



## 6th DISPARITIES PARTNERSHIP FORUM

# Overcoming Disparities: Diabetes Care In High Risk Populations

A rising threat — the impact of social determinants of health

Compilation of Abstracts

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## INTRODUCTION

The 2013 Forum's focus was to collaborate with partners to address the disparity of cultural competency, health equity and health literacy in health care, specifically in populations at highest risk for diabetes.

A key feature of the 2013 forum, entitled *Overcoming Disparities: Diabetes Care in High Risk Populations*, was the presentation of promising practices that can be applied to community efforts aimed at improving diabetes care in high-risk populations. It is our pleasure to offer abstracts of the two oral presentations as well as all submitted practices. We hope these abstracts help to inform your efforts in your communities.

### Assessment Of Patients' Sustainability Of Behavior Changes Post DSME/T Classes

**Abstract:** The Diabetes Treatment Center (DTC) at Howard University Hospital is a state-of-the-art facility focused on a multidisciplinary approach to diabetic patient care. The center fosters both group and individual education and counseling by certified diabetes educators and nutritionists. Through a 3-day DSME/T class offered monthly, the DTC seeks to educate, empower, and increase the minority population's awareness and understanding of diabetes. During the classes, patients are educated on the AADE 7 Self-Care Behaviors. On the first day of training, patients establish behavior change goals regarding nutrition, blood glucose monitoring, and/or physical activity which seek to improve their diabetes outcomes. The objective of this study is to assess the sustainability of patients' behavior change goals post DSME classes over time. Additional factors (i.e. patient demographics) were also assessed to determine if they may also affect patients' ability to sustain their behavior change goals. A retrospective chart review was conducted for this research; there were no interventions and/or procedures. The study focuses on 17 patients who attended a 3-day DSME/T class in either the month of October, November, or December 2012. Patient follow-up was bi-monthly over a 6-month time frame. Follow-up consisted of patients ranking the achievement of their behavior change goals. Successful "sustainability of behavior change goals" was defined as anyone who ranked their goals as being achieved always or most of the time. Additional data assessed included education, work status, number of class days attended, and gender. Based on the McNemar Test, there was not a difference in the proportion of successful goal achievement comparing months 2 and 6 or months 4 and 6. Successful goal achievement rates for months 2, 4, and 6 were 41.2%, 53.3%, and 85.7%, respectively, showing a trend of sustainability over time. However, there was no statistically significant association found between successful goal attainment and the other assessed data.

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### Access To Care For Latinos With Diabetes And Behavioral Health Challenges

**Abstract:** The fastest-growing population group in the United States, Hispanics/Latinos have a higher risk and rate of diabetes than the general population—more than 10 percent have diagnosed diabetes. Rates of poverty, unemployment, and low educational attainment among Hispanics/Latinos are higher than in the general population. Also, uninsurance and undocumented rates are higher than any other ethnic group. Disparities affect individuals with mental and substance use disorders as well, who are at higher risk than the general population of developing diabetes. Nearly 8 percent of all adults with any mental health problems and serious mental health problems also have diabetes. Hispanics/Latinos are also more likely than the general population to have experienced serious psychological distress in the past 30 days. Yet, they are half as likely to receive mental health counseling and prescription medications for treating mental health conditions. The Affordable Care Act (ACA) offers more opportunities for health care coverage. It will benefit many individuals with diabetes, and potentially improve many Latinos' diabetes and behavioral health care. With better access to quality primary care services to help prevent and manage these deadly conditions, more Hispanics/Latinos will be able to pursue recovery, optimal health, and wellness. This poster presentation will show the multiple factors that contribute to these disparities and how access to care through the ACA will enhance health care in the Hispanic/Latino community. Through learning about the Substance Abuse and Mental Health Services Administration's (SAMHSA) Wellness Initiative, attendees will learn how replicating Hispanic/Latino-focused wellness activities can improve diabetes care and behavioral health care among this high-risk population, while supporting their overall wellness and recovery.

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## Achieving Normal Glycemic Control By Implementing An American Indian Approach Diabetes Prevention Program For Non-Complicated Type II Diabetes

**Abstract:** Indian Health Center of Santa Clara Valley (IHC) has implemented the Diabetes Prevention Program (DPP) since 2004. The curriculum is based on a study by the National Institute of Health which found that an intensive lifestyle intervention can lower the risk of Type 2 diabetes by 58%. At IHC, the annual diabetes conversion rate is 1% as compared to the NIH study predicted rate of 11% without the intervention. The aim is to successfully apply the DPP to participants with uncomplicated diabetes using IHC's DPP innovative 17-week lifestyle change program taught by a multidisciplinary team of professionals including a Registered Dietitian, Certified Diabetes Educator, Mental Health Counselor, Kinesiologist, and Health Educators. Baseline/follow up labs and surveys are obtained to track outcomes. In 2010, IHC contracted with Valley Health Plan, a Public Health Sector insurance plan, to provide DPP to participants with pre-diabetes with a Fasting Blood Glucose of 100-125 or A1c 5.7-6.4 and patients with uncomplicated, non insulin dependant , Type 2 diabetes with a FBG >125 or A1c > 6.4. Of 43 participants, 23 were diagnosed with Type 2 diabetes and 21 of those completed the program. Follow up labs indicate 57% of those with diabetes decreased their glycemic measures from diabetes range to pre-diabetes or normal range (FBG<100, A1C<5.7). Using IHC American Indian DPP concepts, participants with uncomplicated Type 2 diabetes were able to lower their risk of diabetes complications and increase their quality of life.

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**Assessment Of Clinical Status Of Patients With Type 2 Diabetes Mellitus In Sultan Qaboos University Hospital, Muscat, Oman**

**Abstract:** Type 2 diabetes mellitus (T2D) results in progression of hyperglycaemia with time, and causes multiple organ damage. Accordingly, glycaemic control needs to be assessed and monitored frequently. This study aimed to assess the clinical status of T2D patients in Sultan Qaboos University Hospital (SQUH), Muscat, Oman. A total of 673 T2D Omani patients were recruited from the Diabetes Clinic and Family Medicine Clinic at SQUH. Inclusion criteria were Omani patients with T2D, over 18 years old, with active follow up and at least 3 visits within one year. Patients underwent anthropometric (age, gender, height and weight) and biochemical investigations (HbA1C level, urine microalbumin/creatinine ratio (ACR), total cholesterol, low density lipoprotein (LDL)-cholesterol, high density lipoprotein (HDL)-cholesterol and triglycerides). Blood pressure was also measured and duration of diabetes was documented. Using the recommended care levels, only 22% of the patients achieved HbA1C target (<7%), 30% achieved blood pressure target ( $\leq 130/80$ ), 35% were within total cholesterol level target ( $<5.2$  mmol/L), 63% were within LDL-cholesterol level targets ( $<2.59$  mmol/L), 38% were within triglyceride level targets ( $<1.69$  mmol/L), 50% and 52% of the males and females, respectively, were within HDL-cholesterol level targets (males:  $>1.0$  mmol/L; females  $> 1.3$  mmol/L). Almost 60% of the patients had urinary ACR within normal range. Forty two percent of the patients were on insulin treatment and 70% were on statins. Omani patients with diabetes require better management of their glycaemic control and other associated conditions. However, many barriers, in this community, stand in front of achieving the recommended care. Some of these are the great reluctance of Omani patients to take insulin therapy which delays the proper treatment; major problem with compliance to treatment plans; tertiary referral with complicated-difficult cases and traditional dietary problems. Management of diabetes requires collaboration between patient's effort as well as provider efforts.

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## Association Of Socioeconomic Position And Demographic Characteristics With Cardiovascular Disease Risk Factors And Healthcare Access Among Adults Living In Pohnpei, Federated States Of Micronesia

**Abstract:** The burden of diabetes and cardiovascular disease (CVD) is increasing in low-to-middle income countries (LMIC). Although strong evidence for inverse associations between socioeconomic position and health outcomes in high-income countries exists, less is known about LMICs. Our study examined the association between socioeconomic and demographic characteristics with CVD risk factors and healthcare access in such countries. We extracted data from the World Health Organization's STEPwise approach to Surveillance (STEPS) 2002 cross-sectional dataset from Pohnpei, Federated States of Micronesia (FSM). We estimated associations for socioeconomic position (education, income, employment) and demographics (age, sex, urban/rural) with CVD risk factors (behavioral and anthropometric/biochemical), and with health care access, among a sample of 1638 adults (642 men, 996 women; aged 25–64 years) representative of the FSM population. Our analysis included chi-square with Rao-Scott adjustment and one-way analysis of variance with post-hoc pairwise comparisons. Generally, we found significantly higher proportions of daily tobacco use among men than women (69.6%, 95% Confidence Interval [CI]=64.5–74.2 vs. 30.4%, 95% CI=25.8–35.5,  $P<.001$ ), and among respondents reporting primary-level education (<9 years) than among those with a post-secondary education (>12 years) (62.1%, 95% CI=54.5–69.1 vs. 8.6%, 95% CI=05.8–12.5,  $P=.012$ ). Participants reporting paid employment had significantly higher mean waist circumference ( $P=.011$ ) and higher mean systolic blood pressure ( $P<.001$ ) than unemployed or unpaid work. Women reported significantly higher rates of health care access ( $P=.011$ ) and had significantly higher mean waist circumference ( $P<.001$ ) than men. Our results suggest that socioeconomic position and demographic characteristics impact CVD risk factors and healthcare access in FSM. Providing better evidence on the impact of socioeconomic position on CVD risk factors in LMICs may help decision makers tailor policy and programs to fit country-specific conditions.

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### Be Heart Smart Project: Evaluation Of A Culturally Appropriate Health Education Program

**Abstract:** African American women are more likely to develop CVD and suffer from other diseases, such as diabetes, and obesity. The purpose of this study is to collaborate with women's service organizations in TN to provide culturally appropriate health education programs. Individuals for the program were recruited through women's service organizations in the community. Study activities included: pre and post health risk scales, knowledge tests, and health education sessions. Physical screenings were performed and included: height, weight, waist circumference, body mass index (BMI), blood pressure and blood analysis. The blood analysis included a lipid profile and glucose. Education sessions used culturally appropriate materials including the American Diabetes Association's "Choose to Live, Sisters Strong Together". To date 47 African American women initiated the program, of which 39 participated to completion. According to their preliminary health survey reports >30% were pre-hypertensive, had pre-diabetes or were obese. Study results showed mean glucose levels decreased at 6 month. The estimated mean glucose change at 6 month was -10.08 (-22.1, -2.23). There was no statistical evidence to conclude that the mean BMI changed over the 6 month time period. The mean knowledge test score did not change after the intervention ( $p=0.1536$ ). There were no significant changes noted in blood pressure and lipid values. Our initial experience with the program appears promising based upon program completion rates, and trends toward improved metrics of health in this high risk population. This culturally sensitive, health education program developed for African American women warrants further refinement and evaluation. Outcomes will contribute to the literature on community-based education interventions for this population; and inform approaches that improve heart disease, diabetes and obesity awareness and reduce these risks in African American women.

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## Beliefs About Diabetes Mellitus Etiology, Health Behaviors, And Treatment Patterns Among The Bangladeshi-American From Queens Borough Of New York City

**Abstract:** In the United States of America, natural products use is most prevalent among the immigrants. Very few studies have been conducted in the Bangladeshi immigrants to the United States of America on natural products knowledge. Therefore a gap in knowledge exists. This study deals with the field observations recorded on therapeutic applications of natural products used in diabetes and metabolism by the Bangladeshi immigrants of the Queens borough in New York City. Fieldwork was carried out from July 2012 to June 2013. Semi structured interviews and guided field-walk methods were used to gather information on natural products used by the Bangladeshi immigrants. Along with natural products, information was also collected on natural products parts used, formulations, and dosages. Information on physiochemical as well as pharmacological activity studies on these natural products (if any) was obtained from several data bases. These natural products names included *Apis cerana* Fabricius, *Ocimum tenuiflorum* L., *Nigella sativa* L., *Aconitum napellus* L., *Agaricus campestris* L., *Labeo rohita* F. Hamilton, *Ophicephalus striatus* Bloch, *Lactuca sativa* L., *Persea americana* Mill., *Plantago major* L., *Glycyrrhiza glabra* L., *Olea europaea* L., *Corchorus capsularis* L., *Ipomoea aquatica* Forssk., *Cocos nucifera* L., *Allium sativum* L., *Solanum melongena* L., *Citrus maxima* (Burm.) Osbeck, and *Camellia sinensis* (L.) Kuntze. Information on home-grown use of natural products has led to discovery of many medicines in use today. It is important that modern scientific studies be conducted on these natural products towards isolation and identification of compounds through which diabetes and metabolism can be effectively treated.

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### Biomeasure Health Measuring System

**Abstract:** BioMeasure Machines are self-service devices that accurately measure weight and height, body fat percentage and calculate body mass index (BMI) at the push of a button, then provide results on a printed ticket to each user. With the capability of measuring over 750 individuals in one day, we think our Machine's greatest value is the speed measurements can be taken, without compromising accuracy. Individuals line up for their height and weight measurements, body fat percentage and immediate BMI calculation, all shown on a printed ticket within 15 seconds.

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### **Building Cultural Competency Into The Diabetes Prevention Program**

**Abstract:** The Diabetes Prevention Program (DPP) lifestyle intervention, has demonstrated effectiveness in reducing risk factors for diabetes and cardiovascular disease. Culturally appropriate long-term strategies for maintaining healthy lifestyle practices among Hispanics are lacking. The purpose of this project was to examine the effectiveness of a Diabetes Prevention Program (DPP) adapted to meet the needs of a high-risk monolingual, Spanish-speaking population. The population received culturally appropriate diabetes educational materials, skill building, and social support provided within a group format. Eliminating health care disparities for Hispanics at high-risk for diabetes begins with gaining cultural insight and tailoring educational efforts to individual patients. The DPP program consisted of 16 weekly core sessions following completion of 1 bimonthly and 7 monthly sessions. The primary outcome was weight loss and reduction in BMI; secondary outcomes included HbA1c, fasting glucose and lipid profile, systolic and diastolic blood pressure (SBP, DBP), and waist circumference (WC) conducted by safety net clinics. A total of 60 participants with pre-diabetes were enrolled in four different cohorts. After completion of the initial 16 DPP core sessions, participants continued in a post-core program. Between baseline and 4 months significant weight loss was noted in all four of the cohorts, along with significant decreases in HbA1c, SBP, DBP, and WC. Assessments will also be conducted at 12 months from baseline. These results suggest that cultural competency educational strategies woven into the core and post-core strategies were successful in maintaining a reduction in diabetes and CVD risk factors at 12 months.

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## Centering Pregnancy Diabetes As A Means Of Outcomes Improvement In High Risk Populations

**Abstract:** Centering Pregnancy uses the concepts of social learning theory to promote improved adherence with medical care in a supportive environment. Three factors comprise the foundation for medical treatment of pregnant women using Centering Pregnancy model: assessment, knowledge and support. Providence Hospital is using these concepts to work with high risk pregnant women at risk for complications due to pre-gestational and gestational diabetes. Providence has targeted this group to reduce complications related to diabetes in pregnancy, including fetal macrosomia, hypertensive disorders in pregnancy and fetal death in utero. We have noted remarkable improvement in outcomes using the basic Centering Pregnancy model which Providence has modified to provide comprehensive diabetes care. The Centering Pregnancy Diabetes Groups recruit pregnant women with similar demographics, including gestational age and ethnicity. The District of Columbia area is comprised of a large population of underserved, including African American and Hispanic women, who have limited access to health care. In addition, Providence is one of the few providers of reduced or no cost prenatal care. To date, we have completed one Centering Pregnancy Diabetes Group and have two others in progress. Based upon outcomes from the first group, we have noted what will be less frequent Caesarean deliveries for macrosomia, improved glycemic control throughout pregnancy, improved problem solving skills and increased ability to cope with managing diabetes in pregnancy.

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### Church and State Meet Excel: Eliminating Lower Extremity Amputation In African American Males

**Abstract:** Church & State Meet Excel: Eliminating Lower Extremity Amputation in African American Males Big Data Brings Big Results for African American Males Nationally African Americans lose a limb at twice the rate of white Americans. In the Philadelphia Pa., area, African American men were suffering major LEA almost four times as often as white men . Most of these amputations are the result of poorly managed diabetes. By drilling down into the data, specific at-risk neighborhoods can be identified by zip code. The Save Your Soles campaign was developed to reduce the high rate of limb loss in African American men in the Philadelphia area. Campaign organizers used the big data provided by state-administered, publicly accessible hospital inpatient databases to identify the zip codes with the highest rates of LEA. These zip codes were largely African American. Reports highlighting the racial disparity were distributed via local churches. The campaign partnered with the local churches because they are a trusted community resource and understand the local healthcare landscape. Church-sponsored health events provided education and simple amputation prevention tools. Church leaders were also recruited to act as agents of change and spread the word on this little-known racial disparity. As part of this ongoing campaign, church leaders and local physicians will receive updated reports on the local LEA incidence. The reports include excel spreadsheets and graphs to show the numbers of amputation by zip code with comparison to non-African American communities. The data provides hard evidence to evaluate the progress of the campaign. The campaign has witnessed a 20 percent decline in a two-year period in the high-risk zip codes. (246 words)

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## Contributing To Health Equity In Diabetes: Educating High-Risk Populations About Preventing Vision Loss From Diabetic Eye Disease

**Abstract:** Diabetes and eye disease cause significant disability, loss of productivity, and diminished quality of life for millions. Although all people with diabetes are at risk for diabetic eye disease such as cataract, diabetic retinopathy, and glaucoma, many are unaware of the effects of diabetes on vision. Today, 7.7 million Americans 40 and older have diabetic retinopathy, and this number is projected to increase to more than 11 million by 2030. Further, eye disease prevalence rates remain disproportionately higher among minorities, including African Americans, American Indians/Alaska Natives, and Hispanics/Latinos. With 26 million Americans affected by diabetes, culturally competent health education is needed to raise awareness about one of the leading causes of vision loss and blindness. Through its National Eye Health Education Program (NEHEP), the National Eye Institute, one of the National Institutes of Health, provides sight-saving information to multicultural audiences. This session will explore NEHEP's approach to enhancing its annual diabetic eye disease activities during American Diabetes Month (ADM) and beyond. Using the umbrella theme, "Diabetic eye disease is a complication of diabetes," the 2012 ADM campaign employed a surround-sound media strategy to increase the reach of messages to underserved and high-risk audiences. Through blended traditional and social media strategies, NEHEP successfully created a continual stream of messages that informed the public about the relationship between diabetes and vision and the importance of early detection and timely treatment for diabetic eye disease. Using cost-saving measures to repurpose existing materials, media outreach activities garnered more than 70 million combined media impressions in 30 days, an increase of 95 percent from 2011. NEHEP's results show how a targeted multichannel approach can decrease health inequities by increasing the reach of health messages. Other agencies can replicate—and sustain—this type of campaign to open the eyes of Americans to diabetic eye disease.

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## **Demographics Of Study Participants In Clinical Trials For Diabetes Drugs Approved By FDA From 2010 To 2013**

**Abstract:** Historically, women and minorities have been underrepresented in clinical trials of drugs. In clinical trials for treatment of a disease with a diverse demographic prevalence, such as diabetes, this is especially concerning. A recent study of adults in the US population showed that 6.7% of men, 6.3% of women, 5.6% of whites, and 10.0% of blacks are diagnosed with diabetes. To accurately assess the safety and efficacy of drugs, the U.S. Food and Drug Administration (FDA) has made a conscious effort to ensure adequate representation of women and minorities in clinical drug trials through guidance documents and regulations. The purpose of this study is to assess the participation of women and racial/ethnic minorities in FDA-reviewed diabetes drug trials that were included in New Drug Applications (NDAs) approved between 2010 and 2013. The sex and race of subjects in all diabetes drug clinical trials submitted to FDA in support of NDAs approved between January 2010 and April 2013 were assessed from final clinical study reports in internal FDA databases. Four drugs, all indicated for improving glycemic control in adults with type 2 diabetes mellitus, were approved during the period studied. A total of 151 clinical trials classified as phase 1, 2, or 3 studies were submitted in support of NDAs. Demographic analysis (shown in Table 1) indicated that the mean participation of women in these trials was 42% and the majority of the trial subjects were Caucasians (69%). The overall inclusion of women in these late-phase (phase 2 and 3) trials is similar to the proportion of women in the US diabetic patient population. There is lower representation of women in Phase 1 trials, during which much of the pharmacokinetics and dose tolerability of new drugs are evaluated. The participation of African Americans in all phases is considerably lower than the US diabetic patient population. Because several of these trials were conducted internationally, further studies are needed to understand the patients' demographic distribution within the trials and the disease across the world.

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## Development Of A Culturally Tailored Diabetes Education Program Using Shared Decision Making To Improve Glycemic Outcomes In Multi-Ethnic Minorities

**Abstract:** Diabetes (DM) remains a major health burden among racial & ethnic minorities despite the availability of proven interventions to prevent the onset of DM & its complications. Recent studies suggest that patient-centered care (PCC) may improve the effectiveness of medical therapies to achieve positive clinical outcomes. The patient-provider (P-P) relationship is a key element of PCC, yet few studies have examined interventions that focus on “patient-centeredness” to improve outcomes in clinical practice. We selected shared decision-making (SDM) as a key process in the development of an intervention to improve glycemic outcomes in Native Hawaiians & Other Pacific Islanders (NH/OPI). Describe the development of a culturally informed patient-centered DM education program using SDM to improve P-P relationships & glycemic outcomes. Empirically tested DM self-management programs for NH/OPI patients were reviewed & integrated into a new DM intervention, entitled Hanapū. An independent panel of diabetes educators & 4 physician reviewers critiqued Hanapū. Critiques were scanned for concordant themes to use in revising & finalizing the curriculum. Hanapū consists of two components: 1) A 5-module DM self-management program created for PATIENTS, entitled “Maka Hana Ka Ike” (learn by doing). The 5 modules included nutrition, exercise, support & talking with your doctor. 2) A parallel program for PROVIDERS, entitled “Providers Tool Box”, is a 5-session web-based curriculum that includes complications, medications as well as commitment, building trust & active listening in P-P relationships. The goal of Hanapū is to integrate clinical practice guidelines with practical examples of how-to use culturally tailored, SDM approaches to strengthen P-P relationships. DM education programs designed to improve health by strengthening P-P relationships are sparse. Hanapū is a unique 2-component educational outcomes program aimed at both patients & providers to address this gap by improving cultural competence & provide practical approaches towards “patient-centered” health care.

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## Diabeaters!, An Online T2DM Lifestyle Intervention For Both Clinic And Classroom: The Application Of Diabeaters! At Mount Sinai Medical Center And Columbia University

**Abstract:** A unique partnership between Mount Sinai Medical Center's Pediatric Diabetes Department, Columbia School of Social Work and the Columbia Center for New Media Teaching and Learning has resulted in diaBeaters!, a multi-session, interactive, online program to help mothers and caregivers establish the lifestyle changes needed for the prevention and management of type 2 diabetes in their children and families. The Internet capabilities of this program holds the promise of cost effective distribution, usage and training capabilities for professional and community health workers via webinar conferencing. Launched in 2010, diaBeaters! prompts families to reflect on their current behaviors, assess their needs and resources, and develop customized plans to meet their unique needs. Following the CDC's evidence based recommendation of multisession healthcare counseling, this program adds motivational counseling interventions to overcome psychosocial barriers and progress through the hierarchy of stages of change, including relapse. Through interactive games and activities diaBeaters! enhances a family's engagement in health education, promotes their investment in creating and implementing self-made plans, strengthens their development of problem solving skills and builds self efficacy. diaBeaters! has implications for the training of new and existing healthcare workers. At Columbia University, students in the Advanced Clinical Practices social work courses use diaBeaters! effectively to learn about diabetes and analyze various clinical skills to enhance their practice. The teaching guide provided for every page of the intervention educates and supports the practitioner. To quote one student, "I think my biggest take-away from the diaBeaters! intervention is seeing how closely connected these elements of health, social work, and psychosocial work are."

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### Diabetes Prevention: Increasing Awareness And Education In Latinos With Pre-Diabetes

**Abstract:** The purpose of this service learning project was to aid in the prevention of T2D in Latinos with identifiable risk factors by increasing their level of awareness and education. The prevalence of Diabetes Mellitus (DM) has progressively increased throughout the years reaching epidemic proportion making it a major public health crisis, and the 7th leading cause of death in the United States (U.S.). Latinos are disproportionately affected by T2D and related complications thus, increasing their morbidity and mortality rates. Although contributing factors increasing T2D risk in Latinos is multi-faceted, significant modifiable factors are dietary and sedentary related. In observation of a Boston area neighborhood health center, language appropriate written educational materials for pre-diabetics were lacking. The primary care provider(s) (PCP) are responsible for educating patients regarding diabetes prevention, as outpatient support is unavailable for pre-diabetics. Patient education was performed with packets provided to the PCPs, as well as distributed to adult Latino patients with  $\geq 1$  identifiable risk factor(s) for T2D. A 2-3 month follow-up visit was performed for improvement of T2D risk factors. A chart review showed 40% of subject's hemoglobin A1c decreased to  $< 5.7\%$ , indicating no longer having pre-diabetes. Health promotion, disease prevention, and education are strongly emphasized and routinely practiced by PCPs. Although, many factors influence the ability to alter behavior via lifestyle modification, simplified written educational materials that are language appropriate and easy to comprehend aid in increasing awareness and educating patients regarding diabetes prevention. Furthermore, identifying influencing factors and reducing barriers can positively impact patient health outcomes and ease economic burden related to DM complications.

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## Disability Literacy, Diabetes And Social Security Disability Insurance

**Abstract:** Disability literacy is the ability to obtain/understand information regarding health, finances and resources to adapt to, anticipate and overcome challenges resulting from a chronic illness/disability. The Social Security Administration's (SSA) disability benefits are important sources of income security for many people of color. African Americans have lower life expectancy and higher disability rates before age 65 as compared to whites and are more likely to be eligible for and receive Social Security disability and survivor benefits. In the U.S. disabled workers are more likely to be black or Hispanic. Understanding Supplemental Security Income (SSI) and Social Security Disability Insurance (SSDI) is critical in ensuring individuals can make informed decisions and take action to maximize all available resources to improve health and financial well-being before and/or after work is no longer possible. Patients encounter a variety of barriers in accessing disability benefits. Qualitative and quantitative research results will illustrate experiences of those who have gone through the SSDI process, identify barriers and explore ways to overcome barriers and improve award outcomes. Individuals with diabetes are among those most often denied benefits at the initial application level, yet subsequently awarded benefits at the hearing level. SSA changed the way it evaluates diabetes in 2011. An explanation of these changes and its affect on individuals will be discussed. At the end of this presentation, participants will be able to 1. Define disability literacy 2. Understand function, benefits and process of the SSI/SSDI programs, especially as it pertains to persons with diabetes 3. Identify the stressors/negative outcomes associated with the SSDI process 4. Identify barriers to access and awards from SSI and SSDI programs 5. Identify strategies and available resources to eliminate barriers and improve award outcomes for individuals with diabetes

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## Ethnically-Tailored Intervention Program In A Tertiary Care Setting Eliminates Diabetes Disparities

**Abstract:** Racial and ethnic disparities in diabetes care have been well reported in primary care setting. Our previous study showed that disparity also exists in tertiary care institution. After one year of care at an academic and specialized diabetes clinic, despite having a greater A1C % change, significantly fewer minority patients achieve the A1C goal of  $\leq 7\%$  than white patients (40% vs. 52%). With the aim to eliminate the disparities among Asian Americans (AAs), our diabetes center formed an Asian Clinic (AC) designated to provide ethnically tailored care to this population. The AC consists of a team of endocrinologists, registered dietitian who is also a certified diabetes educator and a clinic coordinator. The staff is trained in Asian culture and diet, and is provided with culturally appropriate education materials that help the patients to manage diabetes. Our previous study showed that new AC patients had significantly worse A1C control and with longer duration of diabetes than Caucasian patients who are newly admitted to the general adult clinic (AD) of our center. This disparity in glycemic control was maintained even after one year of care in our diabetes clinic and may be related to significantly lower median household income and level of education. Since last study, we have instituted ethnically tailored intervention, diet education and metric monitoring of the providers. Using these interventions in the AC, more of the AAs followed in the AC reached an A1C of  $\leq 7\%$  than the AAs followed in the AD (50.4% vs. 43.7%, respectively). In addition, this result was comparable to all patients followed in AD. Thus, ethnically-tailored clinical intervention is effective in narrowing, and may even eliminate, ethnic disparities in diabetes care in a tertiary care setting.

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### **Everyone With Diabetes Counts - A CMS Multi-State Health Disparity Reduction Project**

**Abstract:** Everyone with Diabetes Counts (EDC) is a national initiative which began six years ago by the Centers for Medicare & Medicaid Services. It is implemented through CMS contractors called Quality Improvement Organizations (QIOs). To date, EDC has been implemented in 9 states. Currently, the initiative is in New York, Texas, and West Virginia. Each QIO is implementing a community-based Diabetes Self-Management Education (DSME) intervention program targeting minority racial/ethnic, and rural population Medicare beneficiaries with diabetes in medically underserved communities. Innovations include: regionally-tailored community partnerships and outreach; evidence- based DSME programs; deployment of trained community health workers, certified diabetes educators, and lay leaders; and, sustainability strategies to ensure programs and community involvement continue after the current EDC contracts conclude in July 2014. Goals include: (1) Enrolling 6,000 Medicare beneficiaries per state with 2,500 completers of DSME curricula and pre/post survey assessments; (2) Improving participant diabetes self-efficacy; (3) Improving clinical health outcomes post DSME; (4) Developing culturally and regionally specific sustainability plans. Outcome measures include: (1) Participant self-efficacy as indicated in a ten question patient activation survey; and (2) Changes/improvements in HbA1c, Lipids, Blood pressure, Weight, and Eye exam. New York QIO targets Hispanics living in Greater New York City area; Texas QIO targets African Americans living in two large Texas regions; West Virginia QIO targets 13 rural counties. Results for the first year include: Number of participating physician practices recruited; number of Medicare beneficiaries enrolled and completing DSME classes; results of self-efficacy scores post DSME training (measured pre- and post DSME intervention); results of clinical outcomes measures post DSME training (measured pre-DSME intervention; and at 3 and 6 months post DSME intervention).

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### **Forgiveness And Health In African Americans: Is There A Place For This In Diabetes Care?**

**Abstract:** Religious practices influence the diet, physical activities, glucose monitoring, and the medication adherence of people with diabetes. Research shows that patients want their health providers to care for them genuinely, connect with them as a person, talk about spiritual matters, and facilitate the use of spiritual resources including forgiveness interventions. Forgiveness, a tenet of most religions, has been linked to improved cardiovascular health, better sleep, less anxiety, lower blood pressure, less symptoms of depression, and lower medication usage. African Americans are reported to still face on-going discrimination and racism in the United States. Therefore, it is assumed that Blacks who have higher rates of diabetes must also balance forgiveness and their chronic disease management. Forgiveness facilitation is a part of the Nursing Interventions Classification (NIC). Use of forgiveness intervention in the health care setting could improve health outcomes including lowering depression scores and glycemic control. However, diabetes educators must be open to including forgiveness and its possibilities in diabetes care. This training curriculum offers a unique way to bring forgiveness into health care in order to increase health equity.

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## Healthy Linkages: Addressing Health Disparities Through Partnership And Collaboration

**Abstract:** The Healthy Linkages Initiative is a collaboration between the University of Mississippi Medical Center, the Mississippi State Department of Health and the 21 Federally Qualified Health Centers (FQHCs) in the state. Collectively, these three entities are the largest providers of care to the underserved and uninsured in the state. Prior to Hurricane Katrina, there was no formal communication between the University of Mississippi Medical Center, the sole academic medical center in Mississippi, the Mississippi State Department of Health Clinics, and the 21 FQHCs in the state (i.e. lack of trust). The medical center cared for approximately 17,000 patients in its emergency room each year for primary care visits; many of which were uninsured or underserved, many of which suffered from chronic diseases such as Diabetes. The devastation of Hurricane Katrina revealed the need for better collaboration, thus Healthy Linkages was formed. Healthy Linkages is comprised of many programs by which the three organizations collaborate to ensure adequate patient access to quality health care. One example is an emergency room diversion project that has directed many individuals to medical homes and has saved the medical center millions of dollars in costs. This is made possible through linkages via electronic medical records, where the emergency room staff of the medical center has access to the electronic medical record of the largest FQHC in the state. Patients are scheduled directly into the system for appointments. Another program includes partnering with various entities to increase the number of accredited Diabetes Self-Management sites throughout the state. Major outcomes include a savings of approximately \$1 Million in uncompensated costs related to ER referrals in the first year, an enhancement in medical homes for chronic disease patients, and an increase in DSME sites.

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## Impact Diabetes: Developing A Team-Based Model Of Care For Uninsured Free Clinic Patients To Improve Diabetes Outcomes

**Abstract:** The goal of the Impact Diabetes Program was to improve outcomes in patients with diabetes by implementing pharmacist-integrated, culturally appropriate, team-based care for underserved patients. Three free clinics participated in a Medical Home Initiative, which had a collaborative goal to improve outcomes for chronic diseases in our uninsured community, with a focus on patients with low-English proficiency. The pharmacist worked with each clinic to establish a collaborative practice, and weekly clinic to which providers could refer patients with uncontrolled diabetes. Pharmacists worked closely with the primary care team, nurses, social workers, clinic staff, interpreters, lay health promoters, and specialists to coordinate diabetes care. Ninety patients were enrolled in the program from 1/31/12 to 1/31/13. Inclusion criteria included patients with at least two visits three months apart during the year, over 18 years of age, and A1C values > 7%. Demographics N= Average / Percentage Age 90 49.9 Ethnicity Caucasian Hispanic African American Asian Other 30 17 37 1 5 33.3% 18.9% 41.1% 1.1% 5.6% Gender Female Male 50 40 55.6% 44.4% Visit Information N= Average Number of Visits in Study Period 90 5.5 Visits First Visits Time 90 47.8 Minutes Follow-Up Visit Time 90 37.5 Minutes Clinical Measures N= Baseline Baseline SD Most Recent Most Recent SD Change Change SD P= A1C 89 10.0 1.9 8.2 1.6 -1.8 2.3 0.000 BMI 89 34.3 7.4 34.5 7.4 0.3 3.0 0.212 Systolic BP 89 130.2 19.9 128.4 16.2 -1.7 20.5 0.213 Diastolic BP 89 78.6 9.5 77.4 10.1 -1.2 12.9 0.188 Total Cholesterol 74 191.7 51.6 154.0 27.3 -37.7 51.1 0.000 LDL 69 118.1 97.6 79.0 22.4 -39.1 97.9 0.001 HDL 74 41.4 12.2 43.5 11.6 2.1 9.1 0.024 Triglycerides 74 279.5 295.0 167.0 111.3 -112.5 276.4 0.000 We successfully implemented the pharmacist-integrated, team-based Diabetes Care Program, with positive outcomes noted during the study period.

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## Improving Access And Impacting Outcomes Of Underserved Patients With Diabetes Through Clinical Pharmacy Services Integration At A Federally Qualified Health Center.

**Abstract:** The American Pharmacists Association Foundation Project IMPACT: Diabetes is a national initiative to improve care for patients with diabetes through community-based teams that include pharmacists. Objectives of the initiative include expanding models of care to patients in need, and identifying and supporting disproportionate share populations to improve key indicators of diabetes care. This report details the results of one participating team supporting diabetes education and management by clinical pharmacists integrated into a multidisciplinary health care team within a federally qualified health center. Patients with hemoglobin A1C above 7% were identified, offered services and enrolled from June 2011 to January 2012, then followed through December 2012. Diabetes education was provided through one-on-one visits with a clinical pharmacist and medical translator as needed. Pharmacists closely collaborated with primary care providers to optimize medication regimens and promote lifestyle changes to control diabetes and other related comorbid conditions. Patients received medication reconciliation to promote effectiveness, adherence and minimize out-of-pocket costs through available resources such as 340B medication pricing and patient assistance programs. Grant support subsidized patient teaching tools and point-of-care laboratory tests including hemoglobin A1C and lipid panels for enrollees. Of the 76 patients followed during the intervention period, 70% belonged to an ethnic minority and 74% were uninsured. At the end of the study period the mean hemoglobin A1C decreased by 1.9%, from a baseline of 10.2% ( $p<0.001$ ). Mean total cholesterol was also significantly decreased from 203 to 188 mg/dL ( $p<0.05$ ) and the mean LDL cholesterol was less than 100 mg/dL. Baseline and final mean blood pressure readings were less than 130 over less than 80 mmHg. The increased efforts and access supported through this multidisciplinary initiative were important to address barriers and improve health outcomes in our patient population.

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## Improving Diabetes Outcomes Through Telehealth Technology And Mental Health Coaching In A Rural Health Care Setting

**Abstract:** FirstHealth of the Carolinas is a health care system located in rural, South Central North Carolina. According to a random-digit dial survey commissioned by FirstHealth with Professional Research Consultants (PRC) in 2007, 22 percent of the population was living at or below 200 percent of the Federal Poverty Level (FPL) and were uninsured. In a three county region, the diabetes prevalence rate was 15.6 percent compared to the state at 9.1 percent. Furthermore, 30 percent of diabetic individuals living in the region currently experience depression and 64.6 percent live at or below 200 percent of the FPL. In response to this data, the FirstHealth Diabetes Management program implemented the Diabetes and Depression project in 2011. FirstHealth launched this project to develop expertise in identifying and managing depression and diabetes simultaneously among low-income and underserved populations. This program had three components to include implementation of telehealth to improve access to diabetes education, the implementation of a mental health screening tool and health coaching services for individuals who scored abnormal on the screening. A telehealth unit was installed in a clinic, and resulted in 28 individuals receiving educational services who otherwise would not have access with a high rate of patient satisfaction. All diabetes educators were trained to implement the PHQ2 assessment tool. If patients scored abnormal, they were referred to a licensed social worker for further assessment with the PHQ9 tool and mental health coaching. 184 patients scored abnormal on the PHQ2 with 148 receiving the PHQ9 and health coaching. Preliminary results demonstrate a 49 percent lower PHQ9 score after health coaching. And the patients who received health coaching services improved their hemoglobin A1c levels on average by .62. In the presentation, FirstHealth will demonstrate how to implement telehealth for diabetes education and further explain implementation and benefits of mental health screening and coaching as part of a comprehensive diabetes education approach.

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## Measuring Social Support For African American Women With T2dm

**Abstract:** There is a clear and positive relationship between social support and Type 2 diabetes mellitus (T2DM)-related health outcomes and self-management behaviors including dietary adherence, glucose testing and medication adherence. However, there is little agreement on how to define and measure social support as it relates to T2DM, especially in disparate populations. Moreover, social support is perceived differently in the African American (AA) community, where there is a high incidence of T2DM, and may include more family caregiving and a greater reliance on informal social networks. Therefore we adapted one of the most commonly used social support scales, the Dunst Family Support Scale (FSS), by revising several questions and response options to be relevant to this disparate population. We administered the revised FSS-T2DM at baseline to 200 AA women with uncontrolled T2DM living in rural settings and participating in a randomized controlled trial. Exploratory factor analysis and regression analysis were conducted to test psychometric properties and to investigate the scales relationship with other biopsychosocial outcomes. Results showed that participants rated their primary/regular physician, family members with T2DM, and their own children to be the most helpful to them in providing support for managing their diabetes. The Cronbach's coefficients for Factor 1 (Parent and Spouse/Partner Support subscale), Factor 2 (Community and Medical Support subscale), and Factor 3 (Extended Family & Friends Support subscale) were similar (0.86, 0.83, and 0.83, respectively). The overall reliability for the 16-item measure with three factors was found to be high ( $\alpha = .90$ ). Scores on FSS-T2DM were significantly correlated with other biopsychosocial measures. In conclusion, the adaptation of the Dunst social support measure for AA women with uncontrolled T2DM appears to be a beneficial adaptation and one that could help better assess social support and its relationship to long-term outcomes in disparate T2DM populations.

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### Motivational Interview In WIC Settings: Testing Participant-Centered Nutritional Education On Caregivers Of Overweight Hispanic Children

**Abstract:** The Special Supplemental Nutrition Program for Women, Infants and Children (WIC) reaches approximately 9 million children and caregivers each fiscal year, an estimated 62% of which are Hispanic or non-Hispanic Blacks. Accounting for nearly 20% of obese US children and roughly twice as likely to be diagnosed with diabetes compared to non-Hispanic whites, Hispanics are a high-risk group for which effective, culturally sensitive, nutritional counseling methods bear increased importance. Healthy Children, Healthy Adults was a pilot study conducted among a sample of Hispanic WIC participants to evaluate the feasibility and effectiveness of using motivational interviewing (MI) as opposed to standard WIC nutritional counseling in this population. Overweight Hispanic toddlers (2-4.5y,  $\geq 85^{\text{th}}$  BMI percentile) and consenting caregivers were recruited through an urban WIC clinic in Washington DC. Dyads received either standard counseling ( $n=15$ ) or MI ( $n=15$ ) from a bilingual WIC nutritionist during four regularly scheduled visits across 6-month periods. Repeated measurements of caregiver goal development, anthropometric change, health behavior and appointment quality were recorded each visit. Goal development was observed to occur earlier among MI caregivers, and they selected a wider variety of goals with increasing frequency over time. Children lost an adjusted mean weight of 0.878 kg (95% CI 0.280–1.717), and median BMI declined more than three percentiles ( $p=0.042$ ) in both counseling groups. 18.5% of standard WIC counseling sessions exceeded 15 minutes, in contrast to only 1 MI session. Without lengthening WIC session duration, MI was able to stimulate caregiver goal development and promote comparable and significant change in child BMI relative to standard WIC counseling.

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## Novel Strategies For Addressing Health Disparities And Chronic Disease In Mississippi

**Abstract:** The purpose of this project is to reduce health disparities in the state of Mississippi through community empowerment and partnerships between academic medical centers and the faith-based community. The state of Mississippi leads the nation in many chronic diseases such as Obesity, Diabetes, and Hypertension. This is further exacerbated by the limited number of primary care providers, especially in rural areas, and low health literacy in many areas of the state. As the only academic medical center in the state of Mississippi, the University of Mississippi Medical Center (UMMC) has taken a major interest in partnering with various faith and community-based organizations who share the medical center's concern about improving Mississippi's poor health rankings. Two programs have been developed to address this issue, the Community Health Advocate (CHA) Program and the Healthy Living Program (HLP). The CHA program is designed to empower lay persons in communities to adopt healthy lifestyles and also assist others in his or her community in doing the same. This program includes several modules, which address the major chronic diseases of the state. The HLP, a companion to the CHA program, provides basic practical healthy eating and weight management information for lay persons. UMMC has partnered with several faith-based and educational facilities to train a host of Community Health Advocates to work in communities throughout the state. This presentation will discuss, in detail, how Mississippi's sole academic medical center is partnering with communities to address health disparities. To date, the Community Health Advocate Training program has trained approximately 1000 individuals throughout the state of Mississippi. Reports indicate an increased awareness and understanding of issues such as Diabetes as well as increased community-based screenings.

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### Operation D.E.T.E.C.T. (Diabetes Education Today Eliminates Complications Tomorrow) Health Navigator Program

**Abstract:** When comparing the incidence of diabetes in minority populations, living in DC, African Americans have an incidence rate of 13.4% compared to 2.5% in Caucasians and 5.5% in Hispanics. Interestingly, when comparing the geographical locations where diabetes is most prevalent, we see that Ward 7 (11.6%) and Ward 8 (15.2%) are much higher compared to Ward 1 (7.1), Ward 2 (6.1), Ward 3 (2.2) and Ward 6 (6.7). The predominantly African American population who reside in Ward 7 and 8 are more likely than all other wards to have many Diabetic co-morbidities including heart disease, obesity, mental health issues (depression) and end stage renal disease. In addition, both lack of access to culturally appropriate care coupled with lack of knowledge of prevention and management strategies contribute to inappropriate use of health care resources. African American patients are four times more likely to use the Emergency Department as their primary medical care which reflects the perceived unequal access to care, distrust of the medical system, and a lack of knowledge regarding chronic disease self-management and risk factor reduction. Starting March 2013 the United Medical Center Not-For-Profit Hospital Corporation Diabetes Education Program is participating in an (8) month pilot program to determine if the addition of Patient Navigators (Community Health Workers) can improve diabetes management, reduce co-morbidities as well as healthcare utilization in residents living in Ward 7 and 8. The program will hire and deploy Patient Navigators to work within the existing UMC diabetes program to strengthen the existing community based networks and support system. The patient navigators will provide outreach, education, point of care testing and advocacy over five visits. The navigators will also bridge gaps in health care delivery by scheduling the Clinical Pharmacist and Registered Dietician arms of the program to improve medication adherence and meal planning respectively. Preliminary findings suggest that Patient Navigators intervention in these communities can be effective.

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## Organizing Community Action For The Management And Control Of Type 2 Diabetes Among Vulnerable Populations: Lessons From The Field

**Abstract:** Please note: This Abstract is relevant to multiple target audiences of the partnership forum The National Program to Eliminate Diabetes Related Disparities in Vulnerable Populations is a five-year cooperative agreement to reduce morbidity and premature mortality and eliminate health disparities associated with diabetes. CDC has funded six national community-based organizations to mobilize local partners and assist them in effectively planning, developing, implementing, and evaluating community-based interventions to reduce the risk factors that influence the disproportionate burden of diabetes in vulnerable populations. The purpose of the presentation is to highlight approaches utilized by National community- based organizations along with 18 community partners to address health disparities in the management and control of type 2 diabetes in selected African American, Hispanic/Latino, Asian American/Native Hawaiian, Pacific Islander, American Indian and rural communities (including the Appalachian region) . The panel discussion will cover strategies for selecting key partners and community mobilization, engaging community partners in program planning efforts (i.e. needs assessments and strategic planning), report progress on the implementation of culturally tailored evidence-based interventions (i.e. PSE) and lessons learned.

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## Outcomes From The Implementation Of A Collaborative Care Model Utilizing Pharmacist-Delivered Medication Therapy Management (MTM) In An Underserved Area

**Abstract:** Project IMPACT: Diabetes is a national initiative to improve care for high-risk patients through implementation of a community-based collaborative care model in underserved communities. The objectives of this multi-site study are to implement pharmacy-based MTM services, improve key indicators of diabetes care, establish local peer-to-peer network mentoring, and create a sustainable platform for permanent change. At the University of Mississippi site in Jackson, Mississippi, a pharmacist is integrated into the healthcare team to provide MTM. Patient visits with the healthcare team include 30 minutes with the pharmacist for a comprehensive medication review, to develop an individualized self-management plan, and for disease education. Patients included are on diabetes medication(s) with hemoglobin A1c (HbA1c) >7% at enrollment and are able to ambulate and present for clinic visits. Eligible patients are identified through review of clinic data. Exclusion criteria includes age <18, institutionalized, unable to give written informed consent, and known pregnancy. Enrollment began in September 2011 and the study concluded in January 2013. Clinical outcomes include: HbA1c, systolic and diastolic blood pressure (SBP, DBP), fasting cholesterol panel, body mass index (BMI), dates of diabetic foot exams, comprehensive eye exams, immunization status (influenza and pneumonia), smoking status, most recent BMI, and medications recommended by current treatment guidelines. A total of 64 patients completed the study with at least 3 documented visits at least 3 months apart. Clinically and statistically significant outcomes include mean HbA1c decrease of 1.2%, decrease in SBP/DBP by 8.3 mmHg/3.5 mmHg, respectively, and LDL reduction of 16.6 mg/dL. These results demonstrate great benefit with the integration of the pharmacist on the healthcare team in this setting. Services have continued since study completion and sustainability for this model is currently being explored.

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## Outcomes Of Diabetes Awareness To Reach Excellence (DARE): Making A Difference In The Homeless

**Abstract:** Summary: Diabetes Awareness to Reach Excellence (DARE) - Making a Difference in the Homeless was implemented in September 2011 at The Daily Planet, Inc, a Federally-Qualified Health Care for the Homeless Clinic, funded as part of the American Pharmacists Association Foundation Project ImPACT: IMProving America's Communities Together. The program is two tiered with comprehensive interprofessional diabetes outreach and screening and a diabetes management program. Outreach events also provide education and screening for comorbid conditions such as obesity, hypertension, and hyperlipidemia. The interdisciplinary diabetes management program operates within a patient-centered medical home model which includes a physician, pharmacists, nurse, scheduler, dietitian, medical assistant, health educator, optometrist, case manager, behavioral therapist and volunteer. The cost of medications (if needed), testing supplies, bus passes for visits, and special incentives such as lunch are offered during the diabetes clinic day. Goals: To incorporate an innovative interprofessional diabetes program in a patient-centered medical home for the homeless or those at risk for homelessness and to evaluate the impact on diabetes health-related outcomes. Target Population: Homeless persons or those persons at risk for homelessness with diabetes mellitus and who have an A1c > 7 Outcome Measures: A1c, BMI, BP, Lipid Panel, foot exams, eye exams and influenza vaccine, Evaluation Results: 64 patients participated in the program for 12 months with an average of 9 visits, mean age 52.8 years, 26.6% female and 73.4% male. Mean A1c decreased 0.5%, p=0.049; mean baseline BP started at goal and remained stable. BMI increased slightly from 31.8 to 32, p=0.0195. Baseline total cholesterol, HDL, LDL started at goal with triglycerides significantly decreasing from 183.5 mg/dl to 147.5 mg/dl, p=0.012. Smoking status decreased from 48.3% to 46.75%, eye exam status increased from 7% to 14%, foot exams increased from 95% to 96.7%, and no significant change in influenza vaccines.

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## Overcoming Disparities: How A Nurse Practitioner Directed Diabetes Health Center Is Reducing The Burden Of Diabetes On The Hispanic Population

**Abstract:** Residents of southern Colorado experience a number of healthcare disparities based on factors including race/ethnicity, lack of insurance and income. Hispanics, the area residents least likely to be insured, comprise over 40% of the population. Current estimates report area uninsured rates at nearly 22%, with 20% considered under-insured. The area's Hispanic heritage contributes to an over-representation of diabetes in the population. The Colorado Health Disparities Profiles reveals a diabetes mortality rate of 60.3% for Hispanics/Latinos and 24.1% for Caucasians. Led by an NP, the Diabetes Health Center (DHC) in Pueblo, Co provides cost effective treatment and education to a high-risk diabetic patient population. The DHC provides greater access to specialty care for uninsured and under-insured patients in southern Colorado. In its current setting, the DHC can provide 3400 patient visits per year, and offer accessible, quality care, education and monitoring to over 500 patients annually. The DHC has demonstrated clinical effectiveness by reducing HbA1c levels and increasing patient knowledge and compliance. Patients are referred to the DHC by providers and/or self-referral. All patients see NP for initial assessment, see NP at least every 3 months, have labs drawn every 3 months and see CDE or dietician as needed. The typical patient averages 6-7 visits per year and can stay in the program indefinitely. Patients included in the study had been in the practice for at least 6 months, had admission, 3 month and 6 month A1C's in record and had been seen in the practice within the last 3 months. The average A1C for these patients on admission – 9.9%, @ 3 months - 8.1%, @ 6 months - 7.8%, representing approximately a 20% decrease in A1c. The Centura Health Care System is evaluating how this clinic can be replicated to manage other chronic diseases, noting that effectively managing chronic diseases in the outpatient setting helps to prevent hospital admissions or re-admissions, improving quality of life for patients and fiscal burdens of hospitals.

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## Overcoming Disparities: Health System And Policy Change Evolving From The Local Experience

**Abstract:** Reducing health inequities requires systems and policy change based on real-life experiences of vulnerable individuals at risk of or with diabetes. While introducing innovative interventions for African-American, Native American, and Latino low-income participants, the 5 community-based sites of the Alliance to Reduce Disparities in Diabetes recognized that policy changes were essential to move their efforts from periodic programs to institutionalized efforts that ensured sustainability. Six key policy considerations emerged from a Summit of grantee partners, experts, and national organizations: #1) encourage greater integration of public health and health care systems; #2) share and report community-wide health data; #3) eliminate incentives that encourage under-investment in vulnerable populations; #4) optimize ACOs' abilities to reduce disparities; #5) support deployment of community health workers (CHW); and #6) enhance diabetes self-management education and supports. Over 4 years, Alliance projects achieved 22 system and policy changes that progressed from early development to implementation and 7 that are in maintenance with formal documentation and sustainability assured. Change efforts addressed the policy considerations, with implementation at the community (2), citywide (2), organizational (10), multi-site organizational (11), and state (4) levels. Examples for each consideration will be described, e.g., Chicago's efforts to establish clinic-community links (#1), Camden's success in establishing a citywide Health Information Exchange (#2), Dallas' achievement in formalizing the CHW role within the Baylor System and securing ongoing funding via a Medicaid 1115 waiver (#5), and the Wind River Reservation team's developing Tribal cultural guides that are now part of the IHS Employee Orientation (#6). It is estimated that the Alliance's change efforts have affected and assisted thousands of people with diabetes. These data suggest that supportive policy changes are essential to sustaining effective interventions to achieve health equity.

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## Overcoming Type 2 Diabetes: The Experiences Of Black Men In Atlanta, Georgia

**Abstract:** Type 2 diabetes (diabetes) is common, costly and deadly disease. Management of diabetes to prevent and control the development of complications can be complex and challenging. In 2006 the rate of hospital admission was three times higher among Black men compared to White men, 330 versus 108.5 per 100,000 respectively\*. Limited research has focused on efforts to address diabetes among Black men. The purpose of this qualitative study was to examine the coping strategies used by Black men living with and managing diabetes. In-depth interviews were conducted with 25 low income Black men 45 to 65 years of age who were recruited from the Grady Diabetes Clinic in Atlanta, Georgia. The study also collected demographic data on age, marital status, history of diabetes duration of diabetes, health insurance coverage, use of insulin, and presence of another health illness or injury other than diabetes. More than 72% reported having a history of diabetes, using insulin, having another health illness or injury other than diabetes, and having some form of health insurance at the time of the interview. The common themes reported by the men were acceptance, taking action to change behavior, support from healthcare professionals, support from family, seeking health information, and support from friends. None of the themes highlighted negative coping strategies. It is useful for healthcare providers, community health educators, and patient advocates working with Black men with diabetes and their families to be aware and knowledgeable of the coping strategies for diabetes. To address diabetes in Black men, it is critical to incorporate these coping strategies as part of a public health approach to reducing the burden in this population.

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## Patient Self-Management Knowledge Of Diabetes After Participation In Diabetes Awareness To Reach Excellence (DARE): Making A Difference In The Homeless

**Abstract:** Summary: Diabetes Awareness to Reach Excellence (DARE) - Making a Difference in the Homeless was implemented in September 2011 at The Daily Planet, Inc, a Federally-Qualified Health Care for the Homeless Clinic, funded as part of the American Pharmacists Association (APhA) Foundation Project ImPACT: IMProving America's Communities Together. DARE is an interdisciplinary diabetes education and management program within a patient-centered medical home. Patients enrolled in DARE completed a baseline diabetes self-management knowledge assessment and completed the same assessment at one year after participation in the program. Self-management knowledge scores are categorized as beginner, proficient, and advanced. Goals: To evaluate the impact of DARE on diabetes patient self-management knowledge Target Population: Homeless persons or those persons at risk for homelessness with diabetes mellitus and who have an A1c > 7 enrolled in DARE Outcome Measures: Patient diabetes self-management knowledge score and proficiency assessment Evaluation Results: 42 patients completed both the baseline and final knowledge assessment. Mean score increased to 26.62 from a baseline of 23.55. Self-management proficiency at baseline: beginner 50%, proficient 42.9%, advanced 7.1%. At the end of one year self-management proficiency improved: beginner 19%, proficient 66.7% and advanced 14.3%.

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## Peer Support As An Effective Strategy For Reducing Health Disparities Among High Risk Populations: An Analysis Of Research And Policy Successes

**Abstract:** Peer support (PS) may be an especially effective strategy for reaching the “hardly reached,” those who lack adequate access to healthcare because of cultural, linguistic, social and/or economic barriers. During the first part of the presentation, Peers for Progress and Alivio Medical Center will present findings from US and international programs demonstrating how peer support can effectively reach, engage and benefit these individuals. Peer support has led to better diabetes health outcomes, including improved HbA1c, especially in those with the highest baseline needs and lowest initial adherence to medication. For example, in a study of the effect of peer support on patients recruited through the Veterans’ Administration, overall benefit relative to controls was greatest among those with low initial levels of diabetes support ( $p < 0.001$ ) and those with low health literacy ( $p < 0.05$ ). More recently, an ongoing peer support demonstration project at Alivio Medical Center, a federally qualified health center serving a high-need Latino community in Chicago, has successfully reached and engaged 454 of 471 identified “high priority patients” (HbA1c greater than 8%, appreciable psychosocial problems, clinician referral). The key functions of PS (assistance in daily living, social and emotional support, linkage to clinical care, and ongoing support) can be applied in diverse cultural and geographic settings to target those at highest risk of disease burden. During the second part of the presentation, the Center for Health Law and Policy Innovation of Harvard Law School (CHLPI) and the National Council of La Raza (NCLR) will address policy and advocacy opportunities for peer supporters to expand their programs to a greater number of underserved populations. CHLPI and NCLR will focus on key areas such as capacity building, sustainability and quality control, highlighting NCLR’s successes at engaging the nationwide Latino community and presenting best practices from states that have had the most success in integrating peer supporters into their healthcare systems.

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## Plants Knowledge Among The Ethnic/Racial Minority And Majority Patients With Gynecological Diseases: The Participation From Philadelphia In Pennsylvania

**Abstract:** The plants around the habitats of the immigrant population not only provide food for living organisms, but also produce different chemicals necessary for human health. It is not possible to provide modern healthcare to all the people at affordable cost. They depend on natural flora to meet their healthcare needs. The Philadelphia, Pennsylvania United States of America was selected for the investigation of plants commonly used by different immigrant communities to cure gynecological diseases. During the investigation, the plants collected from the cultivated field and the information regarding them were gathered from the different groups of people. Immigrants have good knowledge about plants and their uses in curing different types of gynecological diseases. The information regarding the botanical name, family name, local name, plant parts used name of the diseases cured and the process of administration were collected with the help of immigrant people, borough herbalists, and aged elders. The identification of each plant was done with the help of various floras and the authentic literature on taxonomy. The communication deals with 21 plant species belonging to 15 families incorporating folklore value used by immigrant people living in the investigation area. The information documented during the investigation may be useful to botanists, chemists, pharmacologists, practitioners of herbal medicine, and foresters to develop useful drugs of herbal origin for human welfare. This type of valuable folklore knowledge should be recorded and preserved for the well being of the future generation.

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## Policy And Infrastructure Changes Impact Health Equity In SE Michigan African American Communities

**Abstract:** Social determinants of health (SDOH) are an important part of the health needs of communities; by addressing SDOH through policy and infrastructure change, overall improvement in health outcomes can be achieved. This project aims to mobilize, empower and assist community partners in planning, implementing, and evaluating community-based interventions to reduce risk factors that influence health disparities associated with diabetes. A grassroots community assessment engaged community residents and a diverse group of organizational partners in the priority setting process. Residents gave a meaningful voice that influenced the project's strategic plan design to create lasting change in their communities. The priorities include increasing access to healthy food; increasing opportunities and safe spaces for physical activity; improving diabetes management education; and improving access to and awareness of health resources. The complexity of identified issues requires cross-systems collaboration to develop effective policy and infrastructure change strategies to improve current conditions and eliminate health disparities. Policy and infrastructure changes include documented agreements and improvements that support healthier choices. They are sustainable changes that will stay in place after the funding for this project has ended. Changes implemented thus far include agreements with a public school system to institutionalize community gardens on school property; a senior center Board agreement to permanently offer a free exercise class; an MOU with state university to provide ongoing nutrition education; agreement with a faith-based institution to provide healthy food options at church events, be an ongoing source for diabetes-related health information, and provide space for meetings and diabetes self-management workshops; and worksite wellness agreements with schools, churches, and health centers. The project is also working on additional changes, such as permanently incorporating health literacy classes into other community workshops.

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## Positive Trending Outcomes Of A Short, Intense And Culturally-Sensitive Diabetes Prevention Program For American Indian Youth

**Abstract:** American Indians/Native Americans (AI/NA) are at higher risk of developing chronic diseases such as hypertension, dyslipidemia and glucose intolerance. Increasing rates of these diseases are shown to be steadily extending into younger pediatric populations. Beginning in 2002, the Native Youth Preventing Diabetes (NYPD) program was established as a culturally sensitive diabetes prevention and wellness education summer camp for children aged 8-12 years. NYPD is lead by 17 of Oklahoma's Tribal organizations. In addition to providing education focusing on diabetes prevention, nutrition, physical activity and behavioral health, beginning in 2005, the NYPD medical staff began conducting health screenings related to diabetes risk factors to include: height/weight/body mass index (BMI), waist circumference, body fat %, fasting lipid panel (High Density Lipoprotein (HDL) Cholesterol, Low Density Lipoprotein (LDL) Cholesterol, Total Cholesterol and Triglycerides), fasting glucose, Alanine Aminotransferase and Aspartate Aminotransferase (ALT/AST), random glucose and blood pressure for all camp attendees. Since 2005, new camper baseline health status indicators are statistically worse than their general population cohorts. Return camper health indicators appear to show improvement over baseline data and improvement over Oklahoma AI/NA youth population trends. These results suggest that yearly short, intensive and culturally-oriented health education intervention may have a positive and lasting effect on long term health outcomes for youth of AI/NA populations.

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### Powerful Partnership Gets Powerful Results

**Abstract:** Prince George's County Health Department (PGCHD) is pleased to submit an abstract to present at the 6th Disparities Partnership Forum. Prince George's County residents experience higher incidents of diabetes than people who live in many neighboring jurisdictions. Our abstract focuses on sharing a replicable model for delivering information about managing diabetes that facilitates high risk populations to successfully self-manage their diabetes and to make appropriate health decisions. Our presentation will specifically address the forum's objective of demonstrating an effective model of delivery of care. The PGCHD, in partnership with Doctor's Community Hospital (DCH) is providing free diabetes education to county residents .The "On the Road" classes provide residents with access to accurate and actionable health information, delivers person centered health information, and supports lifelong learning and skills to promote good health---all of the components of the National Action Plan to Improve Health Literacy. While open to all residents of the county, the "On the Road" program primarily serves the African Americans. The class is free and offered in the communities where our residents live, work, and play, including faith based organizations, community centers, and health clinics. The success of our "On the Road" program can be contributed to a successful collaborative partnership with a hospital; use of an evidence based diabetes curriculum; and integration of community health workers who provide the much need care coordination. The PGCHD is partnering with Joslin Diabetes Center, the only multidisciplinary and accredited diabetes center in the county. The curriculum is evidenced based and led by certified diabetes educators. Community Health Workers, a trusted para- professional, serve the critical role of recruiting and following up with residents to ensure participation in the classes. Data are collected from each participant and A1c screenings are provided and tracked. Participants are linked to care as needed based.

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**Prevalence Of Prediabetes Among Omani Adults With No Family History Of Diabetes Sawsan Al-Sinani, Mohammed Al-Shafae, Ali Al-Mamari, Nicolas Woodhouse, Omayma El-Shafie, Kamlesh Bhargava, Mohammed Hassan, Said Al-Yahyaee, Sulayma Albarwani, Deepali Jaju**

**Abstract:** The objectives of this study were to determine the prevalence of prediabetes in a cohort of Omani individuals with no family history (FH) of type 2 diabetes mellitus (T2D), and to examine the effect of anthropometric risk factors on diabetes associated parameters. A total of 1182 Omani individuals, aged  $\geq 40$  years, were questioned about their FH of diabetes, and categorized into: (1) individuals who claimed not to have diabetes and had no FH of diabetes; (2) individuals who claimed not to have diabetes but had FH of diabetes; (3) diabetics. Only 191 (16%) gave no personal history of diabetes and had no FH of the disease. Those individuals ( $n=191$ ) underwent anthropometric and biochemical investigations and classified into prediabetic or normoglycemic according to their fasting glucose levels (Prediabetic: 5.6-6.9 mmol/L). Twenty-six percent ( $n=42$ ) were found to be predabetics. BMI was found to be significantly different between predabetics and normoglycemics, where 88% of predabetics were found to be overweight and obese in comparison with 74% among normoglycemics. Diabetes associated parameters, such as an increase in fasting insulin, HbA1C and blood pressure (BP), were significantly higher among predabetics. In addition, an increase in fasting insulin, BP and serum lipid profile seems to be correlated with an increase in obesity indices. Obesity indices were strongly associated with the risk of prediabetes and T2D among Omanis, with waist circumference being the strongest predictor. High prevalence of central obesity acting on genetically susceptible individuals among this population, warns of diabetes as a future epidemic in Oman.

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## Psychometric Properties Of The Summary Of Diabetes Self-Care Activities In An Iranian Sample

**Abstract:** Cultural competence requires an accurate understanding of how diverse populations conceptualize health behavior constructs like disease self-care. Psychometric tools measuring diabetes self-care have been utilized in studies across diverse populations. For example, the Summary of Diabetes Self-Care Activities (SDSCA) is a self-report measure of the frequency of completing various diabetes self-care activities including diet, exercise, blood glucose testing, foot care, and smoking. It has been widely used in various samples around the world, including the United States, China, Turkey, Taiwan, Portugal, Lebanon, Spain, and Korea. But the underlying 5-factor structure is rarely tested in these studies. When the underlying structure of the SDSCA has been tested, it has shown mixed results. In the present study, 99 Iranian patients of the Diabetes Center of the Tehran University of Medical Sciences were administered the SDSCA along with other psychosocial measures. Confirmatory factor analysis examining whether the diet, exercise, blood glucose testing, foot care, and smoking factors represented a latent construct of diabetes self-care produced an inadmissible result; 4 of the 5 factors produced loadings between 0.00 and 0.02. This model could not be accepted as an adequate representation of diabetes self-care in this participant sample. Subsequent exploratory factor analysis attempted to replicate the modified item 4-factor structure detailed in a Korean sample. The present sample more closely approximated the factor structure of the Korean sample, producing diet, exercise, blood sugar testing, and foot care factors. The present EFA resulted in a similar recommendation to delete the item concerning high fat foods, but the smoking item loaded significantly on the diet factor. Studies that utilize psychometrics developed on largely Caucasian western samples should not simply assume an invariant worldview of diabetes self-care, and should confirm the existence of the underlying factor structure for use in new populations.

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## Race/Ethnic Disparities On Weight And Glycemia In Older Adults Treated With Peer-Lead And Mobile Telehealth Interventions For Diabetes Prevention And Management

**Abstract:** We assessed the effectiveness of lifestyle intervention, delivered by peer-leaders alone (PL) or enhanced with mobile telehealth (PET), to improve weight and glycemic management in south Florida older adults with or at-high-risk for type 2 diabetes (T2D). In a pilot study, 300 older adults (75% with T2D and 25% with prediabetes) were randomly assigned to PL, PET, or usual care (UC) interventions for 12 months. Interventions used Diabetes Prevention Program/Look-AHEAD modules and were tailored based on input from focus groups. Regressions were used to evaluate differences among racial/ethnic groups, and t-test to evaluate changes over time. Participants had a mean age of  $67.1 \pm 5.3$  years, 94.7% were male, 37.5% were African Americans (AA), 22% were Hispanics (H), and 40.5% were White non-Hispanics (WNH). At baseline, AA were heavier than WNH and H ( $232.6 \pm 42.3$  lbs vs.  $226.6 \pm 42.3$  lbs and  $210.7 \pm 33.9$  lbs,  $p<0.01$  respectively). At 12 months, WNH showed that PL reduced their fasting glucose ( $137.1 \pm 62.6$  mg/dl to  $117.6 \pm 26.9$  mg/dl,  $p=0.04$ ); PET reduced their weight ( $235.6 \pm 48.4$  lbs to  $231.2 \pm 44.6$  lbs,  $p=0.03$ ) and fasting glucose ( $153.6 \pm 82.7$  mg/dl to  $133.7 \pm 48.1$  mg/dl,  $p=0.03$ ). Similarly in H, PL reduced their weight ( $226.6 \pm 34.4$  lbs to  $221.6 \pm 37.6$  lbs,  $p=0.02$ ), PET reduced their fasting glucose ( $138.4 \pm 59.7$  mg/dl to  $116.3 \pm 33.5$  mg/dl,  $p=0.03$ ); while in AA none of the intervention groups showed significant changes. These results suggest that lifestyle interventions delivered through peer-leaders alone or enhanced with mobile telehealth are feasible and effective for weight and glycemic management in WNH and H older adults, but the benefit in AA is less clear. Research on the underlying reasons for these disparities is warranted in order to implement culturally-sensitive and race/ethnic-targeted interventions for diabetes prevention and management.

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## SOPHE Sustainable Solutions For Health Equity: The Role Of Health Educators In Diabetes Education And Resources Development

**Abstract:** There is a need to address the shortage of the diverse healthcare workforce focused on diabetes in community setting. Health education specialists offer knowledge and skills that promote working in interdisciplinary teams; care coordination; quality improvement community engagement; community needs assessments; and health coaching to influence policy, systems and environmental changes in diabetes prevention and resources. The SOPHE Diabetes Toolkit and other diabetes resources may prove to be of help to those involved in collaborative community-based interventions, strategies and approaches. The toolkit supports a national framework to eliminate health disparities and promote health equity through capacity building. This toolkit addresses health disparities based on health education competencies for conducting assessments, planning, implementing and evaluating programs, developing training and establishing partnerships. Participants will gain solid content knowledge for selecting the appropriate steps and materials to conduct the expected work. Participants will also learn specific techniques to utilizing the diabetes toolkit and other diabetes resources for collaborative community-based interventions, strategies and approaches. The presentation will challenge participants to explore the conceptual framework to aid organizations and community leaders in assuring that the community interventions are evidence-based strategies and approaches for successful collaborations. Organizational leaders and health educators will learn how to use the diabetes toolkit and other diabetes resources. This presentation elaborates the essential components of process and outcome evaluation that focus on the development and implementation of appropriate diabetes capacity building activities to meet the learning objectives and assess the effectiveness. This presentation help participants to have the right “tool” for carrying out health education competencies activities to address health disparities.

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### Store Outside Your Door: Hunt, Fish, Gather, Grow!

**Abstract:** The Alaska Native Tribal Health Consortium's Wellness and Prevention Department has developed a new initiative around nutrition called the Store Outside Your Door (SOYD). The mission of this innovative project is to promote the health benefits, awareness, and accessibility of Alaska Native foods to address the health disparities that exist within the Alaska Native population such as increasing diabetes, obesity, and cancer rates. This program seeks to highlight foods which one can hunt, gather, or grow within the unique regions of Alaska. Contrary to the notion that much of Alaska is a "food desert," this program devalues that statement by highlighting those foods which can be harvested from the abundant "store outside your door." The SOYD program promotes traditional food consumption through education and developing partnerships and concepts that look at sustainable ways to eat our local Alaskan foods. Currently SOYD staff are working with staff from the Northwest Indian College in Washington state to develop a traditional foods infant feeding guide that will promote the concept of giving our children a taste for these traditional foods from the start. The initial project of the SOYD program entitled Traditional Foods Contemporary Chef (TFCC) was released in the Fall of 2011 and has been well received by the Alaska Native community and is currently in its second season of filming. TFCC is a "webisode," (web-based video) series highlighting Alaska Native foods available in the diverse regions of our state. To date 24 webisodes ranging in length from 4-6 minutes have been created in six different regions of Alaska. The webisodes are being distributed at no cost throughout the Alaska Native Tribal Health System and countless venues across the state including mass distribution on Facebook and other forms of social media. [www.facebook.com/storeoutside](http://www.facebook.com/storeoutside), [www.youtube.com/anthcstoreoutside](http://www.youtube.com/anthcstoreoutside) and our website: [www.storeoutside.com](http://www.storeoutside.com) link to our current resources.

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### Stress And Diabetes Risk: Early Findings From The Stress And Sugar Study

**Abstract:** Stress-related mental health conditions, particularly depression, have been associated with diabetes risk, however the evidence that stress per say is predictive of type 2 diabetes is mixed and limited by the broad and inconsistent definitions of 'stress' employed in extant research. Clarity is also needed as to the biological mechanisms by which stress may "get under the skin" to influence diabetes risk. We present early results of the Stress and Sugar Study (SASS), a pilot study aimed at clarifying the roles of stress exposure and biological stress reactivity on diabetes risk among racial/ethnic minorities. This study aims to overcome limitations of prior research by manipulating stress in a laboratory setting with the Trier Social Stress Test in order to objectively measure biological stress reactivity through changes in salivary cortisol. The study will also examine the correlation between self-reported social stress exposure (e.g., daily hassles, interpersonal conflict) and experiences of racial discrimination with glucose metabolism (insulin, glucose, and hemoglobin A1c). SASS began recruitment in July 2013 and preliminary results will be available in September. Understanding the role that stress plays in the development of type 2 diabetes, particularly racial/ethnic disparities in diabetes risk, will inform the development of prevention and intervention strategies to promote health equity.

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## The Carondelet Diabetes Scorecard Program: An Innovative Primary Care Team Management Program For High-Risk Populations

**Abstract:** Carondelet Health Network, the largest integrated health system serving two counties in Southern Arizona, reports one in three patients admitted to their hospitals have diabetes. This includes high-risk minorities (Hispanic and Native American), the poor and vulnerable. Carondelet Medical Group implemented a Diabetes Scorecard Program with a Medicaid plan to demonstrate a pro-active management approach of a high-risk population. CMG utilizes a multidisciplinary, bilingual team of diabetes nurses, dietitians and promotoras (outreach workers). The Program framework defines the patient's diabetes score based on clinical parameters. This score drives the intervention scheme of nursing and dietitian visits. The Promotora manages the program through a web-based tool that houses the diabetes scorecard, processes and documentation. Other elements of the Program include Quarterly Diabetes Day Clinics for specialty exams, labs and medical nutrition therapy. Patients receive a \$15 food card incentive to participate every 6 months in the Clinics. High-risk patients are placed on telehome monitoring devices for real-time self-management support. This Program operates under a health plan contract with fee for service payments for the physician, nurse and dietitian and a PMPM for the Promotora's care coordination. HEDIS bonus and shared savings are determined annually. Patients enrolled in the Program received better care, based on standard performance measures, than CMG's Routine Care patients. The levels over baseline benchmarks were notable for eye exams (80%), A1C testing (94%) and GFR (90%). The cost of care between groups is 48% lower for inpatient care and 13% lower for ED costs with the Scorecard patients. Medication costs were 46% higher, likely attributable to medication adherence, guideline-based combination therapy and blood glucose monitoring. This model demonstrates positive clinical outcomes and a financial win-win for the patient, provider and the health plan.

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## The Eagle Adventure: A School Based Program Striving To Prevent Type 2 Diabetes In Indian Country And Beyond

**Abstract:** The Eagle Adventure is a school-based program designed to prevent type 2 diabetes in Indian country and beyond. Eagle Adventure program components were designed after formative research identifying type 2 diabetes as a major concern among Native American families. A transdisciplinary team developed interactive lessons around the CDC Eagle Book series which embraces Native American traditions of storytelling. The program curriculum was also developed using the socioecological model and social cognitive theory as the frameworks. The aim of the program is to provide youth and their families with a vision of hope that type 2 diabetes can be prevented through healthful lifestyle choices. In each lesson, positive role models engage students in interactive lessons promoting the joys of healthful eating and physical activity. Lessons are culturally relevant and transferrable to diverse populations. To date, the program has been implemented in coordination with four tribal partners in over 20 low-income schools in Oklahoma. Behavior-related outcomes are consistently positive on multiple levels post program implementation. At the student level, preference for vegetables consistently improves as well as preference for moving activities post-implementation. At the family level, a high proportion of students report reading the Eagle Books and engaging in take-home physical activity components with family members. At the school level, teachers and administrators remark positively about the program and the effect on children. The Eagle Adventure has the potential to positively impact health disparities related to type 2 diabetes by raising awareness of the disease at an early age and by providing students with the knowledge and skills necessary to improve health related behaviors at home and school.

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## The Impact Of Clinical Pharmacist Services On Patient Glycemic Control

**Abstract:** The Diabetes Treatment Center (DTC) at Howard University Hospital serves the various medical needs of diabetic patients in the Washington D.C area through a multidisciplinary approach to patient care by providing a multitude of education and clinical services. Through services such as patient education and drug therapy recommendations, clinical pharmacists have the opportunity to improve patient diabetes outcomes and overall health. Improving health literacy is increasingly critical as information, choices, and decisions about health care and public health have become more complex. One of the main challenges pharmacists at the DTC face is weak health literacy as many of the patients who visit the center have difficulties properly administering their medications. Therefore, one of the areas that pharmacists at the DTC focus on is educating their patients on medication adherence and recommending lifestyle modifications aimed at achieving optimal therapy and maintaining a healthy lifestyle. The primary goal of this study is to investigate the impact of services provided by clinical pharmacists at the DTC on patients' A1C glycemic control. This study focuses on Washington D.C residents with diabetes who visit the DTC. Data collected included: A1C levels before and after pharmacist intervention(s), number of pharmacist visits, number of co-morbidities at the time of visit, patient medication history and type of pharmacist intervention(s).

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## The IMPACT Of Clinical Pharmacy Services On The Health Outcomes Of High-Risk Patients With Diabetes

**Abstract:** The Project IMPACT: Diabetes initiative aims to improve care for patients with diabetes through community-based interdisciplinary teams that include pharmacists. The project targets high-risk patients that because of their inherent disparities are disproportionately affected by diabetes. The Zufall team was selected as one of 25 community-based nationwide teams in the project. Patients in our project experienced significant improvements in health outcomes as reflected in reductions in HbA1c levels and systolic and diastolic blood pressure measurements, in addition to greater rates of screening as per guideline recommendations when compared to baseline. The data supports that integration of the pharmacist as a member of the interdisciplinary clinical team can significantly improve patient outcomes and increase preventive screenings, avoiding the consequences of diabetes. As an added measure, the team also measured reductions of pADEs and ADEs in patients receiving integrated pharmacy services and has had a 60 % drop in pADEs and ADE rates. The addition of MTM and MTR into the encounters has helped reduce medication related events, including participants of Project IMPACT. We conclude that a patient centered comprehensive approach to diabetes and other chronic diseases that fully integrates the pharmacist results in significant improvements in health outcomes, and improvements in safety and a high level of patient satisfaction in program participants. The process lends itself to replication within community health centers and has the potential to save lives, improve the quality of life for patients and save the health care system the significant costs that are associated with diabetes.

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**The Maya Angelou Center For Health Equity (MACHE): NIMHD Center Of Excellence (Coe) In  
Diabetes And Obesity Translational Research**

**Abstract:** Type 2 diabetes and its complications are higher for African Americans and Hispanics, the largest racial/ethnic minority groups in North Carolina (NC) and the US. Despite the successes seen in national diabetes prevention and control studies, there is a glaring lack of understanding in the ways in which the findings of these and other studies can be implemented and adopted in “real world” settings to provide benefit to the populations most vulnerable to this common and costly disease. The recent emphasis on community-based and translational research, especially “T4” research which emphasizes the translation of scientific knowledge to impact the community, can be a key aspect to addressing these disparities. This approach requires a concerted effort between scientists adequately trained in conducting culturally appropriate research and representatives within the community. The Maya Angelou Center for Health Equity (MACHE) was funded by the National Institute for Minority Health and Health Disparities in August 2012 to develop and implement a multi-pronged approach with the overall focus on translating evidence-based, lifestyle strategies to eliminate health disparities in diabetes prevention and control. The MACHE will achieve the following aims pertinent to the overall goal of translating lifestyle approaches for eliminating diabetes disparities: (1) Design and conduct two community-based intervention studies focusing on diabetes prevention and control in Winston-Salem/Forsyth County, NC; (2) Develop strategies to engage the African American and Hispanic communities in Winston-Salem/Forsyth County to disseminate findings of diabetes prevention and control research studies and provide opportunities to build local capacity to participate in and conduct community-based research to address diabetes disparities; (3) Develop a mentoring program for minority junior faculty to enhance the number of scientists with training in diabetes health disparities research.

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## The West Indian Winter Wellness Festival: Reducing Diabetes Disparities In The Guyanese Community Through Screening, Education And Community Engagement

**Abstract:** The West Indian Winter Wellness Festival of 2012 was a free glucose screening and diabetes education event planned and implemented by West Indian Diabetes Action Coalition (WIDAC), a stakeholder partnership involving more than 20 organizations in Schenectady, NY. This was part of a culturally-appropriate, community-empowering public health action to address a high burden of type 2 diabetes in the Guyanese community. The specific goals of the festival were to 1) provide free diabetes screening, 2) provide free diabetes education on lifestyle modification and regular monitoring, 3) refer uninsured individuals to appropriate community resources, and 4) build community support for WIDAC mission and goals. Schenectady County adults of West Indian origin who are at high risk of type 2 diabetes (e.g. Guyanese) were recruited through post card mailings, flyers, and media advertisement. Participants who signed consent received the random blood glucose (RBG) test. Using the current ADA guidelines, participants were classified into low-risk (RBG 110-139 mg/dl), mid-risk (RBG 140–199 mg/dl) and high-risk (RBG  $\geq$  200 mg/dl). Certified diabetes educators and health insurance enrollers were also present to assist those who required their services. A total of 48 West Indian adults (including 44 Guyanese) participated in the screening component. The mean age was 44.7 years, and 56.3% were female. 36 individuals were low- risk, 8 were mid-risk, and 4 were deemed high-risk. 12 individuals were uninsured (8 low-risk, 2 mid-risk and 2 high-risk), and received insurance enrollment and physician referral services at the festival. 26 individuals requested onsite diabetes education. Many more received diabetes education and insurance information packets. Of the 3 high-risk individuals who received subsequent diagnostic tests by a WIDAC member physician, 1 had diabetes and 2 had pre-diabetes, suggesting a high positive predictive value of the screening.

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## Traditional Medicines And Its Utility In Nepalese Immigrants' Borough Of Queens New York City USA: From Bench To Bedside

**Abstract:** Traditional medicines largely depend on individual skills and practical knowledge of the people. In addition over time, different medical traditions have developed in different parts of Nepal and have their own specialties. Since very little is known of the traditional medicinal practices of Nepalese immigrants in borough of Queens within New York City, the extensive observations were conducted during the period January 2011 to December 2012 and traditional treatment system for the management of different diseases in human which are prevalent in the area were recorded with the help of Nepalese immigrants in the area. Nepalese immigrants revealed the medicinal values of different plant parts like leaves, fruits, flowers, seeds, stem-barks, tubers, and roots. They have been using these parts in the form of paste, powder, juice, decoction, infusion, and also in crude form, with other additives like clarified butter, edible-oil, honey, and milk, to relieve from different ailments. Many unknown uses of plants brought to the light by the observations, consisting 54 plants belonging to 41 families to relieve different ailments like skin diseases, jaundice, rheumatism, antidotes, burning micturition, fevers, intestinal worms, menstrual problems, cough, diarrhea, headache, cold, diabetes, toothache, asthma, eye diseases, stomachache, indigestion, piles, cuts, wounds, abscesses, sexual problems, for getting abortion, nasal drops, and to retain pregnancy. Information on home-grown use of plants has led to discovery of many medicines in use today. The phytochemical and pharmacological screening, biological assay of the drugs/preparations must be carried out to display the active principles present in these plants.

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### Unequal Burden Of Disease, Unequal Participation In Clinical Trials: Solutions From Narail District Of Bangladesh

**Abstract:** In Bangladesh most of the people suffer from diabetes mellitus in every times and especially aging are more considerable. The objective of this study was to determine the prevalence of diabetes mellitus in consideration of age, sex, socio-economical status, determined the present therapeutic management in diabetes mellitus, and related complication having by the patients. The survey was planned to study the drug problem in diabetes mellitus involving the first two steps of the cycle i.e. examine and diagnose by collecting data. This is to learn the exact nature of the problem and to identify the underlying causes of it. A total of hundred patient's information data were collected prospectively by a prepared questionnaire. In type I diabetes mellitus; 70% patients were male, and 30% were female. In type I diabetes mellitus; 100% patients were treated with insulin, 92% with sulfonylureas, 72% with meglitinide, 55% with thiazolidinedione, 99% with cardiovascular drugs, 65% with antiplatelet drugs, 58% with antifibrinolytic drugs, and some more drugs were given to treat the type I diabetes mellitus. On the contrary type II diabetes mellitus; 64% patients were male and 36% were female. In type II diabetes mellitus; sulfonylureas were given to 86% patients, meglitinide to 85% patients, cardiovascular drugs to 99% patients, antifibrinolytic drugs to 68%, antiplatelet drugs to 50% patients, combined antihypertensive drugs to 70% patients, and 42% patients were taking thiazolidinedione drugs. It was also observed that patients aged within 40-49 years were more seriously affected by diabetes mellitus. More than 10% of the patients had low status, 65% having medium status, and 25% having high status. The management of diabetes mellitus is a very important factor both global and national perspective. Introduction of an effective diabetes mellitus control and management guideline would contribute a lot of achieving health care facilities for the people.

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## Using Market Research Data To Optimize Access And Reach Of Diabetes Prevention And Control Programs

**Abstract:** Introduction: Diabetes (DM) is a national epidemic representing over 26 million people in the US. People with prediabetes (PD) have an increased risk of developing type 2 DM, heart disease, and stroke. People with PD who lose weight and increase their physical activity can prevent or delay the onset of type 2 DM and in some cases return their blood glucose level to normal. Groups at greatest risk of developing DM tend to be racial/ethnic minorities and have low SES and educational attainment. Connecting DM Prevention and Control Programs (DPCP) to PD individuals that would benefit from these programs is multifaceted and complex. The inability to understand and respond to social determinants of health(SDH) is often the result of the lack of data to properly characterize the problem, especially as it relates to different areas and levels of geography. Market research (MR) data provide useful tools which can augment public health data-sets to enhance data driven decisions to address a variety of entities that impact health disparities related to DM. MR data can reflect how SDH and behaviors influencing DM disparities evolve over time. Methods: Through a contract with NACDD, DHPE provide eight state health departments' DPCP technical assistance with identifying high risk PD populations in their states where DM Prevention Programs (DPP) are located, and best marketing strategies for reaching these high risk populations, healthcare facilities in the area and business that may be useful with promoting DPPs. Results: DPCP programs received detailed reports, DM Risk Factors Community Profiles, outlining PRIZM segments where populations at high risk for PD are located in proximity to DPPs, and best marketing approaches for reaching these populations. Conclusion: Given the right tools—technical assistance with identifying best strategies for reaching people at high risk for PD, DPCP's have the ability to plan programs with focusing on local health disparities related to DM.

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## Achieving Success In Delivering Diabetes Education To An Immigrant Population

**Abstract:** Diabetes Educators can play a pivotal role in the health of minority population and meeting the healthy 2010 goals of the nation in reducing the incidence and complications of diabetes. The prevalence of diabetes varies substantially by race and ethnicity. Trends show that minority populations are disproportionately affected by diabetes. The prevalence of complications associated with diabetes ( i.e cardiovascular disease, neuropathy, retinopathy, and amputations ) is also higher in some minority populations. The high rates in these groups maybe due to a genetic predisposition to diabetes . Physical inactivity and increased caloric intake associated with adapting to a western society may contribute to a higher incidence in these groups. Queens Hospital Center is one of 11 hospitals in the New City Health and Hospitals Corporatio. Our hospital is located in Jamaica, Queens among a very diverse population of working immigrants. The population we serve comprised of 55% African American descent, 20% Latinos/hipanic, 5% Caucasian, 15% Asians, and 5% who list themselves as other. Diabetes is very prevalent in Jamaica Queens, to this end the hospital has address the diabetes epidemic by developing a comprehensive diabetes self-management education program. None of the population the we serve is a homogeneous group, there are many variables dependin on the number of years since they have immigrated to the United States, education levels and how much they have assimilated into the American Culture. One third of our population is uninsured, and we have an increasing number of elderly patients with diabetes form age 65 to 90 years old. Most of our patients are new to the American health care system and hospitals, and have and no previous diabetes education. There are many barriers and challenges, and most challenging is low literacy and poor health literacy of the different groups. The sheer volume of patients can be daunting, with 40% no show for new or follow-up appointment. I will present some examples of strategies that help address barriers to care and achieve success.

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