



*Charles R Drew University Of Medicine and
Science*

CDU/UCLA Medical Education Program

*The Medical Student Research Thesis Program
(MSRTP)*

Class of 2016

Medical Student Research Colloquium

Topic:

Current Research in Health Disparities

AGENDA

MORNING SESSION

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)

8:35 a. m. *University Welcome*

David Carlisle, MD, PhD

President, Charles R. Drew University of Medicine and Science

8:40 a. m. *The Provost's Welcome*

Steve Michael, PhD

Provost, Charles R. Drew University of Medicine and Science

8:45 a. m. *The Dean's Welcome*

Daphne Calmes, MD

Interim Dean, College of Medicine, Charles R. Drew University of Medicine and Science

MODERATOR OF STUDENT PRESENTATIONS

Stanley Hsia, MD

Associate Professor of Medicine, Charles R. Drew University of Medicine and Science

PANEL OF JUDGES

Michele A. Basso, PhD

Professor of Medicine in the Department of Psychiatry & Biobehavioral Sciences and Neurobiology, UCLA

O. Kenrick Duru, MD

Associate Professor of Internal Medicine, David Geffen School of Medicine at UCLA

Alma Guerrero, MD, MPH

Assistant Clinical Professor of Pediatrics, David Geffen School of Medicine at UCLA

Tony Kuo, MD

Assistant Professor of Family Medicine, David Geffen School of Medicine at UCLA

Jesus G. Ulloa, MD

Robert Wood Johnson Foundation, UCLA; General Surgery, VA Clinical Scholar

Sharon Younkin, PhD

Chief of Staff for the Vice Dean of Education, David Geffen School of Medicine at UCLA

STUDENT PRESENTATIONS

(MORNING SESSION)

- 8:50 a. m. **HANNAH KIM** Primary Mentor: Rebecca Dudovitz, MD
Examining the potential for school-based health centers to act as an adolescent medical home
- 9:00 a. m. **ANN QUAN** Primary Mentor: Anne Coleman, MD, PhD
Role of adult education in the success of preschool vision screening programs
- 9:10 a. m. **JOAQUIN GALARZA** Primary Mentor: Chizobam Ani, MD
Guideline-concordant care in primary care settings: The role of visit duration and medical co-morbidity burden
- 9:20 a. m. **GLORIA KIM** Primary Mentor: Peter Lawrence. MD
New variables for predicting complications in carotid body tumor excision
- 9:30 a. m. **BRITTON JOHNSON** Primary Mentor: Shobita Rajagopalan, MD
A descriptive study of trichomoniasis in Los Angeles county public health clinics
- 9:40 a. m. **EMILIO RAMOS** Primary Mentor: Elisabeta Nemeth, MD
Iron, obesity and colon cancer: Is there a link?
- 9:50 a. m. **JANANI SRIKANTHARAJAH** Primary Mentor: Jyoti Puvvula, MD
Youth opportunities for life options (yolo): Results from a school-based intervention to promote healthy eating and physical activity among teens
- 10:00 a. m. **SHEILA GANJIAN** Primary Mentor: William Cunningham, MD
The associations of substance use with adherence to antiretroviral medications and viral load suppression among hiv+ men leaving LA county jails in project link LA
- 10:10 a. m. **REBECCA LOPEZ** Primary Mentor: Anne Ackerman, MD, PhD
Investigation of treatment of overactive bladder with botulinum toxin in the lower urinary tract system
- 10:20 a. m. **HARRY MAI** Primary Mentor: Gregory Yoshida, MD
Differences in post-operative outcomes after lumbar spine surgery amongst ethnic groups
- 10:30 a. m. **JUAN TORRES** Primary Mentor: Emma Barnard, PhD
A comprehensive review on the metagenomic analysis of Propionibacterium acnes and current perceptions of their role in clinical acne vulgaris

MORNING BREAK (20 MINUTES)

Reconvene at 11 a. m.

- 11:00 a. m. **JOHN THANASUKARN** Primary Mentor: Lawrence D. Robinson, Jr., MD
Influenza vaccination uptake in the Californian Asian American and native Hawaiian/Pacific islander populations and its correlation with acculturation
- 11:10 a. m. **TRACY PHAM** Primary Mentor: Lawrence D. Robinson, Jr., MD
Role of asthma education with the pediatric population: A systematic review
- 11:20 a. m. **MICHAEL NGUMI** Primary Mentor: Steven Schwartz, MD
A cross-sectional study comparing the annual rates of select knee pathologies that can progress to osteoarthritis among ambulatory patients at Martin Luther King, Jr. multi-service ambulatory care center and among total ambulatory care visits nationally
- 11:30 p. m. **ALBERTO CARDONA** Primary Mentor: Shahrzad Bazargan-Hejazi, PhD
Meeting physical activity recommendations in U. S. adults with atherosclerotic cardiovascular disease risk factors by self-reported and objective measures
- 11:40 a. m. **JEREMY LANEY** Primary Mentor: Kabir Yadav, MD
Impact of audit and feedback on chest pain disposition decision making amongst emergency medicine residents (recorded presentation)
- 11:50 a. m. **STACIE COLLINS** Primary Mentor: Shahrzad Bazargan-Hejazi, PhD
ESTEBAN COTA
Medical students' lifestyle and mindful listening

LUNCH BREAK

Reconvene at 1:30 p. m.

Please proceed to the Student Lounge of the adjacent Cobb Administration Building, located on East 118th Street



AFTERNOON SESSION

MODERATORS OF STUDENT PRESENTATIONS

Theodore Friedman, MD, PhD

Professor of Medicine, Charles R. Drew University of Medicine and Science and UCLA

David Hindman, PhD

Assistant Professor of Medicine, Charles R. Drew University of Medicine and Science

PANEL OF JUDGES

Michele A. Basso, PhD

Professor of Psychiatry & Biobehavioral Sciences and Neurobiology, UCLA

Linda Baum, MD, PhD

Professor, Pathology and Laboratory Medicine, Hematopathology & Hematology, David Geffen School of Medicine at UCLA

Dorota Huizinga, PhD

Dean, Graduate Studies & Research, Cal State University, Dominguez Hills

Pamela Krochalk, PhD

Professor and Interim Chair, Division of Health Sciences, Cal State University, Dominguez Hills

Rose Maly, MD

Associate Professor of Family Medicine in the Department of Medicine, David Geffen School of Medicine at UCLA

Gerardo Moreno, MD

Assistant Clinical Professor of Family Medicine in the Department of Medicine, David Geffen School of Medicine at UCLA

Ayesha Z. Sherzai, MD

Department of Neurology and Neurosurgery, Cedars Sinai Medical Center

Dean Sherzai, MD, PhD

Director, Alzheimer's Disease Prevention Program, Cedars Sinai Medical Center

Lynne M. Smith, MD

Professor of Clinical Pediatrics, David Geffen School of Medicine at UCLA and Harbor-UCLA Medical Center

Jesus G. Ulloa, MD

Robert Wood Johnson Foundation, UCLA, General Surgery, VA Clinical Scholar

Sharon Younkin, PhD

Chief of Staff for the Vice Dean of Education, David Geffen School of Medicine at UCLA

STUDENT PRESENTATIONS

(AFTERNOON SESSION)

- 1:30 p. m. **PETER KAGANJO** Primary Mentor: Risa Hoffman, MD
Challenges faced by medical teams and individuals responding to humanitarian crises involving pediatric populations globally: A scoping study
- 1:40 p. m. **HENRY LEW** Primary Mentor: Mayer Davidson, MD
Effectiveness of diabetes self-management education: A systematic review of randomized control trials
- 1:50 p. m. **MATTHEW MEJIA** Primary Mentor: Shahrzad Bazargan-Hejazi, PhD
Contribution of school meals to lowering bmi level in children/adolescents: Application of intersectionality of gender, race, and household income
- 2:00 p. m. **LYNDON GONZALEZ** Primary Mentor: Shahrzad Bazargan-Hejazi, PhD
School's physical activity and obesity level in children/adolescents: application of intersectionality of gender, race, and household income
- 2:10 p. m. **CHRISTOPHER SOBOWALE** Primary Mentor: Paul Robinson, PhD
How the ban of fast-food restaurants in south Los Angeles affected hypertension rates

AFTERNOON BREAK (25 MINUTES)
Reconvene at 2:35 p. m.

STUDENT PRESENTATIONS
(AFTERNOON SESSION, CONTINUED)

- 2:35 p. m. **SAYAKA WEIS** Primary Mentor: Bitu Amani, PhD
Understanding the association between school connectedness and health and the impact of school criminalization on school-connectedness among middle and high school students
- 2:45 p. m. **MEGAN MENDOZA** Primary Mentor: Shahrzad Bazargan-Hejazi, PhD
Adverse childhood experiences (beyond aces) and suicide attempt: A systematic review
- 2:55 p. m. **LYNDSEY BRADLEY** Primary Mentor: Kenneth Lewis, MD
Role of acculturation in determining pre-operative anesthesia-related concerns II
- 3:05 p. m. **MAEREG WASSIE** Primary Mentor: Stanley Hsia, MD
Diabetes perception and knowledge in the Ethiopian community in Los Angeles to Ethiopians living in Ethiopia and African Americans in Los Angeles
- 3:15 p. m. **JASON CIENEGA** Primary Mentor: Lonnie Zeltzer, MD
A quantitative review of the impact of race and ethnicity on children's responses to experimental pain
- 3:25 p. m. **RAQUEL RODRIGUEZ** Primary Mentor: Efrain Talamantes, MD
Medical student exposure to issues of diversity
- 3:35 p. m. **SHAHRZAD BAZARGAN-HEJAZI**
CLOSING REMARKS

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

END OF 2016 CDU MSRTP RESEARCH COLLOQUIUM

CLASS OF 2016

Students and Abstracts

MEDICAL STUDENT RESEARCH COLLOQUIUM
Charles R. Drew University of Medicine and Science
March 23, 2016



Lyndsey Bradley

Kenneth Lewis, MD

Charles R. Drew University of Medicine and Science

Role of acculturation in determining pre-operative anesthesia-related concerns II

Background: Although previous studies have examined which anesthetic-related complications patients are most concerned about pre-operatively, the concerns addressed during pre-operative evaluation remain at the discretion of the anesthesiologist. Large, multicenter studies have concluded that levels of acculturation can have significant impact on patients' perception of their health and disease management. Limited evidence is available on the level of impact of acculturation within the pre-operative setting.

Objectives: The objectives of this study are two-fold: to determine which general anesthetic-related complications subjects are most concerned about during their pre-operative interview and to determine if concerns about anesthetic-related complications vary based on patient level of acculturation. **Methods:** This study is a cross-sectional survey analysis of patients of Mexican heritage in Martin Luther King, Jr. Community Hospital's pre-operative clinic scheduled for a procedure requiring general anesthesia. Self-administered questionnaires assessed levels of concern for various complications using scales of the most common anesthetic-related complications. Levels of acculturation were measured using the Acculturation Scale for Mexican-Americans-II. **Results:** 57 subjects were included in the study. 65% of subjects were categorized as 'Very Mexican Oriented' based on their acculturation scores. Across all levels of acculturation, altered mental status (37%) and nausea/vomiting (35%) were the most common concerns among patients. **Conclusions:** Altered mental status was the most common concern of subjects followed by nausea/vomiting. In comparison with moderate levels of acculturation, subjects with lower levels of acculturation were more concerned with: altered mental status, nausea/vomiting, and headache. Due to the small sample size, association between acculturation and anesthetic-related concerns could not be assessed.



Alberto Cardona

Shahrzad Bazargan-Hejazi, PhD

Charles R. Drew University of Medicine and Science; David Geffen School of Medicine at UCLA

Meeting physical activity recommendations in U. S. adults with atherosclerotic cardiovascular disease risk factors by self-reported and objective measures

Background: The American College of Cardiology/American Heart Association Physical Activity recommend for Adults to achieve at least 150 minutes per week of moderate-vigorous intensity aerobic physical activity (MVPA) to reduce the risk of developing ASCVD risk factors such as HTN, DM2 and a non-optimal lipid profile and to protect against ASCVD events. **Objectives:** 1) Identify percentage of U.S adults with ASCVD risk factors whom achieve the goal of 150 minutes per week of moderate-vigorous physical activity (MVPA) using both subjective and objective measures. 2) Identify the predictive role of race/ethnicity in achieving the recommended goals of 150 minutes of MVPA, comparing subjective and objective measures. **Method:** Cross-sectional data was collected using the secondary public databases: the National Health and Nutrition Examination Survey (NHANES) 2003-06. Adults with known ASCVD risk factors (Diabetes type 2, Hypertension, or with non-optimal lipid profiles) were included. Subjective data from self-report of MVPA was collected and analyzed, with an activity with >3METS being deemed equivalent towards achieving MVPA for subjective measures. Objective measures data gathered via accelerometer, with >2020 counts per minute (CPM) being deemed having achieved MVPA requirements. **Results:** 38.3% of U.S adults with ASCVD risk factors subjectively met the goal of 150 minutes/week of MVPA ; while 34.3% achieved the same goal by objective measures. Subjective data indicates an advantage of achieving MVPA if an individual is white, male, <65 years of age, >200% FPL, >HS education with a BMI <30 kg/m². Objective data shows the same trend as above, except Hispanic's are more likely to achieve MVPA by objective measures, while Asian/others show a larger gap in the difference between self-reported and objectively measured physical activity. Multivariate logistic regression analysis adjusting for usual demographics revealed Hispanics objectively meet MVPA at higher rates to their White counterparts; while Asian/other are at a disadvantage. This persists by objective measures when adjusted for presence of co-morbid chronic disease. Multivariate logistics data adjusting for the usual demographics and co-morbid chronic disease Asian/others are at a disadvantage in achieving MVPA by subjective measures. This disadvantage is not present for A.A and Hispanics. **Conclusion:** U.S adults at risk for having an ASCVD event (heart attack, stroke) continue to fail at meeting the required physical activity guidelines set by the ACC/AHA to prevent morbidity and mortality with only approximately 38.3% of this population meeting the goal of 150 minutes of MVPA/week by subjective measures and only 34.3% achieve this by objective measures. We continue to see a disproportionate amount of U.S adults whom are socioeconomically disadvantage fail at meeting these requirements by subjective and objective measures if their income is <200 of the FPL, and received a <HS education and belong to African American or Asian/other race. Interestingly Hispanics are more likely to meet MVPA than whites by objective measures, conflicting with the higher incidence and prevalence of chronic disease burden in this population. We also found that Asian/other ethnic groups are at a disadvantage by objective and subjective measures once we adjust for the usual demographics and presence of co-morbid chronic conditions. More focus/research needs to be applied to this heterogeneous population as it is difficult to ascertain what factors are positively or negatively affecting this population as "Asian" race can apply to a heterogeneous population of differing cultures/beliefs (i. e. Vietnamese, Korean, Chinese)



Jason Cienega

Lonnie Zeltzer, MD

David Geffen School of Medicine at UCLA

A quantitative review of the impact of race and ethnicity on children's responses to experimental pain

Background: Pain is subjective; however, current research on ethnic differences to experimental pain suggests a common pain experience is shared between people of the same ethnic group. These studies however, compare African-American, Hispanic, and Asian adults to non-Hispanic White adults. **Objective:** The primary aim of this study is to examine research investigating ethnic group differences in experimental pain response among children. **Methods:** We performed a systematic literature review and analysis of studies using

experimental pain to evaluate pain sensitivity across children of multiple ethnic groups. The search covered the period from 1944-2016, and utilized the PUBMED database. We identified racial/ethnic group categories, pain stimuli and measures and calculated effect sizes. **Results:** We found 997 studies investigating ethnic group differences and pain. Three of these met our review inclusion criteria of investigating ethnic group differences in experimental pain in children. All of the studies included comparisons between African Americans (AA) and non-Hispanic Whites (NHW). There were consistently moderate to large effect sizes for heat pain intensity in AA's and NHW's; AA's demonstrated lower heat pain intensity. For heat pain tolerance among AA's and NHW's, findings inconsistently demonstrated lower heat pain tolerance in AA's, but the effect was moderate. Limited data were available for other pain modalities and experimental pain effects. **Conclusion:** Important ethnic and racial group differences may exist in experimental pain perception in children. Finding and understanding these differences will allow providers to offer more culturally sensitive care. In addition, it will aid in the management of acute pain and the identification of children at risk of developing chronic pain conditions. Given the limited data available in children more work needs to be done in the future to elucidate these findings paying particular attention to ethnic disparities in pain.



Stacie Collins

Shahrzad Bazargan-Hejazi, PhD

Charles R. Drew University of Medicine and Science;
David Geffen School of Medicine at the University of
California, Los Angeles

Medical students' lifestyle and mindful listening

Background: Listing is defined by the International Listing association as “the process of receiving constructing meaning from, and responding to spoken and/or non-verbal messages”. **Objective:** Mindful, active and empathic listening are important aspects of doctor-patient communication, which plays a crucial role in health care delivery. The ability to listen and communicate with

patients has been associated with improved health-care outcomes, and previous studies have demonstrated that there is an overall need for improvement in listening skills among physicians today. This study aims to assess and compare the overall listening skills of UCLA and CDU medical students, to determine students' listening skills with respect to mindful, active, and empathic listening, and to determine the predictors of listening skills among students. **Methods:** Medical students enrolled in all medical education programs at David Geffen School of Medicine were recruited complete a 35-question English language questionnaire on paper or online voluntarily. The survey explores students' listening skills, socio-demographics, lifestyle and other variables using categorical, dichotomous and 3-7 item scales. **Results:** A total of 350 students enrolled in DGSOM and its associated programs participated. Statistical analysis of the questionnaire suggests that on average, students' overall listening skills, as well as listening skills in the domains of mindful, empathic and active listening, are “OK.” There is no statistically significant difference between DGSOM and CDU student listening skills. **Conclusion:** There is room for improvement in regard to medical student listening skills; an increased emphasis should be placed on developing these skills during medical student training.



Esteban Cota

Shahrazad Bazargan-Hejazi, PhD

Charles R. Drew University of Medicine and Science;
David Geffen School of Medicine at the University of
California, Los Angeles

Medical students' lifestyle and mindful listening

Background: Listening is defined by the International Listening association as “the process of receiving constructing meaning from, and responding to spoken and/or non-verbal messages”. **Objective:** Mindful, active and empathic listening are important aspects of doctor-patient communication, which plays a crucial role in health care delivery. The ability to listen and communicate with patients has been associated with improved health-care outcomes, and previous studies have demonstrated that there is an overall need for improvement in listening skills among physicians today. This study aims to assess and compare the overall listening skills of UCLA and CDU medical students, to determine students’ listening skills with respect to mindful, active, and empathic listening, and to determine the predictors of listening skills among students. **Methods:** Medical students enrolled in all medical education programs at David Geffen School of Medicine were recruited complete a 35-question English language questionnaire on paper or online voluntarily. The survey explores students’ listening skills, socio-demographics, lifestyle and other variables using categorical, dichotomous and 3-7 item scales. **Results:** A total of 350 students enrolled in DGSOM and its associated programs participated. Statistical analysis of the questionnaire suggests that on average, students’ overall listening skills, as well as listening skills in the domains of mindful, empathic and active listening, are “OK.” There is no statistically significant difference between DGSOM and CDU student listening skills. **Conclusion:** There is room for improvement in regard to medical student listening skills; an increased emphasis should be placed on developing these skills during medical student training.



Joaquín Galarza

Chizobam Ani, MD

Charles R. Drew University of Medicine and Science

Guideline-concordant care for diabetes mellitus in primary care settings: The role of visit duration

Background: Over 50 million Americans have a medical condition requiring regular outpatient visits. Physicians provide 30-42% of guideline-concordant care (GCC) for chronic diseases. The impact of visit duration on primary care quality, despite its presumed influence, remains unclear. **Objective:** This study explored the relationship between outpatient visit duration and GCC for patients with DM. **Methods:** This was a cross-sectional analysis of secondary data using the 2010 National Ambulatory Medical Care Survey. A simple linear regression was calculated to predict the GCC score for patient with DM (developed from national guidelines) based on visit duration (minutes spent with a physician). **Results:** The unadjusted sample size was 25,004 visits, with DM-associated visits accounting for 14%. The mean visit duration for patients with DM was 21.5 ± 0.6 minutes. A significant regression equation was found: The natural log of GCC score is equal to $0.272 + 0.014 \cdot (\text{TIME}_{\text{MD}}) \cdot (\text{GCC})$, ($p < 0.000$), with an R^2 of 0.774. GCC score increased by 1.014 for each minute spent with a physician. This remained significant after adjustment for demographic factors, healthcare utilization, and medical comorbidity. **Conclusion:** There was a statistically significant association between longer visit duration and a higher GCC score for patients with DM.



Sheila Ganjian

William Cunningham, MD

David Geffen School of Medicine at UCLA

The associations of substance use with adherence to antiretroviral medications and viral load suppression among hiv+ men leaving LA county jails in project link LA

Background: Adherence to antiretroviral therapy (ART) extends longevity and reduces transmission of HIV to partners in the community, yet substance use (SU) may interfere with adherence to ART.

Objectives: We examined, among HIV positive men leaving LA county jails: [1] SU rates by race/ethnicity; [2] the associations of SU with adherence to ART; and [3] the associations of SU with HIV RNA viral suppression (VS). **Methods:** This study is a cross-

sectional analysis of the LINK LA randomized control trial at baseline among HIV+ inmates released from LA County Jail (n = 356). We compared rates of SU by race/ethnicity using Chi-squares. Multivariate analysis was used to examine associations of SU with 1) adherence to ART, and 2) VS (undetectable viral load), controlling for sociodemographics and CD4 count. We used linear regression on adherence (scale 1-10, 10 = highest possible) to examine its association with SU. We also used logistic regression on undetectable viral load with SU, and present odds ratios, 95% CI, and p-values.

Results: The sample was 42% Black, 31% Latino, and 27% White. Whites had higher rates than Blacks of methamphetamine use (77% vs 38%). Blacks had higher rates than Whites of any alcohol use in the past 30 days (59% vs. 43%). Methamphetamine use and any stimulant (methamphetamines, crack cocaine) use within 30 days of incarceration were associated with decreased ART adherence ($p \leq 0.0001$). Decreased VS was also associated with use of several substances: alcohol use to intoxication (OR = 0.08, 95% CI 0.01-0.60, $p = 0.02$), heroin use (OR=0.29 95% CI 0.11-0.81, $p = 0.02$). **Conclusions:** Stimulants were associated with decreased adherence to ART, while heroin and alcohol intoxication were associated with decreased VS. The findings suggest the importance of identifying factors that may impair important outcomes of HIV care in a very vulnerable population.



Lyndon Gonzalez

Shahrzad Bazargan-Hejazi, PhD

Charles R. Drew University of Medicine and Science; David Geffen School of Medicine at UCLA

School's physical activity and obesity level in children/adolescents: application of intersectionality of gender, race, and household income

Background: According to current estimates, 10% of infants and toddlers and 17% of adolescents are obese. School meal and physical activity programs play a significant role on the diet and exercise of children and adolescents. **Objective:** This study investigates the role of school physical activity in relation to obesity and its intersectionality with gender, race, and household income. **Methods:** Data from the NHANES National Youth Fitness

Survey (NNYFS) 2012 were analyzed using STATA 14. Data were collected on physical activity and fitness levels of children in the U.S. ages 3 to 15. Linear regression is used to model the main effect as well as the interaction between gender, race, household income, and physical activity on body mass index (BMI), controlling for age. $P < 0.05$ indicates statistical significance. **Results:** Of the 1,498 participants, 95.6% were physically active and had an average BMI of $20.4 \pm 0.2 \text{ kg/m}^2$. For the main effect, physically active children had significantly lower BMI than non-physically active children ($R^2 = 23.2\%$, $p < 0.05$). Physical activity intersect with gender, race, and income where physically active, female, Hispanic of middle income family had lower BMI than the non-physically active, white, high income group ($R^2 = 28.8\%$, $p < 0.05$). **Conclusion:** The data shows that with regard to BMI, children experience the health effect of physical activity differently by gender, race, and income. This provided support for the intersectional method to childhood obesity disparity showing that gender, race, household income and physical activity are linked together as predictors of childhood obesity and focused interventions in the community should take these indicators into consideration to control childhood obesity.



Brittni Johnson

Shobita Rajagopalan, MD

Charles R. Drew University of Medicine and Science

A descriptive study of trichomoniasis in Los Angeles county public health clinics

Background: *Trichomonas vaginalis* (TV) is a common, sexually transmitted protozoan infection. The rate of TV infections is high in women over 40 years old and among incarcerated persons. Non-molecular diagnostic tools such as wet mount or culture for the detection of Trichomoniasis provide a lower sensitivity of detection compared to newer molecular methods. Molecular tests are three to five times more sensitive than wet mount for detection of Trichomoniasis. **Objective:** To describe patient demographics and positivity rate of Trichomoniasis in female patients seen at Los Angeles County public health clinics. **Methods:** A retrospective review of de-identified *T. vaginalis* NAAT (TV NAAT) laboratory results was performed for specimens submitted between July 2014 to December 2015. TV NAAT was performed as part of routine screening for sexually transmitted infections from female patients seen at Los Angeles County public health clinics. TV NAAT was ordered for patients with discharge and parasite negative wet mount. Laboratory testing was performed at the Los Angeles County Public Health Laboratories using the Hologic Aptima *Trichomonas vaginalis* assay. Provider performed microscopy was used for wet mount evaluation at public health clinics. **Results:** During the study period, there were 537 specimens submitted for TV NAAT. Of these, 243 (45%) were from vaginal swabs and 294 (55%) were from urine. Samples with indeterminate TV NAAT results were removed from the data set ($n=20$) as repeat testing was not performed. Ninety-four of 517 specimens were positive (18.2%) for *T. vaginalis* with the majority of positive samples submitted as urine. Ten of twelve public health centers performing STD screening submitted samples for TV NAAT. The number of samples submitted for testing ranged from 3-163 per clinic site (average= 53). The number of positive TV NAAT by clinic site ranged from 0-22. Antelope Valley clinic had the highest TV NAAT positivity rate (26.8%). The age range of positive samples was 16 to 60. The overall mean age of positive samples was 34. **Conclusions:** TV NAAT was able to detect Trichomonas in wet mount negative female patients and improved the diagnostic sensitivity of detecting disease. Current policy in the public health clinics state that TV NAAT should be performed in women with symptoms consistent with Trichomoniasis, have negative wet mount, and are at high risk. One major limitation of this study is that not all women are screened for Trichomoniasis including asymptomatic women that are at high risk. Changing the clinic policy to allow additional TV NAAT screening would diagnose additional cases of Trichomoniasis and detect infection in asymptomatic women.



Peter Kaganjo

Risa Hoffman, MD

David Geffen School of Medicine at UCLA

Challenges faced by US medical teams and individuals responding to humanitarian crises involving pediatric populations: A systematic review

Background: Medical personnel responding to humanitarian crises (conflicts, epidemics, famine, natural disasters) are faced with many challenges on the field, from lack of resources to inadequate training on how to triage the victims of a disaster. Children are a vulnerable subgroup due to their unique clinical and psychological issues, and addressing their needs can present additional challenges to medical personnel. Therefore, understanding the challenges of caring for children in humanitarian crises is crucial to improving services. **Objectives:** This article reviews challenges faced by medical personnel responding to humanitarian crises involving the pediatric population and highlights some of the proposed strategies that are essential to improving services and improving outcomes for children. **Methods:** This is a systematic review, which will adhere to PRISMA reporting standards. Cohort, cross-sectional, interventional, review articles, and qualitative studies in English, published from 2000 to the present, will be examined. We are searching a wide range of medical and scientific databases including *PubMed*, *Google Scholar*, and *Cochrane Library*, using a predetermined list of terms. These include: Children in humanitarian crises, pediatric populations care during crises, challenges to pediatric care during humanitarian crises, role of pediatricians during humanitarian crises, pediatric disaster preparedness, care of children in a crises, and barriers to pediatric disaster triage. In addition to free text searching, we are also finding equivalent headings and vocabulary for each database. Studies identified during the search are being evaluated for relevance and assessed for risk of bias. Lastly, we are also examining the full text of each article using a data extraction form, and then report on findings and discuss results. **Results:** We identified 98 studies. After removing 19 duplicates, 79 studies were assessed for eligibility. Sixty-four studies were ultimately excluded and 15 articles were used for data extraction. Studies were combed for various characteristics, including year published, age of subjects, and population number. Our preliminary findings points to several challenges that were highlighted by medical personnel who had responded to disasters. Among them were: Financial barriers to healthcare services for the pediatrics, lack of an effective communication systems between pediatricians on the field and hospital institutions, inadequate triage training for the teams responding to disasters involving pediatrics, critical resources allocation during disasters, lack of comprehensive pediatric disaster preparedness nationally, and inadequate drug dosage information for the pediatric population. **Conclusions:** Pediatric population present a daunting task for the medical personnel responding to disasters, owing to the unique needs. Consequently, optimal recovery efforts will require effective communication, pediatric triage training, financial/critical resources allocation, adequate dosing instructions, and comprehensive preparedness in anticipation of a humanitarian crises.



Gloria Kim

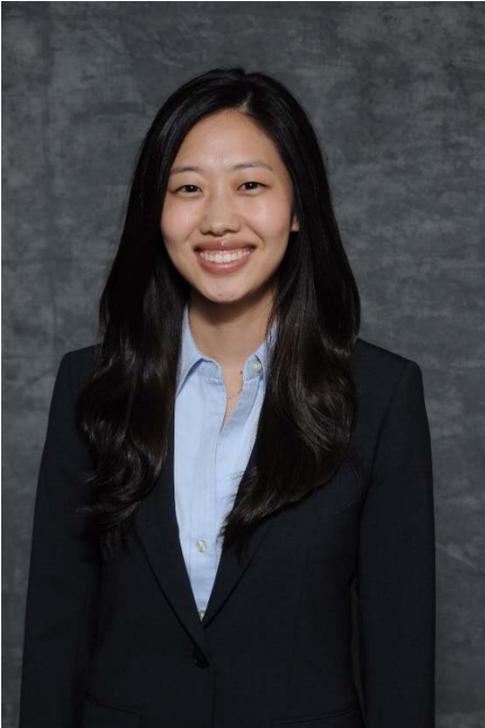
Peter F. Lawrence, MD

David Geffen School of Medicine at UCLA

New variables for predicting complications in carotid body tumor excision

Objective: Bleeding and cranial nerve (CN) injuries are the most common complications in carotid body tumor (CBT) excision. **Objectives:** We conducted a large, multi-institutional study to demonstrate the value of adding two new variables, distance to the base of skull (DTBOS) and tumor volume, to the traditional Shamblin classification, and to quantify the risks represented by these new variables. **Methods:** A retrospective study was conducted utilizing a standardized database by a consortium of 16

institutions to evaluate patients who underwent surgical excision of CBT over a 10-year period (2004-2014). Pearson correlation coefficients, McFadden R^2 values, and odds ratios were used to determine correlation, best-fit logistic regression model, and risk of increased blood loss and CN injuries. **Results:** 356 CBTs were excised in 324 patients (mean age 52 years, 73% female); 33% were Shamblin I, 45% Shamblin II, and 23% Shamblin III. The mean DTBOS was 3.3 cm (SD 2.05, range 1-10) and the mean tumor volume was 25 cm³ (range, .1-205 cm³). The mean estimated blood loss was 257 ml (range, 20-2400 ml). Twenty-four percent of patients had CN injuries. The most common CNs injured were the hypoglossal (11%), vagus (12%), and superior laryngeal (5%) nerves. Of the larger CBTs (Shamblin III), the glossopharyngeal nerve (11%) was also commonly injured. Shamblin grade and DTBOS were statistically significantly correlated with bleeding and cranial nerve injuries; however, tumor volume was only statistically significantly correlated with bleeding (Table 1). The logistic model for predicting cranial nerve injury and blood loss with all three variables: Shamblin, DTBOS, and volume ($R^2=0.221, 0.171$) was superior to a model with Shamblin alone ($R^2=0.091, 0.043$). After adjusting for Shamblin grade and volume, every 1 cm decrease in DTBOS was associated with 1.8 times increase in risk of >250 ml of blood loss (95% CI 1.19-1.92) and 1.5 times increase risk of CN injury (95% CI 1.25-2.55). **Conclusions:** The results of the largest study on CBTs to date demonstrate the importance of determining the DTBOS and volume in addition to Shamblin grade to predict the risks of intraoperative bleeding and CN injury in CBT excision. Given that larger CBTs that are located closer to the base of skull have increased risk of complications, early intervention is imperative. Quantified risks represented by CBT measurements should be utilized in preoperative planning and patient counseling of risks.



Hannah Kim

Rebecca Dudovitz, MD

UCLA Children's Health Center

Examining the potential for school-based health centers to act as an adolescent medical home

Background: Los Angeles Unified School District established 14 school-based health centers, called Wellness Centers (WC), to provide comprehensive health care to students and the surrounding community. However, little is known regarding WC patients, the services they receive, and how they compare to a community health center (CHC). **Objectives:** To describe adolescent WC and CHC patient populations and utilization patterns. **Methods:** Patient demographics and diagnostic codes were examined for all adolescent encounters from June 2012-2015 from two WCs and a CHC run by the same federally qualified health center. Data was analyzed using Excel and STATA. T-tests and chi-square analyses were used to compare means and proportions across groups. **Results:** Analysis of 15,336 encounters with 4,574 patients reveals similar demographics between WCs and the CHC (WC1 59.4% female, 76.2% Hispanic; WC2 58.6% female, 62.5% Hispanic; CHC 54.8% female, 82.0% Hispanic). Females are over-represented at WCs ($p < 0.05$) while black adolescents are under-represented at WC2 ($P < 0.001$). Services provided vary by clinic type ($p < 0.001$). WCs provide more reproductive health services while the CHC provides more acute care services. All sites largely deliver preventive care. Most patients access the clinics more than once and typically return to the same clinic. WCs have larger spikes and dips in visits suggesting that they may be more dependent on the school's schedule. **Conclusions:** WCs serve similar patients and provide similar services to a community-based PCMH. A high proportion of WC patients receive preventive health care and continuity of care, suggesting that WCs have the potential to serve as an adolescent PCMH. Increased outreach to African American and male students might engage under-represented populations.



Jeremy Laney

Kabir Yadav, MD

Harbor UCLA Medical Center

A validation trial: How effective is the heart score in predicting mace and reducing cardiac testing

Background: Roughly \$5-\$10 billion dollars are spent on cardiac testing annually, including cardiac biomarkers, stress testing or angiography. A large population of patients presenting to the Emergency Department with chest pain may be a low risk for a Major Adverse Cardiac Event (MACE). A previous retrospective cohort study by Mahler et al 2011 showed that the HEART score can reduce unnecessary cardiac in low risk chest pain patients by 84.5%. We hope to validate the predictability of MACE, using the HEART score, and safe reduction in cardiac testing in an urban/county Emergency Department (ED) population. **Objective:** To assess the role of HEART score in predicting MACE in low risk chest pain patients presenting to an urban/county ED population. To evaluate if the use of HEART Score can reduce cardiac testing in this patient group. Hypothesis: Our overarching research hypothesis is that the HEART score will be an effective tool in predicting MACE within our patient population. We hope to validate it as an effective tool in significantly reducing cardiac testing with our patients. We expect our findings to validate those of previous studies from Mahler et al. **Methods:** The setting for this study will be the Harbor-UCLA Medical Center (HUMC) emergency department. Over a 12-month period, a convenience sample of consenting emergency medicine resident physicians will complete a short paper survey of factors influencing the decision to transfer a patient to the CORE Unit. In the setting of limited survey submission, we will calculate the HEART scores of appropriate patients through chart abstraction. Lastly, we will follow-up with patients to assess for MACE (within a 30 day period) through phone call and chart review. **Results:** This is an ongoing study. Five hundred and sixteen patients were determined to be eligible for the study thus far. No interim analyses was pre-planned and there are 4 months remaining in the study period.



Henry Lew

Mayer Davidson, MD

Charles R. Drew University of Medicine and Science
*Effectiveness of diabetes self-management education:
A systematic review of randomized control trials*

Background: Diabetes mellitus is chronic condition that relies on patient knowledge and involvement to successfully treat. Diabetes self-management education (DSME) is thought to be an important component for patient engagement and ultimately improving glucose control in diabetic patients.

Objectives: This is a systematic review, which adheres to PRISMA reporting standards. **Methods:** Randomized control trials (RCTs), published from 1990 to the present, were examined. We conducted a literature search PubMed using a predetermined list of

terms. These terms included: diabetes mellitus, self-management, empowerment, randomized control trial, and hemoglobin A1c. Studies identified during the search were evaluated for relevance. We examined the full text of each relevant article, reported on findings and discussed the results. **Results:** During our initial search, we identified 364 studies and abstracts of the studies were assessed for eligibility. Eligible studies had to meet 4 criteria: 1) population examined were diabetic patients; 2) intervention performed was DSME; 3) a measured outcome was hemoglobin A1C levels; and 4) the study was a randomized control trial. After screening and full-text review of articles meeting inclusion criteria, 40 studies were selected for inclusion for this systematic review. Only 14/40 (35%) of identified RCTs showed a significant benefit of DSME on HbA1c. Only 17/40 of the RCTs provided ideal statistics, a baseline-adjusted difference between the change in HbA1c in intervention and control groups with confidence intervals or standard errors. Of the 17 that did, only 2 demonstrated a statistically significant benefit of DSME on HbA1c. The weighted average difference of these 17 RCTs HbA1c in this group is -0.11%. **Conclusions:** There is limited evidence to suggest that DSME is associated with a statistically significant lower HbA1c, especially in Western developed countries like the USA or UK. This is not to say that DSME is not helpful, but timely and appropriate pharmacological treatment decisions are necessary to significantly lower HbA1c levels.



Rebecca Lopez

Anne Ackerman, MD, PhD

David Geffen School of Medicine at UCLA

Investigation of treatment of overactive bladder with botulinum toxin in the lower urinary tract system

Objective: Urinary incontinence and overactive bladder symptoms affect millions of people every year, vastly decreasing quality of life for those affected. For several decades, Botox (onabotulinumtoxinA) has been used in the lower urinary tract as a treatment for symptoms that are refractory to other treatment modalities. Despite several decades of experience with this treatment, the optimal anatomical site of injection, dosage, and frequencies of repeat administration remain unclear. **Objectives:** The aim of this research is to discover whether injections of Botox into the anatomical bladder neck at the time of standard Botox injections into the bladder of overactive bladder patients, affects the rates of complications following treatment. In addition, we aim to determine what demographic factors, if any, affect response rates to Botox treatments. **Methods:** A retrospective chart review of patients that received Botox treatments in the Department of Urology at UCLA from January 2000 to June 2015 was conducted. Response and complication rates were analyzed among non-neurogenic bladder patients that received concurrent bladder neck Botox injections with the standard detrusor muscle injections. In addition, demographic information was analyzed with response rates and complication rates. **Results:** The analysis revealed no improvement in response rates to Botox treatment in patients that received concurrent bladder neck injections of Botox. Patients that were higher in age (51-95) at the time of treatment versus those in the lower age range (20-50) were found to have the same response rates to treatment. Additionally, patients with higher Charlson co-morbidity scores were found to have similar positive response rates to those that had lower Charlson co-morbidity scores. **Conclusions:** These findings indicate that bladder neck injections do not improve rates of post-operative retention. While many urologists are cautious about giving Botox treatments to older patients with more co-morbidities, our study suggests that the procedure is safe and efficacious in those patient populations. This may contribute to the development of a more standardized protocol for making the clinical decision to pursue Botox injections in the lower urinary tract.



Harry Mai

Robert J. Burgmeier MD

Tyler J. Jenkins MD

Jason W. Savage MD

Alpesh A. Patel MD

Wellington K. Hsu MD

Northwestern University Feinberg School of Medicine, Department of Orthopaedic Surgery, Chicago IL

Drew-UCLA Medical Education Program, Los Angeles CA

A Triangle Model of the Pathoanatomy of Congenital Cervical Stenosis

Background: Congenital cervical stenosis (CCS) describes a patient with a decreased spinal canal diameter at multiple levels of the cervical spine in the absence of degenerative changes. Despite recognition of CCS throughout the literature, the anatomical features that lead to this condition have not been established. Knowledge of the pathoanatomy behind CCS may lead to alterations in surgical technique for this patient population that may improve outcomes. **Objective:** To identify the pathoanatomical features of the cervical spine associated with congenital cervical stenosis. **Methods:** From 1,000 cervical MRIs between January 2000 to Dec 2014, CCS was identified in 68 patients using a strict definition of age less than 50 years with mid-sagittal canal diameters (< 10 mm) at multiple sub-axial cervical levels (C3-C7). A total of 68 patients met the inclusion criteria for this group. Fourteen controls with normal SCDs (> 14 mm) at all cervical levels were used for comparison. Anatomic measurements obtained at each level (C3-C7) included: coronal vertebral body, AP vertebral body, pedicle width, pedicle length, lamina length, AP lateral mass, posterior canal distance, lamina-pedicle angle and lamina-disc angle. Statistical significance was defined as $p < 0.01$. **Results** CCS patients demonstrated significantly different anatomical measurements when compared to controls. Significantly smaller lateral masses, lamina lengths, lamina-pedicle angles and larger lamina-disc angles were identified at levels C3-C7 in the CCS group ($p < 0.01$). These anatomic components form a right triangle that illustrates the cumulative narrowing effect on space for the spinal cord. **Conclusions** The pathoanatomy of CCS is associated with a decrease in the lamina-pedicle angle and an increase in the lamina-disc angle. These changes in the alignment of the bony posterior elements lead to decrease in lamina length and ultimately to a smaller cross sectional area for the spinal cord. The global changes in CCS are best illustrated by this triangle model and driven by the posterior elements of the cervical spine.



Matthew Mejia

Shahrzad Bazargan-Hejazi, PhD

Charles R. Drew University of Medicine and Science;
David Geffen School of Medicine at UCLA

Contribution of school meals to obesity levels in children and adolescents: An application of intersectionality of gender, race, and income

Background: Seventeen percent of adolescents are obese, with 35-40% of adolescents' calories consumed at school. Intersectionality investigates marginalizations that intersect at the micro level of an individual person. The intersectional approach has seldom been used in health research, but can help in this study to delineate which subgroup of the population is most affected by poor eating habits at school.

Objective: The objectives of this study is to investigate the role of school-served meals in relation to obesity, and to test its intersectionality with gender, race, and annual household income among children/adolescents in 1st through 9th grade. **Methods:** A cross-sectional design that studied 2,065 healthy children of varying ethnicities aged 3-15 years old using staged sampling within NHANES National Youth Fitness Survey. The measures were obtained through a clinical exam, interview and questionnaires. The main outcome variable was obesity based on BMI (>95th percentile). The main independent variable was a composite measure of eating school-served breakfast and/or lunch. Other independent variables were race, gender, household income, number of times school-served meals were eaten, comorbidities, physical activity, source of care, and health status. Data was analyzed through descriptive, bivariate and logistic regressions. This was used to assess the relationship of children eating school-served breakfast and/or lunch to obesity, taking into account intersectionality variables of race, gender, and income. $P < 0.05$ represents statistical significance. **Results:** Students who ate school served breakfast and/or lunch had lower odds of being obese, but was not statistically significant ($p > 0.05$). However, African-American children who ate a school served meal were found to be at an increased obesity risk (OR 7.97, 95% CI 1.23-51.56). There were no other significant changes in risk of obesity with any other combination intersectional variables. **Conclusion:** School-served meals' effects on obesity remain mixed. Overall, students who ate a school-served meal were less likely to be obese. However, African-American children, specifically, who ate school-served breakfast and/or lunch in comparison to their white counterparts were more likely to be obese. Our findings suggest the importance of tailoring school-based nutrition interventions to specific subgroup of minority populations.



Megan Mendoza

Shahrazad Bazargan-Hejazi, PhD

Charles R. Drew University of Medicine and Science;
David Geffen School of Medicine at the University of
California, Los Angeles

*Adverse childhood experiences (beyond aces) and
suicide attempt: A systematic review*

Background: Suicide is a serious public health problem, as it is the 10th leading cause of death in the United States. The Adverse Childhood Experiences (ACEs) study by Dube et al. in 2001 outlined eight ACEs (emotional abuse, physical abuse, sexual abuse, witnessing domestic violence, substance abuse by household member, mental illness in a household member, incarcerated household member, and parental separation or divorce) and revealed that exposure to ACEs increased the risk of suicide attempt 2 to 5 fold. A major weakness of this study includes a limited definition of an ACE. **Objectives:** To identify what “alternative ACEs” (defined as ACEs not originally reported by Dube et al.) have been reported in the literature and examine their relationship to suicidality in order. **Methods:** We conducted a systematic review using the PRISMA 27-item checklist on the current literature regarding childhood adversity and report on their type and relationship to suicide attempt. Studies were identified from searches in PubMed using combinations of keywords regarding adverse childhood experiences and suicidality. Studies were screened for relevancy, full-text articles were assessed for eligibility, data was systematically extracted, and articles were appraised for quality. **Results:** One hundred seventy-four articles met eligibility criteria. Of these studies, 70.1% were cross-sectional in design, 20.1% were cohort studies and 9.8% were case-control studies. More than ten alternative ACEs were identified. The most commonly reported alternative ACEs included bullying, poor family relations, dating violence, and sexual minority status. The majority of alternative ACEs identified had an association with increased suicidality. **Conclusion:** The list of childhood adversities that increase the risk of suicide attempt may be improved by considering a wider range of adversities. Understanding the wide breadth of adverse childhood experiences that are related to suicidality is important when designing suicide prevention, intervention, and treatment programs.



Michael Ngumi

Steven Schwartz, MD

Jules Stein Eye Institute at UCLA

A cross-sectional study comparing the annual rates of select knee pathologies that can progress to osteoarthritis among ambulatory patients at Martin Luther King, jr. multi-service ambulatory care center and among total ambulatory care visits nationally

Background: Knee OA is a major contributor to morbidity in the United States. The disease is characterized by degeneration of knee articular cartilage, eventually resulting in increased disability due to pain and decreased mobility. The Martin Luther King, Jr. Multi-Service Ambulatory Care Center (MLK-MACC) is located within the Service Planning Area 6 (SPA-6) in

Los Angeles, an area with the highest poverty and uninsured rate in the county.

Objective: To assess the incidence and rates of selected knee OA risk factors at MLK-MACC (2010-11) and to compare this data to similar national averages for outpatient clinics. **Methods:** We identified 18 knee pathologies that can progress to knee OA together with the ICD-9 code that corresponds to each diagnosis. Using the ICD-9 codes, we obtained the total clinic visits of each diagnosis at MLK-MACC from the Los Angeles county Department of Health Services. For the national data, we searched the National Hospital Ambulatory Medical Care Survey (NHAMCS) database for the total outpatient clinic visits for each ICD-9 code. We proceeded to calculate the annual rate and assess for statistical significant using the chi-square test. **Results:** The total patient visits with at least one of the selected risk factors at MLK-MACC was 1024, while nationally was 428,331. The highest incidence and rate at MLK-MACC was among the meniscal tear group (MMT/LMT) with 440 (42.97%) patient visits, while nationally it was highest among the ACL laxity group (DK/Chronic ACL tear/sprain) with 46,281 (34.15%) patient visits. Of note, 0 patients in the NHAMCS database had a MMT diagnosis. There was a statistically significant difference in all but 3 of the risk factors (chondromalacia patellae, fracture malunion/nonunion, fracture proximal tibia/fibula) between the MLK-MACC and national data. **Conclusion:** Meniscus involving pathologies are the most common risk factor at MLK-MACC, while ACL injury is the most common nationally.



Tracy Pham

Lawrence D. Robinson, Jr., MD

Charles R. Drew University of Medicine and Science

*Role of asthma education with the pediatric population:
A systematic review*

Background: In 2013, over 22 million people suffered from Asthma, with over 6 million under the age of 18. In 2014, over 4 million children suffered an asthma exacerbation. Current Asthma Management Guidelines focus on: education on medication, mechanism of action of asthma, proper technique for inhaler usage, avoidance of triggers and exacerbates and plan of action for management asthma symptoms. To address this, asthma educational programs were developed and carried out in specialty clinics, schools, home visits and camps.

Objective: To determine the role of asthma education intervention for children in improving in self-management, medical knowledge and management, health outcomes and health care utilization. **Methods:** A systematic search of PubMed was conducted from January 2006 through January 2016 using search terms “asthma education” AND “self-management” AND “intervention” AND “children” with limits of clinical trials and publications in English. Studies were assessed for relevance based upon information provided in the title, abstract and/or description and eliminated if all inclusion criteria were not met. Studies were selected and reviewed independently by two separate reviewers. Methodologically assessment for quality using CONSORT-25 was conducted and studies were given a score to further categorize into: strong, moderate or weak. **Results:** 181 articles identified and reviewed. 10 studies met all inclusion criteria. Synthesizing the results proved challenging due to variability in characteristics of intervention and data collection within its own study. Instead four measured outcomes were focused on: 1) self-management (5 of 10 studies) 2) medical knowledge and management (8 of 10 studies) 3) health outcomes (7 of 10 studies) and 4) health care utilization (3 of 10 studies). No study received a perfect CONSORT-25 score, the highest score achieved was 22 and lowest was 17. **Conclusion:** While the overall findings on the effectiveness of asthma education were not consistent. Our systematic review showed an overall positive impact within the focused outcomes, especially in asthma education that were both focused and interactive. More importantly, individualizing asthma treatment to individual patients is important in asthma management, as asthma is a disease of great variances in its symptoms and presentation.



Ann Quan

Anne L. Coleman, MD, PhD

Jules Stein Eye Institute at UCLA

Role of adult education in the success of preschool vision screening programs

Background: Studies on children have identified multiple barriers to seeking vision screening and subsequent eye care. One of the important issues to be addressed is parent/guardian understanding of the importance of vision care. **Objective:** To examine whether adult education and video can increase follow-up rates for eye examinations in preschool children. **Methods:** The target population of the study was 3-5 year-old preschoolers attending subsidized preschools within Los Angeles County. On the first visit, trained

program personnel used a handheld auto-refractometer (Retinomax 3; Righton, Japan) to perform on-site screening exams to identify those who benefited from a complete eye exam with the UCLA Mobile Eye Clinic (UMEC). Preschools were randomly assigned into two groups. In the intervention group, preschool personnel and parents/guardians of children referred for UMEC exams received education materials and watched a 3-minute tutorial video. In the control group, the adults received the standard care defined in the protocol for the UMEC and did not receive additional education. Block randomized cluster design was used for the random assignment of preschools into control and intervention groups. The main outcome measure was the rate of follow-up for appointments on the UMEC. The continuous variables were compared between the two groups using T tests (or Wilcoxon rank sum tests if needed), and the categorical variables were compared using Fisher exact test. Results: In the intervention group, 71 (83.5%) children kept their appointments for complete eye exams on the UMEC out of 85 children who failed screening. In the control group, 88 (71.0%) children kept their appointments on the UMEC out of 124 children who failed screening (Fisher exact test $p=0.047$; Odds ratio=2.07; 95% CI=1.04 - 4.14). **Conclusion:** Adult education may play an important role in the success of preschool children vision screenings and help to increase attendance rates with subsequent exams. Further studies are recommended to understand parents' perceptions and barriers to seeking eye care for their children in order to devise initiatives to increase awareness and overcome these barriers.



Emilio Ramos

Elisabeta Nemeth, PhD

UCLA Center for Iron Disorders

Iron, obesity and colon cancer: Is there a link?

Background: Iron and fats are nutrients for all cells of the body, including cancer cells. Obesity has been linked to increased inflammation and cancer. Colorectal cancer, the second leading cause of cancer death in the US, has been linked to abnormal iron and fat homeostasis. **Objective:** To assess whether iron, fat, and inflammatory markers are abnormally expressed in obese colorectal cancer patients. **Method:** Patients (age 50-76) with adenomatous polyps (1-9 total) identified during screening colonoscopy were enrolled in an exploratory prospective clinical trial (n=54). Blood and healthy colon were used to measure markers of inflammation, cancer, obesity

and iron. **Results:** We stratified patients by race and BMI (lean<30>obese kg/m²) and report higher serum hepcidin levels (164 vs 101 ng/ml, p=.01) in lean patients who had a high-risk score of progression to adenocarcinoma (CCCC pathology score) when compared to the low-risk lean cohort. **Conclusions:** Elevated serum hepcidin may be an additional indicator for progression from adenomatous polyp to colorectal cancer. Further studies are needed to explore the molecular mechanism and validate this small, exploratory study.



Raquel Rodriguez Martinez

Efrain Talamantes, MD

Harbor-UCLA Medical Center

Medical student exposure to issues of diversity

Objectives: To investigate the amounts of exposure incoming medical students have had to diverse populations, to different ways of exploring issues of race, gender, and culture, and to obtain information on their opinions about the effects of bias on medical professionals practicing in the present day. **Method:** Incoming first-year medical students at UCLA completed a survey prior to their orientation week in August 2015. The questionnaire included questions collecting basic demographic information, as well as questions about the resources and exposure that students

have had to issues of race, gender, and cultural diversity. **Results:** 109 students in the first-year class completed the survey, with 32.1% identifying as Asian or Pacific Islander, 16.5% as Black or African American, 19.3% As Hispanic American, 22% as White or Caucasian, and 10% as Other. 61.5% of respondents reported having had a meaningful conversation about race, ethnicity, or race issues 7 or greater times during their undergraduate education and 57.8% saying they had meaningful conversations about sexual identity, gender identity, or gender issues 7 or greater times during their undergraduate education. The most commonly used resource to inform their understanding about race, gender, culture, etc. is friends, with 50.5% of respondents using at least this single resource. 11.9% of respondents identify themselves as part of the PRIME program, 25.7% as part of the CDU program, 62.4% as part of DGSOM. 69.2% of the PRIME respondents and 71.4% of the CDU respondents report having 7 or greater meaningful conversations about race, ethnicity, or race issues compared to 61.8% of the DGSOM respondents. 94.5% of respondents report having experienced disparities in healthcare based on race, ethnicity, or gender at least once in their lifetime, with 82.1% of the CDU students, 76.9% of the PRIME students, and 45.6% of the DGSOM students reporting experiencing disparities based on healthcare 7 times or greater during their lifetime. **Conclusions:** The survey participants demonstrated a variety of experiences prior to their medical school enrollment with respect to issues of race, gender, and cultural diversity. Their exposure to varying experiences prior to matriculation may shape their attitudes and knowledge about healthcare issues as practicing clinicians. Few students have had formal instruction for informing their attitudes about issues of diversity, with heavy reliance on friends to have these important discussions.



Christopher Sobowale

David Martins, MD

Paul Robinson, PhD

Deyu Pan, MS

Charles R. Drew University of Medicine & Science, David Geffen School of Medicine at UCLA

How the Ban of Stand-Alone Fast Food Restaurants in South Los Angeles Affected Hypertension Hospital Admissions

BACKGROUND: In September 2008, the city of Los Angeles banned the opening or expanding on stand-alone fast food restaurants in portions of South Los Angeles, in response to the thought that fast food restaurants cause health disparities such as obesity and hypertension, which disproportionately affect low income neighborhoods. **OBJECTIVE:** To assess the impact of the ban on hypertension hospitalization rates in the areas that were placed under the ban compared to similar areas outside the ban. **METHODS:** Retrospective study. Hypertension related hospitalizations were obtained from the Office of Statewide Health Planning & Development from 2001-2010. All the zip codes in the ban areas were selected along with a comparison group outside the ban with similar demographics. Hospitalizations were the numerator and the population was the denominator to generate crude rates. Relative risk and line graphs were used to examine if the ban was associated with hypertension rate changes. **RESULTS:** There were no significant differences in hypertension hospitalization rates when comparing the banned areas to similar area outside the ban areas. **CONCLUSION:** Within the time period we studied, we could not identify an effect on hypertension related hospitalizations. There is a need to do similar study for a longer period of time.



Janani Srikantharajah

Jyoti Puvvula, MD

Harbor-UCLA Family Health Center

Youth opportunities for life options (yolo): Results from a school-based intervention to promote healthy eating and physical activity among teens

Background: 20.5% of teens (ages 12-19) are obese today. Primary care efforts focus on BMI tracking, medical management, and limited education, all during clinic visits. Yet research demonstrates that the major determinants of obesity are behavioral and environmental factors. Youth Opportunities in Life Options (YOLO) is an initiative for teens that doubles as capacity building to increase primary care practitioners' readiness to engage in efforts that extend beyond traditional medical care. **Objectives:** Investigate the impact of a comprehensive school-based obesity prevention intervention on teens in an

underserved community. Evaluate residents' change in capacity as a result of participation in YOLO. **Methods:** Observational and prospective study of the pilot cohorts from a 10-week community intervention. Participants: 22 teens (mean age = 14.76; 75% female; 66.6% Latino and 22.2% African American) from Gardena High School in Gardena, California. Residents (n=11) delivered YOLO and completed an evaluation survey upon completion. Pre/post surveys were delivered to teens. Continuous variable analysis: frequencies, summary statistics, crosstabs and comparison of means (t-test) (StatPlus package utilized). Qualitative and categorical data reported using descriptive statistics. **Results:** Teen knowledge pre-test mean=54%, post-test mean=70% (p=0.0004). Body image score pre-test=2.52, post-test score mean=2.88 (p=0.0003). 41% reported zero consumption of vegetables weekly prior to YOLO, down to 23% on completion. Nearly equivalent increase in consumption of 1-3 vegetable servings weekly (post vs pre-test). Resident skill improvement with 10/17 assessed skills. >70% feel very or quit a bit more confident across measures of non-traditional program delivery as a result of YOLO. **Conclusion:** Statistically significant improvement in knowledge and body image among teens after YOLO. Modest improvement in vegetable consumption. Behaviors overall are unchanged from baseline. No change in BMI, health-beliefs, or self-efficacy scores. Improvement in skills and confidence among residents after participation in YOLO. >80% residents believe YOLO provided unique training opportunities not otherwise included in residency training.



Maereg Wassie

Stanley H. Hsia, MD FRCPC FACE2

Charles R. Drew University of Medicine and Science

David Geffen School of Medicine at UCLA. Division of Endocrinology, Metabolism & Molecular Medicine

Background: The prevalence of diabetes in Ethiopia is estimated to be around 2% nationally with the prevalence around 5% in the population of age 40 and above. The prevalence of diabetes mellitus in Ethiopia is growing as an effect of globalization. There is limited research regarding knowledge and perception of Ethiopians about diabetes. **Objective:** This study aims to assess and compare the attitudes, perceptions and knowledge of the Ethiopian communities in Ethiopia and Los Angeles. **Methods:** This is a cross-sectional survey study. A self-administered survey will be used. Data will be collected on Sundays after church services in Ethiopia and Los Angeles. The

church leaders will make an announcement about the survey during service and encourage the congregation to participate. A box designated for this will be placed in a hall visible for church members to drop filled surveys. Recruitment will be through a flyer with information about the survey and criteria for involvement. **Results:** The study is under IRB review and we plan to start collecting data in March. The expected result is better diabetes knowledge in Ethiopians living in the US compared to Ethiopians living in Ethiopia. **Conclusions:** Based on preliminary data and prior international studies we conclude that diabetes-related knowledge, and attitudes of Ethiopians living in Ethiopia vs. Ethiopians living in Los Angeles. We also conclude that acculturation has a positive role in predicting diabetes-related knowledge, and attitude among Ethiopians living in Los Angeles.



Sayaka Weis

Bitu Amani, PhD

Charles R. Drew University of Medicine and Science

Understanding the association between school connectedness and health and the impact of school criminalization on school connectedness among middle and high school students

Background: School connectedness, defined as the student's belief that adults and peers in the school care about their learning as well as their well-being, has been identified as a protective factor associated with positive behavioral and mental health outcomes. Potentially compromising school connectedness, "school criminalization" has been theorized to adversely affect school climate. Additionally, the institutionalization of criminalizing policies and practices at schools has been demonstrated to disproportionately impact adolescents of color.

Objectives: A review of the evidence and gaps in research on the relationship between school connectedness and health and between school criminalization and school connectedness will be examined to inform school-related policies, adolescent health practice, and future health disparities research. **Methods:** For this scoping review, qualitative and quantitative studies and reviews among middle and high school students in the United States and published in English between 1990 and 2015 were examined. Multi-disciplinary databases PubMed and ERIC were searched for appropriate publications using a pre-determined list of search terms, including: "school connectedness", "school engagement", "school climate", "health", "well-being", "adolescents", "teens", "minority", "school criminalization", "school discipline", "zero-tolerance", "resource officers", "school security", "school police". Abstracts for studies identified during the search were evaluated for relevance from which studies meeting specific selection criteria were included for in-depth content analysis. A data extraction form was used to examine the full text of each article and findings will be discussed. **Results:** Of the 14 papers (7 longitudinal prospective studies, 6 cross-sectional studies, 1 systematic review) that met selection criteria for the research question related to school connectedness and health outcomes, 7 examined violence/aggression/delinquency, 7 examined substance use and 6 examined mental health. For the research question related to school criminalization and school connectedness, 2 papers (1 cross-sectional study, 1 review) met selection criteria, both of which examined disciplinary policies. **Conclusions:** Increased school connectedness is associated with improved emotional health, decreased suicidality, improved help seeking for suicidal ideations, reduced initiation of substance use, reduced delinquency, violence perpetration, violence victimization, and reduced aggressive beliefs. The largest body of literature as it relates to school criminalization and school connectedness examined school disciplinary policies and found that school connectedness is lower in schools that suspend and/or expel students for relatively minor infractions compared to schools with more lenient policies

MODERATORS



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 with the David Geffen School of Medicine at UCLA. He has also 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 over the past 15 years, including both industry and investigator-initiated trials, funded by grants from National Institutes of Health and the American Diabetes Association.



Theodore Friedman, MD, PhD

Dr. Friedman is the Chair of Medicine and Chief of the Division of Endocrinology, Molecular Medicine and Metabolism at Charles R. Drew University (CDU) and a professor of Medicine at both UCLA and CDU. He is board certified in Internal Medicine and Endocrinology, Diabetes and Metabolism. He is also the Director of the CDU Metabolic and Cardiovascular Diseases Research Cluster. He holds an Endowed Professorship in Cardio-Metabolic Medicine.



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 has been involved in residency and training programs since 2004.

JUDGES



Michele A. Basso, PhD

Dr. Basso is the director of Fuster Laboratory of Cognitive Neuroscience at UCLA's Semel Institute for Neuroscience and Human Behavior. 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.



O. Kenrik Duru, MD

Dr. Duru is an Associate Professor of Internal Medicine in the David Geffen School of Medicine at the University of California, Los Angeles. His areas of research include enhancing medication adherence and promoting physical activity in diabetes and other chronic conditions. He is the co-Principal Investigator on the PRediabetes Informed Decisions and Education (PRIDE) study, funded by the NIH.



Linda G. Baum, MD

Dr. Baum is currently Professor and Vice Chair of the Dept. of Pathology and Laboratory Medicine, Division Chief of Laboratory Medicine and Associate Dean for Medical Student Research and Scholarship at DGSOM. She currently serves 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.



Alma Guerrero, MD, MPH

Dr. Guerrero is an Assistant Professor in the Department of Pediatrics at UCLA. Dr. Guerrero practices general pediatrics at the Venice Family Clinic and works with vulnerable populations who have high unmet medical and psychosocial needs. She also sees patients at UCLA's Fit for Healthy Weight Program for children. Dr. Guerrero's research has focused on young Latino children's health and development, and disparities in quality indicators of healthcare services among Latino children.



Dorota Huizinga, PhD

Dr. Huizinga is the Dean of Graduate Studies and Research, and a professor of Computer Science at California State University, Dominguez Hills. She is a recipient of several outstanding faculty recognitions in the areas of scholarly and creative activities, teaching and service. She was awarded in excess of \$3.7 million in grants from the U.S. Department of Education, the National Science Foundation, and the National Institutes of Health.



Pamela Krochalk, DrPH

Dr. Krochalk is currently Professor and Chair of the Division of Health Sciences at California State University, Dominguez Hills. Her teaching areas include public health, research methods, program evaluation, epidemiology, medical sociology, health behavior, health education, multicultural health, and health communication.



Tony Kuo, MD

Dr. Kuo is Adjunct Associate Professor in the Department of Epidemiology at the UCLA Fielding School of Public Health, Associate Clinical Professor in the UCLA Department of Family Medicine, and Director of the Office of Senior Health and Deputy Director for the Division of Chronic Disease and Injury Prevention in the Los Angeles County Department of Public Health. He is currently the Principal Investigator/Co-Principal Investigator/Investigator of several federally funded initiatives in Los Angeles County.



Rose Maly, MD

Dr. Maly is Associate Professor of Family Medicine at the David Geffen School of Medicine at UCLA, and a family physician and geriatrician. Her research interests include health care disparities and focus on patient-physician communication, quality of care, and improving quality-of-life among low income women with breast cancer.



Gerardo Moreno, MD

Dr. Moreno is Assistant Clinical Professor in Family Medicine at UCLA. He received his medical degree in 2004, 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.



Ayesha Sherzai, MD

Dr. Ayesha Sherzai is a staff neurologist and Co-Director of the Brain Health and Alzheimer's Prevention Program, in the Departments of Neurology and Neurosurgery at Cedars-Sinai Medical Center. Her research focuses on preventive neurology, as well as the relationship between lifestyle (nutrition and physical activity), and neurodegenerative and neurovascular diseases.



Dean Sherzai, MD, PhD

Dr. Dean Sherzai is co-director of the Brain Health and Alzheimer's Prevention Program, in the Departments of Neurology and Neurosurgery at Cedars-Sinai Medical Center. His research focuses on early diagnosis and intervention in Alzheimer's disease. As such, he is introducing novel imaging and biomarker tools into the realm of diagnosis at earlier stages of the disease. He is also introducing novel interventions both with regards to pharmaceuticals, as well as comprehensive lifestyle changes that appear to be very effective in altering the course of the disease.



Lynne M. Smith, MD

Dr. Smith is the Vice Chair for Academic Affairs and a Professor of Pediatrics in the Department of Pediatrics at Harbor-UCLA Medical Center. She serves as Medical Director of the High Risk Infant Follow-up Program, Associate Program Director for Neonatal-Perinatal Fellowship Training Program and is Co-Director of the third year medical student clerkship. Dr. Smith's research focuses on improving the neurodevelopmental outcomes of high risk infants.



Jesus G. Ulloa, MD, MBA

Jesus Ulloa, MD is a general surgery resident at the University of California, San Francisco. His research interests include preoperative indicators of morbidity and mortality, surgical outcomes, and disparities in access to surgical services. As a clinical scholar, he seeks to overcome barriers that prevent patients from accessing surgical services, and to advocate for patients who need timely surgical interventions in the evolving health paradigm of the U. S.



Sharon Younkin, PhD

Dr. Younkin received her Ph.D. in Counseling Psychology from The Ohio State University in 1992, and she currently serves as the Chief of Staff for the Vice Dean for Education at the David Geffen School of Medicine at UCLA. Dr. Younkin's research interests are in medical education, medical student well-being, humanism in medicine, community health, health disparities, community based participatory research, and community-campus partnerships.

The CDU Medical Student Research Thesis Program (MSRTP)

Shahrzad Bazargan-Hejazi, PhD, *Chair*

Stacey Teruya, EdD, MS, *Education and Training Manager*

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