43.9% (126/286) Hispanic, and 8.1% (23/286) other. Mean baseline A1c was 8.1% for MN and 8.3% for NM. There was a significant difference in percentages of patients having an A1c in the post-randomization follow-up period (approximately 6 months), 89.0% (300/337) for MN and 67.5% (193/286) for NM. Of those with an A1c test, NM patients had a significantly greater A1c reduction with GE (-0.947 for NM vs. -0.136 for MN), IE (-1.093 for NM vs. -0.497 for MN), and UC (-0.700 for NM vs. -0.253 for MN), ($p < .0001$). **Conclusions:** Although it appears that IE and GE were more effective for NM patients compared to MN, the large number of NM patients without A1c values in the follow-up period makes any conclusions tentative. The long-term data analysis is pending and should provide a more definitive conclusion.

Keywords: Diabetes, Diabetes education, Site differences

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PS2-31:

Cystatin C Heralds Early Chronic Kidney Disease Especially in Diabetes (CHECKED): Conducting a Pilot Feasibility Study

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Background/Aims: Studies to identify early chronic kidney disease (CKD) among patients with diabetes are important. However, collecting blood samples from patients to measure new biomarkers of kidney function can be invasive, inconvenient, and may not be well-accepted. The purpose of this study was to describe the methods for collecting cystatin C measures, using both capillary and venous blood samples, to measure early CKD. **Methods:** We recruited members who were English-speakers, non-pregnant, aged 25-74 years, enrolled in the Kaiser Permanente Georgia diabetes registry, and reported an eGFR > 60 ml/min/1.73m². Members were recruited using an initial introductory letter with a follow-up phone call. A one-time clinic visit was scheduled for the collection of capillary and venous blood samples, anthropometric measures, and questionnaire data. Patients received a \$25 gift card for participating in the study. Clinic visits lasted 20-30 minutes. At the end of the study, a debriefing session was conducted to discuss feasibility issues and barriers to recruitment. **Results:** A total of 343 patients were contacted with initial mailings (a second repeat mailing to 88 patients was done halfway through the recruitment period). Over 7 weeks, 315 members were contacted by telephone; 56% (177 of 315) could not be reached after 3 follow-up phone calls, 10% (32 of 315) had bad or disconnected numbers, 7% (23 of 315) declined, and 26% (83 of 315) agreed to participate. (Among members we spoke to, the response rate for participation was 78% [83 of 106]). Some patients did not show up for their scheduled appointment, leaving a total of 59 completed visits. Feedback from study staff included having a shorter time window between mailings and calls, appointment reminder cards, and proper labeling of samples going to the laboratory. In general, the protocol was easy to follow and patients were eager to participate. **Conclusion:** Our pilot study indicated that collecting blood samples to measure cystatin C in a clinic setting can be done with minimal inconvenience to the patient. Our study methods were well received by patients and clinic staff. For future studies, the use of appointment reminder postcards may reduce the number of no-shows.

Keywords: Diabetes, Early chronic kidney disease, Cystatin C

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PS2-02:

Micronutrient Deficiencies After Bariatric Surgery: Does Ethnicity Matter?

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Background: Micronutrient deficiency is a well-known complication of bariatric surgery, and daily, lifelong multivitamin and multi-trace mineral

supplementation is recommended after surgery. Risk of vitamin deficiency is known to vary by ethnicity, with several studies reporting higher incidence of deficiency of vitamins A and D and B vitamins among blacks compared to whites. We were unable to locate studies that examined risk of micronutrient deficiency after bariatric surgery among ethnic groups other than whites or blacks. The aim of this study was to determine if incidence of micronutrient deficiency after bariatric surgery differs among Asians and Pacific Islanders, compared to whites. **Methods:** We determined prevalence of micronutrient deficiency among 627 adults (36% white, 30% Pacific Islander, 11% Asian, 22% other/unknown) who underwent Roux-en-Y gastric bypass, gastric banding, or gastric sleeve for morbid obesity between 2002 and 2009 in Kaiser Permanente, Hawaii. Data on serum micronutrient levels, demographics, anthropometrics and comorbidities were collected from the VDW. **Results:** During up to 7 years follow-up after bariatric surgery, 78% (488 of 627) patients developed deficiency of at least one micronutrient, and incidence did not differ by ethnicity. Rates of deficiency of specific micronutrients were 61% vitamin A, 47% thiamine, 12% vitamin B12, 4% folate, 25% calcium, 43% iron. Procedure type (Roux-en-Y gastric bypass) and higher percentage of excess weight lost (%EWL) were associated with deficiency of several micronutrients. After adjustment for age, sex, procedure type, and %EWL, ethnicity was not significantly associated with deficiency of any micronutrient after surgery. **Conclusion:** We found no evidence that the incidence of micronutrient deficiency after bariatric surgery differs between whites, Asians, and Pacific Islanders. The low numbers of blacks and those of other ethnicity in our cohort precludes comparison to prior studies. Despite attempts at universal prescribing of multivitamin and multiminerals supplements, incidence of at least one micronutrient deficiency after bariatric surgery remains high in all ethnic groups. Results suggest the need for increased efforts to ensure patient knowledge of and compliance with lifelong supplementation.

Keywords: Micronutrient, Obesity, Bariatric surgery

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Disparities and Vulnerable Populations

C-C3-01:

Implicit and Explicit Ethnic/Racial Attitudes Among Primary Care Providers and Community Members

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Aims: To investigate the implicit (unconscious) and explicit (conscious) attitudes of primary care providers (PCPs) toward African Americans and Latinos, and compare them to the attitudes of community members. **Methods:** A computer-based survey was completed by 210 PCPs (60% participation) and 190 community members (55% participation) in primary care clinics of three different health care organizations throughout the Denver metro area. Results were analyzed in aggregate. The survey measured attitudes toward African Americans and Latinos, compared with Whites in each case. Implicit attitudes were measured with Implicit Association Tests (IAT) and explicit attitudes were measured by self-reported scale ratings. **Results:** A wide range of implicit attitudes was found among both PCPs and community members, from greater favorability toward Latinos or African Americans to greater favorability toward Whites (Latino:White IAT range = -0.91 (pro-Latino) to 1.28 (pro-White); Black:White IAT range = -1.11 (pro-Black) to 1.32 (pro-White). Consistent with other research, implicit pro-White bias was the more frequent and stronger response (Latino:White IAT $M=0.31$, Cohen's $d=0.78$; Black:White IAT $M=0.27$, Cohen's $d=0.76$), and the two samples did not differ in their implicit bias ($p > .20$). The only consistent demographic predictor of implicit bias was participants' self-identified ethnicity/race. White participants demonstrated stronger pro-White bias than did minority participants. A comparison adjusting for differences in