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BOOK OF ABSTRACTS | HEALTH EQUITY

**2019 Health Equity Summer Research Summit Organized by the
Center of Excellence in Health Equity, Training and Research, Baylor
College of Medicine, Houston, Texas 77030, USA on June 18th, 2019**

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WELCOME REMARKS BY SUMMIT CHAIR, DR. TOI HARRIS, MD, ASSOCIATE PROVOST OF INSTITUTIONAL DIVERSITY AND INCLUSION, BAYLOR COLLEGE OF MEDICINE, HOUSTON, TEXAS, USA.

Baylor College of Medicine continues to build on its long history of educational outreach initiatives with the addition of a Center of Excellence in Health Equity, Training and Research (COE). Baylor was one of the 13 U.S. institutions to be awarded the Health Resources and Services Administration grant in 2017, and one of the only three in Texas. The five-year, \$3.3M grant enables Baylor to promote diversity in medicine by focusing on programs aimed to increase the number of diverse and highly qualified medical professionals ready to introduce effective and innovative approaches to reduce or eliminate health disparities. These programs will improve information resources, clinical education, curricula, research and cultural competence as they relate to minority health issues and social determinants of health by:

- Collaborating with community partners, including Texas undergraduate institutions, to expand the underrepresented in medicine applicant pool for medical schools.
- Enhancing student academic performance by developing a personalized academic performance plan for Baylor students.
- Enhancing the pathways for recruitment, training and retention of underrepresented in medicine faculty at Baylor College of Medicine through an evolving faculty development program.
- Conducting translational science activities that focus on health disparity issues to increase the cultural competence of Baylor's medical school graduates.
- Facilitating faculty, fellow and student mentored research on minority health issues, including research in community settings and research that focuses on biologic markers related to social determinants of health.
- Implementing a training program to enhance the capacity of underrepresented in medicine students at Baylor to provide health services to underserved populations at community-based clinics.

In order to enhance the dissemination of the research products of our COE scholars, an annual summer research summit was first held on June 19, 2018, and the second one on June 18, 2019. The second annual summer research summit was open to faculty, staff, trainees, hospital affiliates and community members from the entire State of Texas, who are committed to workforce diversity in the health and biomedical sciences and who are devoted to bringing quality healthcare to underserved and under-represented populations. The summit was organized as a forum to catalyze the fertilization and exchange of cutting-edge ideas in the area of disparity research in medicine with a view to foster understanding of current health equity research, training, clinical care, and outreach initiatives in addition to offering an opportunity for connecting with allies and partners working in the field of health equity and health disparities. An important objective of the summit is to provide opportunities for our COE scholars (undergraduate/post-baccalaureate students and Baylor medical students, clinical fellows and junior faculty) to showcase their research findings which are reflective of their past year's endeavor as scholars at the center. The various abstracts in this published research booklet represent a summary of these research efforts.

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ABSTRACT 01
SOCIO-DEMOGRAPHIC DETERMINANTS OF OVERWEIGHT AND OBESITY AMONG CHILDREN IN THE U.S.

**Charles Ikeanyionwu, BS;¹ Deepa Dongarwar, MS,¹ Zenab Yusuf, MBBS, MPH;¹✉
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Reviewer: Erik Malmberg

Background and Purpose: Childhood obesity is one of the foremost threats to population health in the United States (US) leading to the emergence of co-morbidities and increased healthcare cost. We explore the influence of selected socio-demographic determinants of health (SDDOH) on overweight and obesity among US children.

Methods: We utilized the National Survey of Children's Health (NSCH) 2016-17 dataset for this analysis. Overweight was defined as BMI $\geq 85^{\text{th}}$ to $<95^{\text{th}}$ percentile for age and sex and obesity was defined as BMI $>95^{\text{th}}$ percentile for age and sex. Based on the literature and pathway plausibility, we examined the following SDDOH as predictors of childhood or overweight in the US: age, gender, parent's nativity, primary language, family structure, poverty level, parental highest education level and health insurance coverage. A survey log-binomial regression models was conducted to generate the prevalence ratio estimates to capture the associations between SDDOH and overweight or obesity.

Results: A total of 30.6 million children were surveyed out of which about 9.5 million were either overweight or obese, yielding an overall prevalence of 31.0%. The likelihood of obesity was elevated among non-Hispanic Black children (PR = 1.47; 95% CI = 1.24-1.81), children of single parents (PR = 1.32; 95% CI = 1.10-1.52), and younger age of the child (10-12 versus 16-17; PR = 1.32; 95% CI = 1.19-1.58). Parental attainment of college education (PR = 0.56; 95% CI = 0.40-0.78), private insurance coverage (PR = 0.71; 95% CI = 0.56-0.89), and being a female child (PR = 0.89; 95% CI = 0.76-1.07) were protective of overweight or obesity among US children.

Conclusions and Global Health Implications: SDDOH represent markers of overweight or obesity in children. We recommend the development of innovative individualized and community-customized interventions using SDDOH risk and protective pathways as guide to address current childhood overweight and obesity.

Key words: • Socio-demographic determinants • Overweight • Obesity • Childhood obesity

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ABSTRACT 02
**INTIMATE PARTNER VIOLENCE AMONG ADOLESCENT LATINA MOTHERS AND
THEIR REPRODUCTIVE OUTCOMES: A SYSTEMATIC REVIEW**

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Reviewer: Toi B. Harris

Background: Globally, approximately one third (30%) of all women has experienced intimate partner violence (IPV), according to the World Health Organization (WHO) (2013). The region of the Americas, as defined by the WHO, has the second highest prevalence of physical/intimate partner violence of all global regions, with an IPV prevalence of 30%. The purpose of this systematic review was to synthesize the existing literature on reproductive outcomes associated with intimate partner violence (IPV) in adolescent Latina mothers.

Methods: We employed prominent literature search engines using key phrases to retrieve information according to well-defined criteria. We then synthesized and organized our review systematically. The search was focused on recent publications (2010-2018) to ensure that data were contemporarily relevant, although some publications between 2000 and 2010 were also reviewed to draw and incorporate generic information. By searching combinations of key phrases such as ‘reproductive outcomes of IPV’ and ‘adolescent Latina mothers’ in search engines like Google Scholar and PubMed, we were able to find information pertaining to various aspects of our topic, though none encompassed all aspects of the research question. We then organized our review based on common relationships in the literature and drew our own conclusions.

Results: We found that Latin American countries had the second highest rate of adolescent pregnancy in the world. IPV was associated with adverse reproductive outcomes, both directly and indirectly, such as unintended pregnancy and preterm birth. Our results also showed that adolescent Latina women were at a significantly higher risk of both pregnancy and IPV than most women in other age groups globally.

Conclusion and Global Health Implications: IPV represents a significant threat to the health of Latina women as well as their reproductive functions. Current studies on IPV among adolescent Latinas are scanty and more research is warranted.

Key words: • Intimate partner violence • Latin America • Reproductive outcomes • Adolescents

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ABSTRACT 03
EFFECTIVENESS OF A 24/7 DAD ® CURRICULUM IN IMPROVING FATHER INVOLVEMENT: PROFILES OF ENGAGEMENT

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Reviewers: Deepa Dongarwar

Background and Purpose: Father’s involvement is a key component in maintaining healthy families and communities globally. Considering the significant impact of paternal presence or absence on infant, maternal, family, and community outcomes, many organizations that have previously focused solely on women and children have expanded their reach to include men. REACHUP, Incorporated, a community-based organization in Tampa, Florida, had emphasized meaningful male inclusion for more than a decade. The purpose of this quantitative analysis was to evaluate the first five years of the fatherhood training program offered by REACHUP, Inc.

Methods: REACHUP, Inc. utilized the 24/7 Dad ® curriculum for the fatherhood training program. Demographic and pretest-posttest data collected between 2013 and 2017 were analyzed using chi-square for categorical variables, McNemar’s test for difference in proportions, pre- and post-intervention, paired sample t-test to compare means in pretest and posttest scores, and analysis of variance (ANOVA) to test the difference between means across years and demographic characteristics. SPSS, version 24, was used for statistical analysis and a p-value of <0.05 was considered significant.

Results: Attendance in the program increased yearly, nearly doubling from 55 participants in 2013 to 97 in 2017. The mean pretest score was 8.90 (± 4.04) and the mean posttest score was 16.42 (± 4.54) out of 22 total points representing a highly-significant positive effect of the program on self-awareness, fathering skills, parenting skills, relationship skills and self-care which will enable men to establish long-lasting positive relationships with their children.

Conclusions and Global Health Implications: We found the 24/7 Dad ® Curriculum to be an effective tool in improving the engagement and parental skills of fathers within a community-driven maternal and child health program. Increasing yearly attendance indicates that the notion of male involvement is gaining momentum.

Key words: • Father’s involvement • Fatherhood training program • Maternal and child health program

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ABSTRACT 04

DOES INFECTIOUS DISEASES RESEARCH EMPHASIZE DISEASES THAT AFFECT MARGINALIZED POPULATIONS?

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Reviewers: Deepa Dongarwar, Hamisu M. Salihu

Background: The purpose of this study was to assess whether the Infectious Disease field emphasizes research into infections that disproportionately affect marginalized populations in and beyond the developing world, as measured by both the tier of the publishing journal and post-publication audience engagement.

Methods: We generated the dataset by searching over 1,000 manuscripts published each month using a pre-specified PubMed search query including 25 ID-related search terms in 30 of the most-widely read and cited ID journals (as measured by Scimago Journal Rank [SJR]). Each month, we collected 3 to 6 of the most-clinically valuable manuscripts from each of six subfields of infectious diseases: antimicrobial agents, ID diagnostics, general ID, HIV and other sexually transmitted diseases, oncologic and transplant ID, and antimicrobial stewardship and infection control. For this study, we selected all manuscripts chosen over a four-month period (June to September 2018).

Results: We included a total 146 manuscripts from June to September 2018 in our analysis. ID research was generally of low quality, with only 23 of the top studies representing randomized controlled trials; the other most common study types were retrospective observational (n=47), in vitro (n=20), and prospective observational (n=19). The mean Altmetric score was 54.5 (SD 143) and the mean SJR was 3.5 (SD 3.1). In multivariate logistic regression analysis, Altmetric score was defined by journal, subfield of ID, and sample size, whereas SJR was defined by study type and sample size; manuscript keyword did not influence either outcome.

Conclusions and Global Health Implications: Current infectious disease research is low in quality and led primarily out of North America and Europe. Some ID keywords reflecting diseases pertinent to marginalized communities are associated with low journal publication quality and poor readership; however, other such keywords are associated with the opposite; and in multivariate analysis, keywords did not emerge as a strong predictor of either journal publication quality or audience engagement.

Key words: • Infectious Diseases Research • Marginalized populations • Altmetric score

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ABSTRACT 05
NATIONAL TRENDS IN HOSPITALIZATION, SURGICAL RESECTION, AND COMORBIDITIES IN PEDIATRIC INFLAMMATORY BOWEL DISEASE

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Reviewer: Erik Malmberg

Background: Therapeutic options for pediatric inflammatory bowel disease (IBD) have dramatically changed with the widespread use of biologic medications. However, the overall impact of biologic therapy on pediatric IBD outcomes (specifically hospitalizations, comorbidities, surgical rates, and postoperative complications) remains unclear. We aim to fill this gap in the literature by using a large, validated, national database, to study the change in these indices over the last decade, since the introduction and common use of biologics in the management of pediatric IBD. We hypothesize that morbidity in pediatric IBD has decreased over time with the increased use of biologic therapy.

Methods: The National Inpatient Sample (NIS) Database and ICD-9-CM codes were utilized to identify inpatient admissions with a primary or secondary diagnosis of pediatric Crohn's disease (CD) or ulcerative colitis (UC) from 2002-2015. Trends in hospitalizations, comorbidities (including malnutrition and weight loss), surgical procedures, and post-operative complications were examined using joinpoint regression analysis.

Results: There were 119,282 admissions for pediatric IBD during the study period. The annual incidence of hospitalization increased significantly over time for both CD (average annual percent change [AAPC], 6.0, 95% confidence interval [CI] 4.7, 7.2) and UC (AAPC, 7.2, 95% CI 6.2, 8.1). The rate of intestinal resection decreased in CD patients (AAPC, -6.4, 95% CI, -8.7, -4.1) while postoperative complications remained unchanged. However, comorbidities increased significantly in CD patients (AAPC, 6.8, 95% CI, 4.6, 9.0). For pediatric UC patients, postoperative complications (AAPC, 6.7, 95% CI, 12.2, 12.4), and comorbidities (AAPC, 12.2, 95% CI, 8.8-11.6) increased significantly over time while intestinal resection rates remained stable.

Conclusions and Global Health Implications: Although surgical resection rate in pediatric CD has decreased over time, this was not true for UC. Annual incidence of hospitalization and comorbidities continue to increase in these patients despite the increased availability and use of biologic medications. This further emphasizes the critical need for novel therapeutic options for this vulnerable patient population.

Key words: • Inflammatory Bowel Disease • Pediatric Hospitalization • Surgical Resection • Crohn's disease • Ulcerative colitis

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ABSTRACT 06

DISPARITIES IN INSURANCE COVERAGE FOR HOSPITALIZED ADULT CONGENITAL HEART DISEASE PATIENTS: THE EFFECTS OF THE AFFORDABLE CARE ACT

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Reviewer: Hamisu M. Salihu

Background: A key goal of the Affordable Care Act (ACA) enacted in 2010 was to overhaul health insurance coverage for patients with chronic diseases. We investigated how the ACA impacted insurance status among hospitalized adult patients with congenital heart disease (CHD), other childhood chronic conditions, and the general population and determine associated sociodemographic disparities in these groups.

Methods: We conducted a serial cross-sectional analysis of all hospitalizations in patients 18-64 years of age using 2007-2016 National Inpatient Sample data. ICD-9-CM and ICD-10-CM diagnosis codes classified hospitalizations into four mutually-exclusive groups: CHD, sickle cell disease (SCD), cystic fibrosis (CF), and all other hospitalizations. Pregnancy-related hospitalizations were excluded. The primary outcome was insurance status defined as Government, Private, and Underinsured (self-pay or charity), or other (e.g., military, disability). Insurance distribution and underinsured rates were analyzed during three time periods: pre-ACA (2007-2009), early ACA (2010-2013), and full ACA implementation (2014-2016). Survey-weighted logistic regression was used to determine the adjusted odds of being underinsured by diagnosis, ACA era, age, and race/ethnicity.

Results: Of the nearly 139 million hospitalizations analyzed, there was a decrease in underinsured patients from 11-12% in 2007-13 to 8.5% in 2014-16. Across all disease groups, patients aged 18-25 years had higher crude underinsured rates than older patients. Patients with CHD were less likely to be insured than SCD or CF patients. In all racial/ethnic and age subgroups, the post-ACA era was associated with 30-50% decreased odds of being underinsured. Racial/ethnic disparities persisted for Blacks and Hispanics with CHD for all ACA eras, despite controlling for household income.

Conclusions and Global Health Implications: Hospitalized adults with CHD were more likely to be insured than similarly-aged general hospitalized patients for all ACA eras but were more underinsured than patients with SCD or CF. Racial/ethnic disparities were most pronounced in Hispanics for all ACA eras. The era following full ACA implementation was associated with improved insurance coverage for all groups; however, racial/ethnic disparities in coverage persisted.

Key words: • Insurance coverage • Congenital heart disease patients • Affordable Care Act

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ABSTRACT 07
HEALTH DISPARITIES AND CONSTIPATION MANAGEMENT AMONG PEDIATRIC PATIENTS IN THE EMERGENCY DEPARTMENT

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Reviewer: Toi B. Harris

Background: Constipation is a common cause of abdominal pain in children. Prior studies have demonstrated that nearly half of children with constipation receive enemas; however, studies regarding constipation management based on race and ethnicity has not been pursued. The goal of this investigation was to determine if health disparities affect emergency department (ED) management of constipation. This information may reveal biases that affect the ED management of children with constipation.

Methods: This was a retrospective cross-sectional study utilizing ED data from the National Hospital Ambulatory Medical Care Survey (NHAMCS) from 2005 to 2016 in children < 21 years old. ICD-9 codes were used for the data covering the period 2005-2015, and ICD-10 codes for the year 2016. Patients with comorbidities that predisposed them to constipation were excluded. Groups were analyzed according to race and also by insurance status. Statistical Analysis System (SAS) was used to run binomial logistic regression models that generated adjusted odds ratios (OR) with the encompassing 95% Confidence Interval (CI).

Results: A total of 3,168,240 children with constipation were seen in n EDs during the study period. About 21.6% (N = 684,814) received an enema. There was no statistical difference among non-Hispanic White (referent category), non-Hispanic Black (OR = 0.92; CI = 0.47-1.82) and Hispanic patients (OR = 0.81; CI = 0.34-1.91) with respect to the receipt of enema. Insurance status or type did not influence the provider decision to administer an enema to a child with a diagnosis of constipation.

Conclusions and Global Health Implications: Racial and health disparities do not appear to impact a physician's decision on giving an enema to children with constipation presenting to the ED.

Key words: • Constipation • Enema • Emergency department • Constipation • Pediatrics

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ABSTRACT 08
**MATERNAL CAFFEINE CONSUMPTION AND RACIAL DISPARITIES IN FETAL
TELOMERE LENGTH**

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Reviewer: Toi B. Harris

Background: The identification of risk factors for shorter telomere length, especially during fetal development, would be essential towards caffeine consumption recommendations on a global scale. The purpose of this study was to examine (1) the association between caffeine consumption during the third trimester of pregnancy and fetal telomere length; (2) this association with respect to the World Health Organization (WHO) and the American Congress of Obstetricians and Gynecologists (ACOG) recommendations regarding caffeine consumption during pregnancy; and 3) explore if there were racial differences in telomere length regardless of maternal coffee consumption status.

Methods: Three generalized linear models (GLM) were compared based on binary categorical variables of caffeine levels by mean (117.3 mg), WHO recommendations (300 mg), ACOG recommendations (200 mg), and telomere length (telomere repeat copy number [T/S] ratio). Caffeine intake was measured using a food frequency questionnaire (FFQ).

Results: Among fifty-seven (59.4%) maternal-fetal dyads, 77.2% reported less than 200 mg of caffeine consumption (ACOG) and 89.5% less than 300 mg (WHO). Both WHO and ACOG models found that caffeine consumption ($p < 0.05$) was significantly associated with shorter telomere lengths; sodium ($p < 0.05$), maternal age ($p < 0.001$), “other” race ($p < 0.001$), and “white” race ($p < 0.001$) were also significantly associated with shorter telomere lengths in the same models.

Conclusions and Global Health Implications: Higher caffeine intake, maternal age, and race may be associated with shortened fetal telomere lengths, suggesting that caffeine consumption during pregnancy may have long-term implications for the development of the fetus. The racial/ethnic differences in telomere length found in this study warrant the conduct of larger studies to further delineate these associations.

Key words: • Caffeine consumption • Telomere length • Fetuses • Racial disparities

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ABSTRACT 09
**ASSESSMENT OF RACIAL AND GENDER DISPARITIES IN PATIENTS WITH A
DIAGNOSIS OF MALINGERING IN CLINICAL SETTINGS**

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Reviewer: Korede Yusuf

Background: A malingering diagnosis can have many consequences for patient care in the emergency room, hospital and outpatient settings. While trends of this diagnosis have been explored in forensic settings, use of this diagnosis along racial and gender demographics have not been examined in clinical settings. The purpose of this study was to determine the prevalence of the malingering diagnosis in race and gender groups in emergency rooms and non-psychiatric inpatient hospitals in the United States.

Methods: The National Inpatient Sample (NIS) and National Hospital Ambulatory Medical Care Survey (NHAMCS) databases were utilized to identify inpatient admissions and emergency room presentations with a diagnosis of malingering from 2003-2015. Racial ethnic and gender disparities were examined in both settings.

Results: The malingering diagnosis is prevalent in 0.1% of both emergency room and inpatient hospital patient populations. In both settings, Hispanic men and women had the lowest likelihood of being diagnosed with malingering compared to white and black men and women (OR 0.42, CI 0.3 - 0.55 inpatient; OR 0.33, CI 0.15 – 0.74 emergency room.) Black patients were just as likely to have a diagnosis of malingering as whites in the inpatient hospital setting but were 47% less likely to have the diagnosis in the emergency room. White men have the greatest likelihood of having the diagnosis in both settings.

Conclusion and Global Health Implications: Malingering is not a commonly coded diagnosis in emergency room nor inpatient hospital settings. The lower likelihood with which black or Hispanic patients present to the emergency room with exaggerated or excessive symptom production driven by external incentive may indicate that these patients are less likely to utilize such services unless they are in legitimate distress compared to white patients. Further investigation into the types of presenting symptoms associated with the malingering diagnosis is needed to elucidate trends in these settings.

Key words: • Malingering • Inpatient • Outpatient • Racial disparities • Gender disparities

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ABSTRACT 10

EXAMINING SUICIDE RATES IN HARRIS COUNTY FOLLOWING HURRICANE HARVEY.

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Nancy Osazuma;⁵ **Sophia Banu, MD;**¹ **Asna Matin, MD;**¹ **Joann Schulte, DO, MPH;**²
David Persse, MD, FACEP;² **Asim Shah, MD**¹

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Reviewer: Hamisu M. Salihu

Background: Hurricane Harvey made landfall on August 25, 2017 and over the course of the storm, it dumped 51.88 inches of rain, the largest amount for any single storm. In addition, the scope of damage from the storm was immense, 24 hospitals were evacuated. Given the damage caused by Hurricane Harvey, we hypothesized an elevation in suicide rates within Harris County following Hurricane Harvey when compared to before Hurricane Harvey.

Methods: Medical Examiner's data from Harris County was obtained for suicides from Feb 1, 2016 to Feb 28, 2019. Medical examiners's data from Dallas County was obtained for suicides from Feb 1, 2016 to Feb 21, 2019. Multiple Analyses were run on the data, including descriptive statistics, interrupted time series, and correlation analysis.

Results: There were no differences between suicide rates in Harris County pre- and post-Hurricane Harvey. Within the FEMA-designated incident period between August 23 to September 15, 2017, and Major Disaster Declaration on August 25, 2017 period, there were no differences in suicide rates by gender (Pre-Hurricane Harvey suicide rate for female = 23.7% and for male = 76.3%; Post-Hurricane Harvey suicide rate for female = 19.2% and for male = 80.8%, p-value=0.053). There did appear to be a statistically significant correlation between education level and zip code suicide rates per 100,000. Pre-Hurricane Harvey pearson coefficient correlation to education level and zip code suicide rate was -0.81, p <0.00001. Post-Hurricane Harvey pearson coefficient correlation to education level and zip code suicide rate was -0.75, p <0.00001.

Conclusions and Global Health Implications: Though Hurricane Harvey was a devastating storm for Harris County, there does not appear to have been an increase in suicide rates in the immediate period following the storm. There is paucity of published research on suicide following a disaster and this may help identify factors relevant to suicide rates following disaster events.

Key words: • Hurricane • Harvey • Harris County • Suicides • Houston

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ABSTRACT 11

A NARRATIVE MEDICINE INTERVENTION AND PROVIDER EMPATHY IN AN INTERNAL MEDICINE RESIDENCY PROGRAM

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Reviewer: Toi B. Harris

Introduction: Narrative medicine is an emerging field of study that develops the ability of clinicians to receive patients' accounts of illness through structured exposure to narratives. We hypothesize that weekly resident exposure to oral and written illness narratives may affect residents' empathy as measured by the Interpersonal Reactivity Index (IRI).

Methods: Residents rotating through four hospitals of an academic internal medicine residency program were invited to participate. Two of the hospitals served as a comparison group and two other hospitals as the intervention group. Residents in both arms provided demographic information and completed the IRI at the onset of the study (pre-test) and four weeks later at the conclusion of the study (post-test). Within the intervention group, the residents participated in four one-hour weekly narrative medicine workshops where they listened, discussed, reflected and wrote about various forms of narratives including video, audio, literature and poetry.

Results: Of the 51 residents who completed the pre-test, 39 completed the post-test (76.5% response rate). There was no statistically significant difference (χ^2 analysis) between the comparison group (n=20) and the intervention group (n=19) as measured by various demographic factors. Within the intervention group, on the IRI subscale, there was a statistically significant increase in empathic concern ($p=0.01$, Wilcoxon signed-rank test) over the 4-week intervention. Of the residents who participated in the intervention group, 56.7% attended at least 3 of the 4 weekly workshops. Of those that participated in the narrative medicine workshop, greater than 60% indicated they enjoyed the workshop, would attend another and thought it would be valuable to their patient care, indicating the activity was an acceptable practice.

Conclusions and Global Health Implications: While brief, the narrative medicine workshops had a positive impact on the residents' measurement of empathic concern. Most residents reported they enjoyed the workshop, would attend another and that it would be valuable to their patient care. This pilot suggests that structured and sustained exposure to narrative are acceptable, can affect resident perceptions of others, and may inform further investigations into related behavioral effects.

Key words: • Narrative medicine • Residency • Intervention • Interpersonal reactivity index

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ABSTRACT 12
ASSOCIATION AMONG RACISM, PSYCHO-SOCIAL STRESS, AND HEALTH-RELATED QUALITY OF LIFE: BUFFERED EFFECT OF ALCOHOL

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Reviewer: Erik Malmberg

Background and Purpose: Little is known about the intermediate behavioral pathways linking perceived discrimination to negative health outcomes among ethnic minorities. This study aims to examine the association of experiences of discrimination (EOD) and the number of unhealthy days due to physical or mental illness per month and whether alcohol use confounds this association in a low-income community in Florida.

Methods: A community needs assessment survey was conducted from 2013 to 2014 in a defined urban sample of ethnic minority residents in Florida. The dependent variable was the number of unhealthy days due to physical and mental illness during the last month. Covariates included: frequency of experiences of discrimination, stress appraisal, alcohol use, drug use, insufficient sleep, the number of self-reported medical conditions, and sociodemographics. Mediation analyses were conducted using multiple linear regression and structural equation modeling (MPLUS 7.11).

Results: A total of 135 observations were included in the analysis. EOD was significantly associated with unhealthy days due to physical or mental illnesses, even after controlling for sociodemographics. Path analyses determined full mediation with significant positive indirect effects ($p < 0.05$) of perceived discrimination on unhealthy days through perceived stress, sleep disturbances, and self-reported medical conditions. By controlling for alcohol use, the relationship between perceived discrimination and perceived stress decreased in magnitude.

Conclusion and Global Health Implications: Our findings support the heightened stress response hypothesis and the theory of allostasis. Self-reported alcohol use significantly reduced the impact of EOD on perceived stress, indicating that individuals exposed to perceived racism are likely to use alcohol as a buffer to reduce stress. Future studies should examine the use of alcohol as a coping mechanism to deal with racism-related stress.

Key words: • Racism • Psycho-social stress • Health quality • Alcohol

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ABSTRACT 13
THE ROLE OF COMORBID MEDICAL CONDITIONS IN THE PREVALENCE OF VENOUS THROMBOEMBOLISM AMONG DIFFERENT ETHNIC/RACIAL GROUPS IN A HOSPITALIZED POPULATION

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Reviewer: Hamisu M. Salihu

Background: Few studies have examined the prevalence of venous thromboembolism (VTE) among ethnic groups; however, despite the paucity of investigations addressing this question, there is a consistent pattern observed. African-Americans have a significantly higher rate of VTE compared to Caucasians and other ethnic groups. Asian/Pacific Islanders and Hispanics have the lowest prevalence. Further research is needed to determine the fundamental differences underpinning the prevalence of VTE between different racial/ethnic groups. In this study, our aim is to examine whether the number and/or type of comorbid conditions experienced during hospitalizations contribute to the variable prevalence of VTE observed among different ethnic groups.

Methods: We employed the Healthcare Cost and Utilization Project database (2001-2015) to examine the prevalence of VTE (both deep vein thrombosis (DVT) and pulmonary embolism (PE)) among African Americans, Caucasians, Hispanics and non-hispanic others. Subjects with a primary diagnosis of lower extremity DVT and/or PE, as determined by ICD-9 codes, were included in the cohort. Codes for superficial venous thrombi and upper extremity DVT were not included. We employed the Elixhauser comorbidity index to evaluate comorbidity profile for the individuals in our cohort. Census figures for 2001-2015 were obtained from US Census.

Results: The prevalence of PE and DVT among hospitalized patients was equivalent for both men and women. In hospitalized patients, VTE were more common in patients ages 65-79 and 40-64 than in 80+ and 18-39 age groups. The prevalence of VTE was highest in the African American group, followed by Caucasians. Hispanics exhibited the lowest prevalence of VTE. Age did not affect this pattern. The number of comorbidities did not influence the prevalence of VTE among the different ethnicities, regardless of age. Diagnosis of hypertension, chronic pulmonary disease, rheumatoid/vascular diseases and chronic anemias were among the most frequent comorbidities in those patients with primary diagnosis of VTE. There were some differences in the prevalence of these diagnoses among the different age groups, but interestingly, not among the different ethnic groups.

Conclusions and Global Health Implications: *Our study confirms previously reported findings that African Americans exhibit a higher prevalence of VTE. Although prior studies have documented that Asian Americans have the lowest prevalence, in our study cohort, Hispanics displayed the lowest prevalence. Number of comorbidities or type of comorbid conditions did not shed any light on the differences in VTE observed among different ethnic groups, suggesting that either socioeconomic or genetic factors may be responsible for the observed differences.*

Key words: • Venous thromboembolism • Comorbidities • Racial/ethnic disparities • Hospitalization

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ABSTRACT 14
THE ROLE OF SOCIOECONOMIC FACTORS IN THE PREVALENCE OF VENOUS THROMBOEMBOLISM AMONG DIFFERENT ETHNIC/RACIAL GROUPS IN A HOSPITALIZED POPULATION

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Reviewer: Hamisu M. Salihu

Background: There is a paucity of data explaining how medical or socioeconomic factors affect the variable prevalence of venous thromboembolism (VTE) among different ethnic groups. African-Americans have been shown to exhibit a significantly higher rate of VTE compared to Caucasians and other ethnic groups. It is unclear whether social economic factors play a role in this VTE prevalence trend. In this study, our aim is to examine whether income and insurance status contributes to the variable prevalence of VTE observed among different ethnic groups.

Methods: We employed the Healthcare Cost and Utilization Project database (2001-2015) to examine the prevalence of VTE (both deep vein thrombosis (DVT) and pulmonary embolism (PE)) among African Americans, Caucasians, Hispanics and non-Hispanic others. Subjects with a primary diagnosis of lower extremity DVT and/or PE, as determined by ICD-9 codes, were included in the cohort. Codes for superficial venous thrombi and upper extremity DVT were not included. Insurance status and type were readily available from the database. Income was extracted from zip code data derived from US Census figures for 2001-2015.

Results: The prevalence of VTE was highest in the African American group, followed by Caucasians. Hispanics exhibited the lowest prevalence of VTE. Age did not affect this pattern. Type of insurance (private, Medicare, Medicaid or underinsured) did not change the prevalence of VTE observed among the different ethnic groups. Income was classified based on quartiles: lowest, 2nd, 3rd and highest. Similarly, being from a lower income bracket did not affect the prevalence of VTE observed among the different ethnic groups, suggesting that lack of resources does not reduce the number of hospitalized patients with primary diagnosis of VTE.

Conclusions and Global Health Implications: Our study confirms previously reported findings that African Americans exhibit a higher prevalence of VTE while Hispanics were less likely to be hospitalized with primary diagnosis of VTE. Interestingly, neither type of insurance nor income level appeared to play a role in the likelihood of being admitted with VTE diagnosis. Differential access to financial resources do not explain the observed differences noted in VTE prevalence among different ethnicities.

Key words: • Socio-economic factors • Venous thromboembolism • Racial/ethnic groups

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ABSTRACT 15

PROVIDER USE OF ELECTRONIC HEALTH RECORDS IN PATIENT CARE – DOES ANYBODY REALLY KNOW HOW MUCH TIME THAT IS?

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Reviewer: Hamisu M. Salihu

Background: Studies have investigated physician use of electronic health records (EHR) for patient care and desktop medicine within and outside the office visit. Desktop medicine, i.e. non face-to-face care, can involve charting, reviewing test results, patient communication and care coordination. Previous studies using different methodologies have evaluated the impact of EHRs on physician work in terms of time in their workday. However, few studies have measured the actual time and assessed physician work effort using access logs embedded in EHRs. This study aims (1) to assess the time physicians spend providing ambulatory patient care both in direct care and desktop medicine; (2) to survey physicians on EHR use from self-reported hours compared to EHR logged in activity time; and (3) to explore physician characteristics potentially associated with EHR use, including age, gender and race/ethnicity.

Method: This pilot study focused on family physicians providing direct patient care in the Faculty Group Practice (FGP) at Baylor College of Medicine. Provider use of Epic, the EHR system at FGP, was evaluated by logged in times through the Clarity database. An algorithm for interpreting Clarity time stamps was developed to assess Epic use for individual providers. An online questionnaire was delivered to FGP providers to assess their perspectives of time spent in Epic and demographic characteristics that might be associated with EHR use. Chi-square and regression analyses were performed using SAS® software.

Results: Anticipated findings: an initial sample group (N=17) comprised 52% women, the majority outpatient-based, younger than 50 years and practicing less than 10 years out of training. Family physicians will spend more time using Epic for direct patient care and desktop medicine than self-reported with a greater discrepancy to be observed among women physicians.

Conclusions and Global Health Implications: Desktop medicine is a multifaceted but integral part of physicians' overall care of patients. Physician use of EHR for face-to-face care may be underestimated. EHR provider access logs may be a useful, accurate means to track the time spent in indirect patient care. More research into the methodology would be important in helping physicians optimize their time to provide quality patient care in a work-life balance.

Key words: • Electronic health records • Physicians • Time taken in patient care

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ABSTRACT 16
**EVALUATION OF AN EVIDENCE-BASED AND COMMUNITY-RESPONSIVE
FATHERHOOD TRAINING PROGRAM TO ADDRESS HEALTH INEQUITIES: PROVIDERS'
PERSPECTIVE**

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Reviewer: Deepa Dongarwar

Background and Purpose: Studies on male involvement and pregnancy outcomes have often not incorporated the providers' perspectives which are potentially critical to understanding program context, evolution, perceived impact, and sustainability. We sought to evaluate the 24/7 Dad® program from the viewpoint of the program providers.

Methods: We conducted purposive sampling of 24/7 Dad program facilitators and administrators who were involved in recruitment, training, and follow up of program participants within a Federal Healthy Start program (REACHUP) in Tampa, Florida. We elicited and evaluated factors impacting the performance of the father involvement program using content analysis.

Results: Under program participation and perceived impact, most providers thought that the program had created a safe space previously unavailable for men in the community. The most useful recruitment strategy was building partnerships with other organizations. The key informants noted an important evolutionary trend in the father involvement program over time as well as the nature of linkages to partner organizations within the area. Threats to program sustainability included the continued reluctance and skepticism to invest funds to address male issues, sub-optimal retention of participants who were living transient lives as well as geographical/transportation barriers.

Conclusions and Global Health Implications: The involvement of fathers during pregnancy bears significant implications for healthy babies globally. Our study is a clarion call to augment capacity and infuse more resources to improve paternal involvement. In turn, we hope to achieve health equity, eliminate disparities, and improve the health of all groups as articulated in the *Healthy People 2020* Goals and Objectives

Key words: • Fatherhood • Training program • Health inequities • Evidence-based • Community-responsive

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ABSTRACT 17
SPANISH/CROSS-CULTURAL FELLOWSHIP IN NEUROPSYCHOLOGY: A RESPONSE TO THE NEEDS OF THE HOUSTON HISPANIC COMMUNITY

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Reviewers: Toi Harris, Hamisu M. Salihu

Background: As the U.S. becomes more diverse, the need for neuropsychological services for ethnic and linguistic minority individuals is apparent. There is a shortage of neuropsychologists, who can provide linguistic and culturally sensitive services nationwide. The paucity of Spanish speaking practitioners may in part reflect a lack of cross-cultural neuropsychological training opportunities and the challenges in recruitment at all levels of training (Byrd et al., 2008). To increase cross-cultural training opportunities, Baylor College of Medicine (BCM), through BCM Cerebro, founded a postdoctoral fellowship program specializing in Spanish/Cross-Cultural Adult Neuropsychology. This pioneering specialty-training program provides two years of advanced training grounded in evidence-based practices.

Methods: This innovative postdoctoral fellowship provides training for a wide variety of neurological conditions, offers a comprehensive didactic program, including specialized didactics in cultural neuropsychology, and opportunities for clinical research and medical interpreter certification. The Fellowship strives to teach new assessment techniques and highlights the influence of sociodemographic variables on Westernized neuropsychological practices for monolingual and bilingual Spanish-speakers, and non-English/Spanish speaking minorities.

Results: During the Fellowship's inaugural training year, utilization of services for monolingual and bilingual Spanish speakers increased from 2 clinics to 4 clinics per month for a total of 46 patients. Services were expanded the following 6 months of the Fellowship, serving 71 patients during this short period. The majority of patients were evaluated for differential diagnosis of dementia and a new service was added to evaluate surgical candidacy of patients with epilepsy, tumors, and movement disorders. Clinical services to other non-English speaking communities are also increasing.

Conclusions and Global Health Implications: Fellowships of this nature, which guarantee a comprehensive experience in the designated specialty, are important in ensuring the trainee to independent practitioner pipeline becomes as diverse as the patients being served.

Key words: • Linguistic and cultural sensitivity • Post-doctoral fellowship • Spanish speaking minorities

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ABSTRACT 18

IDENTIFYING REMOTE POPULATIONS THAT MAY BENEFIT FROM EXPERIENCED SURGICAL CARE

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Reviewers: Hamisu M. Salihu; Toi Harris; Deepa Dongarwar

Background: Previous analyses have demonstrated that patients receiving care at low volume Texas hospitals undergo relatively more leg amputations and relatively fewer revascularization procedures (angioplasty/stenting, leg bypass) than those receiving care at experienced hospitals. We sought to identify areas in Texas which are remote from experienced hospitals.

Methods: Publicly available Texas state discharge data for 2004-2009 was used to identify adult patients who underwent leg (above-ankle) amputation and had diagnoses of both PAD and foot complications (incl. foot ulcer, infection, gangrene). The Haversine formula was used to calculate the distance from zip code of residence of each patient to each experienced hospital in Texas. Those living >50 miles from an experienced hospital were considered “remote.” Based on previous analyses, an “experienced center” was defined as a hospital performing an annual average of 15+ revascularization procedures or leg amputations for PAD with foot complications; all others were “low volume.”

Results: A total of 4,374 total leg amputations were identified, with 2,865 (66%) performed at 77 experienced hospitals and 1,509 performed (34%) at 269 low volume hospitals. Of 1,858 Texas zip codes, 476 (26%) were more than 50 miles, and 75 (4%) were more than 100 miles from an experienced hospital. Geospatial analysis identified four concentrations of remote patients: Texarkana; El Campo/Victoria; Brackettville; and Big Spring. Those undergoing leg amputations at low volume centers more often lived >50 miles from an experienced center ($p < 0.001$), and less often traveled excess distance (i.e. beyond the closest medical center) to receive care ($p < 0.001$).

Conclusions and Global Health Implication: Patients living >50 miles from experienced surgical care are concentrated in four Texas regions. Findings also suggest that patients receiving care in low volume hospitals may have their choice of medical center constrained by distance. Surgeons may provide value to these patients by facilitating access to experienced care with less travel burden.

Key words: • Remote populations • Angioplasty • Stenting • Leg bypass • Haversine formula

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ABSTRACT 19
ALTERNATIVE PEER GROUP IMPROVES DRUG CESSATION OUTCOMES AND LIFE SKILLS IN AT-RISK ADOLESCENTS

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Reviewer: Hamisu M. Salihu

Background: People are most likely to begin using drugs during adolescent years, which puts them at increased risk of drug addiction. Signs of drug addiction include uncontrollable drug cravings, behavioral issues, and dysfunctional emotional response or processing, which are becoming more common amongst adolescents. The Teen and Family Services' (TAFS) mission is to help adolescents overcome and prevent drug abuse/addiction, and improved coping skills, life fulfillment and interpersonal skills. A qualitative and quantitative analysis was conducted to assess program satisfaction and effectiveness in drug cessation and life skill outcomes amongst enrolled adolescents.

Methods: Confidential surveys were conducted. Weighted responses were coded and assigned value labels and statistically analyzed using STATA-MP. Summary tables and frequency measures were utilized to assess outcomes. Qualitative survey questions were analyzed by identifying common and overarching themes noted amongst interview responses.

Results: The study revealed improved coping skills, increased emotional honesty and openness when in the group environment as well as enhanced social skills. About 75% reported improvements in understanding and managing their emotions and 68.75% of students were entirely drug free for the duration of time enrolled in APG. Students also reported high levels of trust in their staff counselors and overall positive relationship with their staff counselors and other students in the group. About 93.75% reported TAFS group positively changed their way of thinking and seeing the world.

Conclusions and Global Health Implications: APG appears to be an effective means of drug cessation amongst adolescent with a history of drug abuse or who are at risk for drug abuse. To prevent adolescent drug abuse, addiction and relapse, the effectiveness of early intervention APGs integrated into student's lifestyle needs be further researched with a larger sample size, and programs must have adequate utilization.

Key words: • Alternative peer group • Qualitative survey • Weighted responses • Drug cessation • Adolescent drug abuse

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ABSTRACT 20
FRONTERA DE SALUD: AN INTERDISCIPLINARY AND INTERSCHOLASTIC EXPERIENCE FOR MEDICAL, PHYSICAL THERAPY, OCCUPATIONAL THERAPY, AND NURSING STUDENTS

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Reviewers: Hamisu M. Salihu, Meishon Bell, Toi Harris

Background: While many students are familiar with the concepts of rural medicine and underserved populations, there are few opportunities for these students to experience these concepts firsthand due to their inherent isolation. In an effort to bring students closer to these facets of medicine, Frontera de Salud organizes a yearly medical mission trip to the Big Bend region. This organization's goals are to expose students to rural and underserved communities, gather data on the region's health, and develop sustainable community health programs.

Methods: The students selected to go on these trips come from the medical, physical therapy, occupational therapy, and nursing schools of UTMB and TTUHSC, and together they form interdisciplinary teams that provide preventative medical care under the supervision of healthcare professionals. In addition to providing healthcare, these teams also collect de-identified data that is used for community-based participatory research projects, community service-learning programs, and healthcare interventions.

Results: Since 2016, these students have provided care to over 100 patients in Marfa, Alpine, Presidio, and Candelaria, Texas. The number of patient encounters has given these students excellent opportunities to practice working together in an interdisciplinary environment while experiencing rural medicine in an underserved population. Student experiences, along with the data itself, have also generated enough information to create 11 different posters, a grant, and scientific manuscripts that have been presented at conferences at the local, regional and national levels.

Conclusions and Global Health Implications: Frontera de Salud can serve as a model for other schools to develop similar programs that would allow their students to gain experience in rural medicine, administer healthcare to underserved populations, and gather research data for scholarly pursuits.


Key words: • Rural medicine • Frontera de salud • Underserved population • Community-based participatory research

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ABSTRACT 21
REDEFINING DISCUSSIONS OF SOCIAL DETERMINANTS OF HEALTH: A CURRICULUM CHANGE APPROACH

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Reviewers: Hamisu M. Salihu, Meishon Bell, Toi Harris

Background and Purpose: Pre-clerkship discussions of social determinants of health (SDH) often conflate correlation and causation between illness prognosis and social factors learned and may lead to premature closure. Reframing discussions of SDH is essential to create holistic disease frameworks for building clinical knowledge. While many medical schools have enacted programs to expand on information learned through cultural competency, limited published literature describe ways to update existing curriculum. We aimed to provide context to medical students as they learn about social variables and their relation to illness prognosis through curriculum change.

Methods: We developed a standardized framework to target and edit ambiguous associations between disease processes and SDH. Peer-reviewed articles found through Ovid informed the curation of key phrases related to race, ethnicity, gender, sex and socioeconomic status which we used to search a pre-clerkship syllabus. Discussions about disease and SDH were clarified through the informed lens of the most current literature. We presented suggestions to course directors for approval and dissemination.

Results and Conclusions: A small pilot was implemented during the Renal Integrated Medicine Course at a Texas medical school. The enhancements implemented in this pilot included information regarding how the APOLI gene has been shown to be protective against African Sleeping Sickness and is correlated with developing FSGS for patients of African Descent. This change was verbally endorsed by the faculty directors. However, inclusions of changes are determined by individual lecturers leading to delayed curriculum review.

Conclusions and Global Health Implications: This student-led project created a framework for curriculum change focused on adding context about the relationship between SDH and illness prognosis. Planned directions include survey administration to gain feedback and suggestions from the current students and identifying future tools for curriculum reform.

Key words: • Social determinants of health • Curriculum • APOLI gene • African sleeping sickness

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ABSTRACT 22
DEVELOPMENT OF THE SAME DAY CLINIC SYSTEM AS A MEANS TO INCREASE ACCESS TO HEALTH CARE AMONG RACIAL AND ETHNIC MINORITIES

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Reviewer: Hamisu M. Salihu

Background: The Harris Health System is an integrated delivery system that provides healthcare services to all residents of Harris County, Texas, and financial assistance for medical care to a large number of uninsured patients and minorities. In 2014, Harris Health opened six new walk-in clinics, called Same Day Clinics. This clinic expansion was part of the Texas' 1115 Medicaid Waiver, a program that funded innovative efforts to expand and increase healthcare access to more people in the community. It is in this setting that we had the opportunity to interview patients and review their medical records, with a specific focus on missed primary care and subspecialty clinic appointments.

Methods: Data were gathered on Harris Health patient demographics (Hispanic - 59.4%, African American - 25.1%, Caucasian - 8.3%, Asian/Pacific - 4.4%, Other - 2.6%, American Indian - 0.2%) and payer mix (Uninsured - 60.1%, Medicaid and CHIP - 20.6%, Medicare - 9.7%, Commercial and other funding - 9.5%). Two hundred (200) selected patients with history of missed clinic appointment in primary care and specialty clinics were provided with a questionnaire and asked what caused them to miss their appointments.

Results: Two factors emerged as critical determinants for missed clinic appointments: job insecurity and lack of transportation, among others. Participants reported cause of missed appointments to include: lack of flexibility at work, 30%; lack of transportation, 20%; lack of flexible clinic schedule, 10%; long wait in clinic, 7%; being sick/family member was sick, 10%; forgot the appointment/didn't know about it, 8%; and multiple factors, 15%.

Conclusions and Global Health Implications: The Same Day Clinic System, with walk-in options from 8 am to 8 pm, from Monday through Saturday, has alleviated clinic appointment challenges/barriers leading to enhanced access to health care by providing a flexible clinic schedule with primary care providers for acute care visits. Thus, the new system bears the potential of reducing the burden of worsening medical conditions that typically result in ED visits and hospital admissions. By preventing escalation to higher levels of care, this clinic system is also expected to contribute to a future cost reduction in total health care expenses.

Key words: • Integrated delivery system • Minorities • Uninsured • ED visits • Same day clinic system • Health care cost

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ABSTRACT 23
LGBTQI+ HEALTH TRAINING IN MEDICAL EDUCATION: A QUANTITATIVE AND QUALITATIVE INVESTIGATION

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Reviewer: Hamisu M. Salihu

Background: Education regarding LGBTQI+ health is often inadequate or absent from the training of healthcare professionals. This lack of LGBTQI+ training in medical and allied health professions curriculums leads to medical professionals who are incapable of meeting the needs of this vulnerable population. Furthermore, inadequate training in health education across healthcare professions combined with bias and negative attitudes towards the LGBTQI+ population serve as barriers to improving the high rates of health disparities among this population.

Methods: The *Allies in Medicine* training program at the University of Texas Medical Branch was developed to address this important gap in education. It is a two-hour intensive clinically based training and covers the topics of sex, gender, sexual orientation, romantic orientation, LGBTQI+ medical history, terminology, inclusive medical documentation, sexual practices, and inclusive sexual history taking. The purpose was two-fold: (1) to address the current gap in LGBTQI+ health education in all schools at our institution; and (2) to assess the efficacy of the training that was developed.

Results: We found that a single interprofessional training on LGBTQI+ health topics significantly increased students’ knowledge and comfort levels with this population and sexual health of patients in general.

Conclusions and Global Health Implications: This training program could potentially be implemented in the education of all healthcare professionals at schools throughout the country.

Key words: • LGBTQI+ health • Education • Vulnerable population • Interprofessional training

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ABSTRACT 24
VACCINE HESITANCY AND ATTRIBUTIONS FOR AUTISM AMONG RACIALLY AND ETHNICALLY DIVERSE GROUPS OF PARENTS OF CHILDREN WITH AUTISM SPECTRUM DISORDER

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Reviewers: Hamisu M. Salihu; Meishon Bell, Deepa Dongarwar

Background: Limited research indicates that 29% of parents of children with autism spectrum disorder (ASD) are currently vaccine hesitant, meaning they have concerns about vaccine safety and may delay and/or refuse one or more vaccines. Most vaccine-hesitant parents (VHP) of children with ASD endorse toxins in vaccines as a cause for their child's autism; however, little is known about how cultural differences may influence attributions for ASD and subsequent vaccine hesitance. We hypothesized that higher percentages of parents of color will be vaccine hesitant and more frequently endorse toxins in vaccines as a cause for their child's ASD.

Methods: Participants were 225 parents of children with ASD who were enrolled in the SPARK cohort (Simons Foundation Powering Autism Research for Knowledge) and completed the Parent Attitudes about Childhood Vaccines (PACV; measure of vaccine hesitancy) and Revised Illness Perception Questionnaire (IPQ-R; measure of attributions for child's ASD). Descriptive statistics were computed across racial/ethnic groups regarding vaccine hesitancy status (PACV scores) and personal beliefs of causes of their children's ASD (IPQ-R cause scale).

Results: Overall, 28.9% of respondents ($n=65$) were vaccine hesitant (PACV score ≥ 50). Chi-square tests revealed significant differences between the proportions of VHP in the White sample and combined samples of Color (Asian, Black, Hispanic, Other, Bi-/Multi-Racial; $\chi^2(1)=15.214, p<.001$): 22.0% of the White sample ($n=37$) versus 49.1% of the samples of Color ($n=28$). White non-hesitant parents more often agreed with the child's brain structure as a cause of their child's ASD, while white VHP more often agreed with deterioration of the child's immunity as a cause. All VHP (regardless of race) agreed more often with diet, their own decisions, and vaccines as causes. VHP of color more often agreed with environmental pollution, their own general stress, and their own emotional state as causes.

Conclusions and Global Health Implications: While VHP, overall, agreed with vaccines as a cause for ASD, different patterns of agreement emerged as a function of race by hesitancy status, which could inform targeted vaccine-safety educational strategies in communities of color. The generalizability of these results is limited by small sample size; future work should examine this phenomenon in larger, diverse samples.

Key words: • Autism spectrum disorder • SPARK Cohort • Vaccine hesitancy • PACV

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ABSTRACT 25
COMPARISON OF INCIDENCE OF CATARACTS IN PRE-MENOPAUSAL AND POST-MENOPAUSAL WOMEN AT A COUNTY HOSPITAL

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Background and Purpose: Incidence of cataracts has been hypothesized to be higher in postmenopausal women. We investigated the incidence and risk factors for cataracts in women ages 20 through 85 years.

Methods: A retrospective chart review was performed at a Houston County Hospital. Female patients with an ICD 9 or 10 cataract diagnosis or cataract extraction procedure code recorded between January 2013 and June 2018 were included. Demographics, age at cataract extraction, menopause status, systemic and ocular comorbidities were collected and analyzed using the t-test and chi-square test.

Results: Four thousand five hundred and four (4,504) patients met the inclusion criteria. A sample of 59 patients was randomly selected for data analysis. Thirty five (35) patients were pre-menopausal, and 24 were post-menopausal. In the pre-menopausal cohort, mean age was 30.1 years (SD 5.53). Mean age at cataract extraction was 32.2 years (SD 6.16). About 48% of extractions were in right eyes and 52% were in the left. Most common ocular comorbidities were glaucoma (17%) and diabetic retinopathy (17%). Around 69% were Hispanic, 26% were African American, and 5.7% were Caucasian. Mean BMI was 30.91 (SD 9.71) and 19% had Type 2 Diabetics while 16% had Type 1. Mean Hemoglobin A1c (A1c) was 9.38, 77% of patients reported never smoking, 14% reported smoking, and 8.5% reported quitting. Mean age at menarche was 12.85 years (SD 1.46). In the post-menopausal cohort, average age was 64.04 (SD 7.1). Mean age at cataract extraction was 64.8 years (SD 7.28), 26% of extractions were in right eyes and 74% in left eyes. Most common ocular comorbidities were diabetic retinopathy (25%) and glaucoma (25%). About 77% of patients were Hispanic, 35% were black, 8.3% were Caucasian, 66% of patients were Type 2 Diabetics and 4% of patients were Type 1. Mean A1c was 8.04. Mean age at menopause was 51.8 years (SD 4.2) and 7 patients received hormonal replacement therapy. There was no statistically significant difference in cataract incidence between pre- and post- menopausal women ($p > 0.05$). There was also no significant difference in BMI, A1c, incidence of glaucoma or diabetic retinopathy between the two groups ($p > 0.05$).

Conclusions and Global Health Implications: Preliminary results do not show a significant difference in the incidence of cataracts in pre- and post-menopausal women. This analysis will be augmented upon further chart review. The study will aid in determining risk factors associated with the development of cataracts in women along the life course.

Key words: • Cataract • Incidence • Pre-menopausal • Post-menopausal • Race • Ethnicity

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ABSTRACT 26
GENDER DISPARITY WITHIN SURGICAL SOCIETIES

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Background: The percentage of female surgeons has slowly increased over time. However, women remain underrepresented in leadership positions within academic surgery (<20%). Society leadership positions are used for hiring and promoting surgeons. We hypothesized that within major surgical societies, females will be under-represented.

Methods: The website and databases of the Accreditation Council for Graduate Medical Education (ACGME) and six major surgical societies (AAST, ACS, EAST, Shock, SIS, and Southern) were evaluated for the number of female surgeons, members, and those in leadership positions. Representation in society membership, leadership, and presidency were compared to percentage of female surgeons in the United States.

Results: The percentage of female surgeons and surgery residents has increased from 15% and 18% in 2000 to 24% and 35% in 2017. Among the six surgical societies, there is a median (range) of 1300 (587-82,000) members of which only 16% (6-23%) are female. Women represent only a mean (range) of 27% (17-38%) of leadership positions and 12% (0-22%) of society presidents. Compared to the percentage of female surgeons, women are highly under-represented in surgical society membership (24% vs 16%), and presidencies (24% vs 12%) but not leadership (24% vs 27%).

Conclusions and Global Health Implications: While the number of female surgeons and residents has increased, these trends have not reflected in female participation in academic societies or leadership at the highest level. There is a need for surgery as a specialty to attract more female surgeons, encourage their participation in surgical societies, and provide pathways to access leadership roles at the highest levels.

Keywords: • Academic surgery • Women leadership • Under-representation • Surgical societies

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ABSTRACT 27

ASSESSMENT OF PUBLIC RESOURCE USE AND BARRIERS TO ACCESS IN FAMILIES OF MIXED IMMIGRATION STATUS: A SURVEY-BASED CROSS-SECTIONAL STUDY

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Background: Children of immigrants (COI) are a fast-growing population. Eighty-eight percent of COI are US citizens and many qualify for government-issued resources. With proposed changes to the definition of public charge in the immigration system, some families fear that using public resources will affect their ability to remain in the US. Our primary aim was to assess Medicaid, Supplemental Nutrition Assistance Program (SNAP), and Women, Infants and Children (WIC) utilization rates in children with one or more undocumented parents (UP) compared to children with no UP of similar income status. Secondary objectives were to compare food security and stress levels between groups and to assess for immigration-related concerns in families with UP.

Methods: This cross-sectional study was conducted at Texas Children's Hospital on the hospital medicine service. Primary caregivers of patients 0-18 years old were given an 89-item survey (available in English and Spanish) assessing insurance payor type, SNAP use, WIC use, food security, stress levels, and fear relating to immigration status. We used chi-square and Fisher's exact tests to assess differences between groups.

Results: Preliminary results from enrollment covering the period 3/18-3/29/2019 showed a response rate of 75% (N = 76). About 18% of our sample (n=14) reported that their child had an UP. Approximately 75% of participants reporting an UP had household income levels of <\$30,000 compared to 41% reporting no UP (p=0.04). No difference was detected in WIC, SNAP, or Medicaid use of families with annual income <\$30,000 across groups. Similar stress levels and food security levels existed across groups. Of families with an UP, 29% reported stopping Medicaid, SNAP, or WIC because of immigration concerns; furthermore, 71% reported worrying about deportation.

Conclusions and Global Implications: Families with an UP have significantly higher levels of poverty. Our preliminary results lack sufficient power to determine a significant difference in resource utilization between families with an UP and families with no UP. However, nearly one-third of families with an UP reported discontinuing public resources because of fear of immigration problems. Continued efforts are needed to mitigate fear as a barrier for seeking public assistance in this vulnerable population.

Key words: • Mixed immigration status • Children of immigrants (COI) • Public resource use • WIC • Medicaid • SNAP

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ABSTRACT 28
DEVELOPMENT OF A CROSS CULTURAL NEUROPSYCHOLOGY OUTPATIENT CLINIC AT BAYLOR COLLEGE OF MEDICINE

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Background: Changes in the US demographics have led to an expansion of ethnic minority populations seeking healthcare services. As these minority populations age, the need for accurate diagnosis and effective treatment of patients with cognitive changes will increase. Utilizing the conceptualization of Sue et al.'s (2007) Cultural Competence Model, the BCM Neuropsychology Section (Department of Neurology) is developing a Cross Cultural Neuropsychology Outpatient Clinic to improve clinical services for ethnic minority populations.

Methods: Using the tenets of the Cultural Competence Model, program development has focused on increasing awareness and knowledge of: (1) providers' assumptions and values, (2) patients' world views and lifestyle practices, and (3) culturally appropriate assessment skills and measures. Through group discussions and didactics, we have explored cultural values, stereotypes, and stereotype threats to create a program that will allow providers to serve the underrepresented community of Houston while also training learners across developmental levels. Empirically based clinical procedures have been implemented following comprehensive literature searches and increased contact with multicultural colleagues allowing for acquisition of culturally and linguistically appropriate neuropsychological assessment batteries for Spanish, Hindi, Urdu, Portuguese, Arabic, and Vietnamese populations.

Results: The development of a Cross Cultural Neuropsychology Outpatient Clinic requires thoughtful consideration and increased knowledge through an overarching culturally competent framework. Future goals include implementation of quality improvement procedures and outcomes, changes to scheduling and documentation, provision of patient education materials for non-English speaking patients, development of core cross-cultural neuropsychology fellowship criteria, and inclusion of additional languages and cultures to increase our responsiveness to a myriad of underserved ethnic minorities.

Conclusions and Global Health Implications: The current project will provide a theory-driven model for development of culturally competent clinic within an academic medical center.

Key words: • Cultural Competence Model • Stereotype • Ethnic minorities • Spanish • Hindi • Urdu • Portuguese • Arabic • Vietnamese

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ABSTRACT 29
THE IMPACT OF MEDICAL BIOETHICS EDUCATION IN PIPELINE PROGRAMS

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Background: A June 2018 briefing from the Congressional Academic Medicine Caucus (CAMC) and the American Association of Medical Colleges (AAMC) highlighted the importance of pipeline programs in increasing diversity and broadening cultural competency of today's healthcare workforce. We sought to determine how implementing medical bioethics education in the McGovern Medical School Health Careers Academy (MMSHCA) pipeline program impacts the interest level of underrepresented minority students in pursuing a medical vocation and the confidence level that they will succeed in such a pursuit.

Methods: The MMSHCA works with Cesar E. Chavez High School and YES Prep High School East End in Houston, Texas. We analyzed interest and confidence level among students in the MMSHCA pipeline program as a result of our medical bioethics lesson.

Results: About 95% of students from Chavez are underrepresented minorities (Black and Hispanic) with 79% of the total student body being economically disadvantaged. YES Prep High School East End had 98.2% underrepresented minorities with 76% of the total student body being economically disadvantaged. While students were already very interested in healthcare vocations both before and after our lesson, confidence level increased with statistical significance as a result of our lesson.

Conclusions and Global Health Implications: Our data suggest that medical bioethics should be implemented in future pipeline programs to maintain interest and boost confidence in pursuing a career in healthcare among underrepresented minority students. Medical bioethics is increasingly integral to the practice of medicine as technology becomes more integrated in healthcare. In principle, medical bioethics education would provide exposure to content typically covered during the first and second years of medical school and cultivate an interest in healthcare vocations, both of which are consistent with the objectives of a pipeline program.

Key words: • Congressional Academic Medicine Caucus (CAMC) • Pipeline program • Bioethics in health care • Economically disadvantaged

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ABSTRACT 30
**NATURAL KILLER CELLS EXPRESSING A CONSTITUTIVELY-ACTIVE IL-7 RECEPTOR
EXHIBIT ENHANCED EX VIVO EXPANSION**

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Background: The anti-tumor efficacy of adoptively transferred natural killer cells depends on their in vivo expansion and survival. Interleukin (IL)-7 is a prototypic NK cell developmental and survival factor. We hypothesized that expression of a constitutively-active version of the IL-7 receptor (C7R) in NK cells that provides continuous proliferative and survival signaling would confer an advantage to NK cells directed against solid tumors within suppressive tumor microenvironments.

Methods: NK cells were successfully transduced with a gamma retroviral vector encoding C7R with 56% transduction rate. C7R-modified NK cells expanded 5-fold over 7 days without any additional stimuli, whereas non-modified NK cells died over the same time period with a 0-fold expansion.

Results: C7R-modified NK cells exhibited continued expansion over 21 days ending with 77% transduction rate, whereas non-modified NK cells died by day 10. The modified NK cell population eventually began to contract, suggesting lack of autonomous growth. When transducing NK cells with C7R first and then NGFR, a cell surface marker for luciferase, the NK cells expressing both constructs exhibited an overall transduction rate of approximately 40%. Studies testing the in vivo survival and expansion capacity of C7R-modified NK cells within a suppressive neuroblastoma and sarcoma tumor microenvironment are underway.

Conclusions and Global Health Implications: In summary, engineering NK cells with constitutive IL-7 signaling promotes expansion and survival, thus providing a method by which to enhance anti-tumor efficacy of adoptively transferred NK cells.

Key words: • Anti-tumor efficacy • Interleukin (IL)-7 signaling • NK cell development and survival

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ABSTRACT 31 GENDER DISPARITY WITHIN SURGICAL SPECIALTIES

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Background: Publications are used for hiring and promoting surgeons. Our primary objective was to determine the disparity of female authorship compared to male authors in surgical research.

Methods: The National Institutes of Health PubMed was searched for surgical publications from the U.S. Breast surgery and obstetrics and gynecology were selected as control specialties due to their history of high female representation. Twelve other surgical specialties were randomly selected from the Accreditation Council for Graduate Medical Education (ACGME) specialty list. Articles were randomly selected and the gender of the first and last authors determined. Manuscripts were equally searched and divided into four time periods: 2000-2005, 2006-2010, 2011-2015 and 2016-2017. The ACGME and Association of American Medical Colleges (AAMC) databases were used to determine women representation in surgery over time. The percentage of female surgery residents, attendings, and their leadership positions were determined for three academic institutions in the Texas Medical Center (TMC): (1) Baylor, (2) Methodist, and (3) University of Texas at Houston, (UTH).

Results: A total of 560 articles in 14 different specialties were reviewed. In control specialties, 51% of first authors were female, while in study specialties, 18% of first authors were female. Furthermore, in control specialties, 39% of last authors were female compared to 11% in study specialties. However, for control and study specialties, authorship was proportionate to the number of practicing female surgeons. On comparison, there was no difference between control and study groups ($p = 0.277$). Analysis of Texas Medical Center specific data indicated below average percentages of females in all leadership positions.

Conclusions and Global Health Implications: Gender disparities persist in surgical specialties. Women surgeons publish research at a rate proportional to the number of females involved in that specialty. Disparities in leadership roles are unlikely explained by differences in publications. Instead, disparities are likely due to failure to attract women to academic surgery and to promote and mentor women surgeons into leadership.

Key words: • Academic surgery • Publications • Female authorship • Leadership

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ABSTRACT 32
MEDICATION PRICE OPTIMIZATION IN THE TREATMENT OF COMMON COMORBIDITIES IN THE UNINSURED POPULATION OF GALVESTON

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Background: St Vincent Student Run Clinic is a free clinic that takes care of uninsured, socio-economically challenged patients in the greater Galveston area. Diabetes, hypertension, hyperlipidemia, depression and seizures are common comorbidities prevalent in this population, and many of the patients are unable to manage their conditions due to financial restraints and lack of medical and pharmaceutical coverage. The purpose of this study is to assess the cost and efficacy of current treatments of common comorbidities in the uninsured population of greater Galveston area and to find equally efficacious, economically favorable alternatives.

Methods: We performed a retrospective chart review of patients with the above-mentioned comorbidities between June to August 2018 and collected information about what medications were prescribed, dosages, costs and efficacy in disease management. Costs of medications were obtained from GoodRx website.

Results: We found that certain medications were prescribed more than others within the same class which correlated with lowest cost of medications. Physicians and providers are aware that being able to afford medications is a large barrier to compliance in uninsured patient population. Same medication can be sold at different prices at different pharmacies and price varies significantly depending on #30 pills vs #90 pills supply. Currently patients are often prescribed a 30 pill supply whereas long term management of chronic diseases would be best served by a 90 pill supply when possible.

Conclusions and Global Health Implications: We plan on creating an estimate of monthly cost of medical management of the most common comorbidities and evaluate for cost effective alternatives including patient assistance, cost comparison between pharmacies and coming up with a clinic handout for cost-effective prescription recommendations for the uninsured population.

Key words: • Uninsured population • Student clinic • Medication price • Medical management

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ABSTRACT 33

THE IMPACT OF RACE AND SOCIOECONOMIC FACTORS ON WEIGHT LOSS IN OBESE ADOLESCENTS

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Background: Childhood obesity affects over 12 million children in the United States, and delineating factors associated with obesity is at the forefront of public health initiatives. Deeper understanding of psychological factors surrounding weight loss in children could potentially improve levels of success of weight management clinics.

Methods: At a multidisciplinary pediatric obesity clinic, surveys were administered to children between 12 and 18 years of age as well as their caretakers. Survey questions covered topics such as diet, family, and socioeconomic data. Patients were seen on average every 4-6 weeks.

Results: There were 189 participants enrolled in the clinic. The plurality of participants was Hispanic (47%), White (31%), and Black (21%). At visit 2 and 3, the majority of participants lost weight (kg) (69% $p < 0.01$ and 62% $p = 0.02$, respectively) and had a lower BMI (74% $p < 0.01$ and 75% $p < 0.01$, respectively). White participants were less likely to lose weight at visit 2 if they received reduced cost meals at school ($p = 0.04$). They were more likely to have lost weight at visit 3 if caretakers reported having enough money to buy healthy food ($p = 0.03$). Black participants were more likely to lose weight at visit 2 if participants reported eating 2-3 servings of fruits/vegetables daily ($p = 0.03$). They were less likely to lose weight if caretakers reported having enough money to buy healthy food ($p = 0.04$). Hispanic participants were less likely to have a lower BMI at visit 3 if they reported using technology to track their weight loss ($p = 0.02$). They were more likely to lose weight at visit 3 if caretakers reported that participants were unhappy with their looks when comparing themselves to media imagery ($p = 0.02$).

Conclusion and Global Health Implications: This study provides insightful data regarding the influence of race and socioeconomic circumstances on weight loss in obese adolescents. Public health efforts focusing on these factors can facilitate culturally competent programs to achieve weight loss success.

Key words: • Childhood obesity • Weight loss • Technology • Race • Ethnicity

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ABSTRACT 34
**IMPROVING HEALTH EQUITY POSTEBOLA IN LIBERIA: EVALUATING
ACCEPTABILITY OF AUGMENTED REALITY TECHNOLOGIES FOR STANDARDIZED
AND SAFE LABORATORY TRAINING**

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Reviewer: Hamisu M. Salihu

Background: The 2014 Ebola epidemic claimed >4,000 lives in Liberia. Healthcare workers (HCWs) without adequate training on infection control and prevention were particularly vulnerable. In Liberia, where the provider: population ratio was 1:100,000, an estimated 8% of the HCWs died during the epidemic. Without skilled HCWs, little can be done to prevent and overcome future outbreaks. We deployed a validated, mobile, BSL-3 lab, to Liberia to provide infrastructure needed for high-quality lab training. To effectively utilize this lab, standardized and safe training on PPE (Personal Protective Equipment) donning/doffing, specimen retrieval and isolation must be provided. Novel technologies like Augmented Reality (AR) have been used for training in other settings (manufacturing, surgery) requiring a hands-free approach. AR apps can be used on a smartphone, tablet and associated head-mounted displays for hands-free viewing. By overlaying the field-of-view with animations, they can guide users in a stepwise manner through procedures. Nevertheless, AR is new and may not be accepted in different populations. To evaluate the acceptability of AR in a low resource setting with limited lab training options, we surveyed faculty and students at the University of Liberia.

Methods: A survey developed from the validated Unified Theory of Acceptance and Use of Technology was administered to 9 participants who were shown graphics depicting AR apps on 3 devices: a smartphone, a tablet and an AR headset. They also tried on AR glasses.

Results: All participants (N=9) were being trained traditionally (observation). All owned and used a smartphone for work. All had used an AR app (Snapchat), but none had used AR in a lab setting. Of the 3 AR platforms, the smartphone was most preferred for daily use. AR glasses were favored for being hands-free. Barriers included cost and maintenance.

Conclusions and Global Health Implications: AR tools can facilitate standardized training in remote, low resource settings and are preferred to traditional training methods.

Key words: • Ebola • Epidemic • Liberia • Augmented reality • Mobile lab

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ABSTRACT 35
**FAILURE TO LATCH: PARENTAL LEAVE, LACTATION, AND CHILDCARE POLICIES AT
TOP UNITED STATES SCHOOLS OF PUBLIC HEALTH**

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Background: Institutional policies related to childbirth and childrearing influence the retention and promotion of women in the workplace. Public health organizations and professional societies have long been vocal proponents of the health and equity implications of paid parental leave and policies pertaining to lactation. However, prior literature from other contexts within academic medical centers suggests that institutions may not live up to their expressed values with respect to their own institutional policies. We describe policies related to parental leave, breastfeeding, and childcare for faculty and staff at top schools of public health in the United States (US).

Methods: We identified the top 25 schools of public health from the US News and World Report rankings. We reviewed each institutional website to identify publicly available policies as of July 2018.

Results: For birth mothers, 80% (20/25) schools provided paid childbearing leave to faculty (mean: 8.2 weeks), and 48% (12/25) provided paid childbearing leave for staff (mean: 5.0 weeks). For non-birth parents, 68% (17/25) provided paid parental leave for faculty and 52% (13/25) for staff (range: 1-15 weeks). 64% (16/25) schools had publicly available lactation policies, and 72% (18/25) schools had at least one university-run on-campus childcare center.

Conclusions and Global Health Implications: The majority of top US schools of public health provide paid leave to faculty birth mothers. However, most schools fall short of the 14 weeks recommended by the American Public Health Association. These deficiencies are associated with a persistent gender gap in academia. Given the critical role of health institutions in modeling policies to support health and equity, schools should take steps to better enable their faculty and staff to dedicate time to be with their infants in the earliest months of life.

Key words: • Women in the workplace • Equity • Paid parental leave • Schools of public health • Academia

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ABSTRACT 36
DEVELOPING CULTURALLY COMPETENT FOREIGN LANGUAGE
NEUROPSYCHOLOGICAL ASSESSMENTS: VIETNAMESE-SPEAKING PATIENTS WITH
SUSPECTED DEMENTIA

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Reviewers: Hamisu Salihu; Toi B. Harris; Meishon Bell

Background: Houston has the nation's 3rd highest number of Vietnamese residents with over 16% growth from 2010-2015 (U.S. Census Bureau, 2010). Additionally, the number of Vietnamese Americans aged 65 and above increased to 10% of the Asian American population in 2015 (Pew Research Center). Cognitive declines are not always recognized; when they are evident in daily life, they are considered part of normal aging and not as a neurocognitive disorder (Nguyen et al., 2016). Guidelines from the American Psychological Association (APA) Ethics Code (2010) and Multicultural Guidelines for Assessments (2003) prescribe principles to competently evaluate culturally different clients (CDC) including 1) testing in the patient's preferred language, 2) use of tests validated in the patient's primary language/culture, 3) awareness of limitations from test bias, test fairness, and cultural equivalence. Following these principles can be a challenge as 91% of neuropsychologists in the U.S. identify as Caucasian and the vast majority is English monolingual (Elbulok-Charcape, et al., 2014). As a result, 68.6% of neuropsychologists refer these patients to colleagues who are fluent in the CDC's language and, in the absence of this alternative, 40.5% use an interpreter. This process is further complicated by the lack of culturally appropriate measures and normative data which varies depending on the language and country of origin.

Methods: To address this issue, the BCM Neuropsychology Section (Department of Neurology) conducted a literature review and consulted with colleagues working in the Vietnamese community to assemble a neuropsychological battery that assesses cognitive domains including attention, visual and verbal episodic memory, expressive/receptive language, visuosperception, executive functions, and mood/anxiety status.

Results: These measures can be administered to Vietnamese-speaking patients with suspected dementia through trained interpreters under the direct supervision of a neuropsychologist.

Conclusions and Global Health Implications: Limitations of the measures selected will be discussed and will highlight the need for appropriate normative data and future research to provide optimal measures to more fairly and accurately assess the neurocognitive functioning of these underserved patients.

Key words: • Neuropsychological assessment • Vietnamese battery • Underserved patients • Cultural competence

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ABSTRACT 37
GEOPOLITICAL CONSIDERATIONS OF WORKING WITH MEDICALLY COMPLEX PATIENTS: AN URDU SPEAKING CASE ILLUSTRATION

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Background: Becoming culturally competent healthcare providers depends on the ability of practitioners to acquire knowledge, awareness, and skills related to other cultures (Sue et al., 1992; Sue & Sue, 2016). In building these areas of competence, it is essential to consider geopolitical factors that may influence health and health-seeking behaviors, particularly when working with immigrant populations. Previous research has shown that immigrants in the United States show less trust of healthcare providers and are less likely to seek medical care than their native-born peers (National Immigration Law Center, 2006; Karlamangla & Terhune, 2014). Furthermore, when care is sought, they are likely to experience significant barriers to effective care, including lack of providers who speak their language and failure of practitioners to integrate cultural beliefs into treatment plans. The literature has documented that these barriers result in delays obtaining accurate diagnoses and treatment (Sue & Sue, 2016). This is further complicated by the presence of geopolitical issues, including immigration status, war/conflict in the patient's country of origin, and/or human rights violations.

Methods: The current study will use the case of an Urdu-speaking, Pakistani national to illustrate one culturally-competent approach to the assessment of neurobehavioral changes in the context of complex geopolitical circumstances.

Results: Recommendations for healthcare providers on how to integrate geopolitical considerations into their clinical work will be provided in terms of cultural knowledge acquisition and awareness as well as enhancement of multicultural skills.

Conclusions and Global Health implications: Awareness of the impact of these life experiences not only has the potential to deepen our understanding of our patients, but results in a more holistic, accurate, and culturally competent conceptualization of their physical and mental health needs.

Key words: • Medically complex patients • Immigrants • US • Barriers to care • Cultural beliefs

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ABSTRACT 38

BCM CEREBRO: NEUROPSYCHOLOGY OUTPATIENT CLINIC SPECIALIZING IN THE CARE OF SPANISH-SPEAKERS.

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Reviewer: Hamisu M. Salihu

Background: As the fastest growing segment of the population, Hispanics constitute 45% of Houstonians and 15% of this community is age 65 and older (US Census Bureau, 2017). Advanced age, lifestyle habits, medical comorbidities, and socioeconomic limitations place this population at a greater risk for neurodegenerative conditions (Alzheimer's Association, 2019).

Methods: The Neuropsychology Section (Department of Neurology) at BCM first responded to the need for equitable care in 2008 by providing the Hispanic community with culturally and linguistically appropriate neurocognitive assessments. The College formalized this clinical service in 2017. *BCM Cerebro* is one of four recognized Spanish specialty neuropsychology clinical services for adults in the nation and offers the only cross-cultural neuropsychology fellowship with membership to the Association of Postdoctoral Programs in Clinical Neuropsychology (APPCN). Additionally, *BCM Cerebro* provides training and guidance on culturally competent evaluations through an international webinar didactic program (*Taquitos de Sesos*), which has over 200 registered participants from around the world. This specialty care clinic was formulated based on literature that presents the health disparity in neuropsychology and the call for action regarding the provision of culturally informed services to ethnic minorities (Rivera-Mindt, et. al., 2010).

Results: A data repository was created in 2017 and findings reveal an increase of 180% in the number of patients served in the first year following *BCM Cerebro's* official implementation. While the majority of patients are referred for memory assessments, patients who present with a myriad of neurological and psychiatric conditions - including epilepsy, multiple sclerosis, and movement disorders - have been examined. Pre and post-surgical assessments and intraoperative evaluations have also been conducted.

Conclusions and Global Health Implications: Clinical experiences highlight the need for tailored, culturally and linguistically appropriate medical services in order to adequately serve and medically support the underrepresented Hispanic population in Houston and surrounding areas.

Key words: • *BCM Cerebro* • Hispanics • Spanish specialty neuropsychology • Culturally informed services • Ethnic minorities

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ABSTRACT 39
A BRIEF YET EFFECTIVE INTERVENTION TO IMPROVE RESIDENT EDUCATION AND COMFORT IN CARING FOR THE LESBIAN, GAY, BISEXUAL, AND TRANSGENDER (LGBT) POPULATION

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Reviewers: Hamisu M. Salihu, Toi B. Harris

Background: The lesbian, gay, bisexual and transgender (LGBT) population experiences health disparities in areas of mental health, sexual health, and access to care. Therefore, it is important for clinicians to learn the unique health care needs of this population.

Methods: As part of a regularly scheduled didactic conference, a content expert gave a 1-hour lecture to internal medicine residents about LGBT health with emphasis on health care disparities including HIV incidence and preventive strategies as well as non-judgmental communication practices. A course evaluation was administered as well as a retrospective pre-and post-lecture survey to assess the effectiveness of the lecture.

Results: The lecture was given to 137 residents (PGY-1 to 4), 98% completed the course evaluation while 20% completed the pre-and post-lecture survey. The lecture was highly rated by residents (89% were satisfied or very satisfied). Residents reported improved familiarity with LGBT health care disparities; specifically, residents reported improved understanding of HIV incidence among men who have sex with men and transgender women (92.9% post lecture vs 75% pre lecture), and of screening recommendations for HIV and sexually transmitted illnesses in high risk populations (92.9% post lecture vs 64.3% pre lecture). Self-reported resident comfort level with caring for LGBT patients also improved following the lecture.

Conclusion and Global Health Implications: Incorporation of a brief, interactive didactic session on LGBT health effectively increased resident comfort with critical LGBT health topics such as LGBT-inclusive communication and HIV prevention. Interpretation of the pre and post lecture survey data was limited by the low response rate and reliance on self-reported comfort levels; however, the residents also rated the session highly on the course evaluation. Overall, the introduction of a new LGBT health education was shown to be an effective way to train clinicians to become more culturally competent providers.

Key words: • Resident education • LGBT population • Health disparities • Communication • Transgender • Cultural competence

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ABSTRACT 40
**ARTIFICIAL INTELLIGENCE APPLICATIONS TO ADDRESS GLOBAL HEALTH
INEQUITIES: VERTICAL VERSUS HORIZONTAL PERSPECTIVES**

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Reviewer: Alfred K. Mbah

Background: Artificial Intelligence (AI) applications in medicine have grown considerably in recent years.

Methods and Framework: AI in the forms of Machine Learning, Natural Language Processing, Expert Systems, Planning and Logistics methods, and Image Processing networks provide great analytical aptitude. While AI methods were first conceptualized for Radiology, investigations today are established across all medical specialties. The necessity for proper infrastructure and access to large, well organized data sets has kept the majority of medical AI applications in higher income countries. However, critical technological improvements, such as cloud computing, and the near ubiquity of smart phones, which can collect medical information in the form of ECG's, vital metrics, and ultrasounds could offer pathways for medical AI applications in resource poor areas.

Results: Global health initiatives have already begun to explore ways to leverage medical AI technologies to detect and mitigate public health inequities. For example, AI tools help optimize vaccine delivery and community healthcare worker routes, thus enabling limited resources to have maximal impact. Other promising AI tools have demonstrated the ability to: predict burn healing time from smartphone photos, track regions of socioeconomic disparity combined with environmental trends to predict communicable disease outbreaks, and accurately predict pregnancy complications such as birth asphyxia in low resource settings with limited patient clinical data.

Conclusions and Global Health Implications: Amidst great potential, further study is needed to ensure that medical AI applications properly align with and augment existing global health initiatives. Successful global health interventions have demonstrated that the horizontal component of any vertical intervention is critical for sustainable improvements. We provide an overview of challenges faced, specifically in the form of "vertical" vs. "horizontal" pitfalls for intervention design.

Key words: • Artificial Intelligence • Global Health • Inequities • Vertical versus horizontal approaches

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ABSTRACT 41

CHARACTERIZING THE ROLE OF PIGQ DURING EARLY POST-IMPLANTATION DEVELOPMENT

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Reviewers: Hamisu M. Salihu

Background: Membrane bound proteins perform vital functions in eukaryote organisms. Glycosylphosphatidylinositol (GPI) anchors localize proteins to the cell membrane where these proteins function as receptors, adhesion molecules, enzymes, and transporters. GPI anchors are synthesized in the endoplasmic reticulum where they are attached to proteins post-translationally. The formation of the GPI anchor(s) involves at least 10 reactions with more than 20 different proteins including members of the phosphatidylinositol glycan (PIG) gene family, one of which is PIGQ. In humans, recessive mutations in GPI synthesis genes often result in patient seizures, intellectual disability, and cardiac defects. However, little is known about PIGQ's role in mammals and there are no extant null *PIGQ* animal models.

Methods: We use a disrupted mouse *PIGQ* allele, that contains a LacZ reporter for *PIGQ* expression, to characterize the role of PIGQ in mammalian development.

Results: We show that homozygous *PIGQ* mouse mutants are severely dysmorphic, dying at embryonic (E) day 9.5. We find that mutants had abnormal yolk sac vessels indicative of delayed vascular remodeling. Mutant hearts also seem to puncture the yolk sac, separating the heart on the exterior of the sac from the rest of the unturned embryo within the sac. This phenotype suggests a developmental delay in embryo turning. Imaging of intact E8.5 embryos shows that the allantois is not fused to the forming placenta in homozygous embryos, which is essential for nutrient exchange from the placenta. Additionally, LacZ staining shows broad expression of *PIGQ* in embryos, starting as early as E7.5.

Conclusions and Global Health Implications: In summary, we are characterizing the role of PIGQ during early post-implantation development with mutants that die by E9.5. These mutants harbor defects in yolk sac vascular remodeling and chorioallantoic fusion. Problems with nutrient exchange are the likely cause of poor development, leading to the delayed turning and other defects.

Key words: • Post-implantation • Chorioallantoic fusion • Glycosylphosphatidylinositol • PIGQ

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ABSTRACT 42

CCACTUS: CROSS-CULTURAL CONSORTIUM ON AGING AND COGNITION IN TEXAS, US: THE DEVELOPMENT OF A NEUROPSYCHOLOGY DATA REPOSITORY

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Background: Texas has the second largest Hispanic population in the US. Considering the steady growth of the Hispanic and Spanish speaking population (US Census Bureau, 2018), the tailoring of neuropsychological services to ensure equitable care is imperative. The ability to effectively identify subtle cognitive declines in minority and non-English speaking patients and provide accurate diagnoses is a well-known challenge given the influence of sociodemographic variables on outcome measures and the limited normative data sets available for this population (Mindt, et. al., 2013). While the field of cultural neuropsychology has made significant gains, availability of complete batteries, including standardized administration instructions, and accompanying normative data are sparse (O'Bryant et al., 2017; Hall et al., 2017).

Method: Research has shown that current clinical assessment practices with ethnic minorities can include the use of institution-based translations, unstandardized administration instructions, and normative data sets that are not reflective of the patients' sociodemographics, limiting the accuracy of diagnostic impressions (Strutt et al., 2016). Thus, BCM Cerebro and UTHealth Neuropsychology Section founded CCACTUS in 2018.

Result: Current achievements include the development of a core neuropsychological battery for the examination of neurodegenerative conditions along with a data repository that can norm raw data across available normative sets and store shared data. Clinical assessment practices were established following a comprehensive literature review, focus group meetings composed of faculty, trainees and psychometricians, and a retreat to conclude focus group discussions. Upon finalization of committee structure, the consortium will begin to invite neighboring institutions with the clinical objective to increase availability of uniform services to the Hispanic and Spanish speaking population of Texas.

Conclusion and Global Health Implications: In addition to the implementation of standardized clinical practices, data sets for clinical research (e.g. normative data sets, neurocognitive profiles, and caregiver stress) will be developed and made available to researchers in the field of neuropsychology. Moreover, CCACTUS aims to examine topics associated with health literacy, patient satisfaction, and quality improvement.

Key words: • Aging • Cognition • Neuropsychology • Consortium • Hispanics

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ABSTRACT 43
THE BURDEN OF POOR ORAL HEALTH PROBLEMS IN CHILDREN WITH MENTAL HEALTH DISORDERS IN THE UNITED STATES

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Reviewer: Ronee E. Wilson

Background: Mental health disorders are major public health concerns with increasing risk of morbidity and mortality among children. Oral health problems are receiving attention as comorbidities associated with mental health disorders. This study assessed the burden of oral health problems in 3-17 year old children with mental health disorders in the United States.

Method: Analysis of the 2016 National Survey of Children's Health (NSCH) dataset was performed. Weighted bivariate analysis assessed the association between mental health disorder and oral health problems. Weighted survey binomial logistic regression models were built to generate adjusted odds ratio for the association between mental health disorder and oral health problems. Weighted dose-response models captured incremental effects of varied mental health severity on the child's oral health conditions. Preventable fractions of oral health problems at different levels of mental health disorder severity were estimated.

Result: Overall prevalence of oral health problems in children with any mental health disorder was 14.7%. Patients with behavioral disorders, depression, and anxiety had the highest prevalence of oral health problems. Factors predictive of poor oral health were female gender, age groups 6-8 and 9-11 years, being non-Hispanic White and Black, and single motherhood. Protective factors included non-Spanish-speaking primary household, household earning $\geq 400\%$ FPL (Federal Poverty Level), college degree or higher education and having private insurance. Dose-response analysis showed modest increases in likelihood of oral health problems with rising intensity of mental health severity.

Conclusion and Global Health Implications: The burden of oral health problems in the pediatric population with mental health disorders in United States appears to be on the rise. Disparities exist based on a number of demographic, socioeconomic, and health-related characteristics within this population.

Key words: • Oral health • Mental health • Children • Behavioral disorders • Depression • Anxiety

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ABSTRACT 44
**BARRIERS TO INVOLVEMENT IN T1D MANAGEMENT AMONG AFRICAN AMERICAN
AND HISPANIC PARENTS OF SCHOOL-AGED CHILDREN**

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Reviewer: Hamisu M. Salihu, Toi B. Harris

Background/Objective: African American and Hispanic youth with Type 1 Diabetes (T1D) face challenges with suboptimal glycemic outcomes. Collaborative parental involvement in T1D management is helpful for optimizing glycemic control, and associated with more positive disease outcomes in adolescence. Yet, few studies focus on understanding factors that contribute to African American and Hispanic parent involvement in T1D management. Soliciting from parents, relevant barriers within this understudied population can lead to development of tailored interventions and garner strong receptivity among minority parents. This study employed the Capability-Opportunity-Motivation-Behavior (COM-B) Model to identify barriers to involvement among parents of children with T1D.

Method: Thirty-five parents (18 African American, 15 Latino, 2 biracial) of children with T1D (M=7.6 years, 51% male) completed semi-structured interviews about family diabetes management. Interviews were audio-recorded, transcribed, and coded using thematic analysis.

Result: Parental psychological capabilities that limit involvement included perceived stigma, decreased problem solving, and difficulty managing diabetes burnout. Physical opportunities that reduce involvement included limited financial resources and time constraints due to employment schedules. Parents also identified the important role of inadequate interpersonal interactions and relationships with family, school staff, and health care providers.

Conclusions and Global Health Implications: In addition to financial and structural barriers to T1D management, this study identifies important psychological and interpersonal factors related to African American and Hispanic parents' T1D management experiences. These barriers can be targeted in multi-level interventions that address individual as well as interpersonal, workplace, and financial contextual factors to strengthen parental collaborative involvement in diabetes management.

Key words: • Type 1 Diabetes (T1D) • Glycemic control • Adolescence • Capability-opportunity-motivation-behavior • African american • Hispanic • Thematic analysis

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