



**CONSENSUS REPORT OF THE
NATIONAL MEDICAL ASSOCIATION**

Diabetes in the African American Community



Table of Contents

National Medical Association Diabetes Consensus Panel.....	4
Executive Summary.....	5
INTRODUCTION.....	5
ABOUT THE NATIONAL MEDICAL ASSOCIATION.....	5
METHODOLOGY.....	5
FINDINGS.....	6
DISCUSSION.....	6
Introduction.....	7
Statement of Problem.....	7
DIABETES STATISTICS.....	7
COMPLICATIONS OF DIABETES.....	7
Diabetes Education.....	9
The NMA and Diabetes Education.....	10
Relevant Legislation.....	11
Recommendations.....	12
OBESITY.....	12
PARTNERSHIPS.....	13
PATIENT EDUCATION.....	13
TREATMENT BEST PRACTICES.....	13
<i>CO-MORBIDITIES</i>	14
<i>DIABETES: PRE-, DURING, AND POST- PREGNANCY</i>	14
DIABETES WORKFORCE DEVELOPMENT.....	14
HEALTH POLICY AND LEGISLATION.....	15
RESEARCH.....	15
Summary.....	16
References.....	17



National Medical Association Diabetes Consensus Panel

Nelson L. Adams, III, M.D.

President, Consensus Chairperson
National Medical Association
Miami, FL

Wilma J. Wooten, M.D., MPH

Consensus Panel Co-Chair
Secretary & Region VI – Trustee-at-Large
Public Health Officer
Principal Investigator, NMA Diabetes Education Program
San Diego, CA

Kwabena Adubofour, M.D., President

NMA - Stockton Society
Stockton, CA

Juanita A. Archer, M.D.

NMA Diabetes Education Program
Coalition Lead, Washington DC
Medico-Chirurgical Society of the District of Columbia
Temple Hills, M.D.

Rahn Kennedy Bailey, M.D., FAPA

CEO Bailey Psychiatric Associates
Clinical, Research, and Forensic Institute
League City, TX

Kevin L. Billups, M.D.

Associate Professor of Urology
University of Minnesota
Staff Urologist
VA Medical Center
Minneapolis, MN

Carolyn Barley-Britton, M.D., President-Elect

Associate Professor of Clinical Neurology
Columbia University
New York, NY

Henry Wendell Foster, Jr., M.D.

Professor Emeritus & former dean
School of Medicine, Meharry Medical College
Nashville, TN

Kevin H. Mc Kinney, M.D., NMA Society President

NMA Diabetes Education Program
Coalition Lead, Houston TX
Associate Professor of Internal Medicine
University of Texas Medical Branch
Galveston, TX

Albert W. Morris, Jr., M.D.

Immediate Past President
Memphis, TN

Nutrition Representative:**Roniece Weaver, MS, RD, LD**

Founding Partner & Executive Director
Hebni Nutrition Consultants
Orlando, Florida

Facilitator:**Bobbie C. Lawrie**

Craddock Communications, Inc.
Largo, MD

Writer/Editor:**Katrina Norfleet**

The MayaTech Corporation
Silver Spring, MD

NMA Staff**Ivonné Fuller Bertrand, NRPP, M.P.A.**

Associate Executive Director
Community and Mission Services
Development Office
National Medical Association
Washington, DC

Cheryl A. Dukes

Director Special Projects & New Initiatives
Community & Mission Services Division
National Medical Association
Washington, DC

Roslyn A. Douglas, M.A.

Diabetes Program Coordinator
Community & Mission Services Division
National Medical Association
Washington, DC

The Diabetes Consensus report was sponsored in part by LifeScan.

Executive Summary

INTRODUCTION

Diabetes, the nation's sixth leading cause of death by disease, disproportionately affects African Americans, who are nearly 1.8 times more likely to have diabetes than whites of the same age¹. The National Medical Association (NMA) has historically taken an active role in educating African Americans—NMA physicians, patients, consumers, and the general public—about diabetes. Since 2005, the association has implemented the NMA Diabetes Education Program, a 5-year project funded by a cooperative agreement from the National Diabetes Education Program (NDEP) and the Centers for Disease Control and Prevention (CDC), to conduct diabetes outreach to educate the public and NMA physicians. The ultimate goal of this effort is to help reduce illnesses and deaths associated with diabetes and its complications.

In 2008, the NMA convened a panel of experts to examine recent research on diabetes in Black Americans and develop a Consensus Statement with recommended prevention, education, and management strategies to improve outcomes for this population. Those recommendations are summarized in this paper.

ABOUT THE NATIONAL MEDICAL ASSOCIATION

The National Medical Association is the oldest and largest organization representing physicians of African descent in the United States. Established in 1895, when all majority medical organizations excluded physicians of color, the NMA is comprised of more than 30,000 physicians who serve millions of diverse patients, many of whom are underserved, underinsured, and are predominately people of color. The NMA, which is composed of six geographic regions, has 33 state and 98 local affiliated medical societies. There is a ratio of approximately one (1) NMA society for every 259,000 African Americans across the United States. The organizational structure of the NMA provides a network of affiliated community-based organizations with a powerful

reach to African American communities. All of the states with large minority populations, especially African Americans, are represented within this NMA network of societies.

The NMA is charged with representing the collective interests of African American physicians and patients (which includes native born Black Americans and immigrants of African descent). This trust is displayed in the Association's vision to become a leading force for parity in medicine, which is accomplished by the mission to promote health and wellness, and eliminate health disparities among persons of color.


METHODOLOGY

The NMA National Program staff identified key experts from research centers, private practices, associations, academic settings, and the public health sector to join the Diabetes Consensus Panel to review current data and research on diabetes in African Americans.

A preliminary briefing paper generated by the NMA staff on the prevalence of diabetes in the United States and the African American community was disseminated to members of the consensus panel. The briefing paper summarized (1) prevalence; (2) medical/psychological complications associated with diabetes, (3) testing, (4) patient and physician education, (5) relevant legislation, and (6) activities undertaken by the NMA to reduce the incidence and prevalence of diabetes in the African American community.

Members of the Diabetes Consensus Panel reviewed the paper and convened in Scottsdale, Arizona from January 18–20, 2008. Additional research and information included a presentation on the science of diabetes and prevalence data from Judith Fradkin, M.D., director, Division of Diabetes, Endocrinology and Metabolic Diseases at the National Institutes of Health (NIH), National Institute of Diabetes and Digestive and Kidney Disease (NIDDK).

DIABETES IN THE AFRICAN
AMERICAN COMMUNITY



The recommendations contained in this paper emerged from the consensus panel's deliberations. Key issues addressed by the panel include patient and provider education, treatment, workforce development, research, and health policy and legislation. These recommendations seek to increase awareness about diabetes among the general public, patients, and physicians as well as reduce the disproportionate burden of diabetes within the African American population. Evidence-based medicine and best practices served as the foundation for the formation of these recommendations.

FINDINGS

Death rates among African Americans with diabetes are 27% higher than whites with the disease. Because of the disproportionate burden of diabetes on African Americans, complications such as kidney failure, blindness, and amputations are subsequently experienced by African Americans at higher rates than whites.²

There are three basic types of diabetes: type 1 diabetes, an autoimmune disease which destroys the insulin producing cells in the pancreas; type 2 diabetes, in which the cells of the body become insensitive to insulin and insulin production is insufficient to overcome this insulin resistance; and gestational diabetes, a type of diabetes that develops during pregnancy. Other types of diabetes, which can result from specific genetic conditions, surgery, drugs, malnutrition, infections, and other illness, account for 1% to 5% of all diagnosed cases.

While an estimated 14.6 million Americans have been diagnosed with diabetes, 6.2 million people (or nearly one-third) are unaware they have the disease. In addition, there are 54 million people between the ages of 40 to 74 who have pre-diabetes, a condition that occurs when a person's blood glucose levels are higher than normal but not high enough for a diagnosis of type 2 diabetes.

DISCUSSION

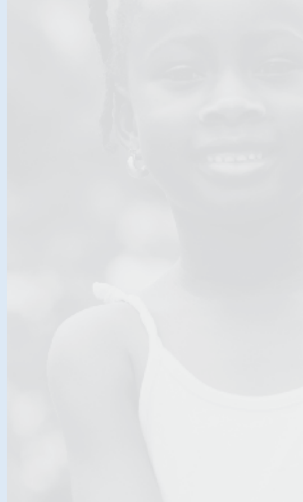
Approximately 90 % of the people with diabetes have type 2 diabetes. The cause of type 2 diabetes is still unclear although both genetics and environmental factors such as obesity and lack

of exercise appear to play roles. The Diabetes Prevention Program (DPP) Study, conducted by NIH³ conclusively showed that losing weight, maintaining a low-fat diet, and increasing physical activity can prevent or delay the development of diabetes and may even return blood glucose levels to normal in people with pre-diabetes.⁴ The DPP Study also showed that while one may delay the development of diabetes with medication, diet and exercise worked better. An increase to 30 minutes a day of moderate physical activity, combined with a 5% to 7% reduction in body weight, produced a 58% reduction in the development of diabetes over about 3 years.⁵

Additionally, data show that three behaviors—lack of physical activity, poor diet, and smoking—contribute to diabetes and other chronic diseases that account for 50% of deaths in the U.S. population.⁶ Comprehensive strategies that address contributing behaviors—physical inactivity and poor nutrition—as factors for developing diabetes are needed to decrease the number of overweight and obese children and adults who are at risk for developing diabetes.

Being aware of the risks for pre-diabetes can help delay or even prevent type 2 diabetes from developing. Early detection of diabetes and appropriate treatment can decrease the chance of developing the complications of diabetes, but unfortunately, early in its course, diabetes may have few symptoms or many of the symptoms of diabetes may be ignored. Efforts to educate and empower people with and at risk of diabetes and to improve therapy and adherence are key to reducing the prevalence of diabetes and resulting associated complications. Better informed practitioners with knowledge and understanding of the co-morbidities and the markers for predicting diabetes; tools to help patients make needed changes in lifestyle and adhere to therapy; and commitment to effective control of glucose, blood pressure and lipids are also necessary in order to improve health outcomes.

The consensus panel recommends that the NMA must establish an aggressive, strategic approach that brings about and sustains an awareness and sense of ownership for both the physician and the patient.



Introduction

In January 2008, the NMA Diabetes Consensus Panel met to examine the research and data on diabetes and its impact on African Americans. After a comprehensive review of the data, the consensus panel recommends that the NMA, a leader in research and action on diseases that disproportionately affect African Americans, be committed to a diabetes strategic agenda that will empower physicians and other practitioners, their patients, and the broader community to prevent, treat, and effectively manage diabetes. To address the projection that one in three people may

develop diabetes during their lifetime,⁷ the NMA will foster excellence in diabetes care among its membership. In acknowledgment of the data that shows overweight and obesity to be a major risk factor for developing type 2 diabetes,⁸ the NMA also addresses strategies stop the obesity epidemic.

Science-based evidence proves that diabetes and its subsequent complications can be prevented or delayed. The recommendations put forth in this document by the NMA also adhere to evidenced-based practices that foster excellence in diabetes care.

Statement of Problem

DIABETES STATISTICS

According to the NIH National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), 20.8 million children and adults in the United States (or 7% of the population) have diabetes; although only an estimated 14.6 million have been diagnosed with the disease. Type 2 diabetes accounts for 90% to 95% of all diagnosed cases of diabetes.⁹

The American Diabetes Association reports that in the United States, 20.6 million or 9.6% of people ages 20 and older have diabetes. Among African Americans ages 20 and older, 3.2 million (or 13.3% of all African Americans) have diabetes; of this number, one-third is not aware that they have the disease. Twenty-five percent of African Americans between ages 65 to 74 and 25% of African American women over age 55 have diabetes.

It is reported that about one in every 400 to 600 children and adolescents have type 1 diabetes.¹⁰ However, subsequent to the recent rapid increase of type 2 in this age group, the current number of children and adolescents with type 2 diabetes

is unknown. Many clinical reports and regional studies suggest that type 2 diabetes is being diagnosed more frequently in children and adolescents, particularly among African Americans, American Indians, and Hispanic/Latino Americans.

COMPLICATIONS OF DIABETES

Complications— blindness, amputations, heart and kidney disease, and stroke—commonly associated with diabetes are well known. The damage is accelerated when glucose, blood pressure, and lipid levels are poorly controlled and increases with longer duration of diabetes. Even those with pre-diabetes begin to develop damage to vessels, nerves, and organs. If left untreated or not properly monitored or controlled for long periods of time, people with diabetes can develop significant health problems that may result in death. African Americans experience higher rates of complications than do non-Hispanic whites with diabetes.

Cardiovascular disease (heart disease and stroke) is the leading cause of death for people with diabetes, accounting for approximately 65% of all deaths. Hypertension (high blood pressure) is an aggressive disease of the blood vessels that is intensified when coupled with diabetes and can lead to cardiovascular disease. About 73% of people with diabetes have high blood pressure. In people with diabetes, cigarette smoking doubles the risk for heart disease.¹¹ Diabetic men with erectile dysfunction (ED) have a 1.6 fold increased risk of developing heart disease compared to diabetic men without ED.¹²

Diabetic eye disease, in particular diabetic retinopathy, is the leading cause of new cases of blindness in people 20 to 74 years old in the United States. Diabetic retinopathy, which is the most common diabetic eye disease, occurs when there is damage to the blood vessels of the retina of the eye. People with diabetes have a higher risk of blindness than people without diabetes due to damage to the retina. Almost half of people with diabetes will develop some form of retinopathy during their lives; African Americans are almost 50% more likely to develop diabetic retinopathy as white Americans.^{13,14} Retinopathy may occur more frequently in African Americans because of the higher prevalence of hypertension in this population.

People with diabetes who have poorly controlled hypertension and hyperglycemia increase their risk for macular edema, the most frequent cause of decreased vision in diabetic retinopathy. Data from the CDC 2002 National Health Interview Survey (NHIS) reports the age-adjusted prevalence for cataracts among those with and without diabetes was 31.8% and 21.2%, respectively; and for glaucoma, 8.0% and 4.3%, respectively.¹⁵

Randomized controlled trials have shown that laser therapy can prevent vision loss in patients with diabetic retinopathy, hence regular eye exams and appropriate referral to retinal specialists is important

Diabetes is a leading cause of kidney disease (nephropathy), having contributed to 44% of new cases in 2002. Diabetes can damage the kidneys and cause them to fail, losing their ability to filter out waste products and the resulting kidney disease also accelerates cardiovascular disease. The prevalence of diabetes in African Americans is reflected in the incidence rate of diabetic End Stage

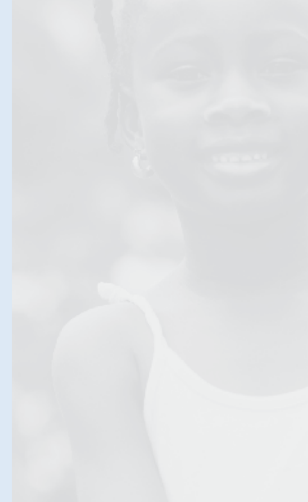
Renal Disease (ESRD) among the group; African Americans with diabetes have six times the risk of having kidney failure, in comparison to whites, accounting for more than 4,000 cases of ESRD each year. Diabetic nephropathy is influenced by factors such as genetics, blood sugar, and blood pressure. Conversely, control of blood sugar and use of angiotensin converting enzyme inhibitors or angiotensin receptor blockers help prevent chronic kidney failure.

People with diabetes are also at risk for nerve damage, or diabetic neuropathy, which can lead to many types of problems. It is reported that about 60% to 70% of people with diabetes have mild to severe nerve damage. Neuropathy is the most common neurologic complication of diabetes. There are two basic types: peripheral, also known as sensorimotor neuropathy, which can cause tingling, pain, numbness or weakness in hands and feet; and autonomic neuropathy, which affects the digestive system, urinary tract, sex organs, heart and blood vessels, sweat glands, and eyes.

Nerve damage predisposes a person with diabetes to limb injury and sometimes amputation because of delayed recognition of injury and infection. Over 60% of non-traumatic lower-limb amputations occur in people with diabetes. African Americans are 1.6 times more likely to suffer from lower-limb amputations.

Much can be accomplished to prevent or delay nerve damage, and to prevent or delay further damage and lessen symptoms for people who already have diabetic neuropathy. These include keeping blood glucose levels in the target range, taking care of and protecting feet, and monitoring certain types of physician approved exercise.

Diabetes often co-exists in the presence of hypertension, dyslipidemia, obesity, nicotine abuse, and chronic physical inactivity, which are all risk factors for erectile dysfunction (ED). ED is the persistent inability (over a period of three months or longer) to obtain or keep an erection adequate for sexual activity. Diabetes results in significant damage to the tissues of the penis that is responsible for erections, resulting in biochemical, functional, and structural abnormalities. It is estimated that 50-75% of men with diabetes have some degree of ED. It is not uncommon for the diagnosis of ED to lead to identifying men with previously undiagnosed diabetes, impaired fasting glucose, or metabolic



syndrome. In fact men with ED are twice as likely to have diabetes as men without ED. Moreover, two recent studies published in the Journal of American College of Cardiology confirm that ED increases risk of cardiovascular disease (CVD) among men with diabetes, suggesting that all men with type 2 diabetes be assessed for ED as part of the full evaluation for risk for CVD.^{16,17}

Unfortunately, ED in men with diabetes tends to be more severe and resistant to medical treatments than in men without diabetes. Regular physical exercise and improved nutrition habit, especially among obese men, has been shown to improve erectile function.¹⁸

In addition to physical complications, diabetes can also affect the mental health of those diagnosed with the disease. Studies show that people with diabetes have a greater risk of depression than people without diabetes. This may be due to the stress of daily diabetes management, dealing with complications of diabetes, keeping blood sugar under control, or even tension between a patient and his or her provider. Depressed patients tend to eat more and exercise less, which results in weight gain that further hinders efforts to control blood sugar levels. Results have shown that depression is a major factor that can increase the symptoms of diabetes and decrease overall functional well-being.¹⁹

Further, recent literature shows that many of the newer psychotropic agents are also associated with metabolic risks and side-effects burden, including; weight gain, obesity, type 2 diabetes mellitus, metabolic syndrome, and cardiovascular disease.²⁰

The results of a recent study showed that compared to the general population, persons with major mental illness lose an average of more than 25 years of potential life, primarily due to cardiovascular disease, making these psychiatric disorders among the most co-morbid medical illnesses that exist. Thus the diagnosis of a major psychiatric condition should now serve as a marker to all physicians for the potential development of other serious medical conditions, including diabetes.²¹

Diabetes can also lead to changes in oral health, particularly the gums and periodontal tissue. Research shows that people with diabetes are two to three times more likely than persons without diabetes to have destructive periodontal disease, such as periodontitis. Periodontal disease, a chronic inflammatory disease caused by bacteria that destroys the connective tissue and bone supporting the teeth, can lead to tooth loss. Periodontal disease is more prevalent in individuals with both type 1 and type 2 diabetes. Like any infection, periodontal disease may also make it more difficult for people who have diabetes to control their blood sugar. Smokers with diabetes are 20 times more likely to have a greater risk of tooth loss.

Oral health practitioners may be the first to notice symptoms of diabetes, which can include burning mouth syndrome, taste disorders, abnormal wound healing, and fungal infections. Many of these problems can be prevented through good glycemic control, good brushing and flossing habits and regular treatment for periodontal disease.

Diabetes Education

African Americans are at high risk for type 2 diabetes, and being overweight increases that risk. However, the DPP study shows that people at high risk for diabetes can prevent or delay the onset of the disease by making moderate lifestyle changes. For optimal results, patients and providers should work together to prevent and control the disease. The NDEP has developed a number of educational guides for both patients and physician with recommendations that align with those of the American Diabetes Association (ADA).

Patients can prevent or delay the disease and lower their risk for possible complications of diabetes such as heart disease, stroke, kidney disease, blindness, nerve damage, erectile dysfunction, and other health problems by losing weight and being physically active. It is recommended that overweight patients lose 5% to 7% of their weight; participate in at least 30 minutes of moderate-intensity physical activity 5 days a week; and follow a low-fat, reduced calorie meal plan.

Along with exercise and medications (insulin or oral diabetes pills), healthy nutrition is important for good diabetes control. Patients can keep their blood glucose levels well-regulated (90 to 130 mg/dL) as close to normal (non-diabetes level) as possible by eating well-balanced meals in the correct amounts. Patients are encouraged to self-manage their diabetes by knowing what their A1C (blood glucose), blood pressure, and cholesterol (the ABCs of diabetes) levels are, knowing what these levels should be, and taking the necessary steps to achieve healthy levels.

To reach their treatment goals, people with diabetes should consider the following to control the disease: work with their healthcare team to develop a diabetes food plan; stay at an optimum weight by being active and eating the right amounts of healthy foods; stop smoking and seek help to quit if necessary; take their prescribed medicines; check their feet every day for cuts, blisters, red spots, and swelling; and see their dentist at least twice a year.

According to NDEP, if physicians apply the lessons learned from the DPP to their patients at risk for diabetes, it will result in significantly fewer new cases of diabetes each year. Providers should identify patients at high risk for pre-diabetes based on several risk factors:

- Age (over age 45)
- Overweight (defined as BMI \geq 25; \geq 23 if Asian American; or \geq 26 if Pacific Islander)
- Blood pressure ($>$ 140/90 mm/Hg)

- Abnormal lipid levels (HDL cholesterol $<$ 40mg/dL for men and $<$ 50mg/dL for women; triglyceride level \geq 250 mg/dL)
- Family history of diabetes (parent, brother, or sister)
- Non-Caucasian ethnicity
- History of gestational diabetes (or gave birth to at least one baby weighing 9 pounds or more)
- Sedentary lifestyle (exercises less than three times weekly)¹⁶

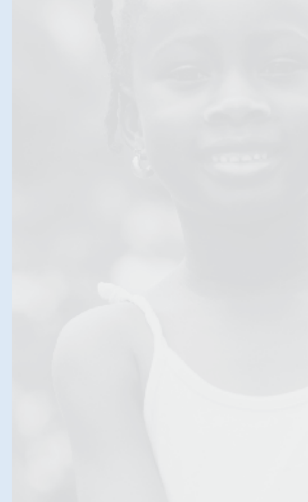
In its *Guiding Principles for Diabetes Care*, NDEP outlines seven essential components for providers that form the basis of its professional awareness program:

- Identify people with pre-diabetes and undiagnosed diabetes (as addressed above),
- Provide ongoing patient-centered care.
- Offer diabetes education,
- Treat diabetes comprehensively (e.g., A1C, blood pressure, and cholesterol should be kept as normal as safely possible; the target values should be based on an overall assessment of the person's health),
- Monitor blood glucose control using the A1C test,
- Prevent long-term diabetes problems, and,
- Identify and treat long-term diabetes problems. (Routine checking for long-term complications can help detect problem at a time when it can be treated and managed successfully.)

The NMA and Diabetes Education

To remedy the disparate rates of diabetes in the African American community, the NMA successfully competed for a 5-year cooperative agreement—beginning in February 2005—with the CDC to implement a

diabetes education program as a NDEP partner. The NMA Diabetes Education Program engages in several educational activities targeting African Americans, those with type 2 diabetes, and physicians.



The goal of the NMA program is consistent with that of the NDEP to reduce illnesses and death associated with diabetes and its complications. The program’s objectives include:

- Forming at least six community coalitions to increase community awareness about diabetes, lead by NMA society affiliates
- Conducting a coalition-driven community outreach and education program to increase the public’s awareness and knowledge about diabetes
- Educating diabetes patients of NMA physicians about diabetes and its complications
- Educating NMA physicians on the current practice guidelines for treatment and management of diabetes

The NMA Diabetes Education Program is implemented through coalitions formed in most of the six regions of the NMA and led by the Association’s local affiliate societies. As the hallmark foundation of this grant, developing and sustaining at least six coalitions is the first of the four objectives of the program. Current coalitions exist in Atlanta, Georgia; Houston, Texas; Indianapolis,

Indiana; Los Angeles, California; Pine Bluff, Arkansas; and Washington, DC.

In each coalition city, the local NMA affiliate (society) forms a community coalition composed of public and private partners, such as the Student National Medical Association, the Auxiliary to the National Medical Association, community-based organizations, faith-based institutions, civic organizations, businesses, state-based diabetes prevention and control programs, local health departments, medical-related programs of historically black colleges and universities, the American Diabetes Association, health providers, diabetes patients, and advocates.

Coalition events that incorporate patient and physician education include health fairs, 5K races, health summits, conferences, town hall meetings, symposia, radio programs, presentations, teen health conferences, children’s programs, health screenings, lectures, health expos, fitness jamborees, and workshops.

The program’s Web site, www.NMAdiabetesnet.org, serves as the vehicle for information dissemination. The Web site hosts a number of consumer, patient, and physician education materials that include fact sheets, tool kits, guides, reports, and posters.

Relevant Legislation

When the Americans with Disabilities Act was passed in 1990, it was clear that Congress intended to protect people with diabetes and other chronic diseases from discrimination. However, recent U.S. Supreme Court decisions have created a “Catch-22” situation where employers are allowed to say a person with diabetes is “too disabled” to do the job, but not “disabled enough” to be protected by the laws. Many individuals with chronic illnesses, including diabetes, have found themselves no longer protected by the Act because they do not meet the stringent definition of disability. In response, the Americans with Disabilities Restoration Act, was introduced on July 26, 2007, with bipartisan support. The bill, currently in discussion at committee hearings, would restore the original

intent of the 1990 legislation and ensure that people with diabetes, and other chronic diseases, are indeed protected from job discrimination.

In 2006, the Health Insurance Marketplace Modernization Act (S.1955), legislation that would have allowed private health insurers to bypass existing state diabetes coverage protections in 46 states and the District of Columbia, was introduced and subsequently defeated in the U.S. Senate. Millions of Americans with diabetes rely on that coverage for supplies, medication, and education. The Senate rejected S.1955 after hearing from patient advocacy groups. However, it could be introduced in Congress in the future.



In an effort to gain greater federal commitment to diabetes research and prevention funding, ADA continues to lobby Congress and the Administration to increase funding for diabetes research at the NIH and diabetes treatment and prevention at the CDC. The NMA joins ADA in urging the 110th Congress to pass a new budget that increases NIH diabetes research funding by 8% (\$148.4 million) and CDC diabetes prevention and treatment efforts by \$20.8 million—one dollar for every American with diabetes.

Scientists from across the United States and throughout the world believe that stem cell research, especially embryonic stem cell research, holds great promise in the search for a cure and better treatments for diabetes. Stem cell research allows scientists to more fully explore how to

control and direct stem cells so they can grow into other cells, such as insulin-producing beta cells found in the pancreas. Creating new beta cells could mean a cure for type 1 diabetes as they would serve as a replenishing source of cells for islet cell transplantation. They could also provide a powerful tool for controlling type 2 diabetes. H.R.3/S.5, the Stem Cell Research Enhancement Act, would expand federal funding for embryonic stem cell research. In the last session of Congress, both the House of Representatives and Senate passed the bill with bipartisan support, but were unable to override President Bush's veto. The bill was reintroduced and was passed by both the U.S. House of Representatives and the Senate, but was vetoed again by President Bush. A congressional override was not attempted.

Recommendations

After carefully reviewing the pertinent data and relevant literature, the NMA Diabetes Consensus Panel made several recommendations to foster excellence in diabetes care. In its deliberations, the panel worked to establish strategies that could become a replicable guide for all physicians on how to treat diabetes in the African American community. These recommendations are categorized under seven topics:

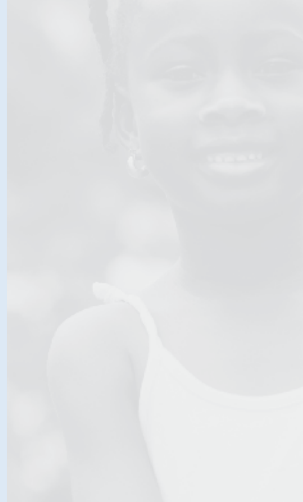
- Obesity
- Partnerships
- Education
- Treatment Best Practices
- Workforce Development
- Policy and Legislation
- Research

OBESITY

According to the CDC, an adult who has a body mass index (BMI) between 25 and 29.9 is considered overweight. An adult with a BMI of 30 or higher is considered obese. Being overweight or obese increases an individual's risk for type 2 diabetes. Conversely, the DPP study reported that as little as a 5% to 7% reduction, and 30 minutes of moderate physical activity each day can prevent or delay type 2 diabetes. The psychological basis for obesity can be fundamentally rooted in the development of an undiagnosed affective (mood related) disorder.

The underpinnings of clinical depressive illness are frequently manifested as altered physiological functions, impaired behavioral controls, and even faulty response reactions. All of these concerns have the direct potential to influence the tendency for one so disposed to become obese (even morbidly so). The consensus panel made several recommendations that support weight loss and physical activity in African Americans to help prevent and manage diabetes.

- The NMA will form strategic alliances around obesity prevention, identification, and control with groups that includes but are not limited to the National Organization for Blacks in Dietetics and Nutrition, the American Society of Bariatric Surgeons, and the Association of Food Industries.
- The NMA will work with the food industry to review content and labeling as it relates to diabetes and make recommendations.
- The NMA will work with local health jurisdictions to assure safe green space to increase opportunities for activity in urban and other communities with large African American population.
- The NMA membership will establish and participate in an NMA leadership model that promotes clinicians as the standard bearers in maintaining optimal weight.



PARTNERSHIPS

By forming partnerships with other stakeholders and those affected by the disease, the NMA will develop strategies that are (1) effective and sustainable, (2) create the social pressures that bring about positive change, and (3) bring about a positive economic benefit by reducing the costs associated with diabetes management. The panel recommends the following:

- The NMA will work to establish strategic coalitions with medical groups that include but are not limited to: the American Diabetes Association, the American Medical Association, the American Association of Medical Colleges, the American College of Physicians, the American Association of Family Practitioners, American College of Obstetrics and Gynecology (ACOG), and the American Academy of Pediatrics.
- The NMA will identify and form key partnerships to help develop and implement sustainable diabetes interventions to advance the NMA strategic diabetes agenda with the following key industries: business; community- and faith-based organizations; government; healthcare; media; and schools, colleges and universities. Specific examples include:

Corporations. The NMA will seek to develop and support corporate sponsored programs that provide employee incentive programs that focus on health and wellness, and those specifically for diabetes. The NMA will oppose programs that include punitive measures for patients.

Community-based and Faith-based Organizations. The NMA will approach community and faith-based groups to seek their assistance in developing strategies and tools for diabetes prevention and education.

PATIENT EDUCATION

Despite the existing literature on diabetes, there is still a deep well of unmet needs. To create a sense of patient empowerment, the NMA will seek input from the target population in developing strategies that will increase information and knowledge, which, in turn, will lead to changed behavior. The panel recognizes that, given the number of

young African Americans who have been diagnosed with diabetes, efforts must also be focused on moving resources toward the prevention and early detection of pre-diabetes in this age group. Among the primary messages will be: “small steps, big rewards.” Recommendations from the panel include a thorough review of the existing information on diabetes as it relates to African Americans and specifically include the following:

- The NMA will develop a comprehensive external marketing campaign that will utilize all avenues of communications such as Internet, radio, PSAs, billboards, and buses, to reach the targeted audience.
- The NMA will review (1) the message and messengers for cultural and language competency; (2) models on effective language for patients and physician information; and (3) effective models on how to engage youth.
- The NMA will establish incentives to assist patients in meeting and maintaining their goals.
- The NMA will ensure patients have reliable resources on diabetes that are evidenced-based and culturally and linguistically competent.

TREATMENT BEST PRACTICES

According to a study conducted by the American College of Physicians in 2001, compliance by physicians with recommendations from the American Diabetes Association (ADA) for management of patients with diabetes is not optimal. The consensus panel supports physician adherence to the ADA guidelines as standard practice and outlines below a number of additional best practices that will foster excellence in diabetes care among all providers.

- The NMA will promote a holistic approach to treatment to ensure patients receive optimal treatment regardless of the point of entry.
- The NMA will train physicians on how to apply patient and family-centered care; increase the interactive exchange between physician, patient, and caregiver in the management of diabetes.

- The NMA will encourage psychiatrists and urologist to view themselves in a primary care, preventative role in identifying patients with diabetes.

The consensus panel acknowledges the need to ensure that in managing diabetes, NMA physicians are aware of treatment guidelines for critically ill, in-patient, co-morbidities, gestational diabetes and other special populations. In fostering excellence in diabetes care, the panel made recommendations in the following areas:

Co-Morbidities

Co-morbidities, a disease or condition that co-exists with a primary disease but also stands on its own as a specific disease, are common among people with diabetes. The Agency for Health Care Research and Quality's Medical Expenditure Panel Survey results show that most adults with diabetes have at least one co-morbid chronic disease, and as many as 40% have at least three co-morbid conditions.^{22,23} The consensus panel specifically addressed erectile dysfunction and psychiatric illnesses and made the following recommendations:

- **Erectile Dysfunction.** Erectile Dysfunction (ED) and sexual health may be a motivating force to help African American men with and without diabetes to change behaviors and embrace lifestyle interventions and medical management. In addition, the NMA recognizes the emerging data showing that some women with diabetes can suffer from various types of female sexual dysfunction, such as problems with arousal, orgasm and libido.²⁴ The NMA will incorporate ED into its physician education outreach for diabetes care and will encourage further clinical studies investigating the impact of diabetes on both male and female sexual health.
- **Psychiatric Illness.** The diagnosis of a major psychiatric condition may serve as a marker to physicians for potential development of more serious medical conditions including diabetes. The NMA will develop and include educational components for its physicians that address the correlation between mental illness and diabetes to effectively and appropriately decrease medical morbidity and mortality.

Diabetes: Pre-, During, and Post- Pregnancy

Diabetes poses special concerns before, during and after pregnancy for women diagnosed with diabetes prior to becoming pregnant. It is critical for women with diabetes to take precautionary measures before becoming pregnant; however, according to the CDC, about 70% of women with diabetes do not plan their pregnancies as compared to about 50% of women who do not have diabetes. In a 1989 study, women with a pre-pregnancy A1C value greater than 9.3% had the highest risk of miscarriages and birth to babies born with congenital anomalies. Women with gestational diabetes, which appears in women with no previous history of diabetes, generally during the last half of pregnancy, are also at risk. Women with diabetes, whether gestational, type 1 or type 2, tend to have larger babies and can lead to greater risk for injuries to the infant during childbirth. Extra large babies also are more likely to become obese and to develop Type 2 diabetes later in life. Gestational diabetes can also convert to type 2, which will then require a lifetime management of diabetes. To address the care of pregnancy and diabetes, the consensus panel recommends the NMA adopt the following strategies.

- The NMA will create a pre-pregnancy strategy to decrease risk for gestational diabetes and attain excellent glucose control in women with diabetes before pregnancy to reduce the risk of pregnancy loss and congenital anomalies.
- The NMA will develop reliable and user-friendly information for practitioners and their pregnant patients with diabetes.
- The NMA will review the American Academy of Pediatrics guidelines for children born of gestational diabetes as it relates to African Americans and suggest modifications to guidelines where gaps exist.

DIABETES WORKFORCE DEVELOPMENT

The panel acknowledges the need for the recruitment, training, and retention of a diverse physician and ancillary workforce to serve the needs of African Americans and other persons of color with diabetes. Studies have indicated that when minority

patients have the opportunity to select a health care provider, they are more likely to choose someone of their own racial and ethnic background.²⁵ There is also a notable shortage of an ancillary workforce to assist patients in preventing and effectively managing diabetes. For example, African Americans only make up 2.6% of the nation's dietitians. Given the disproportionate burden of diabetes on the African American community, and the impact obesity has on the development and management of the disease, a larger representation of persons of color in this field is necessary to address nutrition-related health issues.

Proposed recommendations by the panel include:

- The NMA will develop vehicles to increase the number of certified practitioners that will include the incorporation of a diabetes certification program at its annual meeting.
- The NMA will work to incorporate and increase ancillary personnel as part of the physician's practice.
- The NMA will develop partnerships that will increase the number of culturally and linguistically competent diabetes educators and dietitians.

The Diabetes Consensus Panel also recommends that the NMA should explore the need to develop a projection of the workforce that will be necessary to prevent, cure and effectively manage diabetes over the next 20 to 30 years.

HEALTH POLICY AND LEGISLATION

To fully establish excellence in diabetes care for African Americans, the panel recognizes that changes in health policy and additional federal funding will be necessary. To ensure access to quality care, the consensus panel recommendations are set forth below.

The NMA will:

- Advance policies that promote parity in outcomes in patients with diabetes.
- Develop a comprehensive review of reimbursement as it relates to identification, prevention, and treatment issues related to diabetes management.

- Work with state legislators to assure that medications on the formularies are consistent with the needs of African American diabetes patients.
- Identify all the appropriate stakeholders within NMA to review legislation as it relates to diabetes and bring recommendations before the House of Delegates.
- Continually review diabetes legislation as it impacts diabetic patients and transmit this information to its membership for implementation
- Advocate for increased appropriations and funding to support diabetes prevention, cure, effective management, and research.

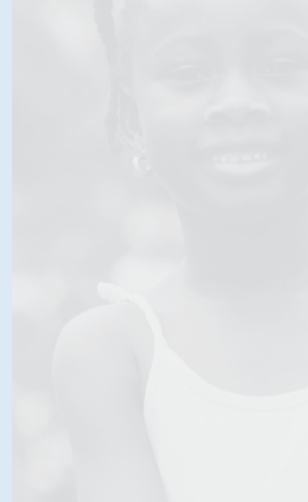
RESEARCH

The consensus panel deliberated on the increasing need for greater representation of African Americans in clinical trials related to diabetes. Recommendations to increase participation in clinical trials and other research include:

- The NMA will explore opportunities to develop a diabetes registry with the W. Montague Cobb/NMA Health Institute, to serve as a basis for future clinical trials and other research activities.
- The NMA will continue its involvement in training its membership on how to conduct clinical trials with a full appreciation of the historic background African Americans have experienced in this field.

While there have been many critical advances in caring for patients with diabetes as a result of clinical trials and other research studies, there is still a considerable amount of data that is not known. To address the many unanswered questions surrounding diabetes, its causes, co-morbidities and treatment outcomes, the consensus panel recommends that as the NMA moves forward in developing its research agenda, the association consider the following research pertinent to the future direction of diabetes:

- The psychological basis for maintaining obesity,
- The best means of achieving glycemic control,



- The role of intensive therapy/glycemic goals in the elderly and those with established complications,
- Inpatient diabetes care: level of control,
- Optimal glycemic levels in pre-conceptional patients,
- The optimal BP control,
- The role of pharmacogenomics and proteomics,
- The use of fibrates,
- Anti-platelet therapy beyond aspirin,
- The optimal use of SMBG,
- The role of bariatric surgery,
- Can beta cell function be preserved with aggressive early management of type 2 diabetes?
- When can we rely on surrogate markers as opposed to events to guide therapeutic paradigms?
- How can we best empower patients in self management—culturally sensitive approaches to nutrition, physical activity, and medication adherence?
- How can we get physicians to appropriately treat the recommended ABC targets?
- How can we implement proven therapies most effectively?
- How can we best utilize erectile dysfunction to improve early stage chronic disease management of diabetes and associated cardiometabolic risk factors?

In addition, the NMA should consider original or collaborative research that answers the following questions:

Summary

Given the contributing burden of diabetes to those chronic diseases that account for 50% of the mortality worldwide, the current prevalence of diabetes and pre-diabetes, and the projection that 1 in 3 children born in 2000 will develop diabetes, the NMA must act now to develop an aggressive, comprehensive strategic agenda to address the impact of diabetes in communities of color, and particularly in the Black population. This agenda must create and sustain an awareness and sense of ownership for both the physician and the patient. It is anticipated that building this sense of ownership will empower physicians and other practitioners, their patients, and the broader community to prevent, manage, and effectively treat diabetes. Such an agenda must include approaches that focus on education (patients and healthcare providers), prevention, treatment, and research efforts. Additionally, legislative support of health care policy to sustain evidence-based, best practice treatment of diabetes is crucial. The NMA must establish strategic partnerships, as the Association cannot combat this enormous task alone. Physicians must work with other provider—dietitians and

diabetes educator—to empower the patient to appropriately self-manage their disease with support from the healthcare team. Increasing the workforce of healthcare professionals will be yet another challenge to addressing the increasing surge in the number of individuals that are at risk for or diagnosed with diabetes.

The task of generating an agenda to address diabetes is a daunting task, but a challenge that the NMA cannot refuse. As such, to promote excellence in diabetes care for NMA members and their patients, the Diabetes Consensus Panel has made approximately 25 recommendations across seven topic areas. We ask that all members, state and local societies, and partners support this charge, the future agenda, and the request to participate.

Thank you to the expert members of the Diabetes Consensus Panel for your dedication and commitment to this effort.

References

- ¹ Centers for Disease Control and Prevention (CDC). National diabetes fact sheet: general information and national estimates on diabetes in the United States, 2005. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2005.
- ² CDC. National diabetes fact sheet: general information and national estimates on diabetes in the United States, 2005. Atlanta, GA: U.S. Department of Health and Human Services, CDC, 2005.
- ³ National Diabetes Information Clearinghouse. *Diabetes Prevention Program*. NIH Publication No. 06-5099. August 2006.
- ⁴ Knowler, W.C., Barrett-Connor, E., Fowler, S. E., Hamman, R. F., Lachin, J. M., Walker, E. A., and Nathan, D. M. (2002). Reduction in the Incidence of Type 2 Diabetes with Lifestyle Intervention or Metformin: Diabetes Prevention Program Research Group. *NEJM*, 346(6):393-403.
- ⁵ Knowler, W.C., Barrett-Connor, E., Fowler, S. E., Hamman, R. F., Lachin, J. M., Walker, E. A., and Nathan, D. M. (2002). Reduction in the Incidence of Type 2 Diabetes with Lifestyle Intervention or Metformin: Diabetes Prevention Program Research Group. *NEJM*, 346(6):393-403.
- ⁶ 3 FOUR 50. Oxford Health Alliance. Accessed on 2007 November 15 at <http://www.3four50.com/>.
- ⁷ Narayan, J.P., Boyle, T.J., Thompson, S.W., et al. (2003). Lifetime Risk for Diabetes Mellitus in the United State *JAMA*, 290(14):1884-1890.
- ⁸ Agency for Health Care Research and Quality. Medical Expenditure Panel Survey, *Statistical Brief #34 The Prevalence of Obesity and Other Chronic Health Conditions among Diabetic Adults in the U.S. Community Population*, 2001.
- ⁹ CDC. National Center for Health Statistics, Division of Health Interview Statistics, data from the National Health Interview Survey.
- ¹⁰ National Institute of Diabetes and Digestive Diseases. National Diabetes Statistics fact sheet: general information and national estimates on diabetes in the United States, 2005. Bethesda, MD: U.S. Department of Health and Human Services, National Institutes of Health, 2005.
- ¹¹ Grundy, S.M., Benjamin, I.J., Burke, G.L., Chait, A., Eckel, R.H., Howard, B.V., Mitch, W., Smith, S.C., Sowers, J.R. Diabetes and Cardiovascular Disease: A statement for Healthcare Professionals from the American Heart Association. *Circulation*, 1999;100:1134-1146.
- ¹² Ma Ching-Wan R, So W, Yang X, Yu LW, Kong AP, Ko GT, Chow C, Cockram CS, Chan JC, and Tong, PC. Erectile dysfunction predicts coronary heart disease in type 2 diabetes. *Journal of the American College of Cardiology*. 2008;51(21):2045-2050.
- ¹³ Harris M.I., Klein R., Cowie C.C., Rowland M., Byrd-Holt D.D. Is the risk of diabetic retinopathy greater in non-Hispanic African Americans and Mexican Americans than in non-Hispanic whites with type 2 diabetes: a US population study. *Diabetes Care*. 1998;21:1230-1235.
- ¹⁴ Wong, T.Y., Klein, R., Duncan; B.R. Nieto, F.J., Klein, B.E., Couper, D.J., Hubbard, L.D., Sharrett, A.R., Racial Differences in the Prevalence of Hypertensive Retinopathy. *Hypertension*. 2003;41:1086-1091
- ¹⁵ CDC. National Center for Health Statistics, Division of Health Interview Statistics, data from the National Health Interview Survey (2002).
- ¹⁶ Ma Ching-Wan R, So W, Yang X, Yu LW, Kong AP, Ko GT, Chow C, Cockram CS, Chan JC, and Tong, PC. Erectile dysfunction predicts coronary heart disease in type 2 diabetes. *Journal of the American College of Cardiology*. 2008;51(21):2045-2050.



- ¹⁷ Gazzaruso C, Solerte SB, Pujia A, Coppola A, Vezzoli M, Salvucci F, Valenti C, Giustina A, and Garzaniti A. Erectile dysfunction as a predictor of cardiovascular events and death in diabetic patients with angiographically proven asymptomatic coronary artery disease. *Journal of the American College of Cardiology*. 2008;51(21):2041–2044.
- ¹⁸ Patient Information: Diabetes and erectile dysfunction. *Clinical Diabetes* 19 (1): 48. (2001).
- ¹⁹ McVeigh, K.H., Mostashari, F., Thorpe, L.E. (2004). Serious Psychological Distress Among Persons with Diabetes. *Morbidity and Mortality Weekly Report*, 53(46) 1089-1092
- ²⁰ Newcomer J.W. Second-generation (atypical) antipsychotics and metabolic effects: a comprehensive literature review. *CNS Drugs*. 2005;19(suppl 1):1-93.
- ²¹ Newcomer J.W., and Hennekens C.H. Severe mental illness and risk of cardiovascular disease. *JAMA* 2007; 298: 1794-1796.
- ²² Druss B.G., Marcus S.C., Olfson M., Tanielian T., Elinson L., Pincus H.A.: Comparing the national economic burden of five chronic conditions. *Health Aff (Millwood)* 20:233–241, 2001.
- ²³ Wolff J.L., Starfield B, Anderson G.: Prevalence, expenditures, and complications of multiple chronic conditions in the elderly. *Arch Intern Med* 162:2269–2276, 2002.
- ²⁴ Esposito K, Ciotola M, Marfella R, Di Tommaso D, Cobellis L, and Giugliano D. The metabolic syndrome: a cause of sexual dysfunction in women. *International Journal of Impotence Research*. 2005;17:224–226.
- ²⁵ Saha S., Taggart S.H., Komaromy M., Bindman A.B. *Health Aff* 2000 Jul-Aug;19(4):76-83.





 **National
Medical
Association**

1012 Tenth Street, NW
Washington, DC 20001
www.NMAnet.org



 **LIFESCAN**
a *Johnson & Johnson* company

The Diabetes Consensus report was
sponsored in part by LifeScan.

