

Abstract Session D1: Lipkin Finalists

The Impact of Diabetes Mellitus on Sexual Function in Ethnically Diverse Women Kelli Copeland¹; Jennifer Creasman¹; Leslee Subak¹; Jeanette Brown¹; Stephen Van Den Eeden²; David Thom¹; Alison Huang¹. ¹University of California San Francisco, San Francisco, California ; ²Kaiser Permanente Division of Research, Oakland, California . (Proposal ID # 8736)

BACKGROUND: Diabetes mellitus is a common chronic condition that can affect multiple dimensions of functioning and quality of life. While previous studies have indicated an over three-fold increased risk of sexual dysfunction in men with diabetes, the effect of diabetes on sexual function in women is poorly understood.

METHODS: Sexual function was examined in an ethnically-diverse cohort of 2,270 women aged 40 to 85 years enrolled in the Kaiser Permanente Medical Care Program of Northern California, including 20% women with diabetes. Sexual function was assessed using self-administered questionnaire measures adapted from the validated Female Sexual Function Index. Diabetic end-organ complications were assessed by interviewer-administered questionnaires, with peripheral neuropathy assessed by the Michigan Neuropathy Screening Instrument, and kidney function assessed by measurement of serum creatinine. Use of medications, including insulin and oral diabetes medications, was assessed by direct review of medication bottles. Multivariable logistic regression models compared sexual function outcomes (i.e., sexual desire/interest, frequency of sexual activity, overall sexual satisfaction, and specific problems such as difficulty with lubrication, arousal, orgasm, or pain) among diabetic women taking insulin, diabetic women not taking insulin, and non-diabetic women, adjusting for age, race, relationship status, menopause, body mass index, hysterectomy, oophorectomy, other medication use, and smoking. Additional multivariable models assessed relationships between diabetes-specific complications and worse sexual function among diabetic women.

RESULTS: Of the 2,270 women, 139 (6%) had diabetes and were taking insulin, 347 (15%) had diabetes but were not taking insulin, and 1,784 (79%) did not have diabetes. The mean ($\hat{\mu} \pm SD$) age of participants was 55 $\hat{\mu} \pm 9.2$ years and 44% (N=1006) were white, 18% (N=401) Latina, 20% (N=443) African-American, and 18% (N=401) Asian or Pacific Islander. Approximately half of women overall were at least moderately interested in sex (42% of diabetic women taking insulin, 38.1% of diabetic women not taking insulin, and 48% of non-diabetic women [P= 0.02 for heterogeneity]). Of the diabetic women taking insulin, 61% reported less than monthly sexual activity, compared to 58% of diabetic women not taking insulin and 48% of non-diabetic women (P

CONCLUSION: Compared to non-diabetic women, women with diabetes are more likely to report low sexual satisfaction, independent of other demographic and clinical factors. Diabetic women taking insulin may also be at higher risk of specific sexual problems such as difficulty with lubrication or orgasm. Multiple diabetic complications are associated with worse sexual functioning, suggesting that prevention of these complications may be important in preserving sexual function in diabetic women.

Acculturation and cardiovascular behaviors among Latino sub-groups Andrew J. Van Wieren¹; Mary B. Roberts²; Naira Arellano³; Edward Feller⁴; Joseph Diaz⁵. ¹Alpert Medical School of Brown University, Providence, Rhode Island ; ²Brown University/Memorial Hospital of Rhode Island, Pawtucket, Rhode Island ; ³Injury Prevention Center at Rhode Island Hospital, Providence, Rhode Island ; ⁴Department of Community Health, Brown University, Providence, Rhode Island ; ⁵Brown University/Memorial Hospital of Rhode Island, Pawtucket, Rhode Island . (Proposal ID # 9241)

BACKGROUND: Latinos are expected to increase from 15.5 to 25% of the US population by 2050, and represent nearly 20 countries. Despite lower socioeconomic status and worse access to health care, Latinos have better overall health outcomes and longer life expectancy than non-Latino Whites. This “Latino Health Paradox” has been partially attributed to healthier cardiovascular (CV) behaviors among Latinos. However, as Latinos become more acculturated or "Americanized," differences in some CV behaviors disappear. Despite diversity among Latinos, few studies have examined the role of country of origin in impacting associations between acculturation and CV behaviors among Latinos.

METHODS: Data from the 2005 and 2007 California Health Interview Survey (CHIS) were used to measure associations between acculturation level and smoking, diet and physical activity patterns among Latino sub-groups. To measure acculturation, we utilized a previously validated scale to categorize Latinos as low, moderate or high acculturation based on language, citizenship, birthplace and percent of life spent in the US. Using non-Latino Whites as a reference group and controlling for demographic variables, we calculated adjusted odds ratios (ORs) by acculturation level and country of origin for: never smoking, meeting American College of Sports Medicine (ACSM) physical activity and 5-a-day fruit/vegetable recommendations, and consuming any daily fast food.

RESULTS: The sample included 16,000 Latinos and 60,638 non-Latino Whites. Measured demographic variables were statistically different (p

CONCLUSION: As the US Latino population expands dramatically, the Latino Health Paradox will become increasingly important to public health. Our results indicate that country of origin impacts associations between acculturation and CV behaviors in complex ways, a finding that has implications for clinical practice and further research. Clinicians should consider both acculturation and country of origin when counseling Latino patients about CV risk to maximize cultural sensitivity and effectiveness. Although CHIS data lack generalizability to the overall Latino population, this study contributes to the limited literature on this topic and demonstrates need for further research.

Association of HIV status and non-AIDS comorbid diagnoses in a cohort of older HIV-infected and at-risk men Katherine Krauskopf¹; Alex D. Federman¹; Grace Mhango¹; Robert S. Klein¹. ¹Mount Sinai School of Medicine, New York, New York . (Proposal ID # 10186)

BACKGROUND: The prevalence of non-AIDS comorbid conditions in HIV-infected individuals is rising in the United States. To-date, prevalent non-AIDS conditions have been described in specific HIV-infected populations (U.S. Veterans, for example) and factors associated with incidence of several non-AIDS conditions (for example pulmonary disease, non-AIDS malignancies) have been identified. This study defines the prevalence and incidence of several non-AIDS conditions, including cardiometabolic comorbidities, in a unique urban cohort of older men, and compares factors associated with developing these conditions in subjects with well-controlled HIV, poorly-controlled HIV and those uninfected but at-risk for HIV.

METHODS: We analyzed prospective, standardized interview and laboratory data from The Cohort of HIV At-risk Aging Mens Prospective Study (CHAMPS), a study of HIV-infected and at-risk men, 49 years of age and older, conducted from 2001-2006 in the Bronx, New York (n=643). HIV status was defined as negative if participants reported never having a diagnosis of HIV at study entry, well-controlled if patients were HIV-positive with an undetectable HIV viral load at study entry, and poorly-controlled if patients were HIV-positive with a detectable HIV viral load at study entry. Study outcome diagnoses of hyperlipidemia, hypertension, chronic liver disease and diabetes were self-reported at baseline and 6-month follow-up interviews over the study duration. Baseline prevalence of these outcomes was calculated using cross-sectional frequency analysis. Kaplan-Meier analyses were performed to determine diagnosis incidence and unadjusted hazard ratios across all three HIV status groups. Cox proportional hazard regressions were performed to determine significant differences in and factors associated with the probability of developing outcome diagnoses, adjusting for baseline age, race and use of HAART.

RESULTS: Mean age of participants was 55 years (SD 5), 53% identified as Black, mean highest grade completed was 12th (SD 3), 78% had Medicaid. Fifty-six percent (n=360) were HIV-infected at study entry. Of these, 39% had well-controlled HIV. At baseline, participants with well-controlled HIV were more likely than poorly-controlled to have had an AIDS diagnosis (53% vs. 32%, p Baseline prevalence of non-AIDS diagnoses varied significantly across study groups only for hyperlipidemia: 28% of HIV-negative participants reported hyperlipidemia vs. 33% of well-controlled HIV-infected participants and 18% of poorly-controlled participants (p 0.015). Cumulative incidence rates of hyperlipidemia were 36%, 39% and 29% (HIV at-risk group, the well-controlled group and the poorly-controlled group respectively). Cumulative incidence rates of hypertension were 20%, 22% and 21%; of chronic liver disease: 20%, 21% and 26%; and of diabetes: 15%, 16% and 13%. At 1 year, the unadjusted probability of developing hyperlipidemia was 22% (95% CI 16%-29%), 29% (95% CI 19%-68%) and 25% (95% CI 17%-32%) in the HIV at-risk group, the well-controlled group and the poorly-controlled group respectively; of developing hypertension: 10% (95% CI 4%-11%), 10% (95% CI 3%-17%) and 10% (95% CI 4%-16%); of developing chronic liver disease: 17% (95% CI 11%-28%), 12% (95% CI 5%-19%) and 22% (95% CI 15%-29%); and of developing diabetes: 10% (95% CI 5%-14%), 8% (95% CI 3%-14%), 10% (95% CI 5%-14%). There were no statistically significant differences in the probability of developing any non-AIDS comorbidity across study groups over total study follow-up. In Cox regression models, black race was associated with probability of developing a diabetes diagnosis (HR 2.9, 95% CI 1.2-7.3, p 0.024) and age was associated with incident diagnosis of chronic liver disease (HR 0.95, 95% CI 0.9-1.0, p 0.049).

CONCLUSION: Chronic non-AIDS comorbidities were common in the HIV-infected older men in this study. HIV status, control and baseline use of HAART were not associated significantly in this cohort with incidence of reported hyperlipidemia, hypertension, chronic liver disease or diabetes. These findings support generally recommended standard screening and interventions for non-AIDS conditions in patients with poorly-controlled as well as well-controlled HIV infection, and thus highlight the growing complexity of providing effective primary care for HIV-infected individuals. These results also suggest that additional work should explore the interplay of factors beyond medication effects that contribute to the development of non-AIDS conditions in HIV-infected adults.

Physician communication behaviors differ by BMI Kimberly A Gudzone¹; Mary Catherine Beach¹; Lisa A Cooper¹. ¹The Johns Hopkins University School of Medicine, Baltimore, Maryland . (Proposal ID # 10253)

BACKGROUND: Physicians' weight bias may contribute to obesity-related health disparities by impairing patient-physician communication. However, whether these negative attitudes influence physicians' interpersonal communication during patient encounters is unknown. Previous studies have shown that patient-centered communication behaviors are positively associated with adherence and satisfaction, while more paternalistic or biomedical behaviors demonstrate the opposite. In this study, we examined the relationship between patient body mass index (BMI) and physician communication behaviors. Given the psychosocial origins of obesity bias, we hypothesized that higher patient BMI would be associated with decreased patient-centered communication behaviors including rapport building and patient counseling, while biomedical behaviors like data gathering would not be influenced by a patient's weight status.

METHODS: We used baseline data from the Patient-Physician Partnership Study. The study sample included 40 urban primary care physicians and 226 of their patients. Each patient had a patient-physician encounter audio-taped, which was then analyzed using the Roter Interaction Analysis System to determine counts of communication behaviors. These encounters were a part of ongoing care. The outcomes were physician behaviors including data gathering, rapport building and patient counseling. The independent variable was measured patient BMI. In order to account for clustering of patients by physician, we used multilevel Poisson regression models to calculate incidence rate ratios evaluating the association between BMI and the physician communication behaviors. All models were adjusted for patient age, patient sex, patient race, number of comorbidities, as well as physician's number of years in practice and specialty. Given the multiple comparisons, we defined a significant p-value to be

RESULTS: The mean (SD) patient BMI was 32.8 (8.0) kg/m². Patients' mean (SD) age was 61.7 (12.2) years with 65% female and 60% black, while physicians were 54% female and 53% white. Mean (SD) visit length was 15.5 (7.2) minutes and did not vary significantly by BMI. Table 1 shows that physicians' data gathering behaviors were similar across BMI groups. However, physicians' demonstrated less rapport building with the overweight and obese groups. Physicians also provided less patient counseling for these higher BMI groups as compared to the normal range group, especially in the lifestyle/psychosocial realm.

CONCLUSION: We found that physicians demonstrated fewer patient-centered behaviors including rapport building and counseling to patients with overweight and obesity. As these patient encounters were part of ongoing clinical care, the limited rapport building and counseling may suggest an impaired patient-physician relationship and reduced quality of care for a variety of health outcomes between obese patients and their primary care physicians.

Integrating Patient-Reported Information into an Electronic Medical Record to Ensure Safe Prescribing to Women of Childbearing Potential Sanithia Williams¹; Rachel Hess¹; Sara M Parisi¹; Steven Handler¹; Grant Shevchik²; Wishwa Kapoor¹; Eleanor Bimla Schwarz¹. ¹University of Pittsburgh, Pittsburgh, Pennsylvania ; ²UPMC, Pittsburgh, Pennsylvania . (Proposal ID # 10376)

BACKGROUND: Certain medications should not be used by women who are pregnant or breastfeeding. Primary care providers are charged with counseling women about the risks that may be posed by medication use, however, it is challenging for clinicians to routinely assess women's pregnancy intentions, use of contraception, and lactation status.

METHODS: We developed a system that uses wirelessly-networked tablet computers to allow women to enter pregnancy, contraception and lactation information which is then automatically extracted and transferred into the patient's electronic medical record prior to their visit with a primary care provider. We implemented this system at two community-based primary care practices in Western Pennsylvania.

RESULTS: Over a 7-month period, 962 female patients entered pregnancy, contraception, and lactation information that was extracted from a tablet computer into their patient record prior to their visit with a provider at two community-based primary care practice in Western Pennsylvania. On average, these female patients were 35 (+/- 10) years old. Introduction of this system did not significantly increase wait times at the clinic's front desk. Information that might affect prescribing decisions was entered by 360 (37%) women. Current pregnancy or an effort to conceive was reported by 40 (4%) of women, while another 33 (3%) stated they wouldn't mind becoming pregnant. Among the 856 (89%) who stated they were not trying to become pregnant, 60 (7%) were using no method of contraception while 214 (25%) were relying on relatively ineffective, behavioral or barrier methods of contraception. Thirteen women (1%) reported currently breastfeeding an infant. Notably, only 10 women (<1%) selected the "prefer not to answer" option when the tablet stated, "Some of the medicines that your doctor may prescribe can be harmful during pregnancy. We feel it is important to understand each patient's plans and risks for pregnancy. Are you currently pregnant or trying to become pregnant?"

CONCLUSION: Systematic collection of patient-reported reproductive health information in the primary care setting is feasible, acceptable to women, and has the potential to reduce unsafe prescribing to women of childbearing age.

Colorectal cancer screening in patients with HIV Florence Momplaisir¹; Kathleen Brady²; Gia Badolato²; Judith A. Long¹. ¹University of Pennsylvania, Philadelphia, Pennsylvania; ²PA Department of Public Health, Philadelphia, Pennsylvania. (Proposal ID # 10488)

BACKGROUND: As HIV positive patients live longer, they become susceptible to the development of chronic diseases and cancers. Since the introduction of antiretroviral therapy (ART) in 1995, the incidence of AIDS-defining malignancies (ADMs) has declined tremendously, whereas the frequency of non-ADMs has risen disproportionately compared to the general population. Currently, there are only two published studies describing the use of CRC screening in HIV positive patients. In both, CRC screening was found to be significantly lower in HIV positive patients compared to HIV negative patients. These studies; however, did not evaluate in detail factors associated with CRC screening. There is strong evidence that quality measures for HIV care are better met when, compared to non-expert general practitioners, patients are seen by infectious disease (ID) specialists or expert generalists. There are very few studies; however, looking at quality of primary care in these patients. Whether having a primary care physician (PCP) improves non-ADM screening in HIV positive patients is unknown. In this study we evaluate whether having a PCP is associated with higher CRC screening rates in a population of HIV positive patients.

METHODS: Study sample. Patients included in this study were selected from a larger study called the Medical Monitoring Project (MMP) led by the Pennsylvania Department of Public Health and the Center for Disease Control (CDC). MMP participants were selected based on a three-stage sampling design described elsewhere and consists of HIV patients seeking care from a diverse pool of providers in Philadelphia. Patients were included in our study if they were MMP participants aged 50 or older. Data source. The data was collected by means of chart abstraction. We used the National Health And Nutrition Examination Survey (NHANES) template to determine if CRC screening had been performed. Outcomes. The primary outcome of interest was CRC screening defined as having a documented colonoscopy, sigmoidoscopy, barium enema, or Fecal Occult Blood Test after the age of 50. Independent variables. Patient and provider related factors were collected. Patient factors of interest included age, gender, race, lowest and most recent CD4 counts, lowest and most recent HIV viral loads, presence of co-morbid conditions, insurance status, and history of substance abuse or alcohol use. Provider factors of interest included provider specialty (ID or Generalist) and practice type (primary care practice, single versus multispecialty care practice). Statistical analysis. Standard descriptive statistics were used to describe all potential factors associated with ever having at least one CRC screening. All variables were dichotomized. Statistical differences for CRC screening (yes/no) based on clinical and demographic factors were assessed using the χ^2 test. A multivariable logistic regression model was created to assess the relative strength of the various associations. All variables associated with CRC screening at p

RESULTS: Out of 123 chart abstractions performed, 115 had a complete clinical record from MMP to be fully analyzed. The majority of the population was male (71.3%), non-white (73.8%) and between the age of 50 and 59 (71.3%). Most patients had a recent CD4 count greater than 350 (69.6%), an undetectable viral load (75.6%), and no history of opportunistic infections (69.5%). 45.2% did not have a PCP. In accordance with other studies, we found that the rate of CRC screening among patients with HIV was low (49%) compared to the national rate of 62.9%. Having a documented PCP was the only variable strongly associated with CRC screening. Rates of screening were 66.7% among those with a PCP versus 28.5% among those without a PCP (χ^2 p < 0.001). After adjusting for race, substance use, and alcohol use, the odds of getting CRC screening in those without a PCP was 0.2 (95% CI 0.09-0.51, p < 0.001).

CONCLUSION: Patients with HIV who lack a PCP are significantly less likely to receive CRC screening. Given the improved survival among patients with HIV and the increased risk of dying of non-ADMs, it is imperative that all persons be managed with standard preventive practices regardless of HIV status. Having PCPs working in collaboration with ID specialists might help improve CRC screening rates in this population.