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001

VALIDITY OF ELECTROCARDIOGRAPHIC CLASSIFICATION OF LEFT VENTRICULAR HYPERTROPHY ACROSS ADULT ETHNIC GROUPS WITH ECHOCARDIOGRAPHY AS A STANDARD: A REVIEW.

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Aims. To assess the validity of the ECG as a diagnostic tool for left ventricular hypertrophy (LVH) for different ethnic groups with echocardiography as a standard.

Methods. Systematic review of the literature related to Cornell and Sokolow-Lyon voltage criteria for LVH.

Results. Five studies were identified. Pooled data from these studies demonstrated low sensitivity using both types of ECG criteria for White and African-origin groups but with slightly higher sensitivity values for the African origin group (Cornell: 31.2%, 95% CI 28–34.8%; Sokolow-Lyon: 32.9%, 95% CI 29.5–36.4%) compared to the White group (Cornell: 26.5%, 95% CI 25.2–27.8%; Sokolow-Lyon: 18.2%, 95% CI 17.2–19.3%). Specificity was high using both types of criteria in the White groups (Cornell: 87.4%, 95% CI 86.4–88.4%; Sokolow-Lyon: 88.9%, 95% CI 88–90%) but was much lower in the African-origin group using the Sokolow-Lyon criteria (72.1%, 95% CI 68.7–75.3%). Specificity was high, however, for the African-origin group using the Cornell criteria (86.2%, 95% CI 83.4–88.5%).

Conclusions. Both types of criteria are more sensitive in African-origin populations. The Sokolow-Lyon criteria are less specific for LVH in people of African origin. The evidence favors the Cornell criteria in research and service contexts involving African-origin and White populations. Further research is needed to adapt ECG criteria to take into account ethnicity to a greater degree and with studies encompassing a broader range of ethnic groups.

002

IMPLEMENTING SMOKELESS TOBACCO INSTRUCTION INTO MEDICAL EDUCATION

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Objectives. Smokeless tobacco use has unique health and epidemiologic features, including increased use among minority populations. Nonetheless, medical education regarding this topic is virtually lacking; we sought to address this deficiency.

Methods. Using a National Cancer Institute grant, we have developed a model curriculum for medical schools that includes specific instruction in basic and clinical sciences as they relate to cultural competency and both smoked and smokeless tobacco use. The curriculum was informed by a thorough review of the literature and includes eight modules in basic and clinical sciences that are evaluated by pre-test/post-test increases in knowledge as well as minority and non-minority standardized patient encounters and process evaluation. We report preliminary data analysis.

Results. Pre-test/post-test data indicate that students increased knowledge on specific smokeless tobacco questions (eg, correct answers on prevalence of smokeless use, nicotine dosage in smokeless tobacco, cancer risk, and carcinogen components; all increased at $P < .001$). Students also scored well on interactions with minority and majority standardized patients using the Tobacco Intervention Risk Factor Interview Scale, a validated instrument to assess medical students' tobacco counseling skills. Process evaluation data indicate that modules were generally well received.

Conclusion. This Web-based, comprehensive curriculum—the only curriculum we are aware of treating the topic of smokeless tobacco use—appears to be effective and well-received. Medical education must devote more attention to instruction in smokeless tobacco use, given its adverse health effects including cancer and cardiovascular disease, as well as its increased use among minority populations.

003

REDUCING THE INCIDENCE RATE OF CARDIOVASCULAR DISEASE IN AFRICAN AMERICANS THROUGH CULTURALLY SENSITIVE COMMUNITY-BASED HEALTH EDUCATION STRATEGIES

A JOHNSON; M Colomb; N Duncan

Objectives. Upon completion of this poster presentation, participants will be able to: 1. Understand how heart disease, high blood pressure, and stroke disproportionately affect African Americans. 2. Recognize the significant impact culturally sensitive community-based health education has on reducing the incidence rate of cardiovascular disease (CVD) in the African American population.

Methods. This poster presentation is based on findings from the interactive community health education instructor certification course Cardiovascular Disease Prevention for African Americans Community Health Education Instructor Training. The poster provides statistical data depicting the impact CVD has on the African American population. It also outlines best practices and methods used to train community health workers to effectively disseminate culturally sensitive and linguistically appropriate health promotion and cardiovascular disease prevention messages in African American communities.

Results. Instructor training courses have been conducted in 6 states representing 25 community-based organizations. Quantitative data revealed that 100% of the participants agreed that they had learned new skills as a result of the training and 85% planned to utilize the skills gained to improve health outcomes in their communities. Within a 2-year period, a reported 305 African Americans were educated on CVD prevention by certified community health education instructors.

Conclusion. Utilizing culturally sensitive community-based education strategies to educate community health workers has proven to be an effective tool in disseminating cardiovascular disease prevention messages, which may positively impact the incidence rate of cardiovascular disease in African Americans.

004

PUTTING THEORY INTO PRACTICE: IMPROVING HEALTH OUTCOMES IN THE AFRICAN AMERICAN POPULATION THROUGH COMMUNITY-BASED APPROACHES TO CAPACITY BUILDING ASSISTANCE

A JOHNSON; M Colomb; N Duncan

Objectives. Upon completion of this poster presentation, participants will be able to: 1. Understand how an effective community-based approach to capacity building assistance can significantly impact the incidence rates of cardiovascular disease and cancer in the African American population. 2. Recognize how the behavior change theory (transtheoretical model) can be utilized to successfully recruit, train, evaluate, and certify community health education instructors.

Methods. This poster presentation is based on two interactive community health education instructor certification courses: (1) Cancer Prevention for African Americans Community Health Education Instructor Training; and (2) Cardiovascular Disease Prevention for African Americans Community Health Education Instructor Training. These courses utilize the behavior change theory (transtheoretical model) to train participants on how to effectively disseminate cardiovascular disease (CVD) and cancer health promotion and disease prevention messages in the African American communities. This poster presentation will outline the recruitment, training, evaluation, and certification processes.

Results. The community health education instructor training courses have been conducted in 12 states representing 50 community-based organizations. A total of 66 participants earned certification status. Quantitative data revealed that 85% planned to utilize the skills gained to improve health outcomes in their communities. Within a 2-year period, a reported 736 African Americans were educated on CVD and cancer prevention by certified community health education instructors.

Conclusion. Utilizing an effective community-based approach to capacity building assistance coupled with a thorough understanding of the behavior change theory has proven to be one of the most effective tools in educating the African American population on cardiovascular disease and cancer prevention.

005

PLASMA DHEAS AND CORTISOL/DHEA RATIO ABNORMALITIES OF BABY WITH LOW BIRTH WEIGHTS CAN PREDICT CARDIOVASCULAR DISEASE STATUS IN ADULTHOODD MAVOUNGOU^{1,4}; MY Akoume^{1,3}; B Ongali^{1,3}; PHamed²

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Background, Purpose, and Methodology. Low birth weight may be associated with risk factors, such as hypertension, diabetes and dyslipidemia, which may lead to cardiovascular disease in adulthood.

Herein, we reinforce this hypothesis by measuring RLA and EIA by plasma levels of aldosterone (A), testosterone (T), Cortisol (C), dehydroepiandrosterone (DHEA) and its sulfate ester (dehydroepiandrosterone sulfate, DHEAS) in young adults (52 males and 25 females) born with low weight caused mainly by maternal infections, one of the causes of infertility in Gabon.

Results. Data revealed evident subgroups as a function of levels of DHEAS and classified as elevated (>300 g/dL), average (160–289 g/dL) which was considered as controls, and low (<159 g/dL). High plasma DHEA and DHEAS levels were concomitant with high A levels. Positive correlations were found between plasma A and diastolic blood pressure (DPB) ($r=0.34$, $P<.01$) or DHEAS ($r=0.45$, $P<.001$) which, in turn, showed a positive correlation with DPB ($r=0.31$, $P<.01$). A levels were correlated with both DHEA ($P<.01$) and DHEAS ($r=0.45$, $P<.001$) for the entire study population. These correlations were stronger in males than in females. Impaired DHEAS levels were accompanied by significant decreases of C and T in all subgroups of females but not males.

Conclusion. Thus, the association of low birth weight with any defect of DHEAS, higher A and/or lower C levels as well as significantly increased C-DHEA ratio in the plasma of these adolescents may correspond to a pre-hypertensive state and dyslipidemia. Plasma DHEAS and C-DHEA ratio abnormalities should demonstrate need for preventive action in case of low birth weight babies.

006

HOSPITAL QUALITY AS A PREDICTOR OF UNAUTHORIZED DISCHARGES AMONG CARDIOVASCULAR DISEASE PATIENTS: DOES RACE/ETHNICITY MATTER?

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Background. Institutional factors related to hospital discharges against medical advice have received less attention than patient factors like race/ethnicity. Prior studies have not considered hospital quality, a modifiable factor. We examine whether the relationship between hospital quality and unauthorized discharges in patients with cardiovascular (CV) disease varies with race/ethnicity.

Methods. This was a retrospective analysis of inpatient hospital discharge data augmented with data from the Joint Commission (JCAHO). Inclusion criteria: hospitalization with a primary diagnosis of CV disease from 2000–2005. The outcome was a discharge against medical advice. Covariates of interest included an indicator for a high quality hospital (using JCAHO measures) and for non-Caucasian race.

Results. A total of 2,593 of the 328,342 hospitalizations for CV disease (0.8%) resulted in an unauthorized discharge. The sample was 52% male, 31% non-Caucasian, with a mean age of 67 years. Fifteen percent ($n=48,177$) of the hospitalizations occurred in high-quality hospitals. High-quality hospitals were more likely to be large teaching hospitals located in a large city. High-quality hospital status was negatively associated with an unauthorized discharge and non-Caucasian status. Among Caucasians, an unauthorized discharge was less likely at a high-quality hospital (AOR=0.51; $P=.02$). Among non-Caucasians, the risk of an unauthorized discharge was unchanged across hospital quality groups (AOR=0.86; $P=0.51$).

Conclusions. The key finding is that higher hospital quality is protective for unauthorized CV discharges in Caucasians but not in non-Caucasians. Future research using alternative quality measures will be needed to understand the differential impact of hospital quality.

007

DEVELOPMENT OF A VALID AND RELIABLE TOOL FOR ASSESSING KNOWLEDGE ABOUT CARDIOVASCULAR DISEASE AND ITS RISK FACTORS IN PATIENTS DIAGNOSED WITH HYPERTENSION AND/OR DIABETES: THE BALTIMORE CARDIOVASCULAR PARTNERSHIP

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Objective. The objective of this research project is to develop and test the validity and reliability of a written tool assessing African American hypertensive and diabetic patients' knowledge about cardiovascular disease (CVD) and its risk factors. The developed tool will be used to tailor physician/provider counseling with the patient.

Methods. Construction of the tool will build on measures adapted from past research and construction of new items as necessary. Following the initial development of the tool, the expertise, experience, and familiarity of the physicians with the patient population of the Baltimore Partnership to Reduce Cardiovascular Disparities will be relied upon for evaluation and revision of items. Patients recruited from the parent project's treatment and control groups, will assist with construct-related validity. Focus groups of 8–10 patients with diabetes and/or hypertension will be asked to complete the preliminary questionnaire and comment on the items. The tool will then be administered to patients while waiting to be seen by their physician/provider at routine visits.

Results. For assessing construct validity, factor analysis (principal component or classic) will be used. Internal consistency reliability will be evaluated using the Kuder-Richardson formula 20. The alpha level will be set at 0.05. Test-retest reliability testing will also be employed. Bivariate correlations will be examined using Spearman's Rank Correlations. Additional analysis will be carried out as necessary.

Conclusion. Customized/tailored counseling may increase patient compliance with treatment and improve communication between physician/providers and patients. Having some idea of what African Americans know about CVD will raise physician/provider awareness and assist with the initiation of effective communication.

008

THE EFFECTS OF VITAMIN D AND PARATHYROID HORMONE ON BLOOD PRESSURE AND NON-INVASIVELY MEASURED VASCULAR FUNCTION IN NORMOTENSIVE AFRICAN AMERICANS

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Background. Vitamin D deficiency and elevated parathyroid hormone (PTH) or secondary hyperparathyroidism are highly prevalent in African Americans, particularly those who are obese.

Goal. Determine the association of depressed vitamin D and elevated PTH with blood pressure and non-invasively measured vascular function in overweight, normotensive African Americans ages ≥ 35 years.

Methodology. Cross-sectional contrasts of ambulatory blood pressure measures (daytime $n=74$ and nighttime $n=58$) and hemodynamic variables ($n=67$) were performed using general linear models adjusted for age and sex across three mutually exclusive groups: 1) normal vitamin D (25-OH D > 50 nmol/L, normal PTH ≤ 65 pg/mL); 2) low vitamin D, normal PTH; and 3) low vitamin D, elevated PTH. Linear regression analyses were performed to show the relation of dependent variables to vitamin D and PTH.

Results. Age- and sex-adjusted daytime systolic blood pressure (SBP) in groups 1–3 was 126.7, 130.4 and 133.4 mmHg ($P=0.22$), respectively; daytime diastolic BP (DBP) was 73.3, 78.2 and 76.0 mmHg ($P=0.22$), respectively. Both nighttime SBP and DBP showed similar trends. Cardiac output was 5.3, 6.0 and 6.3 L/min ($P=.08$); stroke volume was 70.7, 76.0 and 81.8 mL ($P=.09$); systemic vascular compliance was 1.3, 1.5 and 1.5 mL/mmHg ($P=.03$). Per 1-log unit higher vitamin D, SBP was lower by 4.7 mmHg ($P=.06$) in the daytime and by 4.2 mmHg ($P=.08$) at night.

Conclusion. Abnormal vitamin D and PTH metabolism are linked to hyperdynamic circulation while vitamin D is inversely linked to ambulatory SBP.

009

FROM DISASTER MEDICINE ANECDOTE TO SHARED EXPERIENCES: QUALITATIVE METHODS FOR IMPROVING PREPAREDNESS KNOWLEDGERD FOREMAN¹; ML Icenogle²; ED Crook¹; MA Arrieta¹¹Center for Healthy Communities, Department of Internal Medicine, University of South Alabama; ²Department of Management, University of South Alabama

Immediately after Hurricane Katrina, published data on healthcare issues were anecdotal, relating individual experiences. We captured the collective experiences of health/social service providers and the patients they serve, focusing on chronic diseases in the health disparate populations of coastal Alabama and Mississippi. Rigorous qualitative methods were used to 1) document chronic disease management challenges and solutions and 2) identify elements required for disaster-resilient, community-based networks.

Qualitative data were collected in three phases, allowing for successively deeper layers of information to surface. In Phase I, key informant (KI) interviews (providers) and focus groups (patients with chronic diseases) elicited detailed disaster “stories” (Aim 1). In Phase II, network elements were identified at a KI workshop (Aim 2). Verbatim transcripts of data were coded and analyzed for emerging themes using Atlas.ti software. Themes conveyed the shared experiences of participants, including strategies used to meet the needs of chronic disease patients and key elements of disaster preparation. This collective knowledge base was recorded in a detailed report. In Phase III, KI submitted feedback on the report via e-mail, phone or work group. Phases II and III promoted an enhanced sense of project ownership among participants and provided an opportunity for individual/inter-agency networking.

A final report was published and distributed to KI and their organizations, interested community members, local, state and regional policy makers and other disaster responders. Planned followup will ascertain whether recipients found the report useful (ie, instigated dialogue on disaster preparations, implemented solutions, fostered new partnerships).

010

SELF-REPORTED HEALTH STATUS AND ATTITUDES TOWARD COMMUNITY-BASED HEALTH PROMOTION RESOURCES IN AN UNDERPRIVILEGED NEIGHBORHOOD

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Introduction. Health status of low income and minority populations lags behind that of majority populations. Health promotion resources may be unavailable/underutilized in low income neighborhoods.

Objective. We sought to understand self-reported health status, lifestyle behaviors, health care utilization and attitudes toward community-based health promotion resources.

Methods. Surveys were mailed to a random sample of 1200 residents ages ≥ 50 living in neighborhoods within two zip codes with at least 28% of residents at or below poverty level. Frequency counts were used for analysis.

Results. Of 205 completed surveys, respondents were mostly African American female, ages 60–79 years. Most often reported medical condition was hypertension (57.6%), followed by arthritis (46.2%) and vision problems (39.4%). 34.1% rated their health “fair to poor,” and 44.5% as “good” or “excellent.” 62% had visited their doctor 1–3 times in the past six months. While 51.5% reported having no non-healthy days in the past month, 9.8% had 1–5 non-healthy days, and 4.5% had 6–15 non-healthy days. Only 7.4% were exercising regularly, over 50% not regularly. 80% were interested in community-based health promotion. For example, 60.6% reported interest in exercise classes if offered, 64% would use a “health room” for simple health measurements (blood pressure, weight) and for obtaining health information and 64% would walk if provided a safe, well-lit surface.

Conclusion. Although limited by a low response rate (17.6%), our findings indicate that members of a low income, minority community perceive a need for community-based health promotion resources and would be inclined to use them if available.

011

DEVELOPING PUBLIC HEALTH PROGRAM GUIDANCE FOR BLOOD PRESSURE CONTROL AMONG AFRICAN AMERICAN MEN

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Objective. To create a guidance document for CDC-funded state heart disease and stroke prevention programs to use in program development efforts addressing blood pressure control in African American men.

Methods. A systematic literature review was conducted using the Internet, scientific journals, and other sources to document the burden of high blood pressure, delineate psychosocial factors surrounding disparate morbidity and mortality rates, and identify promising systems-level interventions. One hour key informant interviews were conducted on nine out of 11 interventions that focused on African American men and blood pressure control in their activities. In addition, men's health resources were gathered and an expert panel was engaged through conference calls and e-mails to give input and feedback.

Results. Only fifteen sources pertaining to African American men and blood pressure control were found in the scientific literature. Of the nine systems-level interventions studied in depth, only two had been formally evaluated and had published information. The other interventions reported making significant changes in the lives of the participants, but did not have the infrastructure or staff to document or evaluate their efforts. Although African American men were not the sole focus of a few of the interventions, key informants shared lessons learned regarding culturally responsive programming for this group.

Conclusion. Additional systems-level interventions need to be developed, implemented, and evaluated pertaining to blood pressure control among African American men. With the lessons learned and resources provided in this document, state programs can find more culturally responsive ways to address this population.

012

PRE-KIDNEY TRANSPLANT EDUCATION POSITIVELY IMPACTS PATIENT SATISFACTION IN A PREDOMINATELY AFRICAN AMERICAN COMMUNITY

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Objective. End-stage renal disease (ESRD) is a major complication of hypertension in African Americans. Although kidney transplantation is the treatment of choice for ESRD, disparities in graft survival exist between Black and White Americans. Our center performs kidney transplants in Blacks at a rate twice the national average. This study investigates perceptions about kidney transplantation in a predominantly African American population in an attempt to identify pre-transplant factors impacting inequities.

Methods. Twenty-nine community nephrologists and 123 end-stage renal disease patients were surveyed to characterize each group's knowledge and attitude about kidney transplantation.

Results. Early results indicate that 82% of ESRD patients were presented with kidney transplantation as a treatment option by their nephrologists, and the majority (79%) of those encounters included companion educational materials. One-third of patients reported no fear of transplantation, and almost 90% of patients reported the belief that their renal healthcare provider functions in their best interest.

Conclusions. Contrary to previous disparity studies in kidney transplantation our findings demonstrate a high level of patient satisfaction during the pre-transplant period. In this predominantly African American cohort it appears that physician-patient discussions combined with educational materials on kidney transplantation positively impact the pre-transplant experience.

013

HIGH BLOOD PRESSURE COMPLICATIONS IN AMBULATORY AREAS IN AFRICA (N'DJAMENA TEACHING HOSPITAL EXPERIENCES)

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Introduction. High blood pressure (HBP) complications are frequent and severe among Black Africans. But only a few surveys have been conducted in ambulatory areas in order to assess the frequency of these complications.

Objectives. To determine the frequency of high blood pressure and its complications in urban areas and to contribute to a better management of those complications.

Methodology. Our survey took place from September 1, 2004 to August 31, 2005. All patients were followed at the Bekondo clinic and all hypertensive patients underwent clinical exam, Xray, EKG, and blood test during this period.

Results. Survey results showed that high blood pressure was very frequent in cardiologic practices in urban areas (33.6%). 45.3% of the hypertensive patients had organ damage and 69.2% were in stage II hypertension, with 30.8% in stage III. There were no patients in stage I.

The average age of patient was 54.60 ± 11.60 years old with a range of 25 to 90 years of age. 65% were male (86/130).

The main factors contributing to the high blood pressure organ damage were noncompliance of treatment, the long-standing undetected high blood pressure, and overweight. Those with multiple organ damage and elderly had the worst prognosis.

Conclusion. In conclusion, high blood pressure complications among Black Africans are frequent and severe, confirming the fact that high blood pressure is a real "silent killer."

014

EFFECT OF WILLIAMS LIFESKILLS TRAINING ON ANGER CONTROL IN AFRICAN AMERICAN ADOLESCENTSVA BARNES¹; VP Williams²; RB Williams³; MH Johnson¹; AM Stevens¹; VP Shenbagarajan¹¹Medical College of Georgia, Augusta, Georgia; ²Williams LifeSkills, Inc.; ³Duke University Medical Center, Durham, North Carolina

Background. The Williams LifeSkills anger and stress management workshop (WLS) provides training in strategies which enhance awareness and evaluation of thoughts and feelings in stressful situations, as well as deflection, assertiveness and problem solving skills. LifeSkills include speaking clearly, listening, empathy and building supportive relationships. Anger is a psychosocial risk factor associated with sub-clinical cardiovascular disease in youth as well as coronary heart disease in adults.

Objective. The purpose of this study was to determine the effect of school-based WLS training on anger control in adolescents.

Methods. 104 African American adolescents (mean age \pm SD = 15.7 ± 1.5 years, 44% males) were randomized to WLS ($n=52$) or CTL ($n=52$) groups. The WLS group engaged in twelve 50-min training sessions conducted during health or physical education classes by teachers at school. Subjects completed the Spielberger Anger Expression Scale at pre- and post-intervention. The statistical analysis used repeated measures ANOVA including pre-test and post-test values.

Results. Least squares means were observed such that the WLS group increased from 23.0 to 23.9 in anger control score compared to a decrease from 22.1 to 20.5 in controls ($P=.04$).

Conclusion. The findings demonstrate the feasibility of conducting the Williams LifeSkills program in the school setting and its potential beneficial impact on anger control levels in African American adolescents. Replication and verification in a larger group with a longer follow-up is warranted.

015

VALIDITY OF THE REDUCED-SAMPLE-INSULIN-MODIFIED FREQUENTLY SAMPLED INTRAVENOUS GLUCOSE TOLERANCE (FSIGT) TEST IN AFRICAN AMERICANSAE SUMNER¹; MF Lucerio¹; BA Frempong¹; M Ricks¹; S Sen²; H Kushner²; MK Tulloch-Reid³¹Bethesda, Maryland; ²Philadelphia, Pennsylvania; ³Kingston, Jamaica

The Disposition Index (DI), the product of the insulin sensitivity index (SI) and the acute insulin response to glucose, has been linked in African Americans to chromosome 11q. This link was determined with SI calculated from a Reduced-Sampled-Insulin-Modified-FSIGT. However there is uncertainty about the resolution and validity of SI from the Reduced-Sampled-IM-FSIGT. Our goal was to determine in African Americans the SI resolution rate by the Full-Sample-IM-FSIGT and Reduced-Sample-IM-FSIGT and to compare SI determined by the two protocols. 101 African-Americans (48% obese, 24% glucose intolerant) had Full-Sample-IM-FSIGT with samples taken at 30 timepoints. Analyses were repeated with 12 timepoints (Reduced-Sample-IM-FSIGT). Agreement was determined by concordance and the Bland Altman method. The rate of failure of resolution of SI was 1%(1/101) and 3%(3/101) for the Full and Reduced-Sample-IM-FSIGT respectively. For the remaining 97 subjects, SI for the Full and Reduced-Sample-IM-FSIGT were: 3.76 ± 2.41 (mean \pm SD) and 4.29 ± 2.89 ; relative error $21 \pm 18\%$, Spearman $r=0.97$, concordance 0.92, (both $P < .001$). The Bland Altman limits of agreement on ln transformed data were: -0.29 to 0.53 . The mean difference was 0.12 with a 95% CI 0.08 to 0.16. Dividing the population into tertiles with insulin resistance defined by the lowest tertile of SI from the Full-Sample-IM-FSIGT, the misclassification rate by the Reduced-Sample-IM-FSIGT was 8%. Failure to resolve SI with either the Full or Reduced-Sample-IM-FSIGT occurs in only small fraction of subjects. The agreement of SI determined by the two protocols is high.

016

ANXIETY PREDICTS CARDIOVASCULAR REACTIVITY IN YOUNG, HEALTHY AFRICAN AMERICANS

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Objectives. We investigate whether psychosocial factors explain cardiovascular reactivity response to stressors.

Participants. A convenience sample of 49 self-reported normotensive African Americans from 18 to 40 years old and residing in the North Carolina Triangle region.

Design. The study protocol measures systolic blood pressure (SBP), diastolic blood pressure (DBP), mean arterial pressure (MAP), and heart rate (HR) at rest, during anger recall (psychological stressor), and cold pressor test (physiological stressor). Psychosocial factors (anger expression, anxiety, depression, hostility, active coping, and perceived racism) and metabolic syndrome markers were measured. Pearson correlation was used to determine association between psychosocial factors and cardiovascular reactivity; multivariate analysis was used for selection of variables that could predict cardiovascular reactivity to acute stress.

Results. State and Trait anxiety (STAI X-1, STAI X-2) are significant parameters ($P < .0001$) in regression models of cold pressor stress as measured by change in SBP with a fit r^2 of 0.84, increase in DBP with a fit of $r^2=0.76$, and MAP with an $r^2=0.76$. Models for the psychological stressor, anger recall, with State Anxiety as the independent variable predict the increase in SBP with a fit of $r^2=0.60$, DBP with an $r^2=0.62$, and MAP with $r^2=0.68$.

Conclusions. Neither traditional metabolic syndrome measures such as cholesterol, body mass index, insulin resistance, nor elevated resting blood pressure are significant predictors of blood pressure reactivity in young, healthy, African Americans. Here, anxiety is a significant predictor of cardiovascular reactivity response to acute stressors.

017

THE IMPACT OF ANGER ON CHOLESTEROL LEVELS IN HEALTHY AFRICAN AMERICANS

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Objectives. The overall goal of this research study is to investigate the impact of anger on the cardiovascular disease risk factor, high plasma cholesterol.

Design. Using a subset of 174 participants from a larger cohort of a convenience sample of 180 normotensive African Americans (116 females and 64 males), anger was assessed using the 20 item Spielberger Anger Expression (SAE) scale and plasma total cholesterol, LDL, HDL, and triglycerides were measured. Pearson's correlations were performed to determine whether anger expression was associated with lipid profile.

Results. Although questions 1 (I control my temper) and 8 (I keep my cool) were the highest endorsed items in the SAE scale only item 15 ("I am angrier than I am willing to admit") was significantly associated with cholesterol profile. This item conveys anger experience but an unwillingness to outwardly express it. Pearson correlation (two-tail) revealed that item 15 was negatively associated with LDL ($r = -0.205$, $P < .03$) and positively associated with HDL ($r = 0.285$, $P < .002$).

Conclusion. These results suggest that the adaptive behavior of unwillingness to express anger may produce beneficial effects on cholesterol, increasing the "good" (HDL) and decreasing the "bad" (LDL) cholesterol. While not outwardly expressing anger may serve as a survival technique for African Americans to navigate through life, it also appears to provide protection from cardiovascular disease by reducing the risk factor of low HDL to LDL ratio.

018

IMPORTANCE OF AEROBIC FITNESS (VO₂MAX) IN METABOLIC SYNDROME IN SEDENTARY, OVERWEIGHT AND OBESE AFRICAN AMERICAN WOMEN

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Background. Metabolic syndrome (MetS) is associated with lower aerobic fitness (AF). Therefore, we quantitated VO₂ max to examine the level of AF that significantly impacts MetS (ATP III criteria) in non-diabetic, overweight/obese African American women (AAW).

Methods. We studied 68 AAW, mean age 47 ± 10.7 yrs and BMI 33.6 ± 8.5 kg/m². Fasting and 2 hr postprandial serum glucose, insulin, and c-peptide levels obtained during OGTT. Insulin resistance (IR) was calculated by homeostasis assessment model. AF was empirically categorized as very low AF-VLAF: ($n = 25$, VO₂max < 21 mL/kg/min); low AF-LAF: ($n = 14$, $> 21 < 24.4$ mL/kg/min) and moderate AF-MAF: ($n = 29$, > 24.4 mL/kg/min).

Results. The mean BMI, % body waist circumference (WC) and IR were significantly lower in the MAF, intermediate in VAF and highest in VLAF. The prevalence of MetS in AAW was 25% as a group, highest in VLAF (32%), intermediate in LAF (29%) and least in MAF (14%) group. With the exception of serum glucose (4%) and triglycerides (7%), the prevalence of MetS and individual components varied depending on level of AF. The percent of WC meeting ATP III decreased from 84% in VLAF to 64% in VAF and 31% in MAF. The corresponding percent rates for HDL-C were 60%, 57% and 46% and those for systolic BP were 36%, 21% and 7% for VLAF, VAF and MAF groups, respectively.

Conclusion. We show that modest AF (brisk walking equivalent) clearly has significant impact on IR and the prevalence of MetS and its components and should be recommended and encouraged on a national level for the primary prevention of both CVD and type 2 diabetes in AAW.

019

A RETROSPECTIVE ASSESSMENT OF THE ASSOCIATION BETWEEN PATIENT FACTORS AND AFRICAN AMERICANS' WILLINGNESS TO ACCEPT HEART CATHETERIZATIONS

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Racial and ethnic disparities exist in accessing heart catheterizations. When compared to Whites, African Americans are the least willing to undergo heart catheterization procedures and, least likely to receive access to them. The objective of this study was to assess patient factors associated with African Americans' willingness to accept heart catheterizations.

An integrated theoretical model was used to assess ethnic variations in cardiac care. The social conflict theory and the psychological conflict theory of decision-making were used to assess African American cardiac patients' willingness to accept heart catheterization procedure. Clinical and administrative data from the Cardiac ACCESS Longitudinal (CAL) Study were used to examine 298 African American cardiac patients. Frequency distributions, chi square and logistic regression analyses were used to analyze the data.

A majority of the African American cardiac patients were willing to accept the heart catheterization recommendation. Over half of the patients had high-perceived racism and high medical mistrust. Yet, most patients were satisfied with their hospital. Patients who agreed hospitals experiment on people without their knowledge were 63% less willing to accept the cardiac procedure than those who disagreed with the statement ($P < .009$; CI: .175-.780). Patients 50-64 years old were 76% less willing to accept the heart catheterization than patients >80 years old ($P < .021$; CI: .074-.822).

020

BLOOD PRESSURE LEVEL AND NEUROCOGNITIVE PERFORMANCE IN A COMMUNITY-BASED SAMPLE OF AFRICAN AMERICANS

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High blood pressure (HBP) (hypertension) is estimated to affect one billion people worldwide. HBP affects over 40 percent of African Americans compared to approximately 27 percent of European Americans. African Americans have 1.3 times the number of nonfatal stroke, 1.8 times the number of fatal stroke, 1.5 times the number of heart disease deaths, 4.2 times the number of end stage renal disease (ESRD) cases and develop hypertension earlier than European Americans. Hypertensive African Americans experience greater cognitive decline than hypertensive European Americans.

The objectives of this study were: 1) to examine the relationship between BP at baseline and neurocognitive performance; and 2) to examine the relationship between BP and neurocognitive performance after administration of neuropsychological measures.

Ninety non-demented stroke-free African Americans (47 women and 43 men) between 21-71 years of age recruited from the Washington, D.C. metropolitan area took part in this Minority Organ Tissue Transplant Education Program (MOTTEP) study.

Results revealed that at baseline and after administration of neuropsychological measures, BP was significantly correlated with neurocognitive performance. However, hierarchical regression revealed that age and education were the best predictors of neurocognitive performance.

021

ANGER/HOSTILITY AND DEPRESSION ASSOCIATED WITH AN INFLAMMATORY MARKER OF CARDIOVASCULAR DISEASE IN AFRICAN AMERICANSDT MWENDWA¹; J Thomas¹; S Crump¹; C Callender²; D Morehead¹; J Wiley¹; J Brownlow¹; AL Campbell¹¹Howard University Department of Psychology; ²Howard University Hospital Department of Surgery and Transplantation

Recent literature suggests that depression, anger/hostility, and C-reactive protein (CRP) are associated with cardiovascular disease and stroke. A group of researchers reported that anger/hostility and depression were positively related to elevated levels of CRP in a healthy group of participants. These researchers posited that changes in the immune system triggered by negative mood states produced chronic inflammation. The purpose of the current study was to determine whether trait anger/hostility and depression were associated with increases in CRP in a community-based sample of middle-aged African Americans. This study is part of a project aimed at identifying biological and psychosocial predictors of renal health outcomes. One hundred fifty-five African American adults from the Washington, DC metropolitan area were recruited for this study. Participants reported to the General Clinical Research Center and provided urine and blood specimens. They were administered neuropsychological and psychosocial measures. The Neuroticism, Extraversion, and Openness to change Personality Inventory-Revised (NEO-PI-R) was used to measure trait depression and anger/hostility. C-reactive protein was used to measure inflammation. Trait depression ($r=.19$; $P=.02$) and anger/hostility ($r=.22$; $P=.006$) were both positively correlated with CRP. These measures were submitted to a stepwise multiple regression procedure and anger/hostility emerged as the only significant predictor of CRP ($r=.31$, $P=.0001$). Our findings suggest a relationship exists between trait anger/hostility, depression, and elevated CRP in African Americans. Clinical implications of these findings include the need for regular screenings of anger and depression as they may contribute to the inflammatory process involved in cardiovascular disease.

022

CAN GUIDELINES IMPROVE THERAPEUTIC INERTIA AMONG PHYSICIANS WHO TREAT HYPERTENSION IN AFRICAN AMERICAN MEN?

J RAVENELL; D Allen; J Thompson; R Haley; R Victor

Therapeutic inertia (TI)—inappropriate hesitation to initiate or intensify medical therapy by physicians—could contribute to disproportionately low hypertension (HTN) control rates among African American men, the demographic group with the highest age-adjusted death rates from uncontrolled HTN. Most studies on TI have analyzed data from the Veterans Administration (VA) and other large provider networks with electronic medical records. Fewer studies have focused on reducing TI among community physicians in solo or small-group practices, where physicians may have less access to system-wide educational resources or automated chart reminders. Accordingly, we obtained information on community physicians caring for 891 hypertensive African American men in Dallas County, Texas using data from an on-going community intervention trial and local physician databases. To date, a representative sample of 28 community physicians has been interviewed by a physician-investigator using a case-based questionnaire to identify knowledge gaps from the 2003 JNC-7 practice guidelines. When presented a clinical scenario of a 45 year-old African American man with previously undiagnosed HTN, 64% of the physicians would not initiate pharmacologic therapy for office blood pressure (BP) of 145/92 mm Hg and out-of-office BPs averaging 154/95 mmHg (ie, ~20/10 mm Hg above JNC-7 cut-off of 135/85 mm Hg for normal out-of-office BP). Additionally, none of these physicians reported being very familiar with the JNC-7 guidelines. These preliminary findings suggest that new guidelines alone are unlikely to produce substantive improvement in TI among community physicians who treat hypertensive African American men. Novel modalities for disseminating HTN treatment guidelines to community-based physicians are needed.

023

THE IMPACT OF FRAMINGHAM RISK SCORE ON ARTERIAL VASCULAR STRUCTURE AND FUNCTION IN HIGH-RISK AFRICAN AMERICANS

S Hussein; J Kwagyan; G Willie-Carnegie; M Ketete; S Xu; AR Maqbool; S Nidich; R Schneider; OS RANDALL

Introduction. The vascular endothelium plays a major role in maintaining the integrity of healthy vasculature. Endothelial dysfunction has been reported to be the initial step in the development of arterial vascular disease. Flow-mediated dilatation (FMD), induced by reactive hyperemia, is an endothelium dependent phenomenon. Decreased FMD has been reported to be an important marker of endothelial dysfunction. Cardiovascular disease (CVD) risk factors have been related to increase intima-media thickness (IMT) of the carotid arteries as well as to decrease FMD.

Objective. To investigate the impact of FRS on arterial structure (IMT) and function (FMD) in 106 African Americans with a mean age of 64.0 ± 6.6 years.

Methods. Brachial artery diameter (Di) at rest, during reactive hyperemia, and after nitroglycerin administration as well as IMT was measured by B-mode ultrasound. The Framingham 10 years risk score (FRS) was calculated for each patient using the NCEP risk score calculator. Participants were divided into FRS groups of <10%, 10–20%, and > 20%.

Result. Thirty-eight participants had risk scores < 10%, 26 had 10–20%, and 42 had > 20%. There was a significant inverse relationship between % FMD and FRS ($P<.0001$). IMT was not statistically different among groups.

Conclusion. Increased IMT, in this high-risk population, is consistent with established atherosclerosis, while FMD, an indicator of vascular function, decreased as FRS increased; thereby reflecting the impact of risk factor clustering on vascular function even in the presence of atherosclerosis. Lack of control of multiple risk factors may account for the disparities in CVD in African Americans.

024

THE EFFECT OF BMI ON NOCTURNAL BLOOD PRESSURE DIPPING

L Makbul; S Hussein; J Kwagyan; A Maqbool; M Ketete; S Xu; O RANDALL

Objective. To determine the effect of different degrees of obesity on Nocturnal Blood Pressure Dipping in African Americans.

Methods. Ambulatory 24 hour blood pressure recordings were obtained on 200 obese subjects. The subjects were subdivided into the following BMI (Kg/m²) groups: 30–39.9 (n=80), 40–49.9 (n=97) and ≥ 50 (n=23). Significant nocturnal blood pressure dipping is defined as a drop in 24 hour mean blood pressure (measured from 10:00 PM to 6:00 AM) by 10% or more.

Results. The mean nocturnal blood pressure in neither group dipped significantly. When the three groups were compared, the group with BMI above 50 Kg/m² had a significant smaller decrease in nocturnal blood pressure ($P<.01$).

Conclusion. Nocturnal Blood Pressure Dipping did not occur in this obese African American population. The participants with BMI ≥ 50 Kg/m² had the smallest dip in nocturnal blood pressure. Obesity may contribute to adverse cardiovascular outcomes due to a decrease in nocturnal blood pressure dipping.

025

RED BLOOD CELL DISTRIBUTION WIDTH (RDW): INDEPENDENT PREDICTOR OF MORTALITY IN A NATIONAL COHORT OF STROKE SURVIVORS

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Objective. The objective of this study was to examine the effect of RDW on all cause mortality among a cohort of individuals with stroke.

Methods. This study examined nationally representative data from the third National Health and Nutrition Examination Surveys (NHANES III). Four hundred and eighty individuals with a stroke, aged 25 years and older were followed up from baseline in 1988–1994 (NHANES III survey) through to mortality assessment in 2000 using National Health Index (NDI) records. Sample weighted descriptive analysis, univariate and Cox proportional-hazards regression analysis were employed to explore the relationship between RDW and all cause mortality among individuals with a stroke while controlling for known predictors of stroke mortality.

Results. There was a statistically significant difference in mean RDW levels among stroke individuals who survived compared to those who died. Univariate and multivariate analysis demonstrated that among individuals with a stroke, male gender, age greater than or equal to 65 years, myocardial infarction, diabetes, current smoker status, higher white blood cell count, lower hematocrit level, and RDW levels at the 75th percentile or greater (>13.9%) had a statistically significant increased relative risk of mortality. Specifically, individuals with RDW levels greater than 13.9% had a two-fold higher relative risk of death compared to individuals with RDW of 12% and less (RR=2.00, CI=1.25–3.20).

Conclusions. RDW, a readily available complete blood count parameter, may be a useful index of stroke mortality.

026

BLOOD PRESSURE RESPONSE TO SYMPATHETIC STIMULATION IS LINKED TO THE ALDOSTERONE-RENIN SYSTEM IN AFRICAN AMERICANS

CE GRIM; S Krishnaswami; JM Kotchen; S Kidambi; TA Kotchen

The sympathetic nervous system (SNS) and aldosterone (Aldo) may contribute to hypertension (HTN).

We evaluated the association of the Aldo-Renin(R) system with the blood pressure (BP) response to norepinephrine (NE) infusion in 309 AAs (52% men) (30 minutes at 0.01, 0.25, 0.05 µgm/kg/min). In each subject we computed the slope of the NE dose-related increment of systolic BP (NE-BP slope).

Urinary Na excretion was high and did not differ in normotensives (NT) and hypertensives (HTN)(196+8 SE vs 191+9 mM/24 hr). The increase in BP to NE was greater in HTN (P<.001): NT: 3, 11,21 mm Hg vs 7, 16,26 mm Hg in HTN.

In HTN, standing Aldo was higher, R lower and Aldo/R higher than in NT. In NT, both Aldo and R were inversely related to NE sensitivity but the Aldo/R was not. In contrast, in HTN, although NE sensitivity was not related to Aldo alone, the BP response to NE was directly correlated with the Aldo/R ratio. This correlation is consistent with the hypothesis that the increased BP responsiveness to NE in HTN AA is mediated by aldosterone-induced vascular volume expansion.

	Normotensives(n=184)		Hypertensives(n=125)	
	Mean	Correlation with NE-BP slope	Mean	Correlation with NE-BP slope
		r (P value)		r (P value)
Aldo	6.3±.4(SEM)*	-0.18 (.03)	8.3±0.6	-0.11 (0.28)
Renin	1.9±0.2*	-0.16 (.04)	0.8±0.1	-0.26 (.006)
Aldo/Renin	14+3	0.07 (0.39)	32 + 4	0.24 (.02)

* P<.001 NT vs HTN.

027

EAT SMART, LIVE STRONG: NUTRITION EDUCATION FOR OLDER ADULTS

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Objectives. At the conclusion of the session, participants will be able to: 1. Describe the formative research and behavioral framework for Eat Smart, Live Strong. 2. Discuss the Eat Smart, Live Strong components and activities designed to facilitate behavior change.

Methods. The USDA Food and Nutrition Service (FNS) has developed Eat Smart, Live Strong: Nutrition Education for Older Adults, an Activity Kit designed to improve fruit and vegetable consumption and physical activity among 60–74 year olds participating in or eligible for nutrition assistance programs. Project research included a literature review and a promising practices review to better understand the target audience and identify interventions that affected key behaviors. The materials were tested with educators, stakeholders, and older adults.

Summary. Eat Smart, Live Strong includes a Leader's Guide to promote two key behaviors: increase fruit and vegetable consumption to 3 ½ cups/day and participate in at least 30 minutes of physical activity most days of the week. Also included are four session guides and participant handouts to reinforce the behaviors. Each session allows participants to practice nutrition skills and participate in low-intensity physical activity. Providers and participants are encouraged to seek support from community resources.

Conclusions. The Eat Smart, Live Strong Activity Kit uses a variety of incremental approaches to promote behavior change. Findings from the promising practice reviews and formative testing defined relevant activities and appropriate messages. Participation in both these behaviors can prevent or delay the effects of hypertension, heart disease and other chronic health diseases.

028

THE IMPACT OF PATIENT EDUCATION AND PHYSICIAN EDUCATION ON BLOOD PRESSURE CONTROL

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Study Purpose. To assess the impact of patient education and physician education on blood pressure control in hypertension patients.

Methods. The study population is composed of 237 hypertension patients, who are enrolled in the Baltimore Partnership Programs to Reduce Cardiovascular Disparities. The study design is a 2×2 factorial trial: patients and their physicians were randomly assigned to either intervention or control group, where the intervention group receives patient/physician education and control group does not. Blood pressure was measured at baseline, six months and one year post-enrollment. The intervention of the first period was conducted shortly after enrollment. We used multiple regressions to assess the effects of educational interventions on blood pressure change, defined as the absolute systolic blood pressure (SBP) reduction, as compared to baseline SBP. The models are adjusted for sociodemographic variables.

Results. The majority of study subjects are African American (87.8%), female (60.3%), and under 65 years of age (72.6%). Mean blood pressure at baseline, six months and one year post enrollment were 146/89 mm Hg, 138/80 mm Hg, and 140/82 mm Hg, respectively. For the six-month model, patient education and physician education are both significant predictors of SBP reduction ($P < .01$, $P = .05$). Similar trends can be observed in the one-year model as well, however, the impact does not appear to be significant at this point.

Conclusions. In this patient sample, interventions at both patient level and physician level seem to be effective in blood pressure control.

029

PREDICTORS OF ISOLATED SYSTOLIC HYPERTENSION IN A GROUP OF INNER-CITY MINORITY PATIENTSE Saunders¹; W Johnson¹; F Shaya²; B Weaver¹; A Gu³; C Foster¹; D HOWARD¹

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Study Purpose. To study the prevalence and identify predictors of isolated systolic hypertension (ISH) in a group of inner-city hypertensive patients, predominantly African American.

Methods. The study cohort is composed of 480 hypertension patients, enrolled in the Baltimore Partnership Programs to Reduce Cardiovascular Disparities. We defined isolated systolic hypertension as systolic blood pressure (SBP) \geq 140 mm Hg and diastolic blood pressure (DBP) lower than 90 mm Hg. Potential predictors included in the logistic regression model are family history of cardiovascular diseases (yes vs no), self-perceived good health (yes vs no), older age (age 65+ or not) and being African American (yes or no).

Results. 118 out of the 480 hypertensive patients had isolated hypertension at baseline. Significant predictors of ISH included being older than 65 ($P=.04$) and African American race ($P=.05$).

Conclusions. In this patient sample, the prevalence of ISH is approximately 25%. Patients who are older than 65 years of age and African American patients are more likely to have isolated systolic hypertension.

030

HYPERTENSION IN LINEZOLID TREATED PATIENTS

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Purpose. To review risk factors for hypertension in linezolid treated patients.

Methods. Hypertension and its treatment is reviewed in the incident patient, a 26 year old male, post lumbar discectomy, whose postoperative course was complicated by development of cellulites, abscess, acute kidney injury and hypertension.

Results. Methicillin-resistant *Staphylococcus aureus* (MRSA) is increasing in incidence, largely from increased utilization of antibiotics, resulting in resistance. Patients treated with high doses of antibiotics for prolonged periods, increase the risk of acute kidney injury. For MRSA infections, initial treatment with intravenous vancomycin may be followed by oral linezolid therapy.

Hypertension, a complication of linezolid therapy, especially when prolonged, needs to be monitored in patients with pre-existing cardiovascular, cerebrovascular or kidney disease. Blood pressure monitoring in linezolid-treated patients, especially those with uncontrolled hypertension, carcinoid syndrome, or pheochromocytoma is required. Dietary modification is essential for treatment of secondary hypertension due to linezolid, and hypertension treatment overall. Avoidance of foods depleting or activating monoamine oxidase leads to successful treatment of this secondary hypertension state. When antihypertensive agents are necessary, preferred agents include diuretics, angiotensin converting enzyme inhibitors and receptor blockers. Antihypertensive agents with drug interaction with linezolid include beta-blockers, guanethidine, and reserpine.

During treatment with hydrochlorothiazide, tachycardia resulted and despite dietary modifications, hypertension remained uncontrolled. Upon the addition on labetalol, blood pressure and tachycardia were controlled.

Conclusion. With increasing prevalence of MRSA infections, linezolid usage is likely to increase. Consequently, secondary hypertension in association with linezolid needs to be recognized and treated promptly.

031

EFFECT OF DIABETES ON TREATMENT COST OF STROKE IN TENNESSEE: AN ANALYSIS BY RACE

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Objective. To estimate racial differences in treatment cost of stroke with or without diabetes.

Background. Diabetes plays a significant role in the onset of stroke and its treatment. The effect of diabetes on the cost of treatment for hospitalized stroke patients is unknown. Therefore, we examined adults (aged 20+) from the Tennessee Hospital Discharge Data System (HDDS: 2002).

Methods. Using ICD-9 codes, we examined ischemic (IS) and hemorrhagic (HS) stroke as well as diabetes (DM; both type I & II), race, stroke cost, total healthcare cost, number of admissions, and number of days hospitalized. Data on 18,904 stroke patients (15,693 Whites + 3,211 AA) were examined. Among stroke patients, DM was higher (29.8%) than DM in non-stroke patients (18%). We compared these diabetic stroke patients (DSP) with non-diabetic stroke (NDSP) patients by race for differences in stroke treatment cost for the year. Both analysis of variance and chi square tests of significance were utilized.

Results. For all strokes, the treatment cost for diabetics was higher compared to non-diabetics (\$20,470 vs \$19,344, a difference of 5.8%). Among IS+DM patients, the average cost was higher than Non-DM+IS (\$21,071 vs. \$18,465, a difference of 14%). Among HS, the Dm vs. NDM differences were marginal (\$39,873 vs. \$39,215, 1.16%). Finally, the cost of stroke treatment among AA diabetic stroke patients was nearly 49% higher than their white peers.

Conclusion. The higher cost of treatment among DM stroke patients support the hypothesis that an early and aggressive management of diabetes may lower stroke treatment cost, particularly among AA patients.

032

SERUM SELENIUM AND CARDIOVASCULAR DISEASE DISPARITIES IN AFRICAN AMERICANS: ANALYSIS OF US POPULATION DATA FROM THE THIRD NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY

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Objective. Cardiovascular diseases (CVD) disproportionately affect African Americans. Selenium, an essential component in substances demonstrated to mediate CVD incidence like glutathione peroxidase and homocysteine, has been reported to be significantly lower in African Americans compared to Whites. This study explored the independent impact of serum selenium on CVD prevalence in African Americans compared to Whites.

Methods. This study examined nationally representative data from the third National Health and Nutrition Examination Surveys (NHANES III). Nine thousand four hundred and twenty two non-pregnant individuals with CVD, aged 25 years and older, were included in the study. Sample weighted descriptive analysis, univariate and multinomial logistic regression analysis were employed to explore the relationship between serum selenium and CVD in African Americans compared with Whites while controlling for known predictors of CVD.

Results. Statistically significant difference in mean serum selenium levels among African Americans compared with Whites with CVD (119 vs 126 ng/mL). Multinomial logistic regression analysis demonstrated that, compared with White individuals with CVD, African Americans who were male, who had a lower income, chronic kidney disease, chronic obstructive pulmonary disease, diabetes, dyslipidemia and serum selenium levels of less than 121 ng/mL had a statistically greater odds of having CVD. Specifically compared with Whites with CVD, African Americans with CVD were thrice as likely to have serum selenium levels at or below 121 ng/mL (OR=2.70, CI=2.15–3.39).

Conclusions. Serum selenium is an independent predictor and may explain some of the differential incidence of CVD in African Americans compared with Whites.

033

EVALUATION OF A COMMUNITY-BASED PROGRAM DESIGNED TO DECREASE HEALTH DISPARITIES. A CASE STUDY OF THE AFRICAN CARIBBEAN DIABETES PREVENTION PROGRAM (CANADA)

SR Anthony; V STEVENS; M Rossi; V Bright

The African Caribbean Diabetes Prevention Program (ACDPP) was developed to address the disproportionate incidence of diabetes and hypertension in African and Caribbean Canadian communities. Acknowledging the historical and cultural context of the clientele, this culturally appropriate, community-based program used train-the-trainer techniques and was launched in three regions of the Greater Toronto area.

The ACDPP's purpose is to increase community awareness of both the complications and risks associated with diabetes and hypertension, and to impart lifestyle skills and knowledge essential for disease prevention and management.

Quantitative and qualitative evaluative methods included individual and group interviews (with key informants, stakeholders, volunteer health professionals, lay community facilitators and program participants), participant observation of programs and review of quarterly reports to Health Canada, the funding agency.

The evaluation revealed that the ACDPP had made significant progress in achieving the goals identified in its 2002 Program Model. These include building partnerships, community development (capacity building), social marketing (promotion), environmental support and education. The ACDPP reached more than 250,000 people through social marketing activities, major community health fairs – including one in Eritrea, Africa, and church events, in addition to its healthy eating, nutrition, physical activity, and stress management classes.

Recommendations were that the ACDPP expand programming for at-risk communities, enhance its partnership base, and advocate for more healthy lifestyle classes. Funding for research, paid health and lay staff and additional resources, including a community health bus, was also recommended.

034

FIT BODY AND SOUL: A CHURCH-BASED BEHAVIORAL LIFESTYLE PROGRAM FOR DIABETES PREVENTION IN AFRICAN AMERICANS

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African Americans (AA) have a greater proportion of the nation's obesity and type 2 diabetes (T2D) burden and are less likely to benefit from general weight-loss programs compared to Whites. The objective of this study was to assess the effectiveness within an AA church of a 3-month behavioral lifestyle intervention "Fit Body and Soul" (FBS), translated from the Diabetes Prevention Program (DPP) using a community based-participatory approach. The overall goal was to reduce at least 5% baseline weight among high risk AA church participants.

Methods. Forty church participants were selected who were: (a) aged 20–64 years; (b) self-described AA; and (c) BMI ≥ 25 . Four church leaders were trained by the DPP experts to conduct the 12-session FBS Program at the church (one-hour session/ week for 12 weeks).

Results. Mean age was 46 ± 12 years. Many (48.95%) were obese with mean BMI of 36.07 ± 21 . This pattern was also reflected in high waist circumferences (WC) with mean of 108.66 ± 14.86 . 68% were hypertensive; 40% were newly diagnosed hypertensive. At the end of the 12-session FBS, 50% of participants (19/38) lost at least 5% weight, and 30% lost $\geq 7\%$ weight.

Conclusion. Fit Body and Soul is a culturally relevant, faith-based, behavioral lifestyle program, conducted and promoted by AA church members with the support of experts and church pastors. We have suggested use of expert-led CHA teams to provide the intervention. The overall efforts were to empower individuals and their families within the faith community to establish and maintain positive health-related behavioral changes.

035

CAN DYSFUNCTIONAL HDL EXPLAIN HIGH CORONARY ARTERY DISEASE RISK IN SOUTH ASIANS?S DODANI¹; G Reed¹; L Marion¹; V George¹; M Navab²; S Reddy²¹Medical College of Georgia, Augusta GA; ²University of California, Los Angeles

Coronary artery disease (CAD) is the leading cause of mortality and morbidity in United States, and South Asian immigrants (SAIs) have a higher risk for CAD compared to Caucasians. Traditional risk factors do not completely explain high risk, and some of the unknown risk factors need to be explored. We assessed dysfunctional, pro-inflammatory high density lipoprotein (HDL) in SAIs and assessed its association with sub-clinical CAD using carotid intima-medial thickness (IMT) as a surrogate marker for atherosclerosis.

Methods. Cross-sectional study on SAIs aged 40–65 years. Sub-clinical CAD was measured using carotid intima medial thickness (IMT) as a surrogate marker of atherosclerosis. Dysfunctional or pro-inflammatory HDL was determined by novel cell-free assay and HDL inflammatory index.

Results. Dysfunctional HDL was found in the 50% participants, with HDL-inflammatory index of ≥ 1.00 , suggesting pro-inflammatory HDL (95% CI, 0.8772–1.4333). The prevalence of sub-clinical CAD using carotid IMT (≥ 0.80 mm) was seen in 41.4% (95% CI, 0.2347–0.5933). On logistic regression analysis, positive carotid IMT was found to be associated with dysfunctional HDL after adjusting for age, family history of cardiovascular disease, and hypertension ($P=.030$).

Conclusions. The measurement of HDL level as well as functionality plays an important role in CAD risk assessment. Those SAIs with dysfunctional HDL and without known CAD can be a high risk group requiring treatment with lipid lowering drugs to reduce future risk of CAD. Further large studies are required to explore association of dysfunctional HDL with CAD and identify additional CAD risk caused by dysfunctional HDL.

036

THE ASSOCIATION OF DYSFUNCTIONAL HDL WITH CORONARY ARTERY DISEASES IN SOUTH ASIAN IMMIGRANTS

S DODANI

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Coronary artery disease (CAD) is the leading cause of death in the US, and South Asian immigrants (SAIs) have a higher risk for CAD compared to other populations. Traditional risk factors do not completely explain high risk in SAIs. Clinical studies have demonstrated the inverse association between HDL levels and the risk of CAD. However, available data suggest that HDL can easily be modified losing its anti-atherogenic activities and becomes dysfunctional (pro-inflammatory). The objective of this study was to assess the association of dysfunction HDL (DHDL) with CAD in SAIs.

Methods. In this prospective study, 212 SAI were screened from the community using site-based sampling method. The inclusion criteria were: (a) being SAI Indian living in the US for the last 10 years; (b) age between 35–65 years; (c) no known CAD or cardiovascular disease (CVD) in history; (d) known diabetic; and (e) not on lipid lowering drug. 25/212 fulfilled the criteria and underwent exercise tolerance test (ETT), blood work and DHDL testing using novel cell-free assay and HDL inflammatory index (HI).

Results. 15/25 were ETT positive (60%). DHDL ($HI \geq 1.0$) was present in 22/25 patients and was significantly associated with CAD ($P<.001$) and diabetes ($P<.003$). Low HDL ($P<.002$), Apo A-I polymorphisms ($P=.03$), family history of CAD ($P<.001$) and diabetes ($P<.001$) were strong predictors of dysfunctional HDL.

Conclusion. The measurement of HDL level as well as functionality plays an important role in CAD risk assessment in SAI and requires early treatment with lipid in patients with diabetes to lower future risk of CAD.

037

MEDITATION IN AN INNER-CITY CHARTER SCHOOL: FOCUS GROUP AND SURVEY RESULTSKA Kondwani¹; VA BARNES²¹Morehouse School of Medicine, Atlanta, Georgia; ²Medical College of Georgia, Augusta, Georgia

Objective. To investigate the use and acceptance of meditation in an inner-city school.

Methods. At the end of the 2008 academic year, after implementing a school-wide Consciously Resting Meditation® (CRM) program in an elementary charter school in Atlanta Georgia, narratives from 5 focus groups of students and faculty consisting of 3 to 6 members each were analyzed. In addition, 203 students completed a 20-item survey concerning practice frequency and benefits of the program.

Results. The primary theme that emerged from the focus groups was that meditation in school is beneficial. It creates a calming atmosphere, improves student's social development, focus and cooperation with teachers. Faculty reported CRM fosters good behavior management, better overall academic performance, and more orderliness in the classroom. Survey results indicated the average daily classroom meditation time was 10 minutes. 172 (85%) felt they know how to meditate. 182 (90%) felt meditation is useful. 106 (52%) noticed differences in the class after meditation. 98 (48%) meditate at home, once per day or less frequently. 133 (66%) want to keep meditation in the school. 136 (67%) reported that meditation has helped them personally. 121 (60%) indicated they will continue to meditate on their own.

Conclusion. The majority of the faculty and students reported benefits from the CRM program and want to keep CRM in the school curriculum. Since meditation has been linked to lowering blood pressure and improved academic performance, continuation of the program is warranted. Suggestions for improving program logistics, consistency and accountability will be presented.

038

FACTORS IMPACTING HEMODYNAMIC FUNCTION WITH BEHAVIORAL STRESS REDUCTION IN AFRICAN AMERICAN ADOLESCENTS

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Background. This study examined impact of health education (HE), lifeskills training (LS) and breathing awareness meditation (BAM) upon resting systolic blood pressure (SBP) and heart rate (HR) considering underlying anthropometric, behavioral and psychosocial factors.

Methods. 186 African American (AA) adolescents (80M, 106F; mean age=15.1± 0.7 yrs) with high normal resting SBP (ie, 75th-95th percentiles) were randomly assigned by school to 3-month interventions. School sessions were conducted during health classes by teachers. BAM subjects participated in 10 min sessions at school and home each day. At pre- and post- intervention, 20 min resting supine SBP and HR were recorded. Hierarchical stepwise regression analysis used changes in SBP and HR as dependent variables with treatment group pre-intervention anthropometric, behavioral and psychosocial factors as predictors.

Results. Greater SBP decreases were associated with low neighborhood unemployment. For those receiving BAM, greater SBP decreases were associated with greater family cohesion and for those not receiving BAM, the reverse was true. For resting HR, the highest expected HR benefit was associated with a combination of BAM practice, low benefit expectation for HE.

Conclusions. Behavioral stress reduction programs for AA adolescents may benefit from tailoring based upon underlying psychosocial factors. Family functioning, expectation of benefit and socio-economic factors may play a particularly powerful role, especially with interventions practiced at home.

039

SEX AND RACE DIFFERENCES IN DIASTOLIC FUNCTION: EFFECT OF MENTAL STRESSGK KAPUKU²; HC Davis¹; K Carter¹; G Bulluck¹; G Reed²; GA Harshfield¹¹Georgia Prevention Institute, Pediatrics, Medical College of Georgia, Augusta, Georgia; ²Department of Medicine, Medical College of Georgia, Augusta, Georgia

Introduction. Sex and racial differences exist in the prevalence of diastolic heart failure. Mental stress may contribute to these differences. However, the effect of mental stress on diastolic function is poorly characterized but hypothesized to hamper left ventricular inflow and myocardial relaxation ensuing diastolic dysfunction. The aim of this study was to examine whether race, sex and mental stress affect diastolic function.

Method. Fifty-five (21 Whites and 27 males) normotensive adults (mean age 41 ± 5 yrs) underwent a 2-hour protocol of rest, video game stressor and recovery (40 minutes each). Transmitral inflow and annulus motion velocities (tissue Doppler) were recorded every 20 minutes. Blood pressure (BP) and heart rate were obtained at 10 minute intervals. Repeated measures ANOVAs were performed on LV filling and tissue Doppler variables using testing condition (eg, rest, stress, recovery) as a trial factor and sex and race as grouping factors.

Results. Double product increased with stress (8250 ± 1445 to 9344 ± 1314 mmHg.beat/min, $P < .001$). There was significant effect of condition on transmitral inflow (E/A) and mitral annulus (Em/Am) ratios ($P = .001$ and $P = .037$, respectively). There was a sex by race interaction for E/Em (filling pressure) ($P = .017$) such that Black males had lower E/Em compared to White males and White females had greater E/Em than Black females regardless of condition. A sex by race interaction was also seen for Em (myocardial relaxation) ($P = .01$) such that across conditions Em was lower in White males and Black females compared to Black males and White females. Increasing A and E were associated with decreasing RR ($r = -.75$ and $r = -.65$ respectively, both $ps < .001$). Increases in Am were associated with increases in double product ($r = .30$, $P = .028$), systolic BP ($r = .35$, $P = .008$), diastolic BP ($r = .45$, $P = .004$) and shortening of RR ($r = -.41$, $P = .001$).

Conclusion. These findings suggest that mental stress induced reduction of LV filling and myocardial relaxation is sex and race dependent and occurs at relatively small increase in cardiac workload.

040

IMPACT OF THE 'I AM FIT' PROJECT ON BLOOD PRESSURE IN TEENAGERSVA BARNES¹; S Das¹; J Kenny²; D Walker²; DT Bedden³; D Kornegay¹; AM Stevens¹; RM Cibirka¹¹Medical College of Georgia; ²A.R. Johnson Health Sciences High School; ³Richmond County Board of Education, Augusta Georgia

Background. The purpose of the "I AM FIT" project was to improve health awareness and increase physical activity through an inner-city school walking program.

Methods. 176 high school students were divided by grade into 4 competing teams. Participants wore a pedometer each day for 12 weeks. Each team attempted to walk the equivalent mileage from Augusta, GA, to Hawaii (4557 miles). Blood pressure (BP), height, weight and body mass index (BMI) were measured pre- and post-intervention using standard clinically accepted protocols.

Results. The students collectively logged 10555 miles. 105/176 students (ages ranged 14–18 years) completed evaluations at the beginning and end of the 12-wk project. At pretest, the mean height was 65.1 ± 1.2 inches, mean weight was 150.3 ± 4.5 lb, and mean BMI value was 24.74 ± 0.06 . At posttest there were slight overall increases of 1.7 ± 0.5 lb in weight, 0.2 inches in height, and BMI of 0.2 (all $Ps < .05$). There were decreases of 1.9 mm Hg SBP and 0.01 mm Hg DBP ($Ps > .18$). Overall, 29 (27.6%) students lost a total of 85.9 lbs.

Discussion. The pretest anthropometric values were in the normal range for this age group, except mean BMI was at the 82nd percentile. At posttest, there was a decrease in SBP, and 27.6% of students lost weight. This project was successful in improving important health metrics in an at-risk student population.

041

UNDERSTANDING THE COMPLEXITY OF AFRICAN AMERICAN HOME CARE PATIENTS WITH HYPERTENSION

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Objectives. To examine socio-demographic, clinical and self-management characteristics of a sample of African American (AA) patients admitted to home health with uncontrolled hypertension (HTN) and to determine the extent to which these factors contribute to disease severity. Home care patients are a high-risk group due to prior hospitalization and/or referral by a community physician for skilled nursing care.

Methods. This was a cross sectional study of 498 AA patients newly admitted to home care with uncontrolled HTN. Data for this study were drawn from two sources: clinical and functional assessment data derived from patient interviews and the uniform home health assessment system mandated by the Centers for Medicare and Medicaid Services.

Results. Average systolic blood pressure (BP) was 157.8 mm Hg; average diastolic BP was 87.7 mm Hg. Over 27% had BP considered very serious (>180/110). Over 40% of the patients reported less than a high school education; fifty-nine percent reported annual incomes of less than \$15,000. Twenty percent of patients scored in the lowest stage of the Patient Activation Measure indicating an inability or unwillingness to perform self-management behaviors. Dually diagnosed diabetic HTN patients were at the greatest risk of seriously uncontrolled HTN compared to patients with HTN alone (74.3% vs. 25.7%).

Conclusions. These findings indicate that this complex patient population has significant management and educational needs. In particular, dually diagnosed diabetic hypertensives are at a greater risk of uncontrolled HTN and may benefit most from clinical interventions. There is a clear need for multidisciplinary, multi-factorial strategies to improve care.

042

TWO OF THREE HOME BLOOD PRESSURE DEVICES MARKETED IN INNER-CITY AREAS FAIL TO PASS THE EUROPEAN SOCIETY OF HYPERTENSION VALIDATION PROTOCOL: STUDIES IN AN AFRICAN AMERICAN POPULATION

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Blood pressure (BP) measurement errors expose patients to preventable cardiovascular disease.

The validation of automatic BP devices (adults) is tested using the European Society of Hypertension (ESH) Protocol in 15 subjects in Phase 1 and 18 in Phase 2. We tested devices marketed in Walmart and Walgreens.

We tested three devices: Omron HEM-711DLX measures by oscillometric methods (OM) with one cuff for most arms; Homedics BPA 200 measures BP by OM on inflation (one cuff for most arms), and Homedics BPA 300 uses Korotkoff sounds (2 sizes of cuffs).

Testing was performed in 73 subjects (72 of whom were African American) by 2 trained observers with a double stethoscope (5 BPs alternating with the device taking 4 BPs). To pass Phase 1, one of the following must be met: 56% of readings must be ± 5 , 78% ± 10 and 89% ± 15 mm Hg. The Homedics BPA-200 failed Phase 1 (42% ± 5 , 73% ± 10 and 84% ± 15). The Homedics BPA-300 passed Phase 1 but failed Phase 2, while only the Omron HEM-711DLX passed both phases.

The finding that 2 of 3 devices widely sold in the US to urban populations failed to pass accuracy validation exposes patients and practitioners to the medical-legal risks of using inaccurate BP devices.

We urge mandatory validation of BP device accuracy before they can be sold in the US. Regular validation of individual device accuracy and observers is also required to assure that the striking benefits of hypertension detection and management are translated to the population.

043

PERIODIC BLOOD PRESSURE MEASUREMENT TRAINING UPDATES KNOWLEDGE AND REDUCES COMMON ERRORS IN THOSE WHO MEASURE BP FOR PHARMACEUTICAL TRIALS

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The standard for blood pressure (BP) measurement for drug applications is the auscultatory technique following AHA Guidelines. Most trials today are in small clinics that specialize in trials. It is assumed those who measure blood pressure (BP) in such facilities have mastered and adhere to the good clinical practices and accurately measure BP.

We tested this hypothesis by pre- and post-training assessment of knowledge, skills and performance of 373 personnel being standardized by us for the first time for multi-center (US and International) trials over the last 3 years. 60% of observers had been measuring BP for ≥ 20 years, yet 66% had never heard of the AHA guidelines and only 8% had ever read them.

Only 40% had ever been tested by double stethoscope, 88% had never been tested by videotests, 60% did not know how to avoid the errors of an auscultatory gap, 62% did not use the bell, and 35% used K4 as diastolic. The criterion based pre-training written score was only 49% and increased to 85.

On video-testing using 12 standardized BP examples, only 53% passed on the 1st attempt. The most common error was of 8, 10, or 12 mm Hg suggesting a tendency to read to the nearest 10 mm Hg. On the second attempt another 35% passed. Only 76% were deemed accurate on their first double stethoscope testing.

The deficiencies in knowledge and practice in these "experienced" professionals suggest that without standardized training serious errors in BP measurement are common in pharmaceutical trials.

044

HURRICANE HYPERTENSION: OVERWHELMING THE SYSTEM FOR BP MEASUREMENT. THE UTILITY OF PALPATED PRESSURE AS AN EFFICIENT TRIAGE

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Reports from those working after Katrina listed a large problem with uncontrolled high blood pressure and the problems of measuring BP in the victims of this disaster overwhelming the medical team as many aneroid and electrical devices had been made inoperable.

Our experience in estimating the systolic BP with a mercury manometer (requiring no electricity or batteries) by palpation (PalpSys) before taking four more pressures suggested that this was a fairly accurate way to estimate the true systolic BP (TruSys) determined by the average of these 4 BPs.

The data were analyzed from 360 subjects studied during testing of automatic devices. After a 5 minute rest the PalpSys was taken by one observer and then two observers (double stethoscope) measured the auscultatory BP.

In 360 subjects 48 had a TruSys of ≥ 160 mm Hg. A PalpSys ≥ 150 mm Hg identified 94% (45/48) of these patients. Of the other 30 with PalpSys ≥ 150 only 2 had TruSys of less than 140.

A PalpSys of < 110 identified 100% (20/20) of those with a TruSys of < 100 . We conclude that the palpated systolic pressure is an effective way to triage disaster subjects into those needed evaluation for low or high blood pressure until adequate staff and equipment are available to measure BP accurately on everyone. Indeed the single PalpSys was as accurate as a single automated BP estimate of systolic BP.

045

THE PERSISTENCE OF TRADITIONAL BELIEFS ABOUT EPILEPSY IN GHANA: A PSYCHOSOCIAL STUDY AMONG UNIVERSITY STUDENTS

KB BARIMAH; AT Dugbartey

Introduction. Epilepsy is a brain disorder in which clusters of nerves, or neurons, in the brain sometimes signal abnormally leading to strange sensations, emotions, and behaviour or sometimes convulsions, muscle spasms, and a loss consciousness. In Africa, studies have shown that persons with epilepsy are shunned and discriminated against in education, employment and marriage because epilepsy is seen as a shameful disease in the eyes of the general public. Epilepsy is also traditionally looked on as caused by ancestral spirits or attributed to possession by evil spirits. It is also thought to be due to witchcraft, and "poisoning" and often taken to be highly contagious.

Objectives. The main objective of the study was to investigate the current and changing psychosocial beliefs and knowledge about epilepsy among university students in Ghana, West Africa.

Methods. A total of 173 students of a university at Accra served as voluntary participants. The Antonak and Rankin's (1982) Scale of Attitudes Towards Persons with Epilepsy (ATPE-Form S) was used based on reported reliability and validity.

Results. A Pearson product-moment correlation revealed a moderate relationship between each participant's knowledge about, and attitudes toward. Results indicated a restricted knowledge about epilepsy, as well as relatively unfavorable attitudes toward individuals with this disorder.

Conclusions. A trend toward more favorable attitudes was however demonstrated in this study. Findings are therefore consistent with the view that attitudes about epilepsy among Ghanaian university students are in a process of change.

046

THE INFLUENCE OF WEIGHT CLASS ON METABOLIC SYNDROME AMONG AFRICAN AMERICANSDL COVERSON¹; K Armstrong¹; DA Grossniklaus¹; CM Reilly¹; SB Dunbar¹; PC Clark²; L Zhao³; P Igho-Pemu⁴¹Nell Hodgson Woodruff School of Nursing, Emory University; ²Byrdine F. Lewis School of Nursing, Georgia State University;³School of Medicine, Emory University, ⁴Department of Medicine, Morehouse School of Medicine

Aims. Obesity is a major contributor to MetS (metabolic syndrome), particularly for African Americans. However, little is known regarding the influence of weight class on MetS profiles. The specific aim of this study was to assess the influence of weight class on demographic, clinical, and behavioral factors associated with MetS in African Americans.

Methods. 76 African Americans, age 21–69 years, diagnosed with MetS. Demographic (education and income); clinical (SBP, DBP, weight, BMI, waist circumference, fasting glucose, cholesterol, HDL, LDL, and triglyceride level), and behavioral characteristics (physical activity metabolic equivalents (METS) and total minutes of physical activity per day)) were assessed according to weight class: overweight, obese, and extremely obese.

Results. Demographic factors did not significantly differ by weight class. Waist circumference differed significantly by weight class ($P < .001$) for overweight ($M = 93.6$), obese ($M = 108.0$), and extremely obese ($M = 119.5$). HDL levels also differed significantly by weight class ($P = .009$) for overweight ($M = 59.6$), obese ($M = 46.2$), and the extremely obese ($M = 49.0$). There was a trend towards significance for fasting glucose (0.086) according to weight class. Mean physical activity METS also significantly differed according to weight class ($P = .009$) for the overweight ($M = 8.6$), obese ($M = 7.0$), and extremely obese ($M = 5.8$).

Conclusions. Weight class revealed significant clinical and behavioral differences in MetS factors among African Americans. Further investigation of the influence of weight class on MetS profiles in larger, more diverse samples is needed.

047

FROM NEEDS ASSESSMENT TO PARTICIPATORY RESEARCH: A COMMUNITY VISION OF HEALTH PROMOTION PROGRAMS IN ONE NATIVE AMERICAN COMMUNITY

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Objective. Identify unique cultural needs, priorities, program delivery preferences and barriers to achieving a healthy diet and lifestyle in one Native American community.

Design. A novel modified nominal group technique (NGT) conducted in four districts and three age groups (Elders, adults and youth) ($N=114$). Participants listed, discussed, ranked and then scored their responses to four questions using a modified NGTA formula which used ranking and scoring data to produce an ordinal list of proportionally identified community concerns, barriers and preferences.

Results. The biggest concerns for the overall community were: substance abuse, housing, recreation, employment, and emergency response time. Barriers to healthy eating included: taste, cost, time, availability, and knowledge. Barriers to physical activity included: health problems, motivation, time, available activities, and lack of fitness centers. Preferred health program strategies/elements appropriate for inclusion in health program design included: improve the recreation center; provide workshops and activities that include the entire family, offer nutrition programs, offer outdoor activities, and offer parenting programs.

Conclusion. Culturally appropriate interventions to address identified barriers in this community should be designed to include education for the entire family at an improved recreation facility. It is also important to develop skills among tribal programs to utilize existing quantitative and qualitative data for health promotion and environmental interventions for the Spirit Lake Tribe. Further research will use a participatory research design to familiarize tribal entities with documentation research conducted on the Spirit Lake Reservation.

048

APPLICATION OF AN ONLINE NOMINAL GROUP TECHNIQUE INITIATING KNOWLEDGE TRANSFER, INTEGRATION AND CONSENSUS AMONG HEALTH PROFESSIONALS AT A DISTANCE

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There is a need to understand what barriers prevent adherence with national recommendations as a way to motivate or facilitate changes in eating behaviors and other lifestyle factors to improve the health of the nation. Studies indicate the prevalence of obesity-related health conditions (hypertension, coronary heart disease, high blood cholesterol, and type 2 diabetes) differ across race, ethnicity, age, socioeconomic status and geographic location. There is a specific need for health professionals to have a platform for integration and discussion of knowledge on specific barriers and facilitators to healthy lifestyle choices among populations most at-risk to these major chronic diseases. On-line data collection in tandem with an online Nominal Group Technique (NGT) developed by Information Technology experts from UND have strong application for initiating knowledge transfer, integration and consensus among health professionals at a distance. On-line survey instruments were used to collect previous and on-going demographic and behavioral data related to eating and physical activity into an integrated database. A group of health professionals from across the nation with expertise in the field of behavioral nutrition knowledgeable in health disparities related to minority, socioeconomic and rural health disparities are evaluating the utility of the virtual NGT meeting room developed by UND and used successfully in transnational research as a unique/cost-effective method for public health professionals to integrate our research efforts. This research is an ancillary study to the USDA National Obesity Prevention Initiative. This study will result in a continuously updated national database of barriers/facilitators to healthy eating and activity behaviors most relevant to diverse target populations exhibiting the highest burden of obesity related diseases. Our established on-line NGT platform provides a time and cost-efficient NGT platform for gathering a variety of information among health professionals to address the needs of our most at-risk populations.
