Medical Student Research Thesis Program (MSRTP)

Class of 2018

Current Research in Health Disparities Research Colloquium
March 7, 2018
AGENDA

7:30 – 8:30 a. m. Continental Breakfast in the Keck Building Courtyard

8:30 a. m. Call to Order
Shahrzad Bazargan-Hejazi, PhD
Chair, CDU/UCLA Medical Student Research Thesis Program (MSRTP)

8:40 a. m. University Welcome
David Carlisle, MD, PhD
President, Charles R. Drew University of Medicine and Science

8:45 a. m. The Provost’s Welcome
Steve Michael, PhD
Provost, Charles R. Drew University of Medicine and Science

8:50 a. m. The Dean’s Welcome
Deborah Prothrow-Stith, MD
Dean, College of Medicine, Charles R. Drew University of Medicine and Science

9:00 – 11:15 a. m. Student Presentations (Morning Session)

11:15 – 11:30 a. m. Morning Break

11:30 a. m. – 12:00 p. m. Student Presentations (Morning Session, cont.)

12:00 – 1:30 p. m. Lunch in the Student Lounge of the Cobb Administration Building

1:30 – 2:15 p.m. PRIME Plenary Session

2:15 – 2:30 p. m. Afternoon Break

2:30 – 4:00 p.m. Student Presentations (Afternoon Session)

4:00 – 4:10 p. m. Closing Remarks
Shahrzad Bazargan-Hejazi, PhD

Students, judges and moderators are asked to remain after Closing Remarks for group photos.
Moderators of Student Presentations

Shanika Boyce, MD

Dr. Boyce is a pediatrician, an Assistant Professor at Charles R. Drew University of Medicine and Science, and the Co-Director for the Longitudinal Primary Care Clerkship. She received her medical degree from the CDU-UCLA Medical Education Program, and completed her Pediatric Residency Training at Harbor-UCLA Medical Center in 2014. Following her residency training, she returned to CDU as a faculty member and recently received a dual appointment as Assistant Clinical Professor in the Department of Pediatrics at the David Geffen School of Medicine. She practices clinically at Kaiser Permanente, per diem.

David Hindman, PhD

Dr. Hindman is an assistant professor in the Department of Family Medicine at Charles R. Drew University and Director of Behavior Health Services in the Department of Health Services at the Hubert H. Humphrey Comprehensive Care Center in Los Angeles. He is an officer of the California Psychological Association in the Division of Education and Training, and involved in residency and training programs since 2004.

Stanley Hsia, MD

Dr. Hsia is an Associate Professor of Medicine at Charles R. Drew University of Medicine and Science and a Health Sciences Associate Clinical Professor at the David Geffen School of Medicine at UCLA. He has served as a program director for residents and endocrinology fellows, and as a clerkship director for CDU/UCLA medical students. Dr. Hsia has been conducting clinical research for the past 15 years, including both industry and investigator-initiated trials, funded by the National Institutes of Health and the American Diabetes Association.

Gerardo Moreno, MD (PRIME Plenary Session)

Dr. Moreno is Director of UCLA Program in Medical Education (PRIME) and associate professor in Family Medicine at UCLA. He received his MD from UCLA, and completed his post-doctoral clinical residency training in Family Medicine at the University of California San Francisco. He holds a Master of Science in Health Services from the UCLA School of Public Health, and completed a research fellowship in the Robert Wood Johnson (RWJ) Foundation Clinical Scholars Program at UCLA.
Panel of Judges

Michele A. Basso, PhD
Dr. Basso is a Professor in the Department of Psychiatry and Biobehavioral Sciences and Department of Neurobiology at DGSOM and Director of the Fuster Laboratory of Cognitive Neuroscience. The laboratory conducts research focusing on basic questions of science that may have direct clinical impact on the treatment of certain diseases, including Parkinson’s. One of her current research projects examines the role of the basal ganglia and the superior colliculus in saccadic (quick and simultaneous) eye movement decision-making.

Linda G. Baum, MD, PhD
Dr. Baum is currently Professor and Vice Chair of the Dept. of Pathology and Laboratory Medicine, and Associate Dean for Medical Student Research and Scholarship at DGSOM. She has served on the FASEB Committee on Excellence in Science, the scientific advisory board for the NIH-sponsored Integrated Technology Resource for Biomedical Glycomics, and on the editorial board of several journals.

Steven L. Lee, MD
Dr. Lee is Associate Program Director of the General Surgery Residency at Harbor-UCLA Medical Center, and a Professor of Clinical Surgery and Pediatrics at the David Geffen School of Medicine at UCLA. He received his MD from the University of California at Davis, California.

Malcolm G. Munro, MD
Dr Munro is a gynecologist with interests in the disease states of abnormal uterine bleeding and chronic pelvic pain. A cofounder of the FIGO Menstrual Disorders Committee, he also led the development of FIGO's systems for Nomenclature of Abnormal Uterine Bleeding (AUB) Systems and the PALM-COEIN system for classification of causes of AUB.

John K. Su, MD
Dr. Su is the Program Director of the Family Medicine Residency at Kaiser Permanente Los Angeles and Assistant Professor at the Kaiser Permanente School of Medicine. He received his MD and MPH at Boston University School of Medicine and Public Health, completed his family medicine residency at Kaiser Permanente Los Angeles, and sports medicine fellowship at UCLA. He is a co-founder of the Los Angeles Albert Schweitzer Fellows Program.

Peggy S. Sullivan, MD
Dr. Sullivan is the Residency Program Director and Vice Chair for Clinical Education in the Department of Pathology and Laboratory Medicine at UCLA’s David Geffen School of Medicine. She received her MD at USC Keck School of Medicine and completed her pathology residency and cytopathology fellowship at UCLA. Her clinical and research interests include breast, gynecologic and cytopathology.

Sharon Younkin, PhD
Dr. Sullivan is the Residency Program Director and Vice Chair for Clinical Education in the Department of Pathology and Laboratory Medicine at UCLA’s David Geffen School of Medicine. She received her MD at USC Keck School of Medicine and completed her pathology residency and cytopathology fellowship at UCLA. Her clinical and research interests include breast, gynecologic and cytopathology.
STUDENT PRESENTATIONS (Morning Session)

9:00 a.m.  ACHILLES AIKEN  Primary Mentor: Cesar Barba, MD
Association between medication adherence and illness perception in hypertensive patients at Freemont Wellness Center

9:15 a.m. LILIANA CASAS  Primary Mentor: Nina Harawa, PhD
Risk factors and resiliency factors for suicide ideation in African American women participating in an STI/HIV risk reduction program

9:30 a.m. JOAN CHOI  Primary Mentor: Neil Patel, MD
The voices of intimate partner violence: A qualitative systematic review of the women and their experiences with healthcare providers in the emergency department

9:45 a.m. JACOB GUTIERREZ  Primary Mentor: Mitchell Wong, MD, PhD
Changes in popularity over time and substance use amongst Latino adolescents from low-income neighborhoods in Los Angeles

10:00 a.m. KAITLIN HALL  Primary Mentor: John Santelli, MD, MPH
Association between early age at sexual initiation and HIV infection in Rakai, Uganda

10:15 a.m. JAIME JIMENEZ  Primary Mentor: Monica Ferrini, PhD
Effect of ginger, paullinia cupana, muira puama and l- citrulline, singly or in combination, on modulation of the inducible nitric oxide- no-cgmp pathway in rat penile smooth muscle cells

10:30 a.m. AXELINE MAISONET  Primary Mentor: Sonya Gabrielian, MD
Adapting effective social skills training interventions to improve housing retention in mentally ill homeless veterans

10:45 a.m. PARRISHA MARTELLY  Primary Mentor: Eric Houston, PhD
Interventions used in patients with chronic illness undergoing transition to adulthood in underserved areas: A systematic review

11:00 a.m. LUCIA MARTINEZ  Primary Mentor: Colin Robinson, MD, MPH
Assessing the effectiveness of a novel multimodal medical Spanish curriculum

Morning Break (15 Minutes) Reconvene at 11:30 a.m.

11:30 a.m. MONIQUE MCDERMOTH  Primary Mentor: Omid Khorram MD PhD
Inequalities in Infertility Service Utilisation: A Comparison of African American and Caucasian Women with Impaired Fecundity Who Seek and Do Not Seek Care

11:45 a.m. NANSE MENDOZA  Primary Mentor: Brenna Taira, MD
Knowledge of and barriers to learning CPR differ between English and Spanish speakers
Lunch Break (90 Minutes) Reconvene at 1:30 p.m.

PLENARY SESSION (UCLA PRIME Students in MSRTP Program) 1:30 – 2:15 p.m.

SADIE ACQUAH-ASARE Primary Mentor: Shahrzad Bazargan-Hejazi, PhD
Pediatric emotional intelligence: A scoping review

STEFANIE GOPAUL Primary Mentor: Melanie Gold, MD
The integrative medicine needs of patients at five New York City school based health centres

ERIC OTTEY & JOE TORRES Primary Mentor: Margarita Loeza, MD
Protecting undocumented patients’ access to healthcare: Preserving utilization at Venice family clinic in a time of anti-immigrant rhetoric

JADE SANDERS Primary Mentor: Shauna M. Downs, PhD
Salt and the city: New York City’s sodium warning label policy

Afternoon Break (15 Minutes) Reconvene at 2:30 p.m.

2:30 p.m. DANIEL ORELLANA Primary Mentor: Lonnie Zeltzer, MD
Heart rate variability in pediatric patients with chronic abdominal pain

2:45 p.m. RYAN RANDLE Primary Mentor: Shahrzad Bazargan-Hejazi, PhD
Racial and ethnic differences in the rates of alcohol impaired motor vehicle crashes among various age groups in the U.S. national trauma data bank

3:00 p.m. JAZIEL RODRIGUEZ-LARA Primary Mentor: Darlene Parker-Kelly, MSLS
Critical review of clinical practice guidelines and prescribing trends of clozapine in the management of treatment-resistant schizophrenia

3:15 p.m. SANTELIA ROSE Primary Mentor: Stanley K Frencher Jr. MD
Exploring the implementation of eConsult to improve access to women’s health in the inland empire

3:30 p.m. RICKY THOMAS Primary Mentor: Mohsen Bazargan, PhD
Correlates of Emergency Department Utilization among Underserved Older African American Adults

3:45 p.m. TRACIE TSUKIDA Primary Mentor: Shahrzad Bazargan-Hejazi, PhD
Comparative study of the different simulation modality used in teaching the ICU curriculum for the pediatric residents

4:00 p.m. MIGNOTE YILMA Primary Mentor: Jane Lee, MD, PhD
Retrospective chart review of liver transplantation (lt) referred patients: Exploration of socioeconomic status and patient demographics at a single institution

4:15 p.m. SHAHRZAD BAZARGAN-HEJAZI, PhD
CLOSING REMARKS

End of 2018 CDU MSRTP Research Colloquium

Students, judges and moderators are asked to remain after closing remarks for group photos.
CLASS OF 2018

Students and Abstracts

MEDICAL STUDENT RESEARCH COLLOQUIUM
Charles R. Drew University of Medicine and Science
March 7, 2018
Sadie Acquah-Asare

*Pediatric emotional intelligence: A scoping review*

Mentor: Shahrzad Bazargan-Hejazi, PhD

**Background:** Numerous studies have linked emotional intelligence (EI) to life-satisfaction, academic success, social competence and relationship quality. EI may be protective against psychopathology and aggressive behavior. Pediatric definitions and measurements are unclear because most EI investigation has been performed in adults; nonetheless, pediatric EI interventions have been initiated in many settings.

**Objectives:** This study aims to evaluate current characterizations of EI and how it is expressed by and fostered in youth through (1) defining emotional intelligence, (2) outlining assessment tools, (3) reviewing measurement methods’ reliability and validity, and (4) investigating EI interventions within pediatric populations. Methods As described by Arksey and O’Malley, a systematic search strategy of peer reviewed publications in English between 2006 and 2016 using different electronic databases and key terms was performed. Studies included both genders, multiple ethnicities, and variable group sizes and durations. Exclusion criteria included subjects over 18 years old or presence of mental illness or intellectual disability. Studies including neuroimaging or without translation were also excluded.

**Results:** Sixteen articles fitting inclusion criteria underwent final assessment. Studies in this scope review focused on academic success, social skills and psychological well-being. Themes included: (1) EI definitions consistent with Salovey and Mayer’s four concept ability description, (2) variable measurement tools for youth EI, including: MSCEIT-YV, Emotional Awareness Questionnaire, SREIS, and (3) EI ramifications on future success psychosocially.

**Conclusion:** Per this scope review, neither sufficient longitudinal studies nor significant reliability/validity testing has been done specifically in pediatric populations. The MSCEIT-YV may be the most useful tool for evaluating children’s EI; however, adult scales have had more stringent validity and reliability testing. Studies suggest that fostering development of EI in schools and at home is likely beneficial for psychosocial development of children; however, many programs already educate and prepare professionals to teach and promote EI in children.

**Abbreviations:** MSCEIT-YV: Mayer-Salovey-Caruso Emotional Intelligence Test Youth Version, SREIS: Self-Rated Emotional Intelligence Scale.
Background: Hypertension is an important risk factor in myocardial infarctions, cerebral vascular accidents, heart failure, as well as other preventable cardiovascular diseases. Patients often develop severe cardiovascular complications following years of poor blood pressure control, often exacerbated by medication non-adherence. Prior studies have shown an increased likelihood of well-controlled hypertension in patients with high medication adherence, but the evidence supporting the relationship between positive illness perception and improved medication adherence has been inconsistent.

Objective(s): Assess the association between medication adherence and illness perception among hypertensive patients at Fremont Wellness Center in order to determine if greater understanding of one’s illness is associated with increased medication adherence.

Methods: Patients with a diagnosis of essential hypertension completed two self-administered questionnaires: the Brief Illness Perception Questionnaire (BIPQ) and the Medication Adherence Reporting Scale (MARS-5). Patients were divided into two cohorts: high adherence and low adherence. After the two cohorts were established and analysis of categorical variables was completed, analysis was conducted comparing BIPQ scores between the high and low adherence groups.

Results/Conclusions: Preliminary findings indicate that there is no statistically significant difference between illness perception among the more adherent and less adherent group.
Liliana Casas

Risk factors and resiliency factors for suicide ideation in African American women participating in an STI/HIV risk reduction program

Mentor: Nina Harawa, PhD, MS

Background: Suicide is the tenth leading cause of death in the U.S. and among the leading causes of premature death in minorities. Most research analyzing predictive and protective factors reflect the White male population which comprises the majority of completed suicides. Recent data shows that Blacks have similar rates of suicide ideation and attempts as do Whites, with some data showing Black women having the greatest rate of attempts.

Objectives: We examined the following among low-income Black women who participated in an STI/HIV risk-reduction program in Los Angeles:

1. Risk factors that may contribute to suicide ideation (SI).
2. Whether family support, social support, self-esteem, and religiosity are associated with reduced risk of SI.

Methods: A secondary data analysis was conducted using baseline data from participants (n=465) in the FemAALES (Females of African American Legacy Empowering Self) studies. Suicidal ideation was assessed by asking about thoughts of ending one’s life as part of the Brief Symptom Inventory. Participants chose from a five-point Likert scale (“1-Not at all” to “5-Extremely”). Responses of 2 or greater were positive for SI. Bivariate analyses were conducted using Chi-square and Fischer’s exact tests. Multivariate logistic regression analyses were used to examine the association between potential risk factors and SI after controlling for age and education.

Results: In the bivariate analysis, only chronic burden was positively related to SI. Self-esteem, social support, and family support had statistically significant inverse associations with SI. In the multivariate analysis, self-esteem and family support were the only factors found to be statistically significant. Self-esteem had an odds ratio of 3.55 (95% CI: 1.51-8.32) and family support had an OR of 2.88 (95% CI: 1.01-8.20).

Conclusion: Based on the multivariate regression analysis, none of the risk factors in the study were associated with increased SI. Of the resiliency factors, family support and self-esteem were found to be protective of SI. Physicians can consider screening for SI as an intake item during clinic visits and can build on these resiliency factors. There is still a need for a longitudinal study with a larger sample size to assess causality and to have a more reliable outcome.
Joan Choi

The voices of intimate partner violence: A qualitative systematic review of the women and their experiences with healthcare providers in the emergency department

Mentor: Neil Patel, MD

Background: The World Health Organization defines intimate partner violence (IPV) as behavior by an intimate partner that causes physical, sexual or psychological harm. In the United States, IPV affects one out of four women. It is the leading cause of serious injury, and the second leading cause of death among women of reproductive age. The emergency department (ED) is often the first point of care for women experiencing acute injuries from IPV. However, providers’ lack of knowledge regarding women suffering IPV can compromise effective treatment and support. It is therefore imperative to examine the narrative of battered women to improve outcomes.

Objective: To explore the experiences of battered women presenting to the ED so as to add to the body of knowledge of IPV, yielding better health outcomes.

Methods: A qualitative systematic review was undertaken using PubMed, Medline, Psychinfo, Web of Science, and Google Scholar. Inclusion criteria: Studies conducted in the US from 2000 to 2018, and women 15 years and older who had experienced IPV and presented to the ED.

Results: Several themes reoccurred throughout the narratives. Barriers to disclosing abuse included fear of the perpetrator, losing children, embarrassment, and beliefs that providers would blame and misunderstand their situation. Most perceived the providers to be unconcerned, rushed, controlling, and lacking compassion. However, they were thought to adequately address their physical injuries. The women appreciated and desired non-judgmental caregivers who showed compassion, interviewed privately, and explored options and resources even when the women were not ready to change. Another recommendation was the desire to have domestic violence counselors present in the ED.

Conclusions: The exploration of the narratives of battered women and their experiences in the ED yield findings which provide healthcare providers the opportunity to address the needs of the women and improve outcome. Further study of the narratives of populations with special needs, such as immigrants, mental health patients, the incarcerated, transgender, sex workers, and women veterans is warranted.
Stefanie Gopaul

The integrative medicine needs of patients at five New York City school based health centers

Mentors: Melanie Gold, DO, MPH; Samantha Garbers, MD

Background: Integrative medicine refers to a comprehensive primary care system that draws on both conventional and complementary and alternative medicine (CAM) approaches in order to effectively treat the patient as a whole. The use of CAM to achieve wellness is becoming more common among U.S. children. The 2012 National Health Interview Survey found that 11.6% of children (aged 4-17) used any complementary health approach in the past 12 months. Additionally, studies have shown some CAM modalities to be beneficial in treating a number of conditions including asthma, ADHD, insomnia, and chronic neck/back pain. Given the increasing use of CAM among children and potential health benefits, it is necessary to assess the utility of CAM in integrative medicine and in achieving holistic wellness.

Objective: The objective of this study was to assess the integrative healthcare practices and needs of patients at six NYC school-based health centers (SBHCs). We assessed patient health concerns, familiarity and utilization of various CAM modalities, and modalities patients wanted offered at their SBHC.

Methods: Participants were recruited in the SBHC waiting room and completed a 10-question electronic survey. Data was stored and analyzed using the online Qualtrics reporting system.

Results: There were a total of 399 respondents, grades 9-12 (59% female, 39% male, 1% other). The most reported health issues were improving sleep (63%), fitness (52%), and energy (41%). CAM modalities utilized frequently by respondents were massage (52%), yoga (42%), and mediation (40%). There was lower utilization of acupuncture, Reiki, Tai Chi, osteopathic manipulation, Ayurvedic medicine and hypnotherapy. CAM modalities that respondents wanted at their SBHC included massage (72%), meditation (71%), yoga (69%) and Tai Chi (51%).

Conclusion: School staff should explore opportunities to offer desirable and relatively low-cost CAM therapies such as yoga, meditation, and Tai Chi at their SBHCs to help patients achieve their health goals.
Jacob Gutierrez

Changes in popularity over time and substance use amongst Latino adolescents from low-income neighborhoods in Los Angeles

Mentor: Mitchell Wong, MD, PhD

Background: Previous studies have shown that being more popular is associated with higher rates of substance use among adolescents, but it is unknown whether this relationship between popularity and substance use is causal.

Objective: To explore the possible causal relationship between popularity and substance use, we examined whether changes in popularity over time are associated with substance use among a sample of Latino adolescents from low-income neighborhoods in Los Angeles.

Methods: The UCLA Reducing Inequities in Health Through Social and Educational change study is a natural experimental study designed to examine the impact of high performing schools on adolescent behaviors. We conducted linear regression models to examine risky use of alcohol and marijuana (e.g. frequent use, use at school, getting into trouble because of substance use) and logistic regression models to examine 30-day use of alcohol and marijuana. For each analysis, we adjusted for gender, race/ethnicity, birthplace, language, parental birthplace, and parental education.

Results: Based on 1113 student survey responses, we found that perceived popularity in 10th grade and 11th grade were associated with substance use at 11th grade. Perceived popularity was correlated with risky marijuana use in 10th grade ($\beta = .085$ and $p = .025$). Perceived popularity was also associated with risky marijuana use in the 11th grade ($\beta = .098$ and $p = .015$). However, change in adolescents’ perceived popularity from 10th to 11th grade was not associated with risky use of alcohol ($\beta = .009$ and $p = .851$) or marijuana ($\beta = .002$ and $p = .952$). We also examined 30-day use of alcohol and marijuana and found similar associations with perceived popularity and changes in perceived popularity.

Conclusion: Although perceived popularity is associated with substance use, changes in perceived popularity over time are not associated with subsequent substance use. One reason for this may be that popularity is not causally associated with substance use.
Kaitlin Hall

Association between early age at sexual initiation and HIV infection in Rakai, Uganda

Mentor: John Santelli, MD, MPH

Background: Early sexual initiation among young people is associated with an increased risk of poor sexual and reproductive health outcomes, including HIV infection. To date, HIV remains a prevalent problem throughout sub-Saharan Africa, especially among young women. The Rakai Community Cohort Study (RCCS) is an open, population-based cohort, in Uganda that enrolls all consenting adult residents ages 15-49 from approximately 50 communities in the Rakai District. As part of the study, participants are interviewed and undergo HIV testing.

Objectives: (1) To describe the prevalence of early sexual initiation among participants of the RCCS. (2) To assess the association between early sexual initiation and HIV infection.

Methods: A cross-sectional study using RCCS round 15 data was conducted to assess the association between early sexual initiation and HIV status. Preliminary data analyses consisted of bivariate and multivariable logistic regression methods.

Results: Of 2688 people, 416 (15%) reported sexual initiation prior to 15 years of age, while 2272 (85%) reported sexual initiation at or after 15 years. 1412 (52.5%) of the respondents were female and 1276 (47.5%) were male. 796 (29.6%) were HIV+, while 1892 (70.4%) were HIV-. The odds of early age at sexual initiation were higher among females (OR=4.4; 95% CI: 3.4-5.7), those unwilling at first sex (OR=6.31; 95% CI: 4.5-8.8), and those with older partners (OR=6.0; 95% CI: 4.2-8.8). The ORs for partner relationship varied significantly by type of relationship. There was a significant association between age at sexual initiation and HIV status, adjusting for gender, willingness, partner relationship, and partner age (OR=1.6; 95% CI: 1.3-2.0).

Conclusions: Early age at sexual initiation was found to be associated with HIV infection, supporting the hypothesis that earlier sexual initiation increases the odds of HIV. Further studies are ongoing to assess the association between age at sexual initiation and other reproductive health outcomes.
Jaime Jimenez

Effect of ginger, paullinia cupana, muira puama and L-citrulline, singly or in combination, on modulation of the inducible nitric oxide-no-cgmp pathway in rat penile smooth muscle cells

Mentor: Monica Ferrini, PhD

Introduction: COMP-4 is an oral natural product consisting of the combination of ginger, Paullinia cupana, muira puama and L-citrulline, which when given long-term has been shown in the aged rat to a) upregulate iNOS in the penile smooth muscle cells (SMC), b) reverse the corporal SMC apoptosis and fibrosis associated with corporal venoocclusive dysfunction (CVOD), and d) improve resulting erectile function. To elucidate the mechanism of how COMP-4 and its individual components modulate the iNOS-cGMP pathway.

Materials and Methods: Primary SMC cultures using the explant technique were initiated by cutting small pieces of corporal tissue from 8-week old Sprague-Dawley rats. The SMC were grown in Dulbecco media with 20% fetal calf serum. The SMC were then incubated with or without COMP-4 (ginger: 0.225mg/ml; muira puama, Paullinia cupana and L-citrulline each at 0.9 mg/ml) for up to 24 hours. mRNA and protein were extracted and used for the determination of iNOS and PDE5 content. cGMP content was determined by ELISA. L-NIL (4 μM) was used as an inhibitor of iNOS activity.

Results: Compared to the control values, COMP-4 upregulated expression of cGMP by 85%, 15 fold increase in both iNOS protein and mRNA content while it decreased both PDE5 mRNA and protein content each by about 50%. L-NIL completely inhibited the effect of COMP-4 on cGMP production.

Conclusions: This in vitro study demonstrates that COMP-4 is capable of activating the endogenous cellular iNOS-cGMP pathway within the CSM cells which is theorized to be responsible for reducing the fibrosis and apoptosis as well as the CVOD observed in the aging rat penis. Further studies will be necessary to determine whether supplementation of COMP-4 on a daily basis may be beneficial in halting or reversing this aging related erectile dysfunction in the clinical setting.
Axeline Maisonet

Adapting Effective Social Skills Training Interventions to Improve Housing Retention in Mentally Ill Homeless Veterans

Mentor: Sonya Gabrelian, MD, MPH

Background: Permanent, community-based housing with supportive services ("permanent supported housing (PSH)") improves housing and health for homeless-experienced persons. Despite this, across the VA many homeless Veterans still struggle to sustain housing. Social skills (interpersonal communication or instrumental skills, like money management, which facilitate social interactions) are a determinant of premature PSH exits. Though social skills training (SST) interventions effectively improve participants’ social skills and functioning, these interventions are uncommon within homeless services.

Objective: We conducted a developmental formative evaluation to tailor and adapt effective social skills training interventions to fit the contextual needs of PSH participants and thus improve their housing retention.

Methods: To identify factors relevant to SST intervention outcomes in psychiatric rehabilitation settings, we performed key informant interviews with national SST leaders (n=12). We also conducted an expert panel of experts in homelessness and psychiatric rehabilitation to help adapt the skills training program (n=10). In addition, we conducted semi-structured interviews with PSH participants (n=40). Key informants, experts, and PSH participants were asked about potential barriers to and facilitators of implementation of SST in PSH, along with perceptions about their feasibility and utility. We performed thematic analyses of these qualitative data.

Results: Key informants highlighted the importance of tailoring SST’s behavioral instruction (e.g., role plays) to participants’ real-life challenges, as well as the value of practicing learned skills outside the classroom. Barriers to implementation included participants’ competing needs (e.g., food) and PSH’s lack of treatment mandates. Feasibility of implementation was highlighted by informants’ prior successes in tailoring SST for other complex settings. Both participants and informants perceived SST as highly valuable within PSH; participants perceived particular value in certain SST domains, e.g., money management and conversation skills.

Conclusions: This formative evaluation highlights ways to tailor SST for PSH’s contextual needs. This information was used to create an educational intervention ("Housing Skills Training Group Manual") with SST in 6 major thematic areas: Finding and Renting an Apartment, Filling Your Day with Productive Activities, Managing Your Finances, Solving Interpersonal Problems, Avoiding Misuse of Drugs and Alcohol, and Managing Your Health. We plan to conduct a controlled effectiveness implementation hybrid type I pilot trial of the intervention at the VA Greater Los Angeles.
Parrisha Martelly

*Interventions used in patients with chronic illness undergoing transition to adulthood in underserved areas: A systematic review*

Mentors: Eric Houston, PhD; Lindsay Wells, MD

**Background:** Transitioning from pediatric to adult healthcare is a tumultuous time for adolescents. Minority patients and patients living in underserved areas may face unique stressors that may additionally complicate the process.

**Objective:** Described identified transitions of care interventions implemented in predominantly underserved and/or minority communities, as well as described transition outcomes of implemented interventions.

**Methods:** Studies that were published between January 2000 – January 2017 were identified using PubMed, CINAHL, PsychInfo and The Journal of Adolescent Medicine databases. Included studies were implemented specifically to impact the outpatient transition from pediatric to adult healthcare. Further, studies must have had a minimum of 50% minority patients or have been described as “underserved.”

**Results:** 13 of 2,339 studies were identified to meet inclusion criteria. Identified interventions were typically multimodal. Intervention types included patient education, ancillary services, referral services, social support, and ”soft hand-offs,” among others. Significant outcomes included improvements in disease management, self-efficacy, and increased patient-initiated communication with health care professionals. Improvements were also noted in disease symptoms and markers, including improvements in HgbA1c in diabetic patients and decreased incidences of hypoglycemia.

**Conclusions:** Transition interventions in minority and underserved communities varied greatly in their approach and were commonly multi-modal. Limitations included the lack of demographic data available for some studies that may have otherwise met inclusion criteria. Future research is needed to specifically address the special needs of minority and underserved communities when transitioning from pediatric to adult healthcare.
Lucia Martinez

Assessing the effectiveness of a novel multimodal medical Spanish curriculum

Mentors: Colin Robinson, MD, MPH; Kristen Kipps, MD

Background: With a continually growing Spanish-speaking population in the US, there is an increasing need for improvement of communication and language concordance between Spanish-speaking patients and medical practitioners. Few medical schools and residencies offer Medical Spanish instruction as part of their curriculum. Furthermore, little, if any, research has been done on the effectiveness of existing Medical Spanish curricula.

Objectives: To evaluate the effectiveness of a novel Medical Spanish curriculum to demonstrate:
- Improvement of Medical Spanish proficiency through participation
- Changes in participant comfort with use of Medical Spanish in practice
- Changes in participants’ attitudes towards in-hospital interpreter use

Methods: Participants in our course included medical students and residents who enrolled on an elective basis. Prior to participation, participants completed a written Spanish ability exam as well as a survey on their comfort interacting with patients in Spanish and their likelihood of interpreter use. The course consisted of online independent study, material review with an instructor, and small-group medical case discussion in Spanish. Participants similarly completed a post-test of comparable difficulty and a post-survey.

Results: 89.5% (34/38) of medical students and 27.1% (13/48) of residents completed both pre- and post-tests, while only 19 of participants completed pre- and post-surveys. On average, participants improved by 24.9% (p=0.00). Higher participation through class attendance correlated with a significant improvement in post-exam scores (p=0.01). Students with greater improvements in test scores became less comfortable providing counseling on specific issues (p=0.03) and more comfortable performing a patient history and physical, though not statistically significant. After the course, participants on average became less likely to use an interpreter.

Conclusion: Overall, our course improved the Medical Spanish of its participants, with those who were more active throughout this curriculum demonstrating significantly more improvement in their Medical Spanish proficiency. Limitations of this study include a small sample size and absence of objective verbal fluency evaluation. Future areas of improvement include additional practice counseling and reinforcing the importance of obtaining a qualified Spanish interpreter when necessary.
Monique McDermoth

Inequalities in infertility service utilization: A comparison of African-American and Caucasian women with impaired fecundity who seek and do not seek care

Mentor: Omid Khorram, MD, PhD

Purpose: To compare racial differences in accessing infertility services, and to explore the pattern of female infertility treatment utilization by ethnic identity.

Methods: Using data from the 2006-2015 rounds of the National Survey of Family Growth (NSFG), descriptive statistics and a bivariate analysis was performed to determine the associations between individual patient characteristics and infertility-related health seeking practices, stratified by ethnicity. Key covariates were assessed with multivariate regressions to estimate the impact of the variables in relation to ethnicity.

Results: Of the 22,116 women who were surveyed by the NSFG, 2,585 (11.7%) respondents endorsed difficult with infertility. Of these women, 63.8% were Caucasian, 15.8% were African American and 20.5% were Latina. A lower proportion of African American women sought infertility services compared with Caucasian women (27.6% vs 36.6%, p=0.06). Factors that were significantly associated with seeking infertility services for all ethnicities in bivariate analysis included being married, endorsing physical difficulty having children, having endometriosis and private insurance. For African American women, being religious and having a place one receives usual care was also statistically significant for seeking infertility services when compared to their Caucasian counterparts. In multivariate models controlling for insurance, education, religion, and treatment for medical conditions impacting ovulation, African American women were less likely to use drugs to improve ovulation (p=0.043), undergo infertility testing (p=0.03), utilize artificial insemination (p=0.018) or surgery for treatment of endometriosis (p=0.002).

Conclusions: African American women are less likely to seek infertility services compared with Caucasian women. Additionally, African American women have an overall lower utilization of drugs to improve ovulation, infertility testing, and artificial insemination. A number of sociodemographic factors appear to be significantly related to the propensity of seeking infertility care. This study suggests that infertility service utilization is a multifaceted issue requiring further investigation.
Nanse Mendoza

Knowledge of and barriers to learning CPR differ between English and Spanish speakers

Mentors: Breena Taira, MD, MPH; Caleb Cандers, MD

Background: Previous studies of 9-1-1 callers suggest that limited English proficiency is a barrier to rapid initiation of CPR in out-of-hospital cardiac arrest. We aimed to further define the role of language in CPR utilization by comparing knowledge and barriers to learning CPR between English and Spanish speakers.

Methods: Study Design: Prospective, anonymous survey questionnaire. Setting: A public, county emergency department. Subjects: A sample of adult patients and visitors who spoke English or Spanish. Measures and outcomes: Demographics included gender, age, primary language, number of years of education. The primary outcome was familiarity with the concept of CPR (Y/N). Secondary outcomes included prior exposure to CPR courses and perceived barriers. Analysis: Descriptive statistics.

Results: Of 636 total subjects approached, 606 subjects participated (95% response rate), with 294/606 (48%) responses in English and 312/606 (52%) in Spanish. Mean age was 44 years and 57% were female. Spanish speakers reported significantly less education compared to English speakers, with 52% of Spanish speakers reporting less than 9th grade education. Overall, 150/606 (25%) of respondents were unfamiliar with the concept of CPR; however, familiarity differed by language group; 141/312 (45%) of Spanish speakers never heard of CPR as opposed to 9/294 (3%) of English speakers. Of those familiar with CPR, 47% of English speakers had taken a class compared to 28% of Spanish speakers. When compared to English speakers, Spanish speakers commonly cited expensive course fees (20% vs 11.5%) and language of instruction (11% vs 3%) as barriers.

Conclusions: A high percentage of Spanish speakers reported complete lack of familiarity with the concept of CPR. Spanish speakers were less likely to have taken a CPR course and report logistical barriers to taking a course. To improve the response to out-of-hospital cardiac arrest, future program planning for CPR training must target non-English language groups.
David Orellana

*Heart rate variability in pediatric patients with chronic abdominal pain*

Mentor: Lonnie Zeltzer, MD

**Background:** Heart rate variability is a non-invasive method to measure the autonomic nervous system’s sympathetic/parasympathetic balance. Previous adult studies have shown that a lower heart variability is associated with poorer health, but this association has not been studied in pediatric patients. A lower heart variability is indicator of parasympathetic withdrawal.

**Objective:** The objective of this study was to compare the heart rate variability of healthy controls and children with chronic abdominal pain.

**Methods:** Participants included 163 healthy controls and 37 children with chronic abdominal pain aged 8–17 years. The laboratory session involved a 5-minute baseline electrocardiogram followed by four pain induction tasks: evoked pressure, cold pressor, focal pressure, and a conditioned pain modulation task. After the tasks were complete, a 5-minute post-task electrocardiogram recording was taken. Spectral analysis was used to capture high-frequency normalized power signifying cardiac vagal tone. Before and after the pain induction tasks, participants were asked to rate their anxiety level on a numeric rating (0-10) scale.

**Results:** Results revealed that children with chronic abdominal pain had significantly lower HRV (signified by low high-frequency normalized power) compared to healthy children; moreover, a significant interaction between groups and time revealed that children with chronic pain displayed a static HRV response to the pain session. In addition, baseline and post-task anxiety levels were assessed by a self-reported numeric rating scale. There was no statistical difference in anxiety levels between the two groups before or after the pain induction tasks.

**Conclusions:** These findings suggest that children with chronic pain may have a sustained stress response with minimal variability, but it is not reflected in anxiety levels.
Eric Ottey

Protecting undocumented patients’ access to healthcare: Preserving utilization at Venice family clinic in a time of anti-immigrant rhetoric

Mentors: Margarita Loeza, MD; Wesley Yin, PhD

Background: The federal administration's anti-immigrant legislative advancement has established an environment of fear and anxiety which has negatively affected undocumented patients’ health-seeking behaviors. My Health LA (MHLA) is a Los Angeles county program who pays community health centers like Venice Family Clinic (VFC) to provide medical services for undocumented patients.

Objective(s):
1) To measure utilization rates among VFC MHLA patient population before and after the 2016 election to determine if fewer patients are seeking medical care. 2) To identify barriers that may be preventing undocumented patients from seeking services. 3) To assess VFC’s current policies for protecting undocumented patients and compile a set of best practices to ensure continued health care access in the current political climate.

Methods: The study methods include; 1) a retrospective secondary data analysis – Using aggregated de-identified MHLA data to analyze county-wide utilization from fiscal years FY 2015-2016 to FY 2016-2017; 2) a cross-sectional survey of VFC MHLA patients to identify barriers to care; and 2) interviews with VFC staff to assess knowledge of VFC’s current policies for protecting undocumented patients.

Results:
1) From FY 2015-2016 to FY 2016-2017 there was a 0.265% change in Primary Care visits for the MHLA population and an insignificant change at VFC. There was a 162% increase in Urgent Care and 33% increase in Emergency Care visits county-wide. 2) Preliminary survey results: Since the 2016 Presidential elections-62% feel more concerned about ICE raids in their communities, 62% feel more fear/anxiety about ICE raids at health care clinics, 62% pay more attention to the President’s immigrations comments/polices, and 92% feel more/the same level of safety at VFC compared to clinics.
Ryan Randle

*Racial and ethnic differences in the rates of alcohol impaired motor vehicle crashes among various age groups in the U.S. national trauma data bank*

Mentors: Shahrzad Bazargan-Hejazi, PhD; Steven Lee, MD

**Background:** The few studies that have utilized large clinical databases often forego analyzing patients in separate age groups when considering racial/ethnic differences in rates of alcohol impaired driving and its clinical implications.

**Objective(s):** To determine: 1) whether the proportion of alcohol impaired (AI) patients involved in motor vehicle crashes within specific age groups varies significantly between racial ethnic groups; 2) if a relationship exists between patient age and the clinical outcomes of AI crash victims as measured by Mortality, Hospital Length of Stay (HLS), and ICU Length of Stay (ILOS), and whether this relationship is influenced by race/ethnicity.

**Methods:** The 2012 National Trauma Data Bank (NTDB) was queried for patients 16 years of age or older involved in motor vehicle crashes (MVC) who received a blood ethanol test on admission. Impaired drivers were defined as motor vehicle crash victims with blood test confirmed blood alcohol concentration (BAC) above the legal limit for that state, while non-impaired drivers had a blood test confirmed BAC of zero.

**Results:** Preliminary: Of the 45,708 patients, 36.22% were female, 33.72% were AI; 65.55% were White, 13.51% Black, and 12.33% were Hispanic. The MVC analysis yielded the following results (utilizing White patients as the reference): for ages 16-25, Black patients were less likely to be AI (OR 0.81, p = 0.0001), while Hispanic patients were more likely to be AI (OR 1.46, p < 0.0001); for ages 26-35, both Black and Hispanic patients were more likely to be AI (OR 1.28 & 1.23, p < 0.0001 & p = 0.0002); for ages 36-45, Black patients were more likely to be AI (OR 1.26, p = 0.0003); and for age groups 46-55, Black patients were more likely to be AI (OR 1.23, p = 0.0026).

**Conclusions:** Among MVCs in the US, the rate of alcohol impairment varies by race and ethnicity within specific age groupings.
Jaziel Rodriguez-Lara

Critical review of clinical practice guidelines and prescribing trends of clozapine in the management of treatment-resistant schizophrenia

Mentors: Shahrzad Bazargan-Hejazi, PhD; Darlene Parker-Kelly, MSLS; Curley Bonds, MD

Background: Schizophrenia affects approximately 1% of the adult population and is a severe cause of disability in the United States with more than 21 million people affected worldwide. Approximately 50% of patients with schizophrenia are not receiving care and 20-30% of patients receiving treatment with standard antipsychotics remain symptomatic. Clozapine is a second generation antipsychotic that targets and rebalances dopamine and serotonin to improve thinking, mood, and behavior.

Objective(s): To critically review current prescribing trends of clozapine and implement findings in clinical practice.

Methods: Clinical practice guidelines, meta-analyses, and reports on clozapine prescribing trends in relation to treatment-resistant schizophrenia have been identified from searches in PubMed, EMBASE, PsycInfo, CINAHL and OpenGrey. This review was focused on publications in the last 10-year period (2007 and 2017). Articles selection was limited to those written in the English language. Individual clinical trials and older landmark studies have been cited where appropriate. Keywords used in the literature search included: clozapine, prescribing, schizophrenia, antipsychotic(s), utilization, guidelines.

Results: Current clinical practice guidelines strongly recommend the use of clozapine in treatment-resistant schizophrenia. These guidelines advice that patients should start treatment with this drug when there is clinical evidence of failure to respond to treatment with two trials of standard antipsychotics, however, there is no clear clinical evidence of best specific time to treatment initiation of clozapine. All reviewed studies show that utilization of this drug remains low despite recommendations and have demonstrated nonadherence to guidelines in the US, Canada, New Zealand, Australia and the UK.

Conclusions: Prescribing trends of clozapine do not follow accepted recommendations and guidelines. Therefore, further research on the appropriateness of clozapine prescription is needed.
Santelita Rose

Exploring the implementation of eConsult to improve access to women’s health in the inland empire

Mentor: Stanley Frencher, MD, MPH

Background: The Inland Empire Health Plan (IEHP) includes 1.2 mill members. Half of these members are directly managed by Inland Empire Health Plan and the other half by Riverside University Healthy System (RUHS) and Arrowhead Regional Medical Center (ARMC). eConsult is an asynchronous referral system that allows primary care providers and specialists to communicate more efficiently and effectively to increase patients’ timely access to appropriate specialty care, coordinated care, decrease unnecessary specialty care visits, and improve pre-visit work-ups.

Objective(s): To determine the referral rate and access to women’s health specialties within San Bernadino County and Riverside County using data from Arrowhead Regional Medical Center, Riverside University Health System, and Inland Empire Health Plan.

Methods: This was a 24 month initiative sponsored by the IEHP Data was derived from more than 20 network clinic sites were included: 10 RUHS clinics, 4 ARMC clinics, and 6 IEHP identified clinics.

Results: Women’s health referrals: ARMC average of 313, 4.2% (N=12578) RUH Family Care Clinic 1, 2.5% (N=15716) of RUH Family Care Clinic 2, 2.11% (N=10266) RUH Internal Medicine General Medicine Clinic, and most recently from 2016-2017, 7.6% (N=17810) IEHP. Demographics of each county include: San Bernardino County- White non-Hispanic 29.3%, AA 9.5%, Asian 7.4%, Hispanic 52.8% and Riverside County- White non-Hispanic 36.2%, AA 7.1%, Asian 6.9%, Hispanic 48.4%.

Conclusions: eConsult has shown to be an effective tool in providing better access to specialty care for underserved patients by affording individuals the ability to reduce travel expenses and decrease wait times for appointments. Based on the results of the study, minorities make up the majority of the Inland Empire population, which requires efficient use of coordinated care for access to women’s health. Therefore, the next step is evaluating the implementation of eConsult in these Inland Empire clinics and determining the efficacy in providing access to women’s health for underserved patients.
Jade Sanders

Salt and the city: New York City’s sodium warning label policy

Mentors: Shauna Downs, PhD; Jessica Fanzo, PhD

Background: The average daily consumption of salt amongst New Yorkers is 3,239mg, which is 40% more than the daily recommended dietary allowance. 77% of daily consumption comes from processed and restaurant foods. On December 1, 2015, New York City implemented a sodium warning label policy. This policy required chain food service establishments with 15 or more locations nationally to warn consumers about any menu items containing more than 2,300 mg of salt, the recommended daily allowance.

Objective(s):

1. To determine if retailers complied with the policy.
2. To determine if the policy was associated with reductions in the sodium content purchased by consumers.
3. To understand how consumer awareness of policy impacted food purchasing behavior.

Methods: Using MenuStat, the 10 chains with the highest number of high sodium foods (≥2300mg) within high-poverty and relatively high prevalence of hypertension neighborhoods in NYC were conducted. Observational checklist surveys of 27 restaurants in such neighborhoods were conducted in December 2015 and December 2016. Consumer post-purchase street-intercept surveys were additionally conducted at the same timepoints (n=303; n=331). Sodium content of purchases were determined with receipts and validation via MenuStat.

Results: Retailers compliance grew from 30% to 80%. Average sodium content of foods purchased by consumers was 3,2782.8mg vs. 3,430.7mg with no significant difference observed. Only 21.1% of consumers surveyed one year after policy implementation were aware of the sodium labels. Overall, no significant difference was observed for the average sodium content of foods purchased by consumers who were aware of the sodium labels versus consumers who were unaware of the sodium labels was (3,544.9 mg vs. 3,004.9 mg).

Conclusions: Despite increased retailer compliance with the sodium warning label policy one year after initial implementation, consumer purchasing behaviors remain unchanged in regards to sodium content of food.
Ricky Thomas

Correlates of Emergency Department Utilization among Underserved Older African American Adults

Mentor: Mohsen Bazargan, PhD

Background: A better understanding of factors that account for acute care utilization by the older adults are needed to provide emergency health providers with appropriate strategies to facilitate effective utilization of emergency services.

Objectives: To report health care utilization patterns and factors that correlate with increased ER use in underserved older African American adults.

Methods: This is cross-sectional study of a convenience sample of 609 non-institutionalized African-American adults, aged 65 years and older recruited from 11 senior housing units, and 16 predominantly African American churches located in Service Planning Area 6 (SPA6) of Los Angeles County. The survey instrument was a collection of validated instruments from various sources.

Results: The age range of the sample was 65 and 96 years (M 74 ± 7). Over 90% of participants indicated usually going to the same place for medical care and attended by the same physician when they receive medical care; 73% reported they see more than one type of specialist; one out of four indicated that they missed a doctor appointment; 13% claimed that they needed to see a doctor but they did not, and over 41% of indicated they have been treated in an ER, within last 12 months. While 27% and 9% reported one and two ER visits, 5% reported at least three ER visits, during the same time. The multivariate analysis of data shows that controlling for demographic characteristics, continuity of medical care, severity of pain, number of chronic conditions all are associated with ER utilization.

Conclusions: While the need-for-care characteristic play a major role in sending participants to ER, enabling factors, particularly, continuity of medical care is also associated with ER utilization. The result of this study challenges the assumption that emergency service utilization is the results of nondiscretionary behavior among older underserved African American Adults.
Joe Torres

Protecting undocumented patients’ access to healthcare: preserving utilization at Venice family clinic in a time of anti-immigrant rhetoric

Mentors: Margarita Loeza, MD; Wesley Yin, PhD

**Background:** The federal administration's anti-immigrant legislative advancement has established an environment of fear and anxiety which has negatively affected undocumented patients’ health-seeking behaviors. My Health LA (MHLA) is a Los Angeles county program who pays community health centers like Venice Family Clinic (VFC) to provide medical services for undocumented patients.

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**Conclusions:** Findings from this study could suggest policies to reduce the environment of fear and anxiety that undocumented patients experience in seeking care and to promote continued service utilization at VFC.
Tracie Tsukida

Comparative Study of the Different Simulation Modality Used in Teaching the ICU Curriculum for the Pediatric Residents

Mentors: Shahrzad Bazargan-Hejazi, PhD; Darlene Parker-Kelly, MSLS; Peregrina Arciaga, MD

**Background:** Simulation training is becoming widespread in medical education. Medical simulations are used to assist residents to apply the knowledge they learn in the classroom to a clinical environment. Essential life-saving procedural skills are not as commonly practiced due to infrequency of these circumstances in the pediatric setting.

**Objective(s):** Our objective was to compare the effectiveness of high fidelity simulation vs. low fidelity simulation on training for procedural skills among pediatric residents in the critical care setting.

**Methods:** In this literature review study, online databases were searched for the pertinent published papers. A database search was performed using PubMed, Web of Science, BIOSIS Previews, and Google Scholar. The PRISMA flow chart was used to show the screening process.

**Results:** There were only two studies comparing high-fidelity simulation to low-fidelity simulation in the critical care setting of pediatrics. High-fidelity simulation on pediatric life support training in pediatric house staff shows a significant difference in pre- and post-tests for residents with the high fidelity simulation, but there is no statistical significance between the high-fidelity simulation and standard mannequin group. High fidelity simulation showed no impact on residents' airway management and intubation skills.

**Conclusions:** High-fidelity simulation does not necessarily improve the resident’s procedural skills in comparison to traditional mannequins. There needs to be more research in comparative studies of the effectiveness of high-fidelity mannequin and low-fidelity mannequins in the critical care setting of pediatrics.
Mignote Yilma

Retrospective chart review of liver transplantation (LT) referred patients: Exploration of socioeconomic status and patient demographics at a single institution

Mentor: Jane Lee, MD, PhD

Background: Only 1 in 6 patients with End-Stage Liver Disease make it to the LT waitlist, with Medicaid patients less likely to be listed for LT when compared to patients with private or Medicare insurance.

Objective: To compare the socioeconomic demographics of patients referred for LT versus those that eventually get waitlisted

Methods: Data extraction of adult LT candidates over a one-year period were obtained from the UCLA LT referral list, and only those who made it to the LT committee review were included. Those listed for dual organs or relisted for second LT were excluded.

Result: The mean time difference between referral and waitlist is 106.56 mo (± 12.68 SE) with 72 patients (47%) making it to waitlist. There was a significant difference between referral and waitlist by age group, but no difference by ethnicity, language, occupation or education. The mean MELD score at referral was 20.7 (± 0.79 SE) and mean MELD at listing was 23.2 (±1.2 SE). While the MELD score at listing differed by age group only (p = 0.011), the MELD score at referral and waitlist differed by gender. There was no difference in MELD score at referral and waitlist by ethnicity, language, occupation, or education. Pearson Chi-Square analysis showed significant difference in liver listing status (Yes/No) between different age groups (p=0.009), education groups (p = 0.008), occupation (p = 0.005), and insurance groups. In the waitlisted group (47%), there was a significant difference in patients OLT status (Y/N) between age groups (p = 0.077), gender groups (p = 0.003), ethnic groups (p = 0.048), language (p = 0.021), and referral MELD score (p < 0.001). Using logistic regression, there was one demographic predictor of receiving OLT: gender (male vs female).

Conclusion: The disparity in accessing liver transplant is evident between the referral and waitlist stage, and disappears once a patient is waitlisted.
The CDU Medical Student Research Thesis Program (MSRTP)

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