FMSRJ
THE FLORIDA MEDICAL STUDENT RESEARCH JOURNAL

2021 Seventh Annual Research Symposium

Herbert Wertheim College of Medicine

Florida International University

Miami, FL 33199

For more information and to view our archives, please visit

fmsrj.fiu.edu

This publication is made possible through the support and funding of

Table of Contents

Letter from the Editors

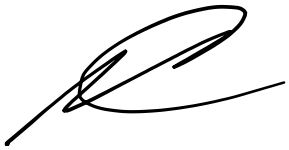
Dear Readers,

We are proud to present a Special Proceedings of the *Florida Medical Student Research Journal* (*FMSRJ*) for the Seventh Annual FIU Herbert Wertheim College of Medicine Research Symposium and the Division of Medical and Population Health Sciences Education and Research. This journal was founded in 2015 by two medical students at the Florida International University (FIU) Herbert Wertheim College of Medicine (HWCOM) as a means to showcase the academic achievements of medical students. The *FMSRJ* publishes work from any health professional or student related to medicine for peer review by Florida medical student editor teams. Through the continued efforts and talent of the student editorial teams, the Journal has developed to represent a venue for innovative, scholarly pursuits.

This year has been unprecedented. These Proceedings would not have been possible if it were not for the generosity of the reviewers and authors with their time and expertise. They completed more than 72 abstract reviews. Because of their efforts and support, it was possible to prepare the Symposium.

Working together, we are preparing students for their future careers and driving FIU research to new heights. We hope that their generosity will inspire others to follow in their footsteps and volunteer their time and effort to support our FIU student researchers and the Herbert Wertheim College of Medicine community at large. Please join us once again in thanking these incredible women and men.

Sincerely,



Nicholas B. Conway

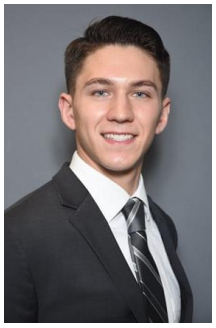
Mina Entessari

Adriana Maribona

Alexandra Firek

Richard Suarez

Editorial Board



Nicholas B. Conway
Editor In-Chief

Mina Entessari
Editor In-Chief

Alexandra Firek
Junior Editor

Adriana Maribona
Junior Editor

Richard Suarez, J.M.
Junior Editor

Managing Editor
Allison Chin

Executive Editors
Dana Shively (FIU)
Dan Tran (FIU)

Senior Editors
Alexander Daniele (FIU)
Daniel Rapado (FIU)
Kyle Sellers (FIU)
Matthew Hey (FIU)
Hans Lapica (FIU)
Luis Ortiz (FIU)
Amro AlAshi (FIU)

Junior Editors
Kevin Bennett (FIU)
Alexa Denton (FIU)
Nishant Gohel (FIU)
Amanda Khan (FIU)
Nitya Ramalingam (FIU)
Alexandra Townsend (FIU)
Samuel Salazar (FIU)

Executive Faculty Advisory Board
Sheldon Cherry, M.D. (FIU), Charles Dimitroff, Ph.D., Juan Manuel Lozano, M.D., MSc (FIU), Carolyn Runowicz, M.D. (FIU), and Joe Leigh Simpson, M.D. (FIU)

Faculty Advisory Board

Frederick Anderson, M.D.
Noel Barengo, M.D.
Eduardo Camps-Romero, M.D.
Juan Carlos Cendan, M.D.
Mercedes Florez-White, M.D., Ph.D., M.B.A.
Jenny Fortun, Ph.D.
Nana Aisha Garba, M.D., Ph.D., M.P.H.
Amalia Landa-Galindez, M.D.
Jody Lehman, J.D.
Edward McGough, M.D.
Elizabeth Ouellette, M.D.
Gregory Schneider, M.D.
Sarah Stumbar, M.D., M.P.H.
George Tershakovec, M.D.
Rebecca Toonkel, M.D.

Oral Presentations

Best Oral Abstract Presentation

Effect of Risk Factors on The Development of Surgical Site Infection in Adult Colectomy Patients

Sidney Barrau, Shifa Akhtar, Frances de la Camara, Pura Rodriguez, Grettel Castro, Juan M. Lozano.
Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: surgical site infection, risk factor, surgery

Introduction and Objective: Surgical Site Infection (SSI) is one of the most common and expensive forms of hospital acquired infection and is frequent after colorectal surgery. The objective of our study was to evaluate the association between several risk factors and SSI in adult patients undergoing colorectal surgery.

Methods: We conducted a retrospective cohort study using data from the 2016 American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP) database. Adults undergoing laparoscopic colectomy were included. A set of 12 potential predictors was evaluated. The outcome was SSI, defined as superficial, deep-incisional, or organ-space infection. Logistic regression was used to assess the independent association between each potential predictor and SSI.

Results: Of 25,540 cases included, 1,478 developed SSI. Risk factors independently associated with SSI included obese category I (AOR 1.38; 95% CI 1.17 - 1.64), obese category II (AOR 1.52; 95% CI 1.24 - 1.86), obese category III (AOR 1.88; 95% CI 1.50 - 2.36), smoking (AOR 1.27; 95% CI 1.10 - 1.46), cancer (AOR 1.45; 95% CI 1.11 - 1.89), steroid use (AOR 1.38; 95% CI 1.15 - 1.66), dirty/infected wound class (AOR 2.65; 95% CI 1.40 - 4.99), undergoing emergency surgery (AOR 2.47; 95% CI 1.90 - 3.20), and operation time (AOR 1.00 for every 1 minute increase in operational time; 95% CI 1.00 - 1.00). Age (AOR 0.99 for every year that the patient is older; 95% CI 0.99 - 1.00) was the only protective factor against postoperative SSI. Patients undergoing emergency surgery, classified as obesity category III, and those with dirty/infected wounds had the highest odds of SSI.

Conclusions-Implications: Patients undergoing laparoscopic colectomy may have modifiable and unmodifiable risk factors that put them at increased risk of SSI. Further research should be conducted on the benefits of preoperative initiatives like smoking cessation and weight control, as well as of increased monitoring, for decreasing the risk of SSI.

O1

Understanding the Association Between Race/Ethnicity and Stage at Diagnosis of Endometrial Cancer Across Insurance Categories

Julieta Gonzalez Alvarez, Kyle Chen, Luis Borges, Grettel Castro, Pura Rodriguez, Carolyn Runowicz, Marcia H. Varella.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: endometrial cancer, ethnicity, stage, insurance status, health disparities

Introduction and Objective: Endometrial cancer is the ninth most common cancer and the incidence rates of endometrial cancer have been increasing in the last decade. Racial/ethnic disparities in cancer stage at diagnosis are a major public health concern. Our study aims to examine racial/ethnic disparities in stage at diagnosis of endometrial cancer and to explore how insurance status contributes to these disparities in the United States population.

Methods: We analyzed data from 2007 to 2016 on the SEER-18 database for all patients with endometrial cancer aged 40 to 99 years old (n=30,318). Race/ ethnicity was categorized as Non-Hispanic Whites (NHW), Non-Hispanic Blacks (NHB), Hispanics (H), and American Indian, Alaska natives, and Asian/ Pacific Islander. Late stage endometrial cancer was defined by grouping the SEER's stage categories of "Regional by direct extension only," "Regional lymph nodes involved only," "Regional by both direct extension and lymph," "Regional, NOS," and "Distant site(s)/node(s) involved." Insurance status was assessed as a potential effect modifier (categorized as "Uninsured," "Any Medicaid," and "Insured"). Multivariable logistic regression analyses were used to assess independent associations and interaction terms (race/ethnicity x insurance status). Stratified analysis were conducted accordingly.

Results: About 23% of the sample were diagnosed at later stages. Logistic regression analysis revealed insurance status as an effect modifier in the association of race/ethnicity and late stage of endometrial cancer at diagnosis (p-values <0.001). In the group who were insured, Non-Hispanic Blacks and American Indian, Alaska natives and Asian/ Pacific Islanders had higher odds of late stage endometrial cancer (OR 1.27, 95% CI 1.13-1.44 and OR 1.27 95% CI 1.15-1.40), respectively. There were no associations between race/ethnicity and late stage diagnosis in the uninsured or Medicaid insured groups.

Conclusions-Implications: Insurance status were found to modify the odds of Non-Hispanic Black or American Indian, Alaska natives and Asian/ Pacific Islander compared to Non-Hispanic White population, to have more late stage of endometrial cancer at diagnosis. Our study highlights an increased need for earlier diagnosis and awareness of endometrial cancer in Non-Hispanic Black or American Indian, Alaska natives and Asian/ Pacific Islander subgroups, specifically with populations who are privately insured.

O2

The Association between Electronic Cigarette Use During Pregnancy and Unfavorable Birth Outcomes

Nicole Izhakoff, Alexandra Galbo, Connor Courington, Grettel Castro, Juan G. Ruiz, Juan M. Lozano.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: e-cigs, electronic cigarettes, pregnancy, preterm birth, low birth weight

Introduction and Objective: While electronic cigarettes (e-cigarettes) continue to gain popularity, literature focusing on the safety and risks of e-cigarette use is somewhat scarce, especially about the use of e-cigarettes and their potential effects in fetal development. Our objective was to investigate the association between the use of e-cigarettes during pregnancy and unfavorable birth outcomes.

Methods: We conducted a retrospective cohort using secondary data analysis extracted from the Pregnancy Risk Assessment Monitoring System (PRAMS) 2016-2017 Phase 8 survey. This database contains both state-specific as well as population-based information on maternal attitudes and experiences before, during and shortly after pregnancy. Women participating in the study are

initially found through each state's birth certificate file. Eligible women include those who have had a recent live birth. Data collection procedures and instruments are standardized to allow comparisons between states. The independent variable was self-reported use of any e- cigarette products during pregnancy. The dependent variable was dichotomized into the presence of at least one unfavorable birth outcome (preterm birth, low birth weight, extended postnatal hospital stay for the newborn) or the absence of all. Binary logistic regression analysis was used to calculate adjusted odds ratios (aOR) and corresponding 95% confidence intervals (CI).

Results: 71,940 women were included in our study. After adjusting for age, race, ethnicity, insurance, maternal education, prenatal care, abuse during pregnancy and complications during pregnancy, the odds of unfavorable birth outcomes increases by 62% among women who reported e-cigarette use during pregnancy versus women who did not (aOR 1.62, 95%CI 1.16- 2.26, p-value 0.005)

Conclusions-Implications: Moving forward, it is imperative for consumers to understand the implications of utilizing e-cigarettes, such as the significant increased risk of unfavorable birth outcomes associated with use during pregnancy. Moreover, healthcare providers, particularly obstetricians, are expected to relay this novel information to at risk patients in both a clear and concise way. Overall, researchers must continue to study the long-term effects of e-cigarettes, including those on fetal development, as there is still much to be uncovered.

O3

The Effect of Epidurals on Perineal Tears in Obese Primiparous Women

Aya Eltantawy, Kelsea R. Grant, Valeria Mantilla, Juan G. Ruiz.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: epidural anesthesia, perineal tears, primiparous, obese, perineal lacerations

Introduction and Objective: Obese pregnant women are generally at increased risk for maternal morbidity. Severe perineal tears can have long-term maternal complications including pelvic floor dysfunction. There is conflicting evidence about whether obesity and epidural analgesia are independent risk factors for severe perineal tears in vaginal deliveries. This study aims to determine the association between epidural anesthesia and severe perineal tears in obese primiparous women.

Methods: We conducted a retrospective cohort study of obese (pre-pregnancy BMI ≥ 30) primiparous women who delivered singleton full term infants (39-40 weeks) vaginally in 2018 using the National Vital Statistics System (NVSS) which comprises data from all live births with a birth certificate in the United States. The exposure was epidural/spinal anesthesia and the outcome was severe perineal lacerations. Our data analysis included 1) descriptive analysis of baseline characteristics, 2) bivariate analysis to explore the association between baseline characteristics and exposure, and 3) multivariate logistic regression analysis to determine the association between the exposure and outcome while controlling potential confounders.

Results: Our study included 92,562 women. Prior to adjustment, there was no statistically significant association between epidural/spinal anesthesia and perineal tears (OR 1.10, 95%CI 0.97-1.26, p=0.145). After adjusting for potential confounders by multivariate logistic regression, there was still no evidence of an association (OR 0.90, 95%CI 0.78-1.03, p=0.123). Other variables associated with perineal tears included instrumentation (OR 4.04, 95% CI 3.59-4.56, $p<0.001$), Asian race (OR 1.64, 95% CI 1.27-2.13, $p<0.001$), and large birthweight infants (OR 2.60, 95% CI 2.28-2.97, $p<0.001$).

Conclusions-Implications: Our study did not find an association between epidural/spinal anesthesia and perineal tears. We found other factors, including but not limited to, Asian race, instrumentation, and large birthweight infants, that increased the chances of a severe perineal tear. Additional research controlling for other potential confounders our study was not able to control will be needed to confirm the validity of our findings before they can be used to guide clinical decision making.

O4

The Association between Potentially Inappropriate Medication Use and Quality of Life among Community-Dwelling Individuals with Dementia

Krissie Lobon, Quincy Samus, Halima Amjad, Deirdre M. Johnston, Juan M. Lozano.

Johns Hopkins University, Baltimore, MD; Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: geriatrics, Beer's list, geriatric syndromes, inappropriate medications

Introduction and Objective: According to the Beer's list, medications of concern for older adults with dementia include anticholinergics, benzodiazepines, opioids and antipsychotics. Nonetheless, many of these drugs are often prescribed in the elderly population. Although the side effect profile of these medications is well known, few studies have examined how they affect quality of life (QOL). This study aims to evaluate the effect of potentially inappropriate medication (PIM) use, polypharmacy, and excessive polypharmacy, on QOL in elderly patients with dementia living at home.

Methods: This was a cross-sectional study using data from the MIND at Home Intervention, a community-based care coordination trial for 646 patients with dementia living at home between 2015 and 2019. The exposures of the study were PIM from Beer's list, polypharmacy (≥ 5 medications), and excessive polypharmacy (≥10 medications). The main outcome was QOL measured by QOL-AD survey completed at baseline. Our data analysis included 1) a descriptive analysis of population baseline characteristics, 2) three bivariate analysis to determine the association between baseline characteristics and each exposure, and 3) three multivariate linear regressions to determine the association between the three exposures and QOL.

Results: Our final sample included 533 individuals. Before adjusting for confounders, individuals who took one or more PIMs, compared to those who do not, had an average 2.19-point decrease in their total QOL score (95% CI -3.34 to -1.04, p value <0.001). There was no significant difference between QOL scores in patients exhibiting and not exhibiting polypharmacy, but QOL scores were lower in individuals with excessive polypharmacy compared to those without it (-1.44, 95% CI -2.60 to -0.29, p=0.017). After adjustment for confounders, PIM use and QOL scores continued to show a statistically significant association (beta -1.5, 95% CI -2.78 to -0.22, p=0.022), but the association between excessive polypharmacy and QOL was no longer significant (beta -0.127, 95% CI -1.47 to 1.21, p=0.85).

Conclusions-Implications: Our study found that PIM is independently associated with poorer QOL scores. Further research and larger studies should be conducted to assess how potentially inappropriate medications affect QOL of those living with dementia or the elderly in general.

O5

Use of E-cigarettes and Self-Reported Lung Disease Among US Adults

Robelyn Barrameda, Vivian Wong, Trisha Nguyen, Grettel Castro, Pura Rodriguez de la Vega, Juan M. Lozano, Juan Zevallos.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: electronic cigarettes, lung disease, COPD, emphysema, smoking

Introduction and Objective: Initially marketed for smoking cessation, electronic cigarettes (e-cigarettes) are commonly regarded as safer than combustible cigarettes because they usually contain less nicotine and do not use combustion. However, few studies have examined the health effects of e-cigarettes. The objective of this study was to examine whether e-cigarette use had a differential effect on the prevalence of lung disease among current, former, and never tobacco users.

Methods: We analyzed data from respondents aged ≥18 (n = 45 908) who responded to questions about e-cigarette use and lung disease in the 2016 Behavioral Risk Factor Surveillance System (BRFSS) survey. We calculated crude odd ratios (ORs) and ORs adjusted by 15 sociodemographic and health behavior factors: age, sex, race/ethnicity, annual household income, health insurance, personal

physician, health status, body mass index, education, marital status, exercise, alcohol use, tobacco smoking, tobacco chewing, and metropolitan status.

Results: We found a significant association between e-cigarette use and lung disease, which was significantly modified by tobacco use. Among never tobacco users, the odds of reporting lung disease were 4.36 (adjusted OR [aOR] = 4.36; 95% CI, 1.76-10.77) times higher among everyday e-cigarette users than among never e-cigarette users. Among current tobacco users, the odds of reporting lung disease were 1.47 (aOR =1.47; 95% CI, 1.13-1.92) times higher among everyday e-cigarette users than among never-e-cigarette users.

Conclusions-Implications: People who have never smoked combustible cigarettes should refrain from starting e-cigarettes, because e-cigarettes carry a significant risk of lung disease independent of tobacco smoking. Additional prospective research into the harmful effects of e-cigarettes would help to further elucidate this link.

O6

The Association Between Diabetic Status and Risk of Complications Post Laparoscopic Cholecystectomy

Gabriel Garcia, David P. Dorcius, Gerry Victor, Pura Rodriguez, Grettel Castro, Juan G. Ruiz.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: diabetes mellitus, insulin, acute cholecystitis, laparoscopic cholecystectomy, postoperative health outcomes

Introduction and Objective: The total number of people with diabetes worldwide is projected to rise from 171 million in 2000 to 366 million in 2030. Knowledge about the outcomes of patients with diabetes undergoing laparoscopic cholecystectomy is limited. The goal of this study is to evaluate whether there is an association between diabetes status and postoperative complications after laparoscopic cholecystectomy.

Methods: We conducted an analysis on a historical cohort using data from the American College of Surgeons National Surgery Quality Improvement Program from 2012 – 2016. Our exposure variable was insulin dependent diabetes, non-insulin dependent diabetes, and non-diabetes. The outcome variable was a composite for postoperative complications. We calculated the unadjusted odds ratios and used a multiple logistic regression to estimate the adjusted odds ratios and 95% confidence intervals.

Results: Our total study sample was 194,595 participants (Mean age 48.7 years; 55.7% female). The odds of developing a complication in participants with insulin dependent diabetes and non-insulin dependent diabetes was 2.98 (95% CI: 2.76 - 3.22)] and 1.69 (95% CI: 1.57 - 1.81) in the unadjusted group and became 1.91 (95% CI: 1.74 -2.09) and 1.29 (95% CI: 1.19 - 1.40) in the adjusted group as compared to those without diabetes.

Conclusions-Implications: Preoperative diabetes status is associated with a significant increased risk of postoperative complication. Future studies should look at whether there is a difference in surgical health outcomes in patients with type 1 diabetes compared to insulin dependent type 2 diabetes.

O7

Hartmann-type Procedures and Surgical Site Infections: Does Laparoscopic Approach Decrease Incidence?

Kayleigh Lewis, Jeffery Turley, Samantha Kay-Green, Grettel Castro, Juan G. Ruiz.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: surgical site infection, Hartmann-type procedures, laparoscopy, laparotomy

Introduction and Objective: Minimally invasive surgery has become the preferred method due to its perceived benefits, prompting further studies analyzing its efficacy among colorectal surgery. However, limited data exists comparing postoperative surgical site infection (SSI) rates of laparoscopic and open Hartmann-type procedures. This study aims to evaluate the difference in incidence of surgical site infection between laparoscopic and open Hartmann-type procedures in adults 18 years of age or older.

Methods: This was a retrospective cohort study analyzing datasets from the 2011-2016 National Surgical Quality Improvement Program (NSQIP) database. Patients over the age of 18 who underwent either laparoscopic or open partial colectomy with end colostomy and closure of distal segment (Hartmann type procedure) were included, representing the independent variable of this study. The main outcome was postoperative superficial, deep, or organ/space SSI. A bivariate analysis was done to assess the association between the exposure and outcome, and to identify confounders. Unadjusted and adjusted logistic regression analysis were used to calculate odds ratios (OR) and corresponding 95% confidence intervals (CI) to estimate the association between the route of Hartmann-type colectomy (laparoscopic vs open) and incidence of SSI.

Results: From 2011-2016, 16,990 patients underwent a Hartmann-type procedure and met the inclusion and exclusion criteria, 2,545 laparoscopic patients and 14,445 open patients. Prior to adjustment, the likelihood of SSI was significantly lower in those who underwent the laparoscopic approach (OR 0.52; 95% CI 0.32-0.61), when compared with the open approach group. Overall, the association between SSI and type of surgery did not change after adjusting for potential confounders (adjusted (adj) OR 0.51; 95% CI 0.42-0.62).

Conclusions-Implications: This study reveals that patients undergoing a laparoscopic Hartmann-type procedure have a lower incidence of postoperative SSI in comparison to the open approach. Although currently minimally invasive techniques are underutilized in regard to Hartmann-type procedures, our findings add to a growing body of literature supporting the advantages of laparoscopy, when feasible. With the recent advent of robotic surgical methods, we strongly recommend conducting similar studies that also factor in robotic approaches.

O8

Association of Maternal Race/Ethnicity on the Incidence of Primary Cesarean Section

Jasmine Abram, Lisa David, Marja Gillette, Pura Rodriguez de la Vega, Grettel Castro, Juan G. Ruiz, Juan Acuna.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: cesarean section, race, ethnicity, incidence, bias

Introduction and Objective: Delivery by cesarean section (CS) is intended to reduce the mortality of infants and mothers in clinically indicated cases. As CS rates in the United States have increased, concerns regarding possible overuse and unnecessary risk have grown. Meanwhile, persistent racial disparities in maternal and infant health are also increasingly coming to light. The objective of this study is to investigate the association between differences in maternal racial/ethnic status and the incidence of primary cesarean section in term, primiparous women ages 15 to 44 years old.

Methods: This is a population-based historical cohort study of all term, primiparous women between the ages of 15 and 44 years assembled from the 2017 CDC Natality Public Use File. The exposure variable was self-reported maternal race/ethnicity and the reported method of delivery was the outcome of interest. Control variables available in the data set included demographics, socioeconomic status, pre-pregnancy and pregnancy health, maternal height, paternal race and educational attainment, antenatal care, birth facility, labor conditions, fetal presentation, and birth weight. Both crude and adjusted odds ratios (OR) and 95% confidence intervals for CS according to maternal race were obtained using non-Hispanic White women as the reference group. Adjusted ORs (aOR) were obtained by fitting a binary unconditional multiple logistic regression model.

Results: In total, 932,474 women who gave birth in 2017 to a live infant were included in the study. The overall prevalence of CS in primiparous women ages 15 to 44 was 27%. As compared to non-Hispanic white women (NHW), and after adjusting for confounders, the odds of CS were 33% higher in non-Hispanic Black (NHB) women (aOR 1.33, CI 1.33-1.35) and 4% higher in non-Hispanic Asian women (aOR 1.04, CI 1.02-1.06). The aORs for other racial/ethnic groups were not statistically significantly different from the reference group.

Conclusions-Implications: The increased odds of CS among NHB women, which is evident even after adjusting for major indicators for CS, represent a

racial disparity. This disparity does not seem to originate from differences in pre-natal factors or the prevalence of medical indications for CS but rather from implicit and explicit bias in physician decision making. Further exploration is warranted to elucidate how CS might be related to the observed disparities in maternal and neonatal outcomes.

O9

The Association between Race on Postoperative Complications in Patients Following Total Knee Arthroplasty in the U.S. during 2011-2016

Hans Drawbert, Amelia Weingart, William Chang, Grettel Castro, Pura Rodriguez de la Vega, Noël C Barengo.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: total knee arthroplasty, orthopedics, racial disparity, race, postoperative complications

Introduction and Objective: Previous studies have revealed that Black patients who undergo total knee arthroplasty (TKA) have higher rates of postoperative complications compared with white patients. However, the current scientific evidence is conflicting. The objective of this study was to investigate the associations between race and postoperative complications following TKA.

Methods: This was a retrospective cohort study using the American College of Surgeons National Surgical Quality Improvement Program (NSQIP) database for patients 18 years or older and underwent TKA during 2016. Patients whose race was unknown or not indicated were excluded. The final population was 49,930 patients. The main exposure variable was race (Black, white, and other races). The main outcome variable was any postoperative complications. Covariates included BMI, smoking status, age, sex, and comorbidities. Unadjusted and adjusted logistic regression analysis were used to calculate odds ratios (OR) and 95% confidence intervals (CI).

Results: Most patients were white (87.5%) followed by Black (9.1%) and other races (3.4%). After controlling for possible confounders, Blacks had increased odds of postoperative complications (OR 1.34; 95% CI 1.19-1.51) compared with whites. In addition, patients in the other race group had the lowest odds of complication (OR 0.77; 95% CI 0.62-0.97). Obese patients had 13% lower odds of postoperative complication (OR 0.87; 95% CI 0.77-0.99).

Conclusions-Implications: As Black patients are at increased odds of postoperative complications following TKA, awareness of this disparity is important in providing safe and effective care in patients undergoing TKA.

O10

Ethnic disparities and incidence of postoperative complications in obese patients undergoing total knee arthroplasty: Analysis of the ACS NSQIP Data

Robert Alfaro, Kevin Kinter, Alexander Mihas, Grettel Castro, Pura Rodriguez, Juan Zevallos, Adel Elkbuli, Noel Barengo.

Kendall Regional Medical Center Department of Surgery, Miami, FL; Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: total knee arthroplasty, surgical outcomes, healthcare disparities, Hispanic paradox, obesity

Introduction and Objective: Total knee arthroplasty (TKA) is common complicated operation. There is a paucity of literature on differences between Hispanics and non-Hispanics with TKA. Our study aims to investigate the association between Hispanic ethnicity and complications in obese patients undergoing TKA.

Methods: Retrospective cohort study using the National Surgical Quality Improvement Program (NSQIP) database for patients with body mass index (BMI) ≥30 kg/m2 who underwent TKA. Exposure in this study was ethnicity (Hispanic vs non-Hispanic) and the primary outcome was postoperative complication. Associations between ethnicity and baseline characteristics, and between covariates and the outcome were assessed via bivariate analysis. Multiple logistic regression was performed to determine associations between Hispanic ethnicity and complications, while controlling for confounders.

Results: 35,027 patients were included in our study, of which 6.3% were Hispanic. Among obese adults, Hispanics had a 1.24 (95% CI 1.11-1.39) times greater odds of having a postoperative complication after TKA than non-Hispanics. This increased to 1.36 (95% CI 1.20-1.54) after adjusting for confounders. Hispanics were significantly more likely to receive transfusion (2.62% vs. 1.59%, $p<0.001$) and have prolonged length of stay (13.29% vs. 11.12%, p=0.002), but were less likely to have wound disruption (0.05% vs. 0.27%, p=0.042).

Conclusions-Implications: Hispanic ethnicity was associated with greater odds of postoperative complication in obese patients undergoing TKA. Future studies focusing on a wide range metrics of social determinants of health are needed to further investigate barriers and intervention to eliminate racial disparities in surgical patients.

O11

The Effect of Functional Health Status on Readmission Rate for Patients status-post Femoral Fracture Repair

Camila Del Rio, Melissa Ramirez, Stephanie Hernandez, Marcia Varella.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: functional status, femur fracture, risk of re-admission,

Introduction and Objective: Femoral fractures pose a significant healthcare burden due to the associated morbidity, mortality, and costs. Though several studies have shown that functional status is an important predictor of risk for hip fractures, few studies have analyzed the effect of functional status on the risk for readmission after surgical repair. Therefore, our objective is to assess the association between functional status (independent, partially or totally dependent) prior to surgery and readmission occurrence among patients undergoing femoral fracture repair.

Methods: We performed a retrospective cohort study using data from participants of the ACS NSQIP year 2016. The independent variable was defined as functional health status, and patients were placed into one of three categories: independent, partially dependent, and totally dependent. The dependent variable will be the occurrence of readmission due to any cause after the surgery. Our analysis included
1) univariate analysis for baseline characteristics
2) bivariate analysis for potential confounders
3) collinearity for the association between predictors and outcome and 4) multivariate logistic regression to determine the association between the exposure and outcome while controlling potential confounders. Associations were presented as odds ratio with corresponding 95% confidence intervals.

Results: Our sample included 27,453 participants. The unadjusted logistic regression analysis showed the partially dependent had a 29% odds of hospital readmission when compared to the independent group. However, the totally dependent group did not have statistically significant results (OR 1.25, 95% CI 1.00-1.56, p 0.051). Once adjusted, both groups had significant results with partially dependent and totally dependent patients having increased odds of readmission by 25% and 37% respectively.

Conclusions-Implications: Our study found that in patients undergoing femoral fracture repair, there was an increased occurrence of readmission for patients defined as partially and totally dependent prior to surgery. We found that the outcome of "any readmission" was broad and specific reasons for readmission should be further explored. Additionally, the classification of functional status done by the NSQIP database is a potentially subjective interpretation process. Future studies should offer a detailed approach to the classification of functional status that incorporates modifiable risk factors in order to provide actionable information for risk prevention models.

O12

Are Vaccinations Associated with Joint Pain Severity in Patients with Preexisting Arthritic Conditions?

Tushar Chakravarty, Micky Akinrodoye, Grettel Castro, Marcia Varella.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: join pain, arthritis, vaccination, flu shot, pneumovax

Introduction and Objective: Anecdotal reports have described an increased risk of developing new onset arthralgia, arthritis, and autoimmune inflammatory rheumatic disease (AIIRD) symptoms following specific vaccinations. While these findings have not been supported by systematic reviews of the literature, the relationship between vaccinations and joint pain exacerbation in patients diagnosed with pre-existing AIIRDs and nonrheumatic arthritides is less known. Objective: To evaluate if any associations exist between selected vaccinations and severity/intensity of joint pain in patients diagnosed with AIIRDs and nonrheumatic arthritides.

Methods: We conducted a secondary analysis of the cross-sectional study – the 2019 Behavioral Risk Factor Surveillance System (BRFSS), which included participants 18 years and older from all 50 states and United States territories that were previously diagnosed with an AIIRD including non-rheumatic arthritides. Mean joint pain severity scores reported by individuals vaccinated with the influenza, pneumococcal, and tetanus vaccines were compared to non-vaccinated controls, via bivariate and multivariable linear regression analyses.

Results: A total of 108,117 participants diagnosed with arthritic conditions were included for analysis. 62% of participants received the influenza vaccination. 60% of participants received the pneumococcal vaccination. 71% of participants received the tetanus vaccination. Individuals who were vaccinated with either the influenza, pneumococcal or tetanus vaccines reported a mean joint pain score of 4.79 (SE = 0.022), 4.94 (SE = 0.021), and 4.86 (SE = 0.02), respectively. Whereas those who were non-vaccinated reported mean scores of 5.1 (SE = 0.026), 4.92 (SE = 0.027), and 5.11 (SE = 0.032) for the respective vaccine exposure statuses. The unadjusted model demonstrated statistically significant decrease in mean joint pain scores for both influenza vaccination (-0.30; 95% CI = -0.37, -0.24; p-value), and tetanus vaccination (-0.25; 95% CI = -0.32, -0.17), whereas with receipt of pneumococcal vaccination the difference was not statistically significant (mean score increase of 0.02, 95% CI = -0.04, 0.09, p-value = 0.504). After adjusting for potential confounders only pneumococcal vaccination was independently associated with a statistically significant increase in mean joint pain severity score by 0.14 (95% CI = 0.06, 0.22; p-value < 0.001) when compared to non-vaccinated controls.

Conclusions-Implications: Our results suggest that vaccination does not seem to increase mean pain score in patients with a variety with arthritis condition, thus vaccination should be given as recommended. Further studies on the potential increase in pain score and its clinical significance are warranted.

O13

Association Between Duration of Aerobic Physical Activity and Self-Reported Health Status in Adults with Arthritis

Douglas Chung, Monica Robelo, Marcia Varella, Grettel Castro.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: arthritis, physical activity, exercise, health status, quality of life

Introduction and Objective: Physical activity provides disease-specific benefits for those with arthritis and is recommended for all patients with arthritis. Few studies have examined the duration of aerobic physical activity that is effective for improving self-perceived health status in these individuals. This study investigates whether increased duration of aerobic physical activity is associated with better self-reported health status in adults with arthritis.

Methods: We performed secondary data analysis on cross-sectional data from 123,962 community-dwelling adults who participated in the 2019 Behavioral Risk Factor Surveillance System survey. The independent variable was duration of aerobic physical activity per week over the past month, which was categorized into three groups: high physical activity level (150 or minutes/week), intermediate physical activity level (1-149 minutes/week), or none (0 minutes/week. The dependent variable was self-reported health status, which was categorized into two groups: better health status (excellent, very good, or good) and worse health status (fair or poor). Multivariable logistic regression was used to obtain odds ratios (ORs) and 95% confident intervals (95%

CIs) adjusted for age, sex, race, ethnicity, employment status, annual household income, and body mass index.

Results: After multivariable adjustment, compared to those who performed no physical activity, the odds of reporting being in excellent/very good/good health increased by 2.46 times among individuals who performed 150 minutes or more (OR= 2.46, 95% CI: 2.30, 2.62) and by 62% among individuals who performed 1 to 149 minutes of physical activity per week (OR=1.62, 95% CI: 1.49, 1.78). Additionally, 49.7% of adults with arthritis met recommended physical activity guidelines.

Conclusions-Implications: Increased duration of aerobic physical activity was associated with better self-reported health status. We found a dose dependent response between physical activity duration and better health status: as duration of physical activity increased, the proportion of individuals reporting better health status increased. Additional studies on patients with arthritis are needed to confirm findings and guide clinical recommendations.

O14

Association Between Duration of Aerobic Physical Activity and Self-Reported Health Status in Adults with Arthritis

Johnatan Jhon, Allison Roach, Keith Shopa, Kevin Lanza, Grettel Castro, Noel Barengo.

UTHSC, Houston, TX; Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: adolescents, physical activity, recreational facilities, environment, exercise

Introduction and Objective: Despite the known benefits of physical activity (PA), less than one-quarter of adolescents achieve recommended daily levels set forth by various health organizations. Many factors play a role in the PA level of adolescents including neighborhood features, proximity, and accessibility to various types of facilities. However, little information exists on the role of school recreational facilities (RF) with adolescent PA in comparison to more widely studied indoor and outdoor facilities. Our objective was to investigate the association between availability of either school RF, outdoor RF, or indoor RF and increased levels of PA in US adolescents ages 11-17.

Methods: Data from a cross-sectional study of the 2017 Family Life, Activity, Sun, Health, and Eating (FLASHE) survey were used. Adolescents aged 11-17 from the US were included. Participants were excluded if no information was provided for moderate to vigorous intensity physical activity (MVPA) or access to RF type (n=245). The final samples size was 1,437. The exposure variables included access to indoor, outdoor, and school RF. Predicted daily minutes of MVPA was derived by summation of predicted weekly minutes of MVPA in school, out of school, and weekends, then divided by seven to represent the average daily MVPA. Age, sex, race/ethnicity, educational level, crime, traffic, school type, work hours, peer and family influence were included as covariates. Unadjusted and adjusted linear regression analysis was used to calculate mean increases in daily minutes MVPA and their corresponding 95% confidence intervals.

Results: A total of 1,437 US adolescents were included. After adjusting for covariates our model showed the associations between type of RF and increased daily minutes of MVPA were statistically significant for school RF but not for indoor RF or outdoor RF. The model showed a mean increase in daily minutes MVPA of 4.7 min (95% CI 3.0, 6.4) for school RF, 0.6 min (95% CI -1.1, 2.3) for indoor RF and 0.3 min (95% CI -1.5, 2.1) for outdoor RF.

Conclusions-Implications: School RF are an important avenue for engaging adolescents in PA objectives. Features within school RF should be studied to further investigate contributions to increased activity levels. Keywords: Adolescents; physical activity; recreational facilities; environment; exercise.

O15

Association Between Referral Source and Delays in Diagnostic Follow-Up After Abnormal Screening Mammogram Among Uninsured Women Using a Mobile Mammography Center

Gabriela Figueroa, Logan Garfield, Amy-Morgan Mycoff, Marcia Varella, Grettel Castro, Julia Bisschops, Lorraine Nowakowski.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: mobile mammography, breast cancer screening, referral, follow-up

Introduction and Objective: Mobile mammography centers aim to mitigate the disparity seen in the morbidity and mortality among underserved populations by increasing access to scree ning services. However, it is yet unclear which modifiable risk factors play the most significant role in delays in diagnostic follow-up. Our study aimed to identify if there is an association between referral source and time elapsed from a BI-RADS-0 screening mammogram result to diagnostic testing in uninsured patients in Miami-Dade County using a mobile mammography center.

Methods: A retrospective cohort study was performed using data from participants of the FIU Linda Fenner 3D Mobile Mammography Center (LFMMC) who had a BI-RADS-0 screening mammogram result between 2014-2020. Patients were initially grouped by referral type, either internal or external referral, with "internal" indicating walk-ins and "external" referring to individuals with a referral from their PCP. These groups were then compared by the measure of completing a diagnostic study within 60 days after their BI-RADS-0 result. Multivariate logistic regression analyses were used to test the associations while controlling for potential confounders.

Results: Out of 850 women with BI-RADS 0 in the LFMMC, a total of 829 were studied. About 62% had external referrals for the screening mammogram and 13.3% did not receive follow-up within the recommended 60-day interval. Adjusted analysis did not result in a significant association between referral source and elapsed time to diagnostic follow-up (OR=0.94, 95% CI: 0.60-1.49, p=0.808). Incidentally, patients who received referral for either diagnostic mammogram or breast ultrasound had higher odds of completion of follow-up within 60 days of receiving a BI-RADS-0 result compared to breast MRI (OR 0.03 (95% CI: 0.02,0.06) and OR 0.02 (95% CI: 0.01,0.04), respectively).

Conclusions-Implications: In patients of the LFMMC, referral source was not associated with time to diagnostic testing after a BI-RADS 0 screening mammogram result, as the majority of women completed follow-up within 60 days. However, a notable proportion of women still had delayed follow-up, underlining the need for future studies to analyze other potential factors influencing follow-up such as race, education level, income, and preferred language.

O16

Investigating the Association between Marital Status and Survival of Glioma among Adults Aged 18-65 Years Old

Mazieyar Azad, Mirza Baig, Evan Ales, Marcia Varella, Pura Rodriguez, Juan M. Lozano.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: marital status, glioma, survival, biopsychosocial

Introduction and Objective: Survival in cancer has been shown to be associated with marital status. Yet, it is unknown if gliomas have such an association. The objective of our study was to assess if there exists an association between marital status and 5-year survival rate in adult patients with gliomas.

Methods: We used information from the Surveillance, Epidemiology, and End Results (SEER) Program. Our sample was limited to adults 18-65 years old diagnosed with gliomas from 1973 - 2015 and whose marital status was reported. The independent variable of marital status was defined as either married or unmarried (including single, divorced, or widowed). The outcome was being alive up to 5 years after diagnosis. A multivariable logistic regression was performed to assess crude and adjusted associations.

Results: Our sample included 2,806 adults. Of them, 1,721 were married (61%) and 1,085 were unmarried (39%). The overall five-year survival was 44.1%. Of married patients, 38.9% survived after 5 years while that frequency was 52.4% for unmarried patients ($p<0.001$). The unadjusted odds ratio (OR) between marital status and survivability showed a statistically significant decrease in the odds of five-year death among unmarried patients (OR 0.73, 95% CI = 0.65 – 0.81). After controlling for age, race, gender, and

whether or not surgery was performed, the adjusted OR was no longer statistically significant (OR = 0.99, 95% CI = 0.86 – 1.13, p-value 0.84).

Conclusions-Implications: We found no evidence for an independent association between marital status and survival in patients with all types of glioma. Further research specifying glioma subtypes and with better characterization of changes in marital status over time are warranted to better understand how non-traditional factors affect how we treat cancer patients.

O17

Association Between Sleep Duration and Obesity in 10-17-Year-Old Children in the United States

Corinna Peden, Emily Harris, Pura Rodríguez de la Vega, Grettel Castro, Noël C Barengo.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: sleep, obesity, children, sleep duration, childhood obesity

Introduction and Objective: Childhood obesity and chronic sleep deprivation in the US have been increasing, subsequently becoming serious public health concerns. While some cohort studies showed that children who lack adequate sleep were more likely to be overweight/obese, meta-analyses revealed inconsistent results. Our objective was to examine the association between adequate sleep duration and body mass index (BMI) class in children ages 10-17 years in the US.

Methods: A cross-sectional design was used to analyze data from the 2018 National Survey of Children's Health (NSCH). Our sample included 15,299 children ages 10-17 years. 742 children were excluded because of missing data for BMI or hours of sleep. The independent variable was adequate sleep duration, defined by the 2016 American Academy of Pediatrics (AAP) guidelines, as 9-12 or 8-10 hours/night for children ages 6-12 or 13-18 years, respectively. The dependent variable was overweight/obesity prevalence based on BMI calculation from parent-reported height and weight. Binary logistic regression was used to calculate unadjusted and adjusted odds ratios (OR) and 95% confidence intervals (CI).

Results: Our data revealed that children with inadequate sleep duration had 1.23 higher odds of overweight/obesity than their counterparts (95% CI 1.03-1.47). Other variables associated with overweight/obesity were ages 10-13 years and poor overall health status.

Conclusions-Implications: Healthy sleeping habits must be an important lifestyle habit for clinicians to discuss with children and parents in the prevention of overweight and obesity. Further research is needed to assess whether this association is causal and to examine sleep as an intervention in obesity prevention.

Poster Presentations

Best Poster Abstract Presentation

Analyzing the Association Between Depression and High-Risk Sexual Behavior Among Adult Latina Immigrant Farm Workers in Miami Dade County

Hyunjean Kim, Yingxin He, Ryan Pham, Gira Ravelo, Patria Rojas, Pura Rodriguez, Grettel Castro, Noél Barengo, Juan Acuna, Elena Cyrus.
Robert Stempel College of Public Health & Social Work;
Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: depression, risky sexual behavior, Latina, Hispanic Americans

Introduction and Objective: Despite representing 18% of the United States population, in 2016, Latinx accounted for 26% of all new HIV diagnoses. Most of the current literature regarding HIV risk focuses on adolescents and men who have sex with men, which excludes adult Latinas. The aim of this study was to analyze the association between depression and high-risk sexual behavior among adult Latina farm workers in Miami-Dade County in South Florida in 2014-2016.

Methods: This study was a cross-sectional secondary data analysis of a community-based participatory research pilot study entitled, Salud/health, Educación/education, Prevención/prevention, Autocuidado/self-care (SEPA). The snowballing technique was used to sample the study population among adult Latina migrants recruited from local community centers. Eligibility requirements included the following inclusion criteria: female, identify as Latina, age 18-50 years, sexually active within the past three months, and lived in the US for 3-10 years. The exposure variable, depression, was assessed using the Patient Health Questionnaire. The outcome variable, high-risk sexual behavior, was assessed using the Sexual Behavior and Sexual History Questionnaire. The tested hypothesis of an association between depression and risky sexual behavior was formulated after data collection. Binary logistic regression was performed to compute odds ratios (OR) and the corresponding 95% confidence intervals (CI).

Results: Out of 234 study participants, 15% reported being depressed, 80% of women were reported as having engaged in high-risk sexual behavior, and 19% were reported as not. No association was found between depression and high-risk sexual behavior (OR 1.77, 95% CI 0.51-6.16). Statistically significant predictors of high-risk sexual behavior were low sexual relationship power (OR 4.10, 95% CI 1.06-15.96), interpersonal violence (OR 2.70, 95% CI 1.02-5.09), and relationship status (OR 2.66, 95% CI 1.17-6.01).

Conclusions-Implications: Although this study could not identify a statistically significant association between depression and high-risk sexual behavior, it was limited by a lack of power due to small sample size. The medical community should implement more effective interventions in order to decrease the prevalence of HIV among adult Latina recent immigrants. Further research may study the association between depression and high-risk sexual behavior in a larger sample size.

P1

The Association Between Parenting Practices and Out-Of-School Physical Activity in US Adolescents in 2014

Robert Wood, Farhan E. Hiya, Jean-Paul M. Lamour, Pura E. Rodriguez de la Vega, Grettel Castro, Juan G. Ruiz, Noël C. Barengo.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: exercise, adolescent behavior, parenting, parent-child relations, social facilitation

Introduction and Objective: Lack of physical activity (PA) is associated with obesity, diabetes, hypertension, cardiovascular diseases, and cancer. Parenting practices influence PA in young children; however, there's little evidence available for adolescents. The objective of this study is to determine whether parenting practices are associated with out-of-school physical activity (OSPA) practices in US adolescents, ages 12-17.
Methods. This cross-sectional 2019 study analyzed data from the FLASHE study, a web-based, quota-sampled survey of parent-adolescent dyads in 2014 (n=1109). Inclusion required parents with ≥1 adolescent (ages 12-17) in their household and dyads to have completed all questions. Physically limited adolescents were excluded. Main exposures (parenting practices) included modelling, monitoring, facilitation, restriction, guided choice, and pressure. The main outcome was measured OSPA Youth Activity Profile (YAP) composite scores. Odds ratios (OR), and 95% confidence intervals (CI), were calculated using adjusted logistic regression analyses.

Results: Guided Choice was associated with 2.12-times higher odds of OSPA for 15-17-year-olds (OR 2.12; 95% CI 1.17-3.84). Facilitation was associated with more OSPA for 12-14-year-olds (OR 2.21; 95% CI 1.13-4.33). Monitoring was associated with 66% less OSPA for 15-17-year-olds (OR 0.34; 95% CI 0.20-0.57) and 55% less for 12-14-year-olds (OR 0.45; 95% CI 0.27-0.74). Friend Support increased the odds of more OSPA in the 15-17 age group by 403% (OR 4.03; 95% CI 2.29-7.08) and 12-14-year-olds by 305% (OR 3.05; 95% CI 1.69-5.51).

Conclusions-Implications: Future interventions should target (i) shared PA decision-making for older teens, (ii) access to PA for younger adolescents, and (iii) promoting PA with peers for all ages.

P2

Associations between Access to Recreational Facilities and Achieving Physical Activity Guidelines in US Adults

Mark Maguire, Larissa Andrade, Ryan Geffin, Pura Rodriguez, Grettel Castro, Ahmad Alkhatib, Noël C. Barengo.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: physical activity, exercise, recreation facilities, public open space, built environment

Introduction and Objective: Meeting physical activity (PA) guidelines is essential for achieving long-term health and disease prevention across populations. According to the American Health Association (AHA), adults should perform at least 75 minutes of vigorous PA or 150 minutes of moderate PA to see an impact on long-term health. Results of previous studies are varied and have yet to integrate perceived access to facilities with AHA PA guidelines. We investigated whether self-reported access to free or low-cost recreational facilities was associated with meeting the AHA PA guidelines.

Methods: This was a cross-sectional internet-based study utilizing data extracted from the Family Life, Activity, Sun, Health, and Eating (FLASHE) database collected in 2017. We analyzed data from 1,750 participants 18 years-old and older across the United States. The main exposure variable was having access to free or low-cost recreational facilities. The main outcome variable was meeting the AHA PA guidelines of 150 minutes of moderate PA or 75 minutes of vigorous PA per week. Covariates included age, sex, level of education, overall health, BMI, ethnicity, hours of work per week, income, and time living at current address. Unadjusted and adjusted logistic regression analysis were used to

calculate odds ratios (OR) and corresponding 95% confidence intervals (CI).

Results: Of the 1,750 included respondents, 61.7% (n=1,079) reported to have access to recreational facilities. Of those with access to recreational facilities, 69.9% met the AHA PA guidelines while 30.4% did not. After adjustment for the covariates, respondents who reported having access to recreational facilities were 42% more likely to meet the PA guidelines compared with respondents who disagreed with this statement (OR 1.42; 95% CI 1.14-1.76). Secondary results suggest that healthier individuals were more to have met AHA PA guidelines.

Conclusions-Implications: Increasing prevalence and awareness of neighborhood recreational facilities could increase access to these facilities and thus improve the ability of individuals to meet AHA PA guidelines. Future research should integrate objective PA data, determine which types of recreational facilities impact PA strongest, and discover methods of increasing awareness of these facilities.

P3

An Assessment on the Association of Depressive Symptom Domains with Alcohol Use Behavior Among Urban Latino Adolescents in South Florida

Dan Pham, Alexandra Held, Jiajun Li, Pura Rodriguez, Juan M. Lozano, Noël C Barengo, Miguel Ángel Cano, Patria Rojas.

Robert Stempel College of Public Health & Social Work; Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: depressive symptom domains, current alcohol use, Latinx, Adolescents, South Florida

Introduction and Objective: Substantial scientific evidence indicates an association between depression and alcohol use in adolescents. According to the Youth Risk Behavior Surveillance System, more Latino adolescents (64.7%) have ever drank alcohol compared to white (61.7%) or black (51.3%); 31.3% of Latino adolescents currently use alcohol. Previous studies focused on depression as a single construct and its association with alcohol use in adolescents but have not investigated the association between depressive symptom domains (DSDs) (negative affect, anhedonia, somatic complaints, and interpersonal complaints) and alcohol use in ethnic adolescents. Our study investigated the association between four DSDs and alcohol use in Miami-Dade Latino adolescents in 2017.

Methods: Secondary data analysis of a cross-sectional study of the CUIDATE community-based intervention dataset was used. A local convenience sample of 201 adolescents were surveyed in Miami-Dade through several agencies in 2017. Inclusion criteria were being Latino and age 13-18 years old. Participants with missing information on the main outcomes or exposure variable were excluded. The final sample size was 151. The main exposure variable was the four DSDs. The main outcome variable was current alcohol use. Age, gender, socioeconomic status, years of residence in the US, and behavioral acculturation were included as covariates. Unadjusted and adjusted logistic regression analysis were used to calculate odds ratios (OR) and corresponding 95% confidence intervals (CI).

Results: Of the 151, 58% were females and 42% were males. Prevalence of current alcohol use was 20.5%. After adjusting for age and gender, negative affect increased the odds of alcohol use by 1.13 times (OR 1.13; 95% CI 1.01-1.27). In addition, each unit increase in “interpersonal problems” was associated with increased odds of alcohol use by 31% (OR 1.31; 96% CI 1.00-1.72).

Conclusions-Implications: Our study shows that DSDs of negative affect and interpersonal complaints are associated with current alcohol use in our sample. Understanding the association between DSDs and current alcohol use in Latino adolescents is vital for a targeted approach to early intervention and treatment. Future studies with larger sample sizes and geographical variance with high rates of Urban Latino adolescents can better establish this relationship.

P4

Intimate Partner Violence (IPV) and Breastfeeding Duration in Minority Women

Natalie Abad, Abigail Tercek, Grettel Castro, Juan Manuel Lozano, Pura Rodriguez de la Vega, Marcia H. Varella

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: IPV, breastfeeding, minority, women

Introduction and Objective: Intimate Partner Violence (IPV) is a global health issue that disproportionately affects women. Among its detrimental consequences, it has been shown to negatively impact the ability of new mothers to breastfeed. Knowledge regarding physical IPV in minority women around the time of pregnancy and breastfeeding outcomes is scarce. Objective: To determine if there is an association between suffering from physical IPV in the 12 months leading up to and/ or during pregnancy and breastfeeding duration in minority women.

Methods: We used cross-sectional study data from the Pregnancy Risk Assessment Monitoring System (PRAMS), Phase 7 (2012-2015) and or Phase 8 (2016-2018). Minority women who were surveyed 59 days after delivery were included. Exposure was self-reported physical IPV in the 12 months leading up to and/ or during the most recent pregnancy. The primary outcome was breastfeeding duration of less than 8 weeks. Logistic regression analysis was used to assess independent associations, after accounting for potential confounders. All statistical analyses were performed using STATA v15 to account for the complex survey design. P-values <0.05 for a two tailed test were considered statistically significant.

Results: Overall, 3.7% of the women reported physical IPV and about 53% reported breastfeeding for less than 8 weeks. According to the unadjusted analysis, minority women who experienced IPV in the 12 months before pregnancy or during pregnancy were 1.53 times more likely to breastfeed for less than 8 weeks compared to women who did not experience IPV (OR 1.53; 95% CI 1.36-1.73). After adjusting for confounding variables, the association was no longer significant (OR= 0.97, 95% CI=0.72-1.31). We found no evidence for effect modification by race.

Conclusions-Implications: We did not find evidence for an association between IPV exposure before or during pregnancy and a shorter breastfeeding duration in minority women. Due to the concern of misreporting variables, better ways to gather information on IPV as well as defining a breastfeeding duration that adheres to widely established guidelines are warranted. Future studies should aim to address social determinants of health that may be acting as barriers to breastfeeding in minority women, as well as address other negative impacts of IPV.

P5

Exploring Racial Self-Identification and Trust in Physicians Amongst Black and White Study Participants in a Cross-Sectional Study

Vittoria Costantino, Nicole Miller, Amanda Rodriguez, Pura Rodriguez de la Vega, Juan G. Ruiz.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: trust in physicians, racial disparities in healthcare, patient trust in doctors, racial differences in physical trust, trust in the healthcare system

Introduction and Objective: The United States has a history of medical mistreatment toward Black Americans, which dates back to the country's infancy. This study aimed to elucidate the association between race and trust in physicians, using information from individuals who self-identified as Black or white in a recent survey. Through this study, we hope to contribute to a deeper understanding of the effect of this historical trauma, so that the medical community can initiate change.

Methods: A cross-sectional comparative study was completed using secondary data from the HINTS 5 Cycle 3 found on the National Cancer Institute database. Subjects who identified themselves as Black or white and who had valid information

regarding trust in physicians were included. Subjects from all other races were excluded. The exposure of interest was self-reported identification as Black or white and the outcome of interest was the level of trust in physicians derived from survey question A6a. We considered several confounders including age, sex, level of education, residence in linguistically isolated areas, perceived quality of urgent care visits, degree of government healthcare assistance, and sexual orientation. Both unadjusted and adjusted for confounders (unconditional binary logistic regression modeling) odds ratios (OR) and 95% confidence intervals (95%CI) were computed.

Results: The prevalence of trust in physicians was higher among white participants: 72% in whites versus 61.5% in Black participants (p =0.006). Prior to adjustment, the odds of low trust in physicians are 61% higher (95%CI 1.15-2.27) in Black, as compared to white, individuals. After adjusting for all confounders, the point estimate increased slightly: OR 1.67 (95%CI 1.11-2.50) and remained statistically significant.

Conclusions-Implications: This study revealed that Black individuals report lower trust in physicians compared to white individuals. The medical community has a duty to acknowledge how our country's past continues to affect Black patients, so inequities can be addressed, and changes initiated.

P6

The Effect of Race and Ethnicity on the Association Between Physical Activity and Obesity in U.S. Adults

David Gomez, Alejandro Matus, Noel Barengo, Pura Rodriguez de la Vega, Juan M. Lozano.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: physical activity, obesity, overweight, race ethnicity

Introduction and Objective: The prevalence of adult overweight and obesity in the U.S. is estimated at 73.6%. Many studies have demonstrated the association between lack of physical activity and obesity. However, few studies have considered race and ethnicity as a potential effect modifier in this association. This study aimed to investigate whether race and ethnicity modify the association between physical activity and obesity.

Methods: The study is a cross-sectional study utilizing the BRFSS 2019 database. The inclusion criterion was adults aged 18 years or older. Survey participants with disabilities that limited physical activity or missing information on the primary exposure and outcome variables were excluded. The study variables included physical activity (independent), overweight or obesity (dependent), and an extensive list of covariates, including race and ethnicity. The data analysis included 1) Descriptive analysis of study participant baseline characteristics, 2) Bivariate analyses that assessed the association between independent and dependent variables, and tested covariates for confounding, and 3) Adjusted analysis (logistic regression) controlling for confounders with stratification by race and ethnicity, which tested for effect modification.

Results: The final study sample size was 272,263. The adjusted odds ratio of being overweight or obese in the group of participants that reported no physical activity and those that reported 1-149 min/week of physical activity were aOR 1.36 (95% CI 1.29-1.44) and aOR 1.20 (95% CI 1.15-1.27) respectively, when compared to those that met the physical activity guidelines of ≥ 150 min/week. After stratifying by race and ethnicity, both no (aOR 1.37, 95% CI 1.29-1.45) and low level (aOR 1.21, 95% CI 1.15-1.28) of physical activity maintained statistical significance in non-Hispanic whites. In contrast, no association between decreased levels of physical activity and obesity was observed in the other strata (aOR between 0.86 and 1.07, $p<0.05$).

Conclusions-Implications: The changes observed in the strength of the association between physical activity and overweight or obesity after stratification analysis suggests that race and ethnicity may serve as an effect modifier on this association. Due to the sparsity of literature addressing this question, additional research should be conducted to validate these findings.

P7

The association between home glucose monitoring and macro- and microvascular complications in adult diabetes patients in the US in 2016

Michael Garcia, Kamahl Harrisingh, Jervon Wright, Noël C. Barengo.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: diabetes, complications, glucose monitoring

Introduction and Objective: Diabetes, by virtue of its chronicity and prevalence of 23.1 million in the United States, represents an illness incurring both economic and personal cost to patients. Given the modifiable risk factors contributing to diagnosis and resultant morbidities, prevention is key. This study focused on secondary and tertiary prevention of diabetic complications in accordance with certain health behaviors. Here, home blood glucose monitoring was evaluated, with microvascular complications (nephropathy and retinopathy) and macrovascular complications (coronary artery disease, myocardial infarction stroke) serving as outcomes.

Methods: Secondary analysis of 9,385 adults who responded to the Behavioral Risk Factor Surveillance System (BRFSS) questionnaire in 2016 will be performed. The BRFSS is a monthly questionnaire administered by the CDC and state health departments collecting health information such as diagnoses given, length of chronic illness, and self-care habits. Participants included in the study were adults with self-reported diabetes mellitus living in the US and Territories. The independent variable of this study was the frequency of self-monitoring blood glucose. The dependent variables of this study were macrovascular and microvascular complications associated with diabetes. The macrovascular complications were defined as coronary artery disease, myocardial infarction, and stroke. Descriptive analysis was performed to ascertain relevant variables and missing values. Bivariate analysis was done for categorical variables to identify possible confounders utilizing chi-square tests and t-tests for the normally distributed continuous variables. Collinearity diagnostics was done to check for a correlation between the exposure and outcome. Lastly, unadjusted as well as adjusted logistic regression analysis was also done, and Odds ratios and 95% confidence intervals presented.

Results: For macrovascular complications, those who performed home blood glucose monitoring <1 time per day had an OR of 1.03 (95% CI 0.72-1.47) compared to those who never performed home glucose monitoring. Adults who performed ≥once per day had an OR of 1.12 (95% CI 0.79-1.59) compared to those who never performed home blood glucose monitoring. For microvascular complications, those who perform home blood glucose monitoring <1 per day had an OR of 1.03 (95% CI 0.72-1.48) while those who performed home blood glucose monitoring ≥once per day had an 1.12 (95% CI 0.79-1.59). This illustrates the lack of a statistically significant difference between the odds of macrovascular complications in diabetics amongst the study groups.

Conclusions-Implications: While results did not depict a clear association between variables of interest, it improved the current knowledge in our area of research. Previous studies focused on glycemic control due to its pathophysiological link to diabetic complications. Few looked at the relationship between SMBG and the incidence of diabetic complications.

P8

GCNT2 Suppression in Metastatic Melanoma Is Potentiated by Hypoxia and Leads to Aggressive Disease Progression

Asmi Chakraborty, Mariana Perez, Norhan B. B. Mohammed, Michael Wells, James S. Wilmott, John F. Thompson, Stuart M. Haslam, Wei Wang, Richard A. Scolyer, George F. Murphy, Charles J. Dimitroff.

Case Western School of Medicine; Melanoma Institute Australia, The University of Sydney; Imperial College London; Brigham and Women's Hospital, Harvard Medical School; Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: melanoma, GCNT2, immunoevasion, hypoxia, Galecitin-3

Introduction and Objective: Metastatic melanoma (MM) is a lethal disease with a dismal 5-year survival rate of 25%. Thus, intense efforts to boost novel therapeutic strategies are underway to identify early detection of melanomas with high propensity to metastasize. We recently discovered that the loss of cell surface glycan, I-antigen, corresponds with the transition of primary melanoma to MM. I-antigen or I-branched glycans are synthesized by β1,6 N-acetylglucosaminyltransferase 2 (GCNT2) and inversely correlate with the growth and signaling potential of MM cells. Moreover, compared with high GCNT2 expression in normal melanocytes, nevi, and early-stage primary melanomas, GCNT2 is conspicuously lost in MM. We anticipate the potential utilization of GCNT2 expression as a biomarker to predict melanoma metastasis. Further, metastasis and aggressive disease progression are key phenotypes of tumor-initiating cells (TIC), which are preferentially generated in areas of hypoxia. In vertical growth phase primary melanomas and melanoma metastases, the tumor microenvironment is typically hypoxic (1.5% oxygen). We hypothesize that the hypoxic microenvironment aids in MM progression through TIC generation and immune evasion, by downregulating GCNT2 and switching I-branched glycans to linear glycans.

Methods: Human MM patient samples, in vivo mouse models, and in vitro assays utilizing MM cell lines with lentivirus-mediated GCNT2 gene expression alteration were utilized to explore the effect of hypoxia and GCNT2 on melanoma progression and stem gene expression.

Results: MM cells grown under hypoxic conditions had reduced GCNT2 and MITF with upregulated stem cell marker KLF4 expression. Importantly, in the in vivo TIC assay, we found significant decreased tumor formation with increased GCNT2 expression while low GCNT2 levels enabled tumor formation even when 1000 cells were injected in immunocompromised mice. Further in accordance with the role of TICs in immunoevasion, human PBMC – MM co-cultures depicted an increase in T-regulatory cell generation associated with low GCNT2 compared to high GCNT2 expression in melanoma cells. Importantly, using melanoma patient specimens, immunohistochemical analysis of GCNT2 corresponded with a significant increase in mortality with the loss of GCNT2 staining. Taken together, our results highlight that GCNT2 associates with increased TIC generation, tumor formation, and immunoevasion.

Conclusions-Implications: These findings highlight GCNT2/I-branching not only as a biomarker of melanoma virulence but reveal malignancy-associated pathways functioning in parallel with loss of GCNT2/I-branching that could offer additional targets for the treatment of metastatic melanoma.

P9

Galectin-9 Helps Govern Human B Cell Adhesion to And Migration Through Human Vascular Endothelium.

Lee Seng Lau, Asmi Chakraborty, Caleb Staudinger, Sandra L. King, Frances Clemente Erickson, Angela Bernasconi, Francis W. Luscinskas, Chad Perlyn, Charles J. Dimitroff.

Department of Translational Medicine, Translational Glycobiology Institute, Florida International University, Miami, FL; Department of Dermatology, Brigham and Women's Hospital, Boston, MA; Department of Pathology, Vascular Research Division, Brigham and Women's Hospital, Harvard Medical School, Boston, MA; Nicholas Children's Hospital Ambulatory Surgery Center and Department of Surgery, Division of Plastic Surgery, Herbert Wertheim College of Medicine Florida International University, Miami, FL.

Keywords: B cell tolerance, humoral immunity, galectins, cell adhesion, immunoregulation

Introduction and Objective: Humoral immunity is critically driven by the coordinated differentiation of naïve B cells into antibody-secreting plasma cells. For naive B cells to access peripheral lymph node (LN) and reside awaiting activation by pathogenic antigen, there is a requirement for circulating naïve B cells to adhere and be retained in LNs. Though lymphocyte (L)-selectin is considered the LN-homing receptor for all lymphocytes, the singular role of L-selectin in B cell homing to peripheral LN is less clear. There is compelling experimental data suggesting that humoral immune responses and number/size of B cell follicles/germinal centers in L-selectin KO mice are robust. Prior data from our laboratory indicate that circulating naïve B cells express an abundance of i-linear glycans that avidly bind galectin (Gal)-9 and

that Gal-9 is expressed at a high level in peripheral LNs. We hypothesize that Gal-9 may play a role in circulating B cell homing to peripheral LNs.

Methods: In this study, we first analyzed human circulating B cells using flow cytometry for their expression of homing molecules, L-selectin and endothelial (E)-selectin-binding glycans, sLeX/A. We then examined the spatial localization of Gal-9 in human tonsil tissue and peripheral LNs and observed conspicuous expression in/on post-capillary venules and high endothelial venules with immunohistochemical and immunofluorescence staining. Using a human umbilical vein endothelial cell (HUVEC) model that expresses high levels of Gal-9, we investigated the ability of Gal-9 to mediate adhesion of MACS-sorted CD19+ B cells from PBMC to HUVEC under static and physiologic shear flow assay conditions.

Results: We found that L-selectin was expressed at low level and sLeX/A antigens were absent on human circulating B cells. Gal-9-dependent adhesion of B cells to HUVEC was inhibited in the absence of Gal-9 or presence of competitive inhibitor lactose. Furthermore, we investigated whether this pro-adhesive Gal-9 activity promoted chemokine-directed trans-endothelial migration (TEM) through HUVEC monolayers. We, in fact, observed a Gal-9-dependent inhibition of TEM compared with controls, suggesting that Gal-9 was decelerating TEM.

Conclusions-Implications: Taken together, these data illustrate Gal-9's potential key role in circulating B cell homing to peripheral LN and/or in retention of naïve B cells in LNs. Our studies implicate, for the first time, Gal-9 in the adhesion of human B cells to vascular endothelium and provide a putative mechanism for Gal-9 controlling the efficiency of humoral immune responses.

P10

Clinical Education in the Midst of a Pandemic; Implementation of a COVID-19 Homeless Surveillance Program

Matison Alderman, Natalie Abad, Krissie Lobon, Chase Mallory, Sarah Stumbar, Gregory Schneider.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: telehealth training, vulnerable populations, COVID-19, clinical skills, interdisciplinary collaboration

Introduction and Objective: In March 2020, various "Safer-At-Home" orders led to closure of university campuses due to the coronavirus pandemic. Medical students at Florida International University Herbert Wertheim College of Medicine (FIU HWCOM) transitioned to online learning, prompting students and faculty to seek alternative ways to provide clinical experiences. Through the combined efforts of FIU HWCOM and the Miami-Dade County Homeless Trust, the COVID-19 Homeless Surveillance Program was created to monitor and address the health needs of homeless individuals with known or suspected COVID-19. The goal of this study was to assess students' perceptions of the remote monitoring program and the extent to which it contributed to their medical education.

Methods: After the conclusion of the program, students received a Qualtrics survey, including 5 Likert-type statements, with a scale ranging from 1-5 indicating strongly disagree, disagree, neutral, agree, and strongly agree, respectively. These statements gauged confidence, after participation in the program, with navigating a telehealth encounter, screening for COVID-19 symptoms, and working collaboratively in a telehealth setting. Two free response questions asked about lessons learned regarding the social determinants of health and how the program contributed to students' medical education and professional development. Investigators evaluated the Likert responses for general trends and performed an inductive analysis of the free text responses to identify common themes. IRB exemption was obtained from the FIU Office of Research Integrity.

Results: 27 pre-clinical and clinical medical students (response rate 67.5%) responded to the survey. All students agreed or strongly agreed that this program assisted them in navigating a telehealth system (mean=4.4, SD=0.8); assessing symptoms of COVID-19 (mean=4.5, SD=0.7); working collaboratively (mean=4.6, SD=0.69); recognizing barriers to patient care (mean=4.3, SD= 0.83); and refining clinical and

professional skills (mean= 4.5, SD=0.8). Students reported learning related to medical comorbidities and health literacy. Navigating telemedicine, interdisciplinary collaboration, and clinical skills were themes identified related to student medical education.

Conclusions-Implications: This study showed that students found participating in a telehealth surveillance program contributed positively to their medical education. As telehealth becomes a more prominent medium of providing healthcare, it is crucial to incorporate telehealth training and virtual clinical opportunities for medical students, especially with the needs of vulnerable populations in mind. As such, similar remote-monitoring programs for chronic or other acute diseases may play a continued role in medical education. Programs like this one can serve as a model for curricular integration of telemedicine.

P11

Prevalence of Pediatric Anxiety and Its Association with Premature Birth

Rachel Shatanof, Skylar Korek, Brett Smith, Juan G. Ruiz, Jenny Fortun.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: prematurity, anxiety, mental health

Introduction and Objective: Studies show that clinical disparities exist between individuals born prematurely and those born at term; however, few studies have examined whether there is a difference in the prevalence of pediatric anxiety between premature and term individuals. Objective: To determine if the prevalence of anxiety differs for pediatric individuals born prematurely compared to individuals born at term.

Methods: This is a secondary analysis of the National Survey of Children's Health (NSCH), in which we conduct a historical cohort analytical study. The NSCH database examines the physical and emotional health of children from 52,129 households identified via the National Census Bureau from 2017-2018. It is a geographically representative sample of children in the U.S. assessing demographics, physical health, mental health, and family dynamics. We compare the exposure variable of premature birth, delivery before 37 weeks of pregnancy, to the outcome variable of self-identification of anxiety currently and previously. The study group consists of all children (52,129) in which data exists on the NSCH. We examined distributions of control variables according to exposure (preterm vs. term birth). Odds ratios (ORs) and 95% CI intervals were computed to assess the direction and magnitude of association between preterm delivery and prevalence of childhood anxiety after adjusting for potential confounders by fitting a multivariable model.

Results: Of the NSCH population, 2,872 of these subjects had premature births, while 23,251 did not. Of those with premature births, 435 reported a history of anxiety, while 2437 did not. In the population that was not born premature, 2724 reported a history of anxiety, while 20,527 did not. When comparing prevalence of anxiety in the premature vs. the non-premature group, an OR of 1.35 was found. Additionally, a history of anxiety was higher in those age 14-17, female, nh white, English speaking, with unmarried parents, who average 4+ hours of screen time (outside of schoolwork), eat fewer meals with their families, are not food secure, have parents who smoke inside, have been diagnosed with ADHD and/or Autism, had adverse childhood experiences (ACE 5,6,7,8, 9), and have special needs with a p-value <0.001 for each finding. When adjusted for these factors, it was found that the odds ratio changed to 1.30 and stayed significant at 0.048.

Conclusions-Implications: A significant difference was found in the prevalence of childhood anxiety among those who were born premature and those who were not born premature. Those born premature had a 30% higher chance of having anxiety during their childhood. This sheds light on a possible link between premature birth and its effect on critical periods of neural development in the late stages of fetal development. One implication of the findings is its limitation to an American pediatric population, and another could be possible survey bias from those who filled out the surveys.

P12

Poverty Status and HPV Vaccination Uptake

Elizabeth Hanna, Alexandra Cabrera, Zeerak Khan, Juan G. Ruiz, Sara Stumbar, Grettel Castro, Pura Rodriguez.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: HPV vaccine, obstetrics & gynecology, public health, preventative medicine, socioeconomic status

Introduction and Objective: HPV is a highly prevalent disease in the United States with potentially deadly sequelae such as cervical, oropharyngeal, and anal cancers. Vaccination is the most assured way to prevent HPV, which is why ensuring its widespread uptake is an imperative public health objective. Our study aims to study whether poverty level among US teenagers (13-17 years) is associated with HPV vaccine coverage.

Methods: A cross-sectional comparative study was done, using data from the National Immunization Survey-Teen 2018. Records with available responses on both the exposure variable (family's poverty level) and the outcome variable (family-provided information on the subject's vaccination status) were included. Odds ratios (OR), both crude and adjusted for potential confounders (multivariable logistic regression), describing the association between poverty levels and HPV vaccine coverage were obtained.

Results: Our final effective sample included 31,391 US teens. After adjusting for age, sex, race/ethnicity, and provider recommendation it was revealed that teens in the below poverty bracket had 70% increased odds of receiving the HPV vaccination when compared to individuals with the highest family income (OR 1.70 (95%CI 1.44-2.01) p=0.00). Teens in the intermediate income bracket were not found to have statistically significantly different odds of HPV vaccination uptake compared to those in the highest bracket (OR 0.94 (95%CI 0.84-1.05)). Of note we also found provider recommendation to be a strongly associated variable with an adjusted OR of 18.13 (95%CI 15.83-20.77).

Conclusions-Implications: Family income below poverty level is associated with increased odds of HPV vaccination uptake in US teenagers. Provider recommendation was also incidentally found to have a strong effect on vaccination uptake. Future interventions should focus on increasing provider recommendations for teenagers with higher family income.

P13

Firearm Violence Prevention Education in the Context Healthcare

Aliasger Ezzi, Priya Shil, Jennifer Knight, Nitya Ramalingam, Rachel Shatanof, Alexa Denton, Lauren Ramesar, Zahra Ukani, Monica Reyes, and Randal H. Silbiger.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: Firearm violence prevention, medical school, education, healthcare issue, gun violence

Introduction and Objective: Firearm violence results in 38,000 deaths in the US each year. Three million children are subjected to lasting trauma from direct exposure to related injuries and deaths. The resultant cost to the US healthcare system is approximately $2.3 billion annually caring for victims and survivors. Until recently, healthcare professionals were prohibited from addressing the presence of firearms in the home as a health risk during a patient encounter in Florida and other regions. Therefore, few medical school curricula include education regarding firearm injuries as a health issue. This pilot study seeks to 1) assess medical student beliefs regarding firearm violence as a public health issue 2) gauge their interest in integrating firearm violence prevention (FVP) education into a medical school curriculum, 3) propose specific components of FVP education beneficial for future clinical practice, and share relevant resources.

Methods: A two-part module was presented to second year medical students by faculty and peers. The presentation introduced firearm safety as a health risk reduction issue to be discussed on par with other similar interventions such as seatbelts, helmets and condom use; addressed the personal, social, and

community impact of firearm violence; and presented some tools physicians can use to counsel patients. A role play demonstration used the Medical Students for Gun Safety White Coat card to teach how healthcare professionals can address firearm safety with patients. Surveys were distributed before and after the FVP module Part 1 to compare students' perceptions of firearm safety as a public health issue and their interest in receiving FVP education in medical school. Four months later, Part 2 of the FVP module informally assessed retention of the material from the first module and reinforced and expanded on interventions including community level efforts.

Results: 92 and 70 students completed the pre and post surveys respectively. 84.8% of pre-session respondents and 91.5% post session respondents strongly agreed or agreed that FVP is a healthcare issue. 85.9% of pre-session respondents and 94.3% post session respondents strongly agreed or agreed that a FVP curriculum would be beneficial to a future physician. 92.4% of pre-session respondents and 95.7% post session respondents indicated they are interested in a FVP curriculum at HWCOM.

Conclusions-Implications: Survey results indicate medical students believe FVP is an important topic of discussion in a healthcare setting. The goals of this proposed curriculum are to educate students on patient-centered techniques to assess the health risks from the presence of a firearm, to equip students with the tools helpful to educate their patients about risk reduction, and to be advocates for prevention of firearm violence through education on the community level.

P14

Comparing the Effects of General vs. Regional Anesthesia on Postoperative Mortality in Total and Partial Hip Arthroplasty

Irfan A. Khan, Raihan Noman, Nabeel Markatia, Grettel Castro, Pura Rodriguez de la Vega, Juan G. Ruiz.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: total hip arthroplasty, partial hip arthroplasty, regional anesthesia, general anesthesia, postoperative mortality

Introduction and Objective: There is conflicting evidence in the literature regarding whether type of anesthesia (regional vs. general) is associated with postoperative mortality in patients undergoing hip arthroplasty. The present study compares mortality between general or regional anesthesia administered to patients undergoing either total (THA) or partial hip arthroplasty (PHA).

Methods: A retrospective cohort was assembled using the 2015-2016 American College of Surgeons National Surgical Quality Improvement Program database. Adult patients undergoing hip arthroplasty under general or regional anesthesia were included. Patients were excluded if receiving any other type of anesthesia, as well as having an ASA score ≥ 4, preoperative acute renal failure, severe congestive heart failure, COPD, or ascites. Adjusted odds of 30 days all-cause postoperative mortality according to type of anesthesia were estimated by fitting multiple logistic regression models that included potential confounders and effect modifiers.

Results: A total of 60,897 patients were included. Given that the interaction between type of anesthesia and type of arthroplasty was statistically significant, separated models were fitted for each type of arthroplasty. There was no evidence of an association between type of anesthesia and postoperative mortality in hip arthroplasty patients regardless of whether the arthroplasty was partial (OR = 0.85; CI 0.59-1.22) or total (OR = 0.68; CI 0.43-1.08).

Conclusions-Implications: The overall postoperative mortality in adult hip arthroplasty patients is low. Our findings support that mortality is not different between patients receiving regional vs general anesthesia regardless of type of hip arthroplasty (total vs. partial).

P15

Association between race/ethnicity and type of provider encountered in the emergency department

Jessica Sharma, David F. Gomez, Marcia Varella.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: race, disparities, emergency department, provider, secondary analysis

Introduction and Objective: Race is associated with significant differences in emergency care, and minorities tend to have worse outcomes, including higher mortality rates. It is unknown whether there are racial/ethnic related differences in the type of provider seeing patients in the ED could contribute to such disparities. The aim of our study is to elucidate whether there is an association between race/ethnicity and the type of provider seeing patients in the ED.

Methods: We performed secondary analysis of data from the CDC database on the National Hospital Ambulatory Medical Care Survey (NHAMCS). The sample included adults visiting the ED and with triage scores between 3-5. The independent variable is the participant's race/ethnicity as reported in the medical records using both ethnicity (Hispanic or non-Hispanic) As well as race (White, Black/African American, Asian, Hawaiian or Other Pacific Islander, American Indian or Alaska Native). The dependent variable is the type of provider seen in the Emergency Department (Nurse Practitioner [NP] and/or physician assistant [PA] but no Attending Physician versus Attending Physician with any combination of other providers). We assessed associations using multivariable logistic regression models for crude and adjusted measurements of odds ratio (OR) and corresponding 95% confidence intervals (CI).

Results: We assessed 108,520 eligible adults with triage scores between 3-5. Triage score did not modify the association tested (P=0.391).The unadjusted odds of being solely seen by a NP/PA and not by an attending physician was 30% higher in the Black/African American group compared to the White group (OR=1.29, 95% CI 1.04-1.61, p=0.020). After adjusting for age, sex, insurance status, presence of chronic condition(s), and triage level, the association was no longer statistically significant (OR=1.16, 95% CI 0.91-1.48, P=0.223).

Conclusions-Implications: We found no evidence that race/ethnicity was associated with the type of provider seeing patients in the ED in adult patients with triage scores between 3-5, suggesting that disparities in health care are not due to the type of provider that sees the patient in ED.

P16

Predictors of Emergency Department Utilization in the United States in 2017: An explorative analysis

Phoebe Hughes, Tori Ehrhardt, Diana Llompart, Grettel Castro, Pura Rodriguez, Noël C. Barengo.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: emergency department, predictors, sociodemographic variables, socioeconomic variables, United States

Introduction and Objective: Emergency department (ED) utilization in the United States is a climbing trend in healthcare and is associated with increased costs and varied outcomes in quality of care within the healthcare system. Existing studies have explored associations between specific sociodemographic variables and emergency department usage. However, there is not a comprehensive understanding of which variables in the general population lead to increased emergency department utilization overall. The objective of this study was to identify independent predictors associated with at least one emergency department visit within the last 12 months in 2017.

Methods: Secondary data analysis of cross-sectional study, using data of the 2017 NHIS database. The study population comprised U.S. adults, aged 18-64 (n=17,421). Participants with missing data or invalid information for independent variables, dependent variables, or covariates were excluded. The main outcome for this study was having had >1 visits to an ED in 2017. Possible predictors included age, sex, race, ethnicity, marital status, sexual orientation, BMI, affordable prescription medications, geographic region, poverty ratio, insurance status, marital status, transportation, occupational status, psychiatric history, smoking history, and preventive care. Unadjusted and adjusted logistic regression analysis were used to calculate odds ratios (OR) and their corresponding 95% confidence intervals.

Results: It was found that predictors of an ED visit within the past year in 2017 were female sex, LGTBQ+, Black/African American, obesity, living with a partner or divorced, no transportation, poverty ratio <1.9, Medicaid or other insurance coverage,

unpaid at work or not working, could not afford their prescription medications, decreased functional status due to a psychiatric condition, and smoking history (OR 1.2-2.5). Protective characteristics for ED utilization included age >40, Asian, and Hispanic (OR 0.7-0.8). No statistically significant association between geographic region or regular preventive care and ED visits was found.

Conclusions-Implications: Our results identified several predictors of Emergency Department usage in the United States. Addressing these predictors can help promote healthcare initiatives, improve patient care, and relieve ED services as a healthcare safety net. Future research should involve further exploration of these identified predictors and focus on trends in ED utilization.

P17

Racial Disparities in the Use of Amputation as Treatment for Malignant Primary Bone Neoplasms: A Retrospective Analysis from 1998-2016

Matan Ozery, Hans Lapica, Harsha Raju, Grettel Castro, Pura Rodriguez de la Vega, Noël C. Barengo.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: primary bone neoplasm, limb-salvage, amputation, ethnic disparity, racial disparity

Introduction and Objective: Primary Bone Neoplasms (PBNs) represent less than 1% of total diagnosed cancers each year. When not treated promptly, PBNs can cause significant morbidity and mortality. With recent surgical advancements, PBN treatment has shifted from amputation to limb-salvage procedures. However, significant disparities between different racial and ethnic groups exist that limit access to limb-salvage procedures. There exist inconsistent scientific findings regarding a relationship between race and treatment disparities in PBN patients. This study investigated patients with PBNs to determine an association between race/ethnicity and procedure-type selection.

Methods: A retrospective observational cohort study was conducted using the Surveillance, Epidemiology, and End Results (SEER) database to select 5091 patients who were diagnosed with a PBN between 1998 and 2016. Participants with missing information on any of the key variables were excluded. Patients were classified into three distinct racial groups (i) White, (ii) Black, and (iii) Other (Asian, American Indian, Pacific Islander). The main outcome assessed was the procedure-type received: amputation vs. limb-salvage. The covariates included in the analysis were ethnicity, age, sex, cancer stage and grade, insurance status, rural location status, and year of diagnosis. Unadjusted and adjusted logistic regression analysis were used to calculate odds ratios and 95% confidence intervals (CI).

Results: Race was not associated with increased amputation rates. However, Hispanic patients had a 40% increased likelihood of amputation (OR 1.4; 95% CI 1.2-1.6). Patients older than 65 were found to be 60% more likely to receive amputation than adults ages 26-49 (OR 1.6; 95% CI 1.1-2.2). Insurance status was an independent predictor of procedure selection. Uninsured patients were 70% more likely to receive amputation than insured patients (OR 1.7; 95% CI 1.1-2.8). Inclusion of an additional adjustment for insurance status did not significantly alter the strength of the association.

Conclusions-Implications: An ethnic disparity was found that could not be explained by differences in patient characteristics. We recommend providers be more aware of patients less likely to seek regular healthcare in the context of PBNs. The specific associations between independent predictors and different race/ethnicity groups elucidate a possible link requiring further investigation.

P18

Wound Outcomes of Smokers Undergoing Implant-Based Breast Surgery

Antoun (Tony) Bouz, Isaac Zucker, Grettel Castro, Pura Rodríguez de la Vega, Noël C. Barengo.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: smoking, post-operative infection, implant-based breast surgery

Introduction and Objective: Smoking is a cause of many postoperative complications, including delayed wound healing, tissue necrosis, and reconstructive

flap loss. However, there is a paucity of evidence-based guidelines for smoking cessation in patients undergoing implant-based breast surgery. The objective of this study was to determine if smoking is associated with wound dehiscence or superficial/deep surgical site infection (SSI) in women undergoing implant-based breast surgery.

Methods: Using the American College of Surgeons National Surgical Quality Improvement Program, data was obtained of U.S. adult females (n=10,077) between the ages of 18 and 70 who underwent insertion of a breast prosthesis from 2014-2016. Patient's preoperative smoking status, demographic and comorbidities were analyzed to determine association with wound dehiscence, superficial SSI, and deep SSI. Unadjusted and adjusted logistic regression analysis were used to calculate odds ratios and 95% confidence intervals.

Results: Patients who smoked had a statistically significant higher proportion of wound complications (2.4%) compared to non-smokers (1.3%; $p<0.01$). Adjusted analysis demonstrated a significantly higher odds of wound complications in smoking patients compared to those who did not smoke (OR 2.0; 95% CI 1.3-3.2).

Conclusions-Implications: Our study suggests that smoking is an independent risk factor for postoperative complications in patients undergoing implant-based breast surgery. These results have significant clinical implications, as increased precautions can be taken in smokers undergoing breast surgery to minimize postoperative wound complications. Future studies may determine the optimal amount of time that patients should abstain from smoking prior to implant-based breast surgery.

P19

Percutaneous Endoscopic Gastrostomy Tube Placement Is Safe and Effective in Children When Compared to Laparoscopic Technique

Matthew T. Hey, Kyle J. Glithero, Cathy A. Burnweit.

Maimonides Medical Center; Nicklaus Children's Hospital, Miami, FL. Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: Gastrostomy, pediatric surgery, safety, cost-effectiveness

Introduction and Objective: There are many techniques of gastrostomy tube placement in children. Percutaneous endoscopic gastrostomy (PEG) has been previously considered to confer more serious complications and be inferior to a laparoscopic technique. The aim of this study is to challenge these assertions by comparing experiences using PEG and laparoscopic gastrostomy (LapGT) techniques at a tertiary care pediatric hospital.

Methods: All PEGs and LapGTs were reviewed at the participating institution from August 2016 through January 2018. Demographics, procedure time, operative charges, and 30-day complications were reviewed for patients who had gastrostomy tube placement, either PEG or LapGT, not in conjunction with other procedures. Means of quantitative values were compared using the student's t test. Categorical values were compared using the X2 test. Percentages and charges were rounded to the nearest whole number.

Results: Over 18 months, 93 isolated gastrostomy tubes were placed in children aged 2 weeks to 19 years. There were 56 PEGs (60%) and 37 LapGTs (40%), based on surgeon preference. There was no significant difference in gender, mean age, or mean weight between the two groups. Mean operative time for PEG was 59% shorter (14 vs. 33 minutes, $p<0.001$). Operating room charges averaged $4,500 less in the PEG group ($11,400 vs. $15,900, $p<0.001$). Neither group had complications that required a return to the operating room within 30 days postoperatively. There was also no difference in the rate of return to operating room for fundoplication after gastrostomy tube placement (fundoplication rate after PEG and LapGT was 0.05 and 0.05, $p = 0.9919$). In two cases PEGs were converted to LapGTs because safety criteria for PEG were not met.

Conclusions-Implications: In this study depicting experience with PEGs and LapGTs, it was found that the PEG technique, when used with clearly defined safety criteria, decreased operative time and cost without compromising safety. In the current milieu of decreasing anesthesia exposure for children and reducing healthcare costs, PEG should be considered as a safe and effective option for gastrostomy tube placement in children.

P20

Predictors of Opioid Consumption after Robotic-assisted Total Knee Arthroplasty

Matan Ozery, Jesus M. Villa, Tejbir S. Pannu Carlos A. Higuera, Preetesh D. Patel.

Cleveland Clinic Florida; Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: total knee arthroplasty, opioid use, cruciate prosthesis, robotic-assisted surgery

Introduction and Objective: In view of the current opioid misuse crisis in the United States, the objective of this investigation was to identify predictors of opioid consumption after robotic-assisted total knee arthroplasty (Ra-TKA).

Methods: We retrospectively reviewed 186 consecutive primary Ra-TKA cases performed in a single institution by a single surgeon after the implementation of Florida's law on controlled substance prescribing (7/3/2018 to 6/18/2019). Postoperative opioid prescriptions consumed by the patient were converted into Total-Morphine-Equivalents (TME) (dependent variable). Predictors of TME evaluated included age, gender, race, ethnicity, BMI, ASA/smoking status in addition to robotic system data {postoperative deviation of postoperative transepicondylar-axis with respect to the posterior-condylar-axis, component sizes, tibial slope, stressed medial/lateral tibiofemoral gaps, postoperative leg-alignment, prosthesis-type [CR(cruciate-retaining) vs. CS(cruciate-substituting)], patellar polyethylene thickness}. Other predictors included knee range-of-motion, length-of-stay, tourniquet/skin-to-skin times, and hospital discharge disposition. Means and frequencies were used to describe continuous and categorical data, respectively. All potential predictors were assessed with univariate regression analyses and significant predictors were incorporated into a multivariate stepwise regression analysis. An independent sample t-test was also performed. Alpha was set at 0.05.

Results: Overall, mean TME was 1,215.4 ± SD 567.6 (range, 515.0 to 4,890.0). Baseline demographics and patient characteristics are shown in Table 1. In univariate analyses, age and prosthesis-type (CR/CS) were significant TME predictors (Figures 1 and 2, respectively). In the multivariate model, prosthesis type was the most important predictor (Pearson-correlation 0.183, p=0.007; regression-coefficient 0.181, p=0.013). In this model, the use of a cruciate-substituting prosthesis predicted a TME increase of 219 units (95%CI, 46.5-391). Age was the second predictor (inverse relation, Pearson-correlation -0.149, p=0.022; regression-coefficient -0.147, p=0.043). For every additional year of age, the model predicted a decrease of 10.2 TME units (95%CI, -20.2 to -0.3). On further analysis, Robotic-assisted TKAs performed with cruciate-retaining prosthesis had a mean TME of 1,061.5 versus 1,282.5 for cruciate-substituting prosthesis (p=0.013).

Conclusions-Implications: The use of a cruciate-substituting prosthesis and younger age were significant predictors of increased opioid consumption after robotic-assisted TKA. These two factors should be considered during the informed consent process and for managing postoperative pain expectations.

P21

Relationship Between Insurance Status and Melanoma Survival Rates

Charles Wyatt, Claudia Trilles, Grettel Castro, Juan Gabriel Ruiz, Noël C. Barengo.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: Melanoma, health insurance, health disparity

Introduction and Objective: In 2019, melanoma of the skin was the 5th most common cancer amongst the US population. Current evidence shows lower survival rates in uninsured or publicly insured melanoma patients relative to those that are privately insured. Scientific information in regard to health insurance status and survival in cutaneous melanoma patients after the Affordable Care Act Medicaid expansion is limited by incomplete follow-up, lack of cause-specific survival data, and inadequate representation of minorities. This study investigates the association between insurance status and cause-specific 5-year survival rates in adults with melanoma between 2007-2016.

Methods: This retrospective cohort study included adult patients with cutaneous malignant melanoma between 2007-2016 using the SEER Incidence Database (n= 109,500). The main outcome was 5-year survival. The exposure variable was health insurance based divided by SEER classifications (uninsured, "any Medicaid", insured, insurance not specified). Covariates included age at diagnosis, sex, race, ethnicity, stage at diagnosis, and surgical treatment. Unadjusted and adjusted Cox regression analyses were used to calculate hazard ratios (HR) and 95% confidence intervals (CI).

Results: Those included in the study were adults aged 18 years and older with a primary diagnosis of cutaneous malignant melanoma between 2007-2016. Patients without information on health insurance, survival data or time, and those with a primary diagnosis-reporting source at autopsy were excluded, leading to a final sample size of 109,500 participants. Those with Medicaid (HR 2.0; 95% CI 1.8 -2.1) and uninsured patients (HR 2.0, 95% CI 1.8-2.2) had a lower probability of survival compared with those having private insurance when adjusted for all covariates. Black patients had a higher hazard of death (HR 1.4, 95% CI 1.2-1.6) compared with white participants.

Conclusions-Implications: Survival disparities exist among patients with malignant skin melanoma based on insurance status and race. Future studies should explore factors related to variability in care among insurance types to reduce cutaneous malignant melanoma survival differences associated with health insurance status.

P22

The Association Between Education Level and Length of Time Between Health Maintenance Visits in Adults Aged 18 to 64

Cristina Fernandez, Diana Rodriguez, Nicole Wilson, Pura Rodriguez de la Vega, Suzanne Minor, Noël C Barengo.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: primary care, outpatient, education, health maintenance visit, and socioeconomic

Introduction and Objective: In the United States, it has been reported that 25% of adults 18 years and older have no annual medical provider visits. While the role of preventative medicine in attenuating negative health outcomes has previously been demonstrated, whether there is an association between educational status and time between preventative health visits is poorly studied. A better understanding of this relationship could lead to the development of interventions for disadvantaged populations. Our study aimed to determine if levels of education are associated with the length of time between health maintenance visits in adults aged 18-64.

Methods: Secondary analysis of cross-sectional data was performed utilizing the 2019 Behavioral Risk Factor Surveillance System survey. Our study was limited to adults aged 18-64 in the US (n=255,268). The respondents missing information on health maintenance visits and/or education level were excluded from the analysis (n=3,939). The independent and dependent variables were education level (never attended school/kindergarten, grades 1-8, grades 9-11, grade 12/GED, some college, college, or more) and length of time since the last checkup (within the past year or greater than 1 year), respectively. Covariates included age, sex, race, ethnicity, income, number of children, marital status, health insurance, and health status. Unadjusted and adjusted logistic regression analyses were used to calculate odds ratios (OR) and 95% confidence intervals (CI).

Results: When controlled for covariates, participants with education levels between grades 1-8 (OR 1.19; 95% CI 1.02-1.39) and 9-11 (OR 1.15; 95% CI 1.03-1.26) had significantly higher odds of time between health maintenance visits exceeding one year as compared to those reporting college education. Other variables associated with increased time between visits included age 18-34 (OR 1.97; 95% CI 1.87-2.09), male sex (OR 1.59; 95% CI 1.53-1.66), income between $25-35,000 (OR 1.22; 95% CI 1.13-1.33), four or more children in the household (OR 1.28; 95% CI 1.15-1.43) and no health insurance (OR 3.66; 95% CI 3.45-3.88).

Conclusions-Implications: Future studies are needed to investigate avenues for intervention, such as adult education programs to address healthcare barriers. Local interventional studies such as training

physicians to identify and counsel patients with lower education may yield positive results. Given that those with lower education levels often have limited job flexibility, implementing weekend and/or telehealth appointments may address these obstacles.

P23

The Effect of Race on Short-Term Postoperative Complications in Patients with Cardiovascular Risk Factors Undergoing Urologic Surgery

Elias Atri, Ian Ergui, Jenna Bergman, Pura Rodriguez, Alan M. Nieder, Juan M. Lozano.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: urologic surgery, health disparities, cardiovascular risk factors

Introduction and Objective: Patients with cardiovascular risk factors (CVRF) have an elevated risk of postoperative complications after urological surgery. African American patients suffer from renal and prostate cancers along with cardiovascular disease at higher rates than Caucasians. The objective of this study was to determine whether race modifies the association between CVRF risk factors and short-term postoperative outcomes in patients undergoing urological surgery.

Methods: The 2015 and 2016 National Surgical Quality and Improvement Program (NSQIP) databases were queried for all adult patients undergoing partial or total nephrectomy, nephroureterectomy, cystectomy or prostatectomy. Patients lacking information on race, CVRF or postoperative outcomes were excluded. The exposure variable was CVRF and the outcome variable was post-operative adverse events. The prespecified null hypothesis was that race is not an effect modifier of the association between CVRF and postoperative complications. Analyses included describing the baseline characteristics, assessing the associations between potential confounders and the exposure/ outcome, and a multivariate analysis of the association between CVRF and postoperative complications including potential confounders and race as an interaction term.

Results: A total of 9,132 patients were included in the final analysis. Among included patients, 67.2% had CVRF and 12.7% had postoperative complications. Patients with preexisting CVRF had 70% increased unadjusted odds of developing a postoperative complication (OR 1.7, 95% CI 1.5-2.0). After adjusting for potential confounders, the association decreased but retained statistical significance (aOR 1.3, 30% CI 1.1-1.6). African American patients had 30% increased adjusted odds of a postoperative complication (aOR 1.3, 95% CI 1.1-1.5). The binary logistic regression model was used to assess the interaction between race and CVRF and found that race does not modify the association between race and post-operative complications.

Conclusions-Implications: African American patients and those with CVRF have higher odds of post-operative complications than other groups. While race was not a risk modifier in the association of CVRF with surgical complications, additional studies are needed to elucidate the mechanisms of the inequities of outcome in minority patients.

P24

The Association Between Rural and Urban Location on Cancer Attitudes and Beliefs: A Cross-Sectional Study of the Health Information National Trends Survey

Ritujith Jayakrishnan, Sharan Kapoor, Aaron Shepherd, Grettel Castro, Pura Rodriguez, Frederick Anderson, Juan Lozano, Noël C Barengo.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: rural-urban, cancer perceptions, cancer disparities

Introduction and Objective: Residential location is an important factor in cancer prognosis, with rural populations suffering from increased mortality rates in comparison to urban counterparts (182 versus 162 per 100,000, respectively). Cancer screening rates also differ between rural and urban populations (77.4% vs 82.0% met screening recommendations). Cancer worry has shown to be a motivator for completing screening, which in turn reduces cancer mortality. There is insufficient data examining the differences in cancer perceptions between these

communities. Therefore, we aimed to determine whether residential location, urban versus rural, is associated with cancer worry in US adults.

Methods: A cross-sectional study was conducted using the 2019 HINTS 5 Cycle 3 database, consisting of 5,438 responses from randomly surveyed American adults. Our sample excluded participants ever diagnosed with cancer and those with missing information on the key variables (n=1,050). The main exposure variable of geographic location was categorized as rural or urban. The main outcome variable was cancer worry. Covariates included age, race/ethnicity, gender, household income, family history of cancer, and depression/anxiety symptoms (PHQ-4 scoring). Unadjusted and adjusted logistic regression were performed to calculate odds ratios (OR) and 95% confidence intervals (CI).

Results: The adjusted logistic regression did not demonstrate any association regarding cancer worry in rural or urban populations (aOR 0.92; 95% CI 0.55–1.53). However, those with a household income of less than $20,000/year had a higher likelihood of cancer worry when compared with those making over $75,000/year (aOR 0.41; CI 0.26–0.65). Individuals with mild and moderate depression/anxiety symptoms were more likely to worry about cancer compared with those without symptoms (aOR 1.73; CI 1.10–2.70 and aOR 2.99; CI 1.68–5.31, respectively). Finally, women had a higher likelihood of cancer worry when compared with men (aOR 1.37; CI 1.01–1.85).

Conclusions-Implications: Our study found no associations between cancer worry and residential location. Physicians may identify patients who are less likely to worry about cancer. This may lead to guided conversations to encourage the completion of screening. Further studies should aim to characterize other aspects of cancer attitudes, such as the Health Belief Model and sociocultural factors.

P25

The Association between Socioeconomic Factors and Influenza Vaccination Uptake in Pregnant Women

Michaela Mills, Sonja Radosevic, Ana Sosa, Pura Rodriguez de la Vega, Grettel Castro, Juan G. Ruiz, Marcia Varella.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: influenza, vaccination, pregnancy

Introduction and Objective: Influenza vaccination is recommended during pregnancy, yet vaccinations rates are still suboptimal. Only 54% of pregnant women received the influenza vaccine in 2019. The aim of our study is to assess if maternal education and household income is associated with influenza vaccination in pregnant women in the United States.

Methods: We analyzed data from the PRAMS years 2016-2019. Participants from most states were included (exceptions were Hawaii and Alaska) (n= 2,977). Independent variables included self-reported maternal education level (>high school, high school, some college education, ≥college), and annual household income ($0-20,000, $20,001-40,000, $40,001-60,000, $60,001-85,000, and >$85,000). The dependent variable was receipt of influenza vaccination, based on maternal self-report of having been vaccinated for influenza during or in the three months prior to pregnancy. STATA v15 software was utilized to perform logistic regression analysis accounting for the complex survey design. Effect modification was tested, and results were stratified by household income groups accordingly.

Results: Sixty-one percent of women received influenza vaccination. Education was not associated with vaccination uptake in women with yearly income ≤ $20,000. In all other groups with income above $20,000, compared to women with ≥college degree, pregnant women with lower education were consistently less likely to receive the influenza vaccination. For instance, in the income group >$85,000, compared to women with ≥college degree, those with some college, high school, or >high school were respectively 54%, 47% and 66% less likely to be vaccinated against influenza during pregnancy (OR: 0.46, 95% CI: 0.39-0.54, OR: 0.53, 95% CI: 0.37-0.74), and OR: 0.34, 95% CI: 0.15-0.73, respectively).

Conclusions-Implications: Lower odds of vaccination were found as education level decreases during pregnancy only in women with annual household incomes above 20,000 dollars. Primary care and OB/GYN physicians could better advocate and intervene for improving vaccination rates during

pregnancy by understanding that education might not be equally effective in all socio-economic groups. Yet, further confirmatory studies are needed.

P26

The Effect of Race and Ethnicity on Extirpative Procedures on Ectopic Pregnancy Patients

Imran Sehgal, Matthew Hanley, Fabiola Miranda, Grettel Castro, Pura Rodriguez de la Vega, Juan M. Lozano.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: invasive, uterine tubes, oviducts, extrauterine pregnancy, tubal pregnancy

Introduction and Objective: Ectopic pregnancy is a rare complication of pregnancy that requires emergency treatment. The most definitive treatment is surgical removal of the fallopian tubes, with or without oophorectomy. However, salpingostomy, a type of conservative treatment, has shown to be a comparable treatment option to extirpative surgery. Some studies have determined which patient factors have an association with conservative versus extirpative surgical management. Our study's goal is to investigate whether race and ethnicity influence surgical treatment.

Methods: We used the NSQIP database with records taken from 2014-2016. This database extracts data from randomly selected patients starting perioperatively to 30-day postoperative. The independent variable in our study was race/ethnicity of the patient, including White non-Hispanic (NH), Black NH, Asian NH and Hispanic. The dependent variable was type of surgery, extirpative if tubes and/or ovaries are removed and conservative if they are preserved. Our data analysis included 1) a descriptive analysis of sample baseline characteristics, 2) a bivariate analysis to assess the crude association between race and other characteristics and the outcome, and 3) a binary logistic regression to determine the association between the exposure and the outcome while controlling for potential confounders.

Results: Our sample included 3,174 patients undergoing surgical intervention for ectopic pregnancy. After controlling for potential confounders, both Black NH and Hispanic patients had increased odds of extirpative surgery, as compared to White NH women (Black NH race: aOR 1.50, CI 95% 1.05 - 2.14; Hispanic: aOR 1.45, CI 95% 1.00 - 2.09). Other factors significantly associated with the type of surgery included elective surgery, outpatient status, ASA classification II and III-V, and steroid use. Age, BMI, diabetes, smoking status, operation year, transfusion, sepsis, hematocrit, and emergency case status were not found to be associated with the type of surgery.

Conclusions-Implications: Our study found that the odds of having an extirpative treatment in women with ectopic pregnancy is significantly increased among Blacks and Hispanics compared to Whites and Asians. Additional studies are needed to address the insufficient information on races and ethnicities not often studied. Practical implications are to make surgeons aware of the implicit bias when managing ectopic pregnancy surgically.

P27

Assessment of the Potential Interaction Between Antepartum Depression and Physical Abuse on The Occurrence of Postpartum Depressive Symptoms in US Women

Jorge Alsina, Kyle Kinslow, Muhammad Hamza, Pura Rodriguez de la Vega, Marcia Varella

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: intimate partner violence, postpartum depression, antepartum depression history, physical abuse

Introduction and Objective: Depression is the most common psychiatric condition affecting pregnant and postpartum women. Both Intimate partner violence and history of depression have been independently associated with the development of postpartum depression. Our aim is to assess whether physical abuse and antepartum depression interact to increase the risk for postpartum depressive symptoms.

Methods: We conducted a secondary analysis of data from the PRAMS collected between 2016-2018. Postpartum depressive symptoms were defined as either feeling down, depressed, or hopeless or having little interest in previously enjoyed activities since childbirth. Multivariable logistic regression analyses were used to compare the odds of postpartum depressive symptom occurrence in crude and adjusted models. Stata v 15 was used to account for the complex survey design. Statistical significance was set at $p<0.05$.

Results: We analyzed data from 101,143 women. History of physical abuse was observed in 4.0% and PPDS in 18.9% of respondents. After adjusting for age, family income, insurance, and pregnancy intention, physical abuse increased 1.85 times the odds of PPDS (aOR 1.85 95% CI 1.62-2.11) and history of depression increased odds of PPDS by 3.53 times (aOR 3.53 95% CI 3.29-3.78, $p<0.001$). No effect modification by depression history was observed (OR=0.99, 95% CI 0.76-1.30, p=0.977).

Conclusions-Implications: History of depression and physical abuse were independent risk factors for development of PPDS in women, suggesting the need for increased screening for those factors during pregnancy and close follow up for PPDS in women who reported physical abuse or depression.

P28

Association between Race/Ethnicity on Influenza Vaccination Status of Pregnant Women in the United States from 2016-2018

Shoshana Mond, Michelle Darko, Carol Sanchez, Marcia H. Varella.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: PRAMS, maternal influenza, racial/ethnic diversity, vaccination

Introduction and Objective: Influenza complications and morbidity are higher among pregnant women. Maternal vaccination against influenza is safe and effective. Still, vaccination rates in this population are suboptimal. Racial disparities in influenza vaccination exist in the general population, but are less explored in pregnant women. The objective of this study is to assess if there is an association between race/ethnicity and influenza vaccination among pregnant women in the US and assess whether this association is modified by age.

Methods: Cross-sectional study using data from the Pregnancy Risk Assessment Monitoring System (PRAMS) from 2016-2018 (n=70,078). Characteristics of the study population were described, followed by bivariate analysis of characteristics by outcome and exposure. Multivariate logistic regression was conducted controlling for maternal age, maternal education, marital status, pregnancy intention, prenatal care utilization patterns, insurance status, household income, and health-care provider vaccine recommendation. Effect modification assessed through interaction terms (age categories x race). Stata V14 was used in all analyses accounting for the complex survey design.

Results: Our population was 49% Non-Hispanic (NH) White, 18% NH-Black, 8% NH-Asian, 17% Hispanic, and 8% NH-Other pregnant women. 60% of our study sample received the influenza vaccine. The relative percentage of influenza vaccination receipt among racial/ethnic groups ranged from the highest being 69% NH-Asian to 58% being NH-Other. Results suggest effect modification by age thus, results of the stratified analysis showed that in both age groups (20-34 and 35 and older), NH-Black have a decreased odds of being vaccinated compared to Non-Hispanic White (OR=0.80, 95% CI 0.77-0.93 and OR=0.62, 95% CI 0.49-0.78, respectively). Hispanic and NH-Asian had an increased odds of being vaccinated compared to NH Whites in both age groups (OR=1.60, 95% CI 1.4-1.7 for Hispanics and OR=1.50, 95% CI 1.3-1.8 for NH Asians between ages 18-34, and OR-1.40, 95% CI 1.1-1.7 for Hispanics and OR=1.4,95% CI 1.1-1.8 for Asians between ≥35 year).

Conclusions-Implications: Vaccination rates in pregnant women remain suboptimal. Racial/ethnic disparities in influenza vaccination are especially worrisome for Non-Hispanic Black women 18 years or older. These results should increase awareness and potentially guide future studies focused on reducing racial disparities worldwide.

P29

Association Between the Adequacy of Prenatal Care and the Incidence of Primary C-Section Deliveries

Lauren Robertson, Cole Evans, Emily Richter, Juan G. Ruiz, Grettel Castro, Pura Rodriguez, Juan M. Lozano. Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: prenatal/antenatal care, cesarean section, pregnancy

Introduction and Objective: The dramatic increase in cesarean (c-section) delivery rates over the past 25 years has raised concern for potential overuse. Appropriate prenatal care may help address overuse. The purpose of this study was to assess for an association between the adequacy of prenatal care and the incidence of primary c-section delivery in low-risk pregnancies.

Methods: A non-concurrent cohort study was assembled using the Centers for Disease Control and Prevention's 2017 Natality Public Use File. Incidence of primary c-section delivery was assessed in singleton term pregnancies delivered in hospitals. Adequacy of prenatal care was determined by the Kotelchuck Index. Control variables include demographics, socioeconomic factors, pre-pregnancy and pregnancy health and comorbidities, as well as profession of the attending provider. Crude and adjusted odds ratios and their respective 95% confidence intervals were computed (multiple logistic regression) as measures of association.

Results: A total of 2,683,547 women were included. Most participants were 20-34 years old, non-Hispanic white, normal BMI, with no preexisting chronic disease. Intermediate care had the lowest odds of primary c-section (OR 0.89, 95% CI 0.88-0.91). Adequate plus care had the highest odds (OR 1.16, 95% CI 1.15-1.17). Independent risk factors for primary c-section included age 35+ (OR 1.3, 95% CI 1.29-1.31), non-Hispanic black race (OR 1.31, 95% CI 1.3-1.32), and overweight BMI (OR 1.34, 95% CI 1.33-1.35).

Conclusions-Implications: Sufficient but not excessive utilization of prenatal care, as seen in intermediate care, may allow for proper care and education, resulting in fewer interventions at birth. Thus, decreasing the recommended number of prenatal visits may help reduce c-section overuse.

P30

Racial Disparities Determining Survival Rates in Individuals with Laryngeal Squamous Cell Carcinoma in the US between 1998 and 2015

Michael Aguad, Anthony Rodriguez, Ramses Perez, Pura Rodríguez de la Vega, Noël C. Barengo.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: neoplasm, larynx, cancer, mortality, race

Introduction and Objective: It is estimated that in 2018, there will be approximately 13,150 new cases of Laryngeal Cancer with 3,710 deaths in the US. Data on the survival of minorities with laryngeal squamous cell carcinoma (LSCC) since 2012 is scant. Since then, there has been a shift in incidence and treatment modalities, which may have improved or worsened survival disparities among races. This study investigated if being Black or Asian/Pacific Islander (API) with LSCC was associated with a lower overall survival as compared to Whites in the US between 1998-2015.

Methods: Retrospective cohort study analyzing secondary data from the Surveillance, Epidemiology, and End Results (SEER) database collected data from 1998-2015. Inclusion criteria were adults 18 years and older (identified as Black, White, or API) who were diagnosed with LSCC between 1998-2015. The main outcome variable was 5-year survival, while the main independent variable was race. Covariates included in the model were age, sex, year of diagnosis, marital status, primary site of tumor, tumor grade, stage at diagnosis, surgery, and insurance status. Kaplan-Meier curves and log-rank test were assessed. Unadjusted and adjusted Cox proportional hazard model were used to calculate Hazard ratios (HR) and 95% confidence intervals (CI).

Results: When compared with Whites in the unadjusted model, both Blacks and API had a statistically significant hazard of death (HR 1.55; 95% CI 1.42-1.69 and HR 1.18; 95% CI 1.02-1.38, respectively). After adjusting for potential

confounders, Blacks HR decreased but remained statistically significant (HR 1.16; 95% CI 1.05-1.29). However, API patients did not have a statistically significant difference (HR 1.14; 95 CI 0.96-1.37) in survival compared with White. In patients that were uninsured compared with insured patients, the Hazard of death within 5-years was 1.59 (95% CI 1.23-2.05).

Conclusions-Implications: The lower 5-year survival seen in Blacks with LSCC is a vital topic in the clinical community that can further help to understand and isolate the specific factor causing it. Therefore, studies that have more complete information on insurance status and other social determinants of health should be conducted to continue to investigate the causality of the difference in survival.

P31

Diurnal Range and Intra-patient Variability of ACTH is Restored after Successful treatment of Cushing's Disease

Prashant Chittiboina, Reinier Alvarez, Elizabeth Hogan, David T. Asuzu, Raven McGlotten, Gretchen Scott, Constantine Stratakis, Lynnette Nieman.

Neuroendocrine Surgery Unit, National Institute of Neurological Disorders and Stroke, Bethesda, MD; George Washington University, Department of Neurosurgery, Washington, D.C; Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: endocrinology, Cushing's disease, diurnal variation, ACTH, variability

Introduction and Objective: In patients with Cushing's Disease (CD), intra-patient variability of hormones levels creates significant clinical challenges. The variation of urinary and salivary cortisol has been well described, however, intra-patient variation of adrenocorticotropic hormone (ACTH) in CD remains unknown. As such, a single static ACTH value after surgery has not been shown to have utility in predicting remission. Considering the pathophysiology of illness, CD treatment should presumably modify ACTH levels prior to affecting cortisol. We hypothesized that the ACTH coefficient of variation (CV) at each diurnal time-point can help predict remission from CD following trans-sphenoidal surgery (TSS).

Methods: We conducted a retrospective review of patients with histologically confirmed diagnosis of CD between 2005 - 2019. Patients with ≥1 pre-operative and post-operative plasma ACTH, drawn between 0400 – 0800h (AM ACTH) and 2200 – 0200h (PM ACTH) were included (n=253). ACTH variability (VarACTH) was defined as the CV of ACTH from the mean. Patients were identified to be in remission if a nadir AM serum cortisol was <5 g/dL within ten days after TSS. ACTH measurements were grouped into morning (AM) and midnight (PM) values to account for diurnal variation (DV). The ability of ACTH variables to predict non-remission was evaluated by univariable and multivariable logistic regression.

Results: Of 253 included patients, 223 achieved remission following first-time or repeat TSS. Patients in remission showed greater AM and PM VarACTH compared to non-remission patients (AM: 36.31 vs 24.38, $p=0.02$; PM 44.24 vs 17.02, $p<0.001$). DV was also noted to be greater in patients who achieved remission (87.77 vs 28.33; $p\leq0.0001$). Additionally, we found that absolute plasma ACTH and the ratio of pre-operative to post-operative ACTH on the morning of POD1 correlated with identifying remission after multivariable logistic regression (adj. $p<0.001$)

Conclusions-Implications: Patients with CD have a compressed intra-patient VarACTH that is restored following remission from the disease. Additionally, we found that in remission patients, the DV of ACTH increased while the mean overall plasma ACTH decreased. The restoration of ACTH variation following treatment can serve as an early indicator of remission.

P32

Understanding differences in echocardiographic characteristics between stroke patients of Haitian and non-Haitian descent

Roshan Bransden, Dianelis Hernandez, Stephanie Mangels, Reema Kola, Grettel Castro, Pura Rodriguez, Starlie Belnap, Amy Starosciak, Adnan Subei, Diana Barratt, Juan M. Lozano.

Baptist Health System; Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: stroke, Haitian, Left ventricular size, extracranial, echocardiogram

Introduction and Objective: Miami-Dade is home to the largest diaspora of Haitians living outside of Haiti. Stroke is a leading cause of death in this population. Previous studies found differences in the etiology of stroke between Haitians and non-Haitians, with Haitian etiology likely rooted in intracranial vessels and non-Haitian etiology in extracranial vessels. The aim of this study was to determine if Haitian and non-Haitian patients with stroke differ in five echocardiographic parameters: left atrial size, left ventricular hypertrophy, ejection fraction, right ventricular size, and left ventricular size.

Methods: We conducted a comparative case series using secondary data from "Get with the Guidelines" stroke database, containing adult patients treated for stroke at Baptist Hospital of Miami, Florida, between January 2008 and August 2014. A previous study identified Haitian patients and non-Haitian matched controls for sex and stroke type in a 1:2 ratio. For our study, we included only those patients with echocardiograms. The exposure was Haitian ethnicity, and the outcomes were five echocardiographic parameters. Our data analysis included baseline characteristics and binary logistic regression to control for potential confounders. Associations were analyzed estimating odds ratios and 95% confidence intervals.

Results: Our sample included 52 Haitian and 111 non-Haitian patients. The Haitian group was mostly Black or African American (86.3%), while the non-Haitian group was predominately White (86.4%). The percentage of patients with Medicaid and with no insurance was significantly higher among Haitians, while the opposite was observed for Medicare. The crude odds of left atrial enlargement decreased by 68% among Haitians compared to Non-Haitians (OR 0.32 95% CI 0.14 to 0.75, p=0.009). After adjusting for age, Medicaid status, and atrial fibrillation/flutter, the difference remained significant (aOR 0.32, 95% CI 0.13 to 0.79, p=0.013). No statistical differences were found in any other echocardiographic parameter, but the precision of the findings does not rule potential clinically significant differences.

Conclusions-Implications: Our study found that non-Haitians had higher odds of having left atrial enlargement when compared to Haitians. Further investigation with larger samples is needed to better understand the etiology of stroke and develop effective preventative interventions for the Haitian population.

P33

The Association Between Parental Nativity and Flourishing of Children Aged 6 -17 years

Thao Nguyen, Dahitza Alexandre, Chyah Halikman, Grettel Miro, Juan G. Ruiz, Eugenio Rothe, Marcia H. Varella

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: nativity, US native, child flourishing, immigration, mental health

Introduction and Objective: Child flourishing is a relatively novel construct that has been shown to be directly related to future mental health. Experience of migration and resettlement in a new country is a stressful event also shown to be associated with later mental health risks. Yet, studies assessing whether nativity of the parents might affect their child's flourishing status are scarce. Objective: To assess whether there is an association between parental nativity and flourishing in US children.

Methods: We used data from participants of the National Survey of Children's Health. Children of 6-17 years of age, without developmental disabilities were studied. The outcome was child flourishing, considered present if parents answered "definitely true" for these 3 items: 1) the child shows interest and curiosity in learning new things; 2) the child works to finish tasks he or she starts; and 3) the child stays calm and in control when faced with a challenge. Parent answers other than "definitely true" on any of these 3 items were considered as not flourishing. The independent variable of interest was parental nativity dichotomized as either having both parents born in the US or one or more parents born outside of the US. Independent associations were estimated using multivariate logistic regression models.

Results: We studied 26,727 children. About 18% of children had one or both parents born outside the US. About 48% of children were considered flourishing. Children whose one or more parents were born

outside the US had higher odds of flourishing than children whose both parents were US natives (OR=1.23, 95% CI= 1.02-1.46, after adjusting for age, sex, race/ethnicity, income, parental level of education, primary caretaker's mental health and children's health rating).

Conclusions-Implications: We found evidence for differences in children's flourishing according to parental nativity status. Non-native US born parents perceived their child as flourishing more often. Further research is needed to confirm these findings and possibly, to assess the potential mechanisms for these differences.

P34

Association between Race and Mortality due to Nasopharyngeal Cancer in the United States From 2007 to 2016

Shahm Raslan, Edwin Rodriguez, Chengcheng Zheng, Juan M. Lozano, Noël C Barengo, Zoukaa Sargi.

Herbert Wertheim College of Medicine, Florida International University, Miami, FL.

Keywords: nasopharyngeal cancer, Asian Pacific Islanders, insurance status, effect modifier, survival

Introduction and Objective: Asian-Pacific Islanders (API) exhibit high incidence of nasopharyngeal cancer (NPC). However, they are often excluded when the disease is studied. Risk-factors and incidence are well-researched while cancer-specific mortality trends remain unclear. We aimed to determine whether insurance status modifies the association between race and cancer-specific mortality in NPC patients.

Methods: This retrospective cohort study used secondary data analysis from the Surveillance, Epidemiology, and End Results Program (SEER) database. Patients ≥18 years with histologically confirmed primary nasopharyngeal cancer from 2007 - 2016 were included. The main outcome assessed was 5-year survival and the main exposure variable was race (API, white, black). Insurance status was classified into uninsured, any Medicaid, and insured (with any insurance). Potential confounders included age, sex, marital status, stage at diagnosis, and surgical treatment. Adjusted Cox regression analysis was used to calculate hazard ratios (HR) and corresponding 95% confidence intervals (CI).

Results: 1610 patients were included (72.98% male, 27.02% female). The majority were API (49.8%), followed by Whites (40.5%), and Blacks (9.8%). Maximum follow-up was 5-years. The adjusted hazard of 5-year cancer-specific death for API and Blacks compared with Whites were 0.77 (95% CI 0.62 – 0.96) and 0.92 (95% CI 0.65 – 1.31), respectively. Cases decreased with age in API and Blacks. 8.2% of cases had localized disease, 45.3% had local spread, and 44.6% had distant metastasis. Insurance status did not modify the association between race and mortality.

Conclusions-Implications: Race is an important prognostic factor to account for in NPC patients. Investigating risk-factors and subtypes stratified by race may explain our findings.