significant improvement for objective 1.

**Conclusions:** In this educational intervention, our interactive clinical case studies improved the confidence of medical Spanish learners in their history-taking and clinical reasoning skills. Students provided constructive feedback and suggestions for improvement. We aim to disseminate this teaching model to improve medical Spanish curricula at other institutions, with the overarching goal of improving patient outcomes through increased physician-patient language concordance.



**ROCÍO IGLESIAS, MD:** she/her

· Junior Researcher

· Foundation for Clinical, Public Health, and Epidemiological Research of Venezuela (FISPEVEN)

· **A Case of a Submandibular Abscess Caused by Coinfection of Tuberculosis and Histoplasmosis in A Patient with Systemic Lupus Erythematosus. First case described.**

**ABSTRACT: Background:** Histoplasmosis and Tuberculosis (TB) are opportunistic granulomatous infections with a similar pathogenesis. Both infections are prevalent in Latin America, overall, 282,000 new or relapsed cases are reported from this region and more than a third of Latin Americans have been exposed to *Histoplasma capsulatum*. The incidence and prevalence of tuberculosis are far more common among third-world populations and immigrants to the United States than among US-born citizens. These pathologies can present as a disseminated infection in immunosuppressed patients, however, the coexistence of both is not frequent, being described mainly in HIV patients. Only 1% of all TB cases have skin manifestations.

**Case description:** We present a clinical case of a 31-year-old female patient, in Venezuela, diagnosed with Systemic Lupus Erythematosus (SLE) and Antiphospholipid Syndrome under treatment with Prednisone and Hydroxychloroquine, who presented to the hospital with a mass in the right submaxillary region, of fluctuating consistency and signs of associated inflammation. A sample was taken for biopsy, reporting positivity in the PAS reaction and Grocott impregnation, showing intra and extracellular yeast-like structures morphologically compatible with *Histoplasma capsulatum*, and acid-fast bacilli were observed with the Ziehl Neelsen stain. Cultures were taken and the diagnosis of tuberculosis and histoplasmosis coinfection was made. The PPD test resulted positive, and a chest X-ray was performed, where hilar lymphadenopathy was evidenced. Treatment of TB and Histoplasmosis was started and clinical improvement was evidenced without remission of symptoms in the following months.

**Conclusions:** The presentation of TB in patients with SLE has been widely described, but cases of disseminated histoplasmosis have been rarely reported. After an exhaustive review of the literature, we are not aware of any other reported cases of patients with SLE and coinfection of TB and histoplasmosis in a skin lesion.



**SONIA LÓPEZ**

- Undergraduate student
- University of Illinois at Chicago
- **Initiatives Aimed at Bridging the Medical School Gap for Latino Students**

**ABSTRACT: Background:** The Latino population has emerged as the largest minority group in the United States. As the Latino population has grown in size, so has the number of Latinos enrolled in higher education. Not only are Latinos pursuing college degrees at higher rates, but they are also increasingly seeking to gain admission into medical schools. In fact, between 1996 and 2015, the number of Latinos seeking admission into medical school increased from about 3000 to 5000; however, the number of those accepted has continued to hover around 35% (AAMC, 2016). In addition, to make matters grim, only 5% of those earning medical degrees are Latinos.

**Objective:** This study sought to examine higher education initiatives aimed at increasing the number of Latinos going into medical fields.

**Methods:** A case study of 3 UIC medical school pipeline initiatives (LaHSEP, Medicina Scholars & Las GANAS), in-depth virtual interviews were conducted with the program coordinators and two student participants from each program.

**Results:** From the perspective of the program coordinators, these programs are successful in recruiting, retaining, and graduating Latino students because they recognize the unique needs of the students and work to address them (i.e. academic support, research skills development, networking, career exploration, and financial support). From the perspective of the students, these programs not only provided the academic foundation needed to succeed academically, but they also exposed students to campus and professional sources of support to help them on their journey.

**Conclusion:** Though these initiatives are extremely important in boosting Latino medical school enrollment, not all universities have similar pre-med pipeline initiatives for their students. In addition to increasing these medical school pipeline programs and even expanding them to capture high school students, there is also a great need for research on the benefits of these types of initiatives.





**ALI MANUEL MALIK:** he/him/his

- Medical Student
- University of Florida College of Medicine
- Presentation Title #1: **An analysis of the factors contributing to the pervasive lack of Latino and Black male dermatologists**

**ABSTRACT: Background:** Dermatology is one of the least diverse fields in medicine. According to 2019 Census data, Latino/a/x Americans compose 4% of dermatologists, compared to 16% of the general population.

Additionally, 13% of Americans are Black, while 3% of dermatologists are Black. The majority of dermatology trainees today are women. Following bolstered recruitment efforts, the number of female underrepresented in medicine (URM) dermatology residents has risen, but the number of male URM dermatology residents has largely remained stagnant.

**Objective:** This study sought to understand the perceptions of URM male medical students regarding the field of dermatology to elucidate strategies for focused recruitment.

**Methods:** A literature review was conducted via PubMed/Medline to identify articles that described barriers impacting URM students in their pursuit of careers in dermatology. A 20-item IRB-approved Qualtrics survey was subsequently created and sent to 112 participating medical schools in the United States. Inclusion criteria specified URM male medical students at MD or DO medical schools in the United States.

**Results:** Survey data revealed that the majority of respondents identified the perceived competitiveness of the specialty as the most significant deterrent to pursuing dermatology, with 73% of respondents citing high USMLE Step 1 and 2 scores and third year clerkship grades as the most significant roadblock toward applying. Interestingly, others cited a lack of URM male role models in dermatology as another deterrent, while others questioned the “community impact” one can have as a dermatologist. Most respondents identified the lack of URM-focused mentorship in dermatology as an additional deterrent. Of the respondents pursuing dermatology, mentorship and support from faculty mentors played the most significant role in their career aspirations, followed by their personal perceptions of their chances of matching into dermatology.

**Conclusions:** This study is the first of its kind to specifically assess the perceptions of URM male medical students regarding dermatology, a field that regularly recruits the smallest proportion of URM male medical students when compared to all other medical specialties. The results of this study shed light on potential strategies for improved recruitment of URM students, particularly the increased need for faculty mentorship for URM male students.

- Presentation Title #2: **Building a long-term safety net: developing a clinical decision support tool to improve care of migrant farmworkers in Florida during the COVID-19 pandemic**

**ABSTRACT: Background:** Spanish-speaking farmworkers, particularly those in Florida, are one of the most consistently marginalized patient populations in the United States and were disproportionately affected by the COVID-19 pandemic. During the pandemic, medical student leaders of student-run free clinics across Florida noticed gaps in farmworker care, particularly as COVID-19 infections spiked on farms across Florida. Many clinic leaders also report that student volunteers often struggle to provide well-rounded care to farmworkers, citing a lack of context or tools with which to provide focused care to vulnerable farmworker patients.

**Objectives:** Using direct survey data collected from Florida farmworkers that details their most pertinent clinical needs, we aim to create a novel and comprehensive clinical decision support (CDS) peer-to-peer tool to guide medical, pharmacy, and physician assistant students involved in farmworker care in Florida student-run free clinics to improve their overall care of farmworker patients.

**Methods:** We chiefly aimed to determine the unique clinical needs of Florida farmworkers in the context of the COVID-19 pandemic via in-person survey data obtained from >300 farmworkers based in Alachua County, Florida. Using this information, we aim to develop a first-of-its-kind, translatable clinical decision support (CDS) tool to guide medical, pharmacy, and physician assistant students to provide high-quality care for farmworkers in student-run free clinics in Florida and beyond. This peer-to-peer, interprofessional, cross-cultural guide will provide condition-specific suggestions for care and “next best steps,” as well as contextually relevant reference information, such as the health effects associated with specific farmworker tasks and activities. For example, hand-weeding is often associated with respiratory illnesses and skin infections, while detasseling corn most often causes musculoskeletal problems.

**Results:** Pending summer project outcomes.

**Conclusions:** The results of this project, particularly the CDS tool, carries the potential to dramatically enhance the care of farmworkers in Florida and beyond. Moreover, there is limited clinical exposure to farmworker patients in traditional medical school curriculums, resulting in a distinct gap in the care these patients receive; this project serves to bridge that gap. Importantly, fostering the health and well-being of migrant and seasonal farmworkers is critical to advancing equity and social justice.



**DIANA MARINO-NÚÑEZ:** she/her/hers

- Medical Student, co-first author /2nd Co-first Author: Maria Paz
- University of Chicago Pritzker School of Medicine
- **Spanish Language Access to COVID-19 Vaccination Information and Registration in the 10 Most Populous Cities in the U.S**

**ABSTRACT: Background:** Covid-19 has disproportionately impacted the U.S. Hispanics, facing a 2.3 times greater risk of death from Covid-19 compared to non-Hispanic whites. Increasing Covid-19 vaccination amongst Hispanics is critical to their wellbeing.

**Objective:** We aim to understand how accessible information and scheduling services for covid-19 vaccines are in Spanish.

**Methods:** Ten most populous cities in the U.S. and percent of their Hispanic populations were identified using the U.S Census data, and CDC data for vaccination rates. We counted clicks to access information in English, and then in Spanish, on receiving the Covid-19 vaccine by querying “(state) department of health” using Google. We counted the clicks to access information about registering for a Covid-19 vaccine in Spanish. We assessed “Big-box” retailers distributing vaccines and their respective websites to record whether vaccine information and appointments were available in Spanish. Medians and interquartile ranges were calculated for clicks to vaccine information using STATA and a sign-ranked Wilcoxon test to assess differences in English and Spanish availability.

**Results:** Upon accessing the DPH sites, the median number of clicks to reach Covid-19 vaccine information was 2 (IQR 0.75) for English and 3.5 (IQR 1) for Spanish ( $p= 0.004$ ). Median clicks to Covid-19 vaccine locator sites from DPH websites in English were 4 (IQR 2) and 5 (IQR 1.23) for Spanish ( $p=0.01$ ). Median clicks to Covid-19 vaccine registration in English were 4 (IQR 2) and 5 (IQR 3) for Spanish ( $p=0.03$ ).

**Conclusion:** Despite over 70% of U.S. Hispanics being interested in Covid-19 vaccination, we found Hispanic Covid-19 vaccination rates ranged from 14.7% to 64.2%. Retrieving information on Covid-19 vaccines and registration in Spanish required more clicks compared to English and half of big-box retailers listed on vaccine locators failed to provide appointment information in Spanish. The importance of consistent navigability of online resources in Spanish is critical to encourage individuals to receive the Covid-19 vaccine.



**MAYRA ALEJANDRA SHAFIQUE, MS:** she/her

· Medical student

· Wayne State University School of Medicine

· **Educational Initiative to Train Medical Students How to Use Tele-health to Reach Out to Latinx Communities in Need**

**ABSTRACT: Background:** During COVID-19 pandemic educational programs and practices pivoted into virtual platforms. Simultaneously, communities were affected by lack of linguistically and culturally relevant information. Responding to this need, a tele-health check-in program was created. Participating medical students had a chance to practice their medical Spanish, interact with the Latinx population and learn about issues that

impacted their health.

**Objectives:** (1) Create an educational opportunity for medical students to expand linguistic and cultural proficiency. (2) Focused training in Spanish to screen for food insecurity and other disparities in Latinx populations via tele-health check-ins.

**Methods:** A script was developed in Spanish to screen for health and social disparities present during COVID-19. Topics included food insecurity, lack of access to proper PPE, a dearth of technology resources for virtual schooling, difficulty maintaining healthcare appointments, and coping with mental health and social isolation during the stay-at-home orders. This was illustrated by roleplay sessions to prepare students for the interviews. Students were educated on specific disparities and how to acquire resources tailored to meet patients' needs. Students also developed "Resources Packets" to provide to patients with community resources in their area.

**Results:** Eleven students volunteered to complete tele-health check-ins with families participating in programs at a community agency. The team was able to successfully complete a tele-health check-in with 32 Spanish-speaking families out of a list of 52. Two out of 11 students completed a practice session, three students practiced with family members, and five felt comfortable enough to connect with families independently.

**Conclusion:** This project shines light on the need for more Spanish-language focused medical education. In a class of 290, only 11 students felt comfortable enough to speak to patients in Spanish via tele-health check-ins. During the check-ins, students were able to experience discussing sensitive topics in a tele-health setting. This initiative can be adopted by other medical schools as a way to work with their Spanish-speaking students and train them how to speak with Latinx populations about inequities that affect them. There is a need for more physicians who use Spanish to not only communicate but also feel comfortable discussing sensitive topics.



**ALEJANDRO TORRES**

- Medical Student, M3
- Medical College of Wisconsin
- Presentation Title: **Secondary Trauma Prevention: A Qualitative Analysis of Hospital-based Violence Intervention Programs**

**ABSTRACT: Background:** Hospital-based Violence Intervention Programs (HVIPs) serve a growing role in preventing violent trauma by extending support that treats not only violent injuries, but socioeconomic risks as well.

Violence is often perceived as solely a societal issue with no ties or parallels to health. When explored in more depth, however, one can see how violence emulates the concept of a contagion as evidenced by its designation as the 5th leading cause of death in the United States.

**Objective:** This paper reviewed the literature on HVIP impact to date and explored the characteristics of 29 HVIPs to compare program functionality.

**Methods:** Variables such as mechanism of injury, qualifying age, services offered, time length of services, and community involvement were reviewed and summarized to determine if a common framework could be identified and implemented to improve existing programs and aid in developing future ones.

**Results:** The resulting comparison showed a time frame of 6-12 months as the most common period for program service usage. Concerning mechanism of injury, 100% of programs included individuals injured by gunshot wounds and 82.7% of programs extended their screening to stab wounds and other violent blunt injuries. Employment and mental health were the two services represented most among several other forms of assistance, offered by 82.7% and 79.3% of programs, respectively.

**Conclusions:** Investigating the variability among these programs helped identify common characteristics that should be considered when assessing program progress and goals for emerging and emerging HVIPs while underscoring important questions with respect to optimizing program outcomes.



**DAVID VELÁSQUEZ**

- Medical student, \*2021 MOLA-MRF Scholar\*
- University of Chicago Pritzker School of Medicine
- **Designing an Intelligent Tutoring System for Latinx Breast Cancer Survivors**

**ABSTRACT: Background:** Breast cancer accounts for roughly 29% of all cancer diagnoses in the Hispanic population, yet educational resources tailored for Latinx women are quite limited. Breast cancer education can improve health-related quality of life (HRQoL) and breast cancer survivorship. Mobile and web-based applications can offer a scalable platform for breast cancer education. However, these methods often require higher literacy levels above the National Institute of Health (NIH) recommendations and typically cannot assess patient comprehension. Intelligent Tutoring Systems (ITS) can provide an innovative solution with a robust pedagogical framework. Based on the constructivist learning approach, ITS can be designed to yield comparable learning gains to that of a personalized human tutor in a cost-effective and scalable manner.

**Objectives:** Thus, we aim to develop a personalized ITS that can effectively query and interact with Latinx breast cancer survivors. We hypothesize that we can develop an ITS capable of conversing with Latinx breast cancer survivors by incorporating technology that allows for culturally appropriate communication and a fundamental understanding of linguistic features commonly used by the bilingual community (these include cognates, misappropriations, and code-switching between English and Spanish).

**Methods:** We will conduct an extensive literature review of the appropriate breast cancer survivorship educational content to incorporate within the ITS and construct a preliminary ITS model.

**Results:** Pending summer project outcomes.

**Conclusion:** By working with an interdisciplinary team composed of computer scientists, physicians, medical students, psychologists, and social workers, we expect to successfully implement the proposed ITS and successfully pilot a limited set of interactions. Increasing the development of individualized educational technology-based solutions for Latinx breast cancer survivors will positively impact HRQoL and broaden accessibility of health education in Hispanic communities.



**KATHIE VÉLEZ:** she/her

· Medical student

· Kirk Kerkorian School of Medicine at University of Nevada, Las Vegas

· **Case Fatality Rates Among Minority Populations With COVID-19 In Southern Nevada**

**ABSTRACT: Background:** From the last day of each month from May to December 2020, the Southern Nevada Health District's daily COVID-19 reports show black and Asian/Pacific Islander populations demonstrate higher rates of COVID-19 cases, hospitalization, and mortality as compared to the white population. These reports recorded higher rates of cases and hospitalizations, but lower rates of mortality in the Hispanic population as compared to the white population.

**Objective:** This study seeks to understand whether there are disproportionate rates of COVID-19 case fatalities affecting minority populations in Southern Nevada.

**Method:** Records were obtained from the SNHD epidemiology website. Daily reports from the end of each month - May to December 2020 - consisting of the demographics of COVID-19 mortality and confirmed cases were obtained to calculate the case fatality rates (CFRs) for each racial and ethnic group per month. White, black, Hispanic and Asian/Pacific Islander populations were included.

**Results:** The CFRs for the Hispanic population from May to December are 2.90, 1.76, 1.73, 1.70, 1.57, 1.41, 1.25, and 1.21, respectively. The CFRs for the white population from May to December are 9.09, 5.84, 3.70, 4.07, 4.10, 3.40, 2.71, and 2.45, respectively. The CFRs for the black population from May to December are 7.98, 5.13, 4.11, 3.7, 3.84, 3.44, 2.82, and 2.46, respectively. The CFRs for the Asian/Pacific Islander population from May to December are 9.78, 6.70, 4.80, 4.60, 4.45, 3.95, 2.99, and 2.65, respectively.

**Conclusions:** Our results indicate the risk of dying from COVID-19 are highest among the Asian/Pacific Islander population and the lowest among the Hispanic population. White, black and Asian/Pacific Islander populations demonstrate nearly 2-3 times greater CFRs as compared to the Hispanic population over several months. Our data may warrant further studies to compare CFRs among Hispanic populations across different regions and factors contributing to discrepancies related to the number of confirmed cases of COVID-19 and/or hospital recorded death due to COVID-19.