

# Diabetes Initiative of South Carolina



**2010 Annual Report**

**Daniel T. Lackland, DrPH**  
**Chair, Board of Directors**  
**Diabetes Initiative of South Carolina**





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February 3, 2011

To Governor Haley and the Members of the General Assembly:

It is my sincere pleasure to provide you with the annual report for the Diabetes Initiative of SC. (DSC). The report describes successes over the past year with regards to the DSC strategic plan objectives. In particular it is noteworthy with reduction in diabetes-related amputations with improvement in foot exams, and improved glycemic control. The Board feels our state is fortunate to have a dedicated and novel effort designed to recognize the excess financial and health burden of diabetes in South Carolina. Specifically, the Diabetes Initiative provides a forum for the DSC partners to coordinate strategies to improve diabetes care. This collaborative effort has a synergistic effect by identifying effective strategies to be used collectively while ceasing less effective efforts, thus providing efficient and effective mechanisms that reduced redundantly and saves resources. DSC have board representation from both academic medical centers, clinicians, certified diabetes educators, SC Hospital Association, SC DHEC, SC DHHS, SC Medical Association all focused on a collaborative effort to reduce the burden of diabetes in the state.

A major function of DSC is the review and approval of diabetes management guidelines and patient education materials for practitioners and patients with diabetes. This effort provides updated evidence-based information improving the quality of care by identifying the best proven diabetes management strategies and making materials available from a trusted source.

We thank you for the past support and look forward to providing you the successes for 2011 in next year's report.

DTL

Sincerely,

A handwritten signature in black ink that reads "Daniel T. Lackland".

Daniel T. Lackland, DrPH  
Board Chair, Diabetes Initiative of SC

Enclosure

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For more information, please visit our website  
<http://www.musc.edu/diabetes>

## **EXECUTIVE SUMMARY**

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The Diabetes Initiative of South Carolina (DSC) is charged with the maintaining the updated standards for the clinical management of diabetes and patient education in the state. The DSC efforts have contributed to multiple accomplishments during the year 2010. Specifically highlighting the following significant improvements include:

- An increase in the number of health care providers participating in education and training programs;
- Establishment and implementation of the processes to assess, approve, and make available patient education programs and materials for diabetes
- Implementation of numerous diabetes care and treatment recommendations from the Board and Councils focused on improved quality of care;
- A significant decline in the rate of lower extremity amputations for South Carolinians with diabetes;
- An increase in the number of South Carolina health care providers receiving state-of-the-art diabetes treatment regimens; and
- An increase in the number of community-based coalitions focused on the treatment and prevention of diabetes in South Carolina.
- Increase in the number of diabetes-related research and amount of extramural funding for the state.

The Diabetes Initiative represents a unique model for the rest of the nation to address the burden of diabetes. DSC functions as a mechanism for individuals and organizations to work together in maximizing the efficiency of activities and interventions. The collaborations of DSC with the South Carolina Department of Health and Environmental Control, the American Diabetes Association and the Centers of Excellence (Charleston, Columbia and Greenville) have resulted in great strides in diabetes prevention and control in South Carolina. Such cooperation with a central goal significantly reduces both the health burden and the economic burden in the state. The DSC Board acts as a forum for these groups as well as other agencies, health care providers, and organizations to facilitate preventive health services. In fact, the Diabetes Initiative represents a true statewide partnership that continues to expand. This collaborative body, consisting of the key groups and organizations regarding the reduction of the diabetes burden, has developed strategies and policies that have greatly enhanced the quality of diabetes care in South Carolina.

The partnerships, working through the three Councils (Outreach, Professional Education, and Surveillance), appreciated great successes during 2010.

The Outreach Council continues the impressive coordination of programs focused on patient education targeting the highest risk segments of the population. The Council works closely with the Diabetes Advisory Council to assess community needs and maintain an efficient and consolidated outreach effort. These programs have increased diabetes awareness and continue to motivate patients with diabetes to maintain their care. An annual conference is held for individuals affected by diabetes where multiple aspects of the disorder are presented and discussed. Several major extramurally funded grants continue to focus on imparting information about diabetes to diverse audiences. Over 200 diabetic children and youths with diabetes attended Camp Adam Fisher, where they learned the latest news about diabetes management from their peers and from volunteer health professionals.

Professional education remains a major focus of the Diabetes Initiative of South Carolina. The 16th Annual Diabetes Fall Symposium for Primary Health Care Professionals was attended by nearly 400 health professionals offering state-of-the-art presentations of scientific topics on diabetes treatment and control. The symposium also provides a forum for young investigators throughout the state to present their research. Additionally, diabetes educational conferences were conducted throughout the state, including the 8<sup>th</sup> Annual Diabetes/Heart Disease & Stroke Winter Symposium. DSC continues with very successful programs to train more Certified Diabetes Educators in the state of South Carolina and also maintains several websites which highlight recent developments in diabetes research and care for health professionals.

The Surveillance Council's efforts have identified positive results from interventions and programs, as well as providing data feedback to clinicians to aid in the management of diabetes. Significant increases were detected in the frequency of diabetes-related monitoring, including blood glucose, hemoglobin A1c, lipids, blood pressure, foot examination and eye examination from health professionals. In addition, treatment rates of associated factors, including hypertension and elevated blood lipids, have dramatically improved. These trends have coincided with the downward trends in lower extremity amputations and in heart attacks and strokes among people hospitalized with

diabetes. These improvements and trends were reported in a 2010 issue of the *Journal of the South Carolina Medical Association*.

The people of South Carolina continue to have an excess physical and financial burden of diabetes and diabetes-related outcomes. However, the maintenance of collaborative efforts of the Diabetes Initiative of South Carolina has functioned as a response to the needs of the public and allowed the implementation of strategies and programs in a fiscally responsible manner. While great strides have been made in reducing the burden of diabetes, the plans to be implemented in 2011 will further lead to a better quality of life for all South Carolinians, and we look forward to presenting those future accomplishments.

## **HISTORICAL BACKGROUND**

## **HISTORICAL BACKGROUND**

In 1991, the Division of Diabetes Translation, Centers for Disease Control, Atlanta, Georgia, published updated trends in diabetes and in diabetic complications in the United States, between 1980 and 1989. Major trends included an increasing prevalence of diabetes and increasing hospitalization rates among diabetic individuals for the serious complications of amputations, end stage renal disease, myocardial infarctions and cardiovascular death. The prevalence of diabetes was doubled in blacks when compared with whites. There was an increase in all major cardiovascular complications among blacks with diabetes. Diabetes was the leading cause of blindness among adults, and women with diabetes were at an increase risk for adverse outcomes of pregnancy.

These issues were magnified in South Carolina, relative to most other states in the United States. Diabetes prevalence was estimated at 6.1%, 5<sup>th</sup> among 38 states surveyed. Diabetes as a contributor to mortality was increasing in incidence in South Carolina and diabetes accounted for approximately 11% of hospital admissions. Overall, 14% of hospital beds were occupied by people with diabetes. Longitudinal data in the decade of 1980-1990 revealed increases in the prevalence of excess weight, self-reported hypertension and high blood cholesterol in individuals known to have diabetes. Hospitalization rates for renal failure, amputation, and myocardial infarction were increasing and the mortality rate for diabetes as one of the listed causes of death in South Carolina was steadily rising, from 50.7/100,000 population in 1980 to 71.1/100,000 population in 1992.

Shortages of health care professionals involved in care for people with diabetes were recognized. In particular, there were inadequate numbers of primary care physicians, endocrinologists, nephrologists, certified diabetes educators, podiatrists, and pharmacists trained in the care of people with diabetes. Major physician health professional shortages were identified by the Office of Primary Care, S.C. DHEC in 50% of the 48 counties in South Carolina and 74% of the counties in the state were designated by the S.C. State Health and Human Services Commission as medically underserved.

Crude estimates of quality of care for people with diabetes were made. In one survey of type 2 diabetes patients in 1994, 24% had not seen a medical doctor in the past year for diabetes, only 34% reported that they checked blood glucose at least once a day, and a mere 28% had ever heard of HbA<sub>1c</sub>. Of these, only 18% had an A<sub>1c</sub> check in the past year. Approximately one quarter of the diabetes individuals reported eye examinations and less than half said they had a foot examination in the past year. It was found that diabetes education had been provided to less than 50% of diabetic individuals.

Evidence was appearing from large scale collaborative clinical trials that the risks of morbidity and mortality from such cardiovascular complications as myocardial infarction and stroke could be substantially reduced by intensive management of lipid profiles and elevated blood pressure. In 1993, the seminal report from the Diabetes Control and Complications Trial (DCCT) established that intensive glycemic regulation in type 1 diabetes would substantially decrease the risks for the progression of retinopathy, nephropathy, and neuropathy. Simple, inexpensive low dose aspirin therapy produced modest risk reductions for myocardial infarction as a secondary prevention strategy. Microalbuminuria was recognized as a risk marker for cardiovascular events and for renal failure, and it was predicted that intervention trials with angiotensin converting enzyme inhibitors (ACEI) would be effective in delaying progression of these serious complications

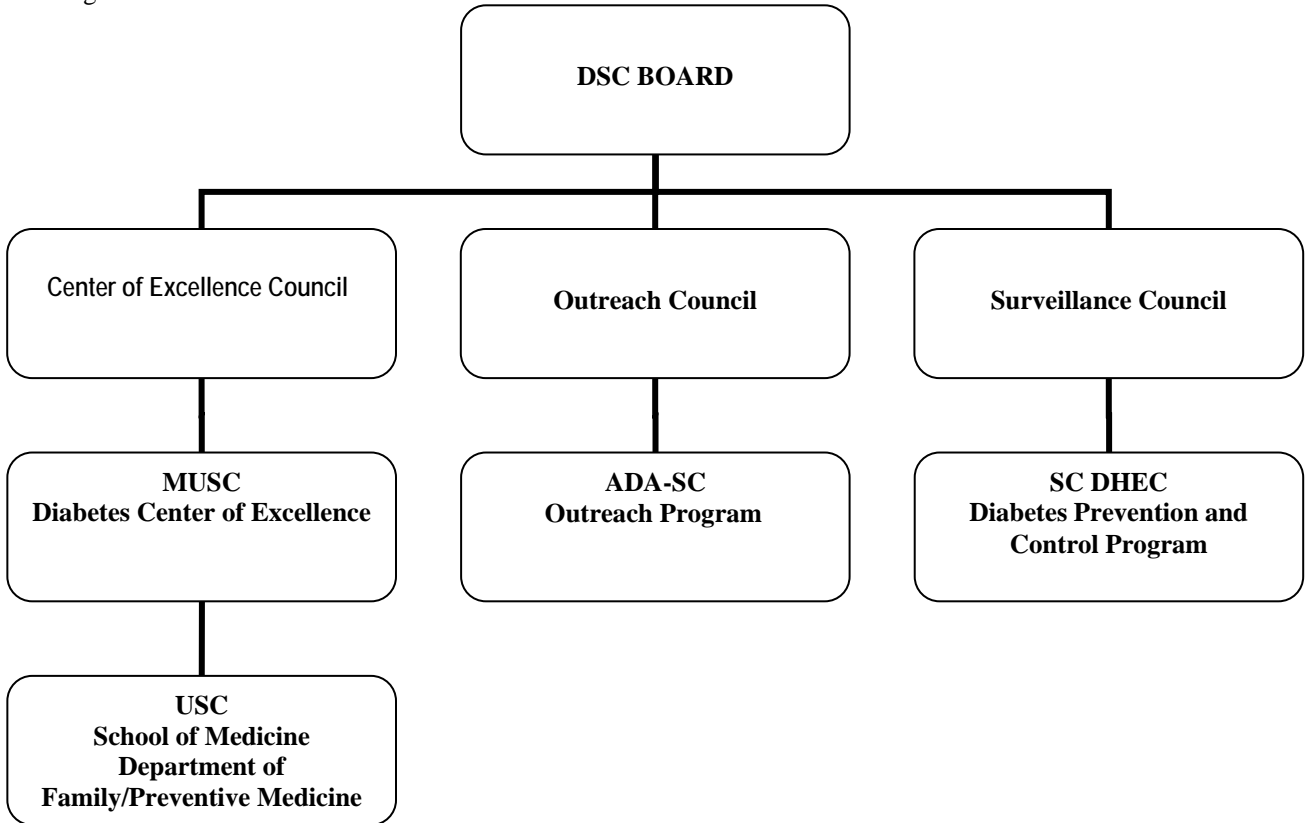
Thus, a serious public health problem of diabetes and its complications was recognized in South Carolina and in the United States. An undersupply of qualified health professionals was on hand to deal with the increasing demands of more intensive education and health care for people with diabetes. Ominous upward trends in mortality and morbidity statistics were present, and an increasing incidence of markers of future cardiovascular events (hypertension, cholesterol, over weight/obesity) was occurring. It was evident that an action plan was needed.

## **10 YEAR STRATEGIC PLAN**

**BOARD OF DIRECTORS**  
**10 YEAR STRATEGIC PLAN**

The Diabetes Initiative of South Carolina (DSC) was created by legislative action and signed into law by the Governor of South Carolina in July, 1994. The law established a Board of Directors with members appointed by the top officials of key organizations with an interest in diabetes and its complications. The Board has met quarterly since that time and has annually submits this Report. It is referred for progress review by the Legislature and the Governor.

The Organization Chart of the Diabetes Initiative of South Carolina is shown below:



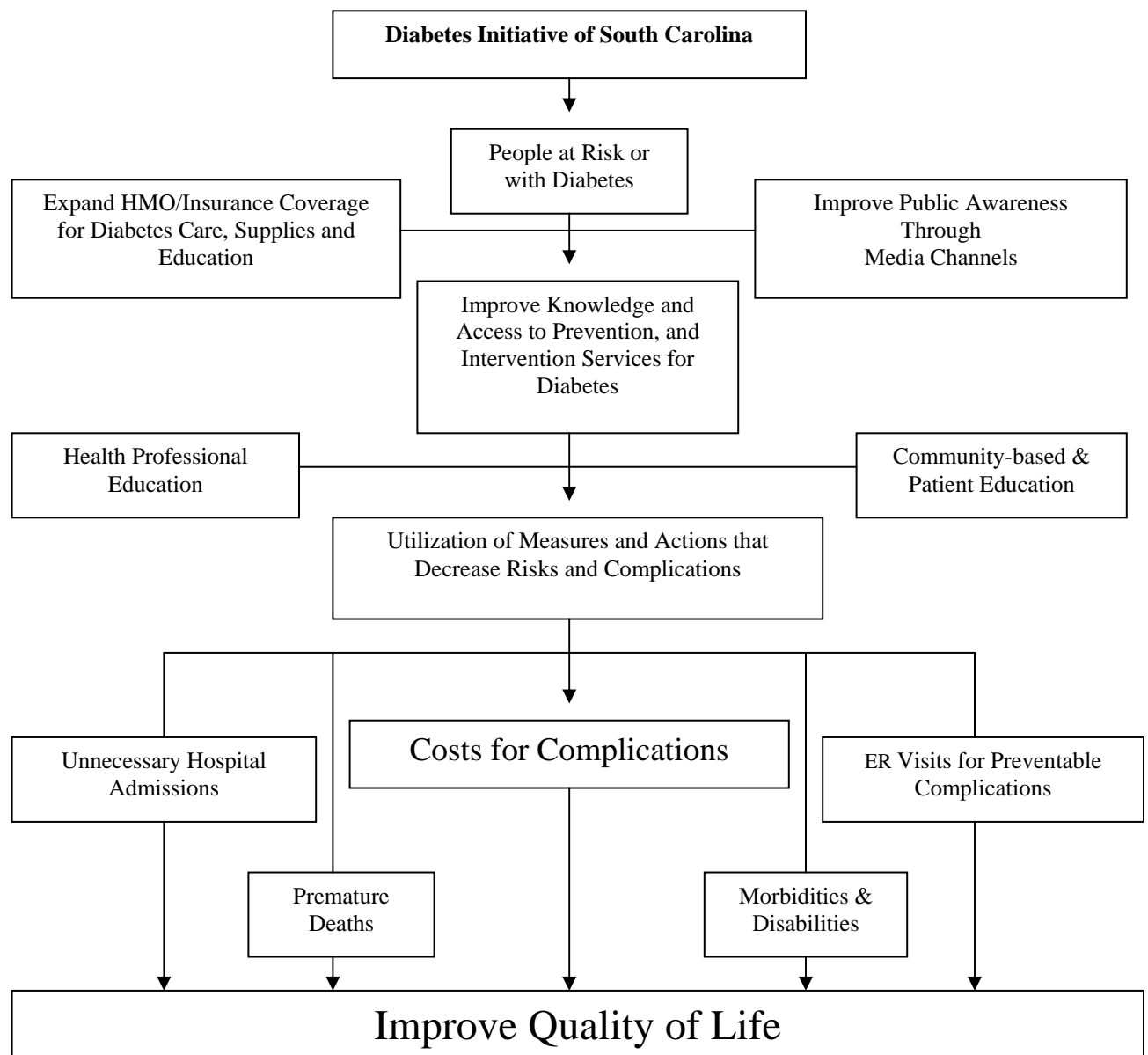
There are three Councils; the Center of Excellence, Outreach, and Surveillance Council. There is a Diabetes Center of Excellence, established in the original legislation, based at the Medical University of South Carolina. This Center is responsible for administering the many activities and programs of DSC and its Board and Councils. It is also responsible for developing and administering professional education programs for health professionals of all varieties in South Carolina, to improve their knowledge and abilities to care for people with diabetes in our state. The Outreach Council is responsible for community interface, with a broad goal of improving diabetes care and education directed at people affected by diabetes. The Surveillance Council is responsible for acquiring, analyzing and distributing epidemiologic information about diabetes including its prevalence costs, morbidity, and mortality. This Council works closely with the Diabetes Prevention and Control Program of SC Department of Health and Environmental Control, and issues regular Burden Reports on the scope and impact of diabetes in South Carolina. A DSC site has been established in the School of Medicine at USC, and provides a critical mechanism for liaison between the two schools and for oversight of programs and activities in the midlands and upstate regions of South Carolina.

We also regularly interact with the American Diabetes Association, Carolinas Center for Medical Excellence, the Hypertension Initiative of South Carolina and the Area Health Education Consortium. Full reports from key components in the DSC structure are included in this Report.

The DSC Board developed a Long Range Strategic Plan in 1998, and has been monitoring results relating to its goals and objectives on a regular basis. The plan has 9 major goals, and The Board expects quantitative evidence of progress towards achieving these goals during the ten year time span of The Plan, 1998 - 2008. These goals are:

- Goal I: To improve knowledge of diabetes, quality of life, and access to prevention and intervention services for people at risk and those affected by diabetes.*
- Goal II: To increase the utilization of short-term (surrogate) measures which lead to actions that will delay progression of complications of diabetes.*
- Goal III: To address the needs of persons at risk and with diabetes by increasing services and education in health professional shortage areas in South Carolina.*
- Goal IV: To reduce the morbidity rates from diabetes-related complications.*
- Goal V: To reduce the age-adjusted mortality rates from diabetes and its complications.*
- Goal VI: To decrease risks for select groups of people with diabetes where the prevalence and complication rates exceed those of others.*
- Goal VII: To reduce preventable hospital admissions and charges for diabetes.*
- Goal VIII: To reduce preventable visits to the emergency room by people with diabetes.*
- Goal IX: To improve the statistical basis for estimating the prevalence of diabetes in South Carolina.*

The mechanisms by which these goals may be achieved are given in the following outline.



In calendar year 2004, we completed a review of 5 years of progress, which concentrated on the first 3 goals of the 10 Year Strategic Plan. We recognized that the legislation had created a uniquely successful statewide collaborative effort. Programs were generally on target and were productive. Examples were community outreach, professional and patient education programs, and surveillance of trends in diabetes care. It was recognized, however, that prevalence of diabetes and obesity was increasing, and that comorbidities such as hypertension and altered blood lipids complicated overall management. Major extramural grant funding for community-based programs and clinical trials had been acquired at MUSC and at USC. Overall, progress with that unique combination of public and private resources (federal, state, regional and local support) had been exciting.

Currently, we are evaluating our progress on the 10 Year Strategic Plan for improving diabetes in South Carolina. Programs have been operative for a sufficient time to begin to see trends in morbidity, mortality, hospitalizations, emergency room visits, and health disparities among people with diabetes in South Carolina. After this analysis by the Board, Councils, and major partners, we will publish a monograph at the 10-year mark in 2010. Areas of defined advances will be described as well as issues, which require further attention. Since diabetes mellitus is a chronic disease with very long-term complications, it is likely that another decade (or more) of work will be needed to be certain that promising trends are sustained and real.

**BUDGET  
AND  
RESEARCH GENERATED IN PARTNERSHIP WITH DSC**

## DSC OPERATING BUDGET

	<u>FY 2010 – 2011</u>
State Appropriation	\$ 289,088
Less Cuts	<u>165,618</u>
Total Budget	\$ 123,470

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### RESEARCH GENERATED IN PARTNERSHIP WITH DSC

We are pleased to report major partnership opportunities in diabetes research for fiscal year 2010.

1. South Carolina Diabetes Prevention and Control Program-DHEC (SC DPCP-DHEC):  
The Diabetes Prevention and Control Program (DPCP) within the Department of Health and Environmental Control is funded by the Centers for Disease Control and Prevention's Division of Diabetes Translation. This five-year grant, which added an additional one-year cost extension, focuses on strengthening secondary and tertiary prevention of type 2 diabetes through improvements in health communications, health systems, and community interventions. To carry out these aims, the DPCP operates under a systems based approach, working together with partners to create the conditions necessary for people with type 2 diabetes to live healthy lives. The Diabetes Initiative of South Carolina Board of Directors provides clinical oversight to the program whose goals and aims are integrated into and complementary of DSC's Strategic Plan.  
PI: Mike Byrd, PhD, MPH
2. LOOK-AHEAD. This study will address questions of macronutrient intake in relation to cardiovascular risk factors and clinical events in persons with type 2 diabetes under conditions of either usual care or intensive weight loss intervention. USC holds a subcontract for the study wide dietary assessment and is responsible for the collection, quality control, and analysis of dietary data from the 20 clinical centers nationwide. PI: Michele Nichols
3. Epidemiology of Diabetes Intervention and Complications (EDIC) is a follow-up study of the course of patients enrolled in the Diabetes Control and Complications Trial (DCCT) in Charleston. Along with patients from 27 other centers in United States and Canada, this is a study of vascular complications after long-term glycemic control in type 1 diabetes. Another 10 year follow-up (2006 – 2015) is approved. PI: Jeremy B. Soule, MD
4. Intravenous Insulin Protocol in Diabetes and Renal Transplantation from the American Diabetes Association. The purpose of this study is to provide tight blood sugar control using insulin given through the veins at the time of kidney transplantation and up to 3 days after surgery. After release from the hospital, the patient will control blood sugar with insulin injections or pills. With this approach, outcomes should improve for diabetic transplant patient such as longer life of the new kidney, fewer hospital readmissions, decreased associated infections, and other advantages. This study will significantly and positively effect kidney transplantation and diabetes outcomes. Presumably, good blood sugar control at the time of kidney transplantation will improve overall survival of the new kidney, and these results may reshape patient care in this setting. PI: Kathie L. Hermayer, MD
5. REACH US: Center of Excellence for Eliminating Disparities (REACH SeaCEED)\* is funded by the Centers for Disease Control and Prevention and focuses on community-based participatory approaches to eliminating disparities in African Americans at risk and with diabetes. Each year, the Center offers Legacy funding for 2/3 counties to address diabetes prevention and control in African Americans. DSC serves as the scientific review group for the Center. PI: Carolyn Jenkins, DrPH  
Diabetes 101 & Soulfully Fit Programs. The Beaufort-Jasper-Hampton County Health Services received a \$20,000 grant from the REACH SeaCEED\* grant to implement Diabetes 101 & Soulfully Fit programs during 2008 - 2009. PI: Valerie Muehleman
6. SEARCH for Diabetes in Youth 2: South Carolina Site was previously developed during the South Carolina Diabetes Child & Adolescent Registry (SEARCH) study. This study is awarded from CDC/NIDDK (NIH). The purpose of this project is to maintain a network of standardized surveillance systems of

- childhood diabetes that will be targeted towards accurate documentation of the prevalence and incidence of specific diabetic phenotypes among diverse populations. PI: Anwar Merchant, ScD, MPH, DO
7. Nutrition and Metabolic Status in Youth with Type 1 DM: SEARCH Ancillary Study (SNAS) SNAS uses both cross-sectional and longitudinal designs, with the overall study goal being to examine associations of nutritional factors with 1) the progression of insulin secretion defects, and 2) the presence of CVD risk factors in youth with DM. PI: Angela Liese, PhD
  8. Developing Measures of the Built Nutrition Environment. This project aims to apply and further develop accessibility measures of the built nutritional environment using GIS technology. It will rigorously evaluate the statistical properties of the nutritional accessibility measures and explore their spatial attributes in study area comprising seven rural and one urban county. PI: Angela Liese, PhD
  9. Soulfully Fit Program – Lowcountry Diabetes Initiative. SC DHEC – Diabetes Prevention and Control provides grants for this faith-based program designed to help communities lower the risk of heart disease and other contributing chronic conditions. Soulfully Fit is implemented through the Beaufort-Jasper-Hampton County Health Services. PI: Valerie Muehleman.
  10. Soulfully Fit Toolkit Program – Lowcountry Diabetes Initiative. Received funding to develop toolkits to help 14 churches implement the Soulfully Fit Program. PI: Valerie Muehleman
  11. Non-recurring State Diabetes Funds. The SC Department of Health and Environmental Control received non-recurring state funds to address the diabetes epidemic and its precursors like obesity, healthy nutrition, lack of physical activity, and complications such as heart attacks, stroke, blindness, kidney failures, and amputations. Funds will allow for programs such as Diabetes Connect, which provides education for MD office staff to enhance knowledge, skills and systems to improve the quality of care provided to their patient's with metabolic syndrome, obesity, and diabetes. Examples of the diabetes prevention activities are 1) the Power to Prevent Diabetes initiative that the Office of Minority Health is implementing in partnership with the Greenville Hospital System. The program is designed to encourage African Americans at risk for type 2 diabetes to become more physically active and to develop healthy eating habits. 2) Funds were distributed across five regions of the state to hire Community Health Advocates to implement diabetes prevention programs and encourage individuals to find out their diabetes status by getting tested. 3) Funds were distributed across five regions to implement action oriented projects such as building walking trails, starting farmers markets, and other risk reduction projects. PI: Mike Byrd, PhD, MPH
  12. Genetic Contributors to Diabetes and Dyslipidemia in African Americans. PI: Jyotika Fernandes, MD
  13. The HMM Trial: Randomized, Clinical Trial of Subcutaneous Analog Basal Bolus Therapy Versus Sliding Scale Human Regular Insulin in the Hospital Management of Hyperglycemia in Non-Critically Ill Patient without Known History of Diabetes. PI: Kathie Hermayer, MD
  14. Basal Plus Trial: Basal Bolus Versus Basal Insulin Regimen for the Treatment of Hospitalized Patients with Type 2 Diabetes Mellitus: A Randomized, Open-Labeled, Non-Inferiority Controlled Study. PI: Kathie Hermayer, MD
  15. DEFEND 1: Durable-Response Therapy Evaluation for Early-or New-Onset Type 1 Diabetes. PI: Jeremy B. Soule, MD
  16. Demographic Differences in the Treatment and Control of Glucose, Lipids and Blood Pressure I Type 2 Diabetics: Implications for Healthcare Policy and Research. PI: Brent M. Egan, MD
  17. Diabetes Reversal by Gastric Bypass – Microbiome, Hepatic and Endocrine Mechanisms. PI: Leonard Egede, MD; Co-PI: Jyotika Fernandes, MD
  18. LEADER Trial: To assess the effect of treatment with liraglutide compared to placebo for at least 3.5 years and up to 5 years on the incidence of cardiovascular events in adults with type 2 diabetes who are at high risk for cardiovascular events. PI: Ali Rizvi, MD

**SUMMARY OF RESEARCH GENERATED IN PARTNERSHIP WITH DSC**

<b><u>PROJECT</u></b>	<b><u>P.I.</u></b>	<b><u>(APPROXIMATE SUPPORT)</u></b>		<b><u>YEARS</u></b>
		<b><u>YEARLY</u></b>	<b><u>TOTAL</u></b>	
1. SCDCP-DHEC	M. Byrd	689,585	4,137,510	2009-2014
2. LOOK AHEAD	M. Nichols	57,242	609,298	2002-2013
3. EDIC	J. Soule	179,750	1,682,227	2006-2015
4. Renal Transplant	K. Hermayer	600,000	1,800,000	2007-2010
5. REACH CEED	C. Jenkins	850,000	4,250,000	2007-2012
6. SEARCH 2–USC Site	A. Liese	383,913	2,538,938	2006-2010
7. SNAS – USC Site	A. Liese	82,780	236,580	2008-2012
8. Built Environment	A. Liese	222,048	513,648	2008-2011
9. Soulfully Fit	V. Muehleman	9,000	9,000	2009-2010
10. Soulfully Fit Toolkit	V. Muehleman	5,000	5,000	2009-2010
11. Non-Recurring Funds	M. Byrd	2,000,000	2,000,000	2009-2010
12. Genetic Contributors	J. Fernandes	47,772	95,425	2009-2011
13. HMH Trial	K. Hermayer	40,256	205,105	2010-2011
14. Basal Plus Trial	K. Hermayer	89,558	179,116	2009-2011
15. DEFEND 1	J. Soule	67,419	202,258	2008-2011
16. Demographic Diff.	B. Egan	80,250	80,250	2009-2010
17. Diabetes Reversal	L. Egede	242,171	968,682	2010-2014
18. LEADER Trial	A. Rizvi	2,044	348,325	2010-2015
	<b>TOTAL</b>	<b>\$ 5,648,788</b>	<b>19,656,462</b>	

**Comment**

*Yearly funding of programs in education, care, and clinical research focus on improving outcomes for people with diabetes in SC. Total funding is now at \$19 million, and yearly funding exceeds \$5 million. This yearly extramural funding is more than 19 times our current state budget. Thus, the modest investment that the state has provided for the Diabetes Initiative of South Carolina’s core funding has paid very impressive dividends in attracting extramural support for 18 long-term projects which address a wide variety of issues relating to diabetes and its complications.*

**DIABETES INITIATIVE OF SOUTH CAROLINA  
OUTREACH COUNCIL ANNUAL REPORT  
JANUARY 1, 2010 – DECEMBER 31, 2010**

**Diabetes Initiative of South Carolina  
Outreach Council  
January 1, 2009 – December 31, 2009  
Annual Board Report**

**Functions**

As defined by Section 44-39-50 amendment to 1976 Code of Laws for South Carolina, the Diabetes Outreach Council shall oversee and direct efforts in patient education and primary care including:

1. Promoting adherence to national standards of education and care.
2. Ongoing assessment of patient care, costs, and reimbursement issues for persons with diabetes in South Carolina.
3. Preparing an annual report and budget proposal for submission to the Diabetes Initiative of South Carolina Board.

**Ongoing Outreach Council Meetings and Activities**

The Outreach Council of the Diabetes Initiative of South Carolina met 3 times in 2010. Additionally, the Statewide Coalitions met two (2) times in spring and fall. The Coalitions presented posters at the Annual DSC Primary Care Symposium in September 2010.

**Prominent Activities**

**Updated DSC Website** with information for health professionals, lay leaders, and people with diabetes.

**REACH: Charleston and Georgetown Diabetes Coalition**

**REACH US: SouthEastern African American Center of Excellence for Eliminating Disparities (SEA-CEED)**

The **Diabetes Initiative serves as the Central Coordinating Agency** and provides quarterly overview and scientific guidance for this CDC funded grants. The focus is to decrease disparities for African Americans at risk and with diabetes. A major emphasis is on building community capacity to address the problems related to diabetes prevention and control. In addition to our activities focused on improving community capacity, training, and community and systems change within Charleston and Georgetown Counties, we provide consultation, capacity building, ongoing training, and small grants to others in the southeastern states. For the coming year, our focus is policy changes to improve diabetes outcomes.

Small grants of \$28,000 each were presented annually to other coalitions that are working to improve diabetes outcomes in African American communities.

**The recipients for 2009-2010 were:**

**Welvista/Darlington Free Clinic** that focused on linking people with diabetes with needed services including diabetes education, obtaining needed medications and resources to better manage diabetes.

**Project DIRECT/North Carolina Public Health Foundation** that worked with Toy Truckers to reach African American men at risk and with diabetes to increase services and linkages.

**Tennessee Office of the American Diabetes Association and Shelby and Davidson County** that worked with African American communities and faith-based institutions to implement diabetes activities in area churches.

**The recipients for 2010-2011 are:**

**Eau Claire Cooperative Health Center** project is focusing on preventing diabetes and diabetes related complication. Their goal is to end health disparities and improve quality of life in relation to diabetes for African Americans by accomplishing two objectives: 1.create a coalition of existing partnerships (with FBOs, Housing Corporations, HCP, DHEC, DSC etc.) in the Eau Claire Community of Columbia, zip code 29203, focusing on ending health disparities and complications of diabetes and 2. Increase the number of 29203 residents' participation in diabetes awareness and prevention programs emphasizing complications of strokes. In addition to this project, Eau Claire Cooperative has nine Health Centers that has been offering affordable health care to patients for almost 30 years. Eau Claire Cooperative Health Center has two centers in the 29203 zip code. During 2009 they served 5,369 patients, of which 950 were diabetics.

**Sumter County Active Lifestyle (SCAL)** is currently engaged in a project: "Diabetes is No Sweet Thing!", which is an awareness and education community-based, participatory, social marketing project that is being carried out in Rembert and Wedgefield, two small rural communities in Sumter County. Sumter County Active Lifestyle goals include: 1. Expand SCAL's outreach in Sumter County by forming partnerships with African American churches in

Rembert and Wedgefield to address health disparities in diabetes and 2. Increase opportunities for adult African American residents in Rembert and Wedgefield to learn about diabetes. In addition to this project, SCAL has other health related programs. One specific program was started as a result of a previous grant received from the Eat Smart Move More Coalition, which allowed SCAL to successfully implement lay-led neighborhood walking groups which are still being sustained.

**Elizabeth City State University** project goals are to: 1. Collaborate with local church organizations to implement culturally appropriate diabetes and cardiovascular disease prevention initiatives, trainings and tools 2. Incorporate health promoting choices and initiatives into church policies and eliminate or modify existing ones. Since 2007, Elizabeth City State University has operated the Health Resource Center (HRC). The mission of the HRC is to improve the health of Elizabeth City residents through provision of information and improved access to preventive health care services. The HRC is staffed five days a week by two registered nurses, and offers flexible hours to accommodate diverse work schedules. The center offers routine risk assessment screenings including: blood sugar, blood pressure, hemoglobin A1C, and total cholesterol monitoring. An exercise room with treadmills, bicycles, and elliptical machines is located within the HRC and is available to residents and other clients at all times. The center also provides monthly educational outreach seminars. To date the HRC has served over 2000 clients and will benefit the local churches collaborating with this Legacy Project.

**Other REACH Activities include:**

- Two student internships worked with REACH during 2010
- Catherine Ling, a PhD Nursing Student, continued to work with REACH focusing on ER use and diabetes.
- Ongoing weekly diabetes self management training and education classes by CDE and RD at 4 Fetter Health Center sites, 4 St. James Santee Health Center sites, East Cooper Community Outreach Center, 4 sites in Georgetown County and other intermittent 3-5 class series at other sites where 8 or more people attend continue. AADE Educational Recognition Program was obtained for Franklin C. Fetter Community Health Center.
- REACH also worked with Palmetto Primary Care Physician Network (PPCP) and they continue to offer DSME through their AADE Recognition Educational Program. PPCP is a network of 50+ physicians and primary care providers in the Charleston area, and have developed an EMR system, case management and educational programs focused on diabetes, hypertension, and hyperlipidemia. Many of their providers are NCQA certified. BCBS has funded their Patient Centered Medical Home Project.
- Georgetown Diabetes CORE Group received \$600 from the National Network of Library Medicine (NNLM), and \$5,000 from NNLM for the Male Health Campaign in September 2009. In October 2009 they raised \$1,300 at the 1<sup>st</sup> Annual Walk for Diabetes and \$4,000 at the Mind, Body and Soul-Health Worship Service and Screening. In March 2020 they raised \$2,890 at the Dinner Theatre “Tired of Wearing Black”. They also received a \$500 grant from Precious Blood Women Ministry, and a \$15,000 grant from Francis Bunnelle Foundation in May 2010.
- Funding from the Medical Student Ball continued to support for the Charleston County Diabetes Coalition for diabetes supplies and activities for those unable to afford monitoring strips and supplies.
- Numerous activities to increase community awareness of diabetes prevention and control.
- Provision of small grants of \$3,000-\$56,000 for 9 community partners—although most were near the smaller amount.
- Continuation of diabetes prevention, Diabetes 101, ADA’s Choose to Live for women, and foot care education and training for community groups.
- PR campaign including media appearances on radio and TV, bus signs focusing on managing diabetes, and large banner focusing on Diabetes Prevention.

**Educational materials available from REACH include:**

- **My Guide to Sugar Diabetes, 4<sup>th</sup> Edition**
- **Check Yourself to Protect Yourself: Taking Care of our Feet**
- **Patient Mini-Record for Tracking the ABCs of Diabetes**
- **Updated Webpage**
- **Healthy Eating Posters**
- **Resource Directory**

**Other programs and activities of Outreach Council Members during the year to address diabetes include the following groups and activities:**

**South Carolina Vocational Rehabilitation Department and South Carolina Medicaid** continue to provide diabetes education for eligible clients and assists the clients in obtaining or maintaining their work environments to support their “disabilities” related to diabetes and its complications. With current economic conditions, these groups

continue to be an important source of funding for those unable to afford health care and diabetes self-management training, as well as helping people with diabetes find or maintain their jobs.

**Welvista (formerly known as CommuniCare), which** provides medications for the uninsured and those who have lost their jobs. Welvista also provides patient navigators in some SC hospitals to assure that eligible patients are linked with services and have access to needed medications.

**South Carolina Hospital Association** continues to focus on improving diabetes control for inpatients with diabetes.

**Pharmaceutical Companies** (and support that the companies can provide for improving diabetes in SC) Merck recently brought together a group of health professionals to focus on improving group visits for primary care providers' patients with diabetes. Sanofi Aventis and Merck and others have provided large amounts of literature for distribution to people at risk and with diabetes. Merck has provided Conversation maps and training for group classes and flip charts for providers' offices to improve diabetes education. Numerous other companies have also provided non-branded materials for us.

#### **Outreach Grants Funded**

**Funded: Technology Center for Healthy Lifestyles, a collaborative effort of USC School of Public Health and MUSC College of Nursing** was approved by Health Sciences South Carolina and Centers of Economic Excellence (CoEE). This collaborative effort of University of South Carolina and Medical University will help support 2 CoEE endowed professorships. Dr. Frank Trieber has been appointed to fill the Endowed Chair at MUSC, and USC is currently recruiting their endowed chair. Dr. Trieber's efforts have focused on cardiovascular disease, hypertension, and diabetes. S. Blair at USC and C. Jenkins at MUSC

#### **Other programs and activities during 2009 to address diabetes include the following groups and activities:**

**MUSC Stroke Fair** where DSC provided an educational exhibit (in collaboration with REACH), screening and education. High-risk individuals and those with diabetes were screened. High risk individuals received patient focused counseling, referral, and follow-up. The participating individuals are fairly typical of those who participate in screenings that are offered by the Tri-County Black Nurses Association

**MUSC Diabetes Awareness Month** (November 9 and 16) DSC and REACH provided educational exhibits and screening for more than 200 persons during Diabetes Awareness Month.

**ADA Project Power Training** The American Diabetes Association and Dr. Ida Spruill provided ADA Project Power Training for > 30 persons. All persons trained will take Project Power to African American churches to improve diabetes activities and self-management in their churches and communities. We will link with ADA for future trainings in SC.

**South Carolina Vocational Rehabilitation Department and South Carolina Medicaid** continue to provide diabetes education for eligible clients and assists the clients in obtaining or maintaining their work environments to support their "disabilities" related to diabetes and its complications. With current economic conditions, these groups continue to be an important source of funding for those unable to afford health care and diabetes self-management training, as well as helping people with diabetes find or maintain their jobs.

**Welvista** (formerly known as CommuniCare) provides medications for the uninsured and those who have lost their jobs. Welvista also provides patient navigators in some SC hospitals to assure that eligible patients are linked with services and have access to needed medications. A major challenge for people with diabetes who are uninsured or unemployed is affording the monitoring supplies. The lack of monitoring frequently leads to increased ER use (at >\$1,000 per visit). The cost of this visit would pay for daily monitoring supplies for almost 3 years!

**South Carolina Hospital Association** that continues to focus on improving diabetes control for inpatients with diabetes. Currently, we are examining not only ways to improve inpatient management of diabetes but are exploring ways to improve discharge planning and education so that patients can better manage their diabetes after discharge.

### **Publications: (2010)**

- Hardman K, Hunt KJ, Carter RE, Jenkins C, Hill R, Lackland DT. Diabetes management and vaccination rates in the southeast United States, 2000 through 2007. *Ethnicity and Disease 21*: Accepted
- Jenkins C, Myers P, Heidari K, Kelechi T, Buckner-Brown J. (2010) REACH Charleston and Georgetown Diabetes Coalition's Efforts to Decrease Diabetes-Related Amputations in African Americans. *Journal of Family and Community Health 34*:
- Matutina R, Newman S, Jenkins C. (2010) Measurement of Students' Perceptions of Nursing as a Career. *Journal of Nursing Scholarship*. 42(3) doi: 10.1111/j.1547-5069.2010.01358.
- Jenkins C, Myers PJ, Heidari K, Gaffney TE, Hill R, Bowen SA, Arnold P, Young VM, Lackland D, Rizvi A. (2010) Diabetes-related Disparities in South Carolina: Challenges, Programs, Progress, and Recommendations for Future Efforts. *Journal of South Carolina Medical Association 106*(2): 50-55.
- Myers PJ, Heidari K, Bowen SA, Lackland DT, Jenkins C, Gaffney TE, Massing M. (2010) An Evaluation of the First Ten Years of the Diabetes Initiative of South Carolina. *Journal of South Carolina Medical Association 106*(2): 84-88
- Jenkins C, Magwood G, Thomas V, Linnen F. (2009) REACH Charleston and Georgetown Diabetes Coalition: Improving outcomes for African Americans with diabetes. In: Liburd L. Diabetes and health disparities community-based approaches for racial and ethnic populations. Springer Publishing (237-256).
- Yuen HK, Onicescu G, Hill EG, Jenkins C. (2010) Statewide survey of oral health education provided by Certified Diabetes Educators. *Diabetes Research and Clinical Practice 88*(1): 48-55.
- Hossler CL, Jenkins C, and King M. (2010) The effect of payer status on the quality of diabetes care: Results from a REACH 2010 project. *SOJNR 10*(1) #4: 1-14.
- Magwood G, Jenkins C, Zapka J. (2010) Validation of Diabetes Health-Related Quality-of-Life Instruments Using Cognitive Interviewing With Older African Americans. *Journal of Nursing Measurement 2010*; 17(3): 195-220.
- Jenkins C, Pope CA, Magwood G., Vandemark L, Thomas V, Hill K, Linnen F, Beck LS, Zapka J. (2010) An evolving expanded chronic care framework to improve diabetes management – the REACH case Study. *Progress in Community Health Partnerships*. 4(1): 65-77.
- Jenkins C, Magwood G, Hossler C, Thomas V, Linnen F. (2010) Community health workers and their roles in diabetes prevention and control. In: Jack, L. Editor, Diabetes in black America: public health and clinical solutions to a national crisis. Munster, IN: Hilton Publishing (213-226).

### **National Presentations (Invited):**

- Jenkins, C. Beyond the Medical Model: the Contributions of Nursing Science to Community Health Improvement. May 13, 2010: The Association for Prevention Teaching and Research: Partnering to Improve Health: the Science of Community Engagement, Washington, DC
- Jenkins, C. REACHing Across the Globe – Partnerships and Opportunities for Advancing Health Equity. May 6, 2010: REACH: Celebrating Community, Recognizing Success and Building Health Equity Workshop. Washington, DC.
- Jenkins, C. REACH: Diabetes and Impact in African American Communities in Charleston. April 30, 2010: HHS Region IV: QUEST for Research Excellence. Atlanta, GA
- Jenkins, C. REACH U.S. Diabetes Prevention and Control Partnership using NDEP Materials: Lessons Learned by REACH SEA-CEED. April 16, 2010: CDC Diabetes Translation Conference. Kansas City, MO
- Jenkins, C. REACH U.S. Progress in Reducing Disparities. March 7, 2010: SOPHE 13<sup>th</sup> Annual Health Education Advocacy Summit. Washington, DC

**DIABETES INITIATIVE OF SOUTH CAROLINA  
DIABETES CENTER COUNCIL ANNUAL REPORT  
JANUARY 1, 2010 – DECEMBER 31, 2010**

**Diabetes Initiative of South Carolina  
Diabetes Center Council  
January 1, 2010 – December 31, 2010  
Annual Board Report**

**Professional Education Activities:**

- Completed:
  1. Annual Diabetes Strategies for the 21<sup>st</sup> Century program: January 24 & 25, 2010, N. Charleston Convention Center, N. Charleston, SC – Attendance = 82
  2. 16<sup>th</sup> Annual Diabetes Fall Symposium for Primary Health Care Professionals, September 23 & 24, 2010, North Charleston Convention Center, N. Charleston, SC – Attendance: Day 1 = 234; Evening dinner program = 114; Day 2 = 216
- Planned:
  1. Annual Diabetes Strategies for the 21<sup>st</sup> Century program, January 25 & 26, 2011, North Charleston Convention, Center, N. Charleston, SC
  2. 17<sup>th</sup> Annual Diabetes Fall Symposium for Primary Health Care Professionals; September 15<sup>th</sup> and 16<sup>th</sup> 2011, N. Charleston Convention Center, N. Charleston, SC

**Professional Presentations:**

- Case Studies: Inpatient and Outpatient 2/25/2010
- Self-Management Education and the “AADE 7” 2/26/2010
- The Nuts and Bolts of Hospital Diabetes Management 3/9/2010
- 9/24/10 16<sup>th</sup> Annual DSC Symposium “Inpatient Diabetes Certification”, N. Charleston, SC
- 11/5/2010 Diabetes Symposium Oklahoma City ,OK “Hospital Diabetes Management Update”

**Meetings:**

- MUSC Hospital Diabetes Task Force
- Hospital Quality Committee
- JC Inpatient Diabetes Certification Task Force
- MUSC Diabetes Advisory Committee for Patient Education

**Projects:**

- DSC Discharge Project in conjunction with MUSC, REACH SEA-CEED, SC Hospital Association, Palmetto Primary Care, Electronic Health Network, The Carolinas Center for Medical Excellence, Spartanburg Regional Healthcare System, Palmetto Health, DSC Midlands Site and DHEC DPCP
- JC/ADA Diabetes Inpatient Certification
- MUSC 5-site ADA Outpatient ERP 1/2009-1/2012 ongoing maintenance

**Clinical:**

- MUSC Diabetes Management Service

**Professional Publications:**

1. **Arnold, P. Jenkins, C.** and Merrill, M. “Diabetes-Related Hospitalizations, A Challenge for SC Hospitals and Nurses” *SC Nurse*, July, Aug, Sept 2010.
2. Carter RE, Lin Y, Lipsitz SR, **Hermayer KL**. Relative Risk Estimated from the Ratio of Two Median Unbiased Estimates. *Journal of the Royal Statistical Society*. Accepted for publication, 2010.
3. Iloka U, **Hermayer KL**. A Review of the Effects of Hyperglycemia and Diabetes Mellitus on Chronic Obstructive Pulmonary Disease. *The Journal of Respiratory Diseases (e-journal)*, 3/19/10.
4. Marlow, N.M., Slate, E.H., Bandyopadhyay, D., **Fernandes, J.K.**, Salinas, C.F. Serum albumin and root caries in Gullah African American diabetics. *Resubmitted to Journal of Dental Research with revisions*
5. Bandyopadhyay, D., Marlow, N.M., **Fernandes, J.K.**, Leite, R.S. Periodontal Progression and Glycemic Control among Gullah African Americans with type 2 diabetes. *Journal of Clinical Periodontology*: 37: 501-509

**DIABETES INITIATIVE OF SOUTH CAROLINA  
SURVEILLANCE COUNCIL ANNUAL REPORT  
JANUARY 1, 2010 – DECEMBER 31, 2010**

**Diabetes Initiative of South Carolina  
Surveillance Council  
January 1, 2010 – December 31, 2010  
Annual Board Report**

**Summary Annual Report**

The Surveillance Council was involved with numerous major achievements during year 16. A primary objective was the development of the evaluation plan and report format for the first 10-year strategic plan followed with the development of the second 10-year strategic. An evaluation committee was established tasked with the production of the 10-year evaluation report. The committee obtained data regarding the aims and objectives from the Strategic Plan and evaluated changes in the measurement parameters. A manuscript was produced and published regarding the DSC first ten-years focused on trends, changes and rates during the 10-year period.

Myers PM, Heidari K, Bowen SA, Jenkins C, Gaffney TE, Massing M, Lackland DT. An evaluation of the first ten-years of the Diabetes Initiative of South Carolina. *Journal of the South Carolina Medical Association* 106:84-88, 2010.

The data and slides are available on the DSC website. These measures will then be used to design the second 10-year strategic plan.

Three areas of focus included the surveillance of diabetes-related outcomes trends, clinical practices related to the management of diabetes, and the continued use of the DSC webpage as a source of information and data regarding diabetes in South Carolina. The surveillance activities for outcomes trends identified several key findings focused on amputations, cardiovascular disease hospitalizations, stroke hospitalizations, cardiomyopathy and hypertension identifying significant improvement particularly in lower extremity amputations and outpatient risk factor control. Equally important, the racial disparity gap for whites and blacks has been narrowing with progress among African Americans with diabetes showing greater improvement than their white counterparts. Similarly, no differences in case-fatality rates between hospitalized white and black individuals were detected indicating similar treatment in hospital settings in South Carolina. Likewise, cardiomyopathy remains a major complication for diabetes with similar trends and racial disparities identified in the South Carolina population. In addition, intensive treatment of diabetes was identified with improvement in peripheral vascular disease. These results were reported in the *Diabetes Care*, *Southern Medical Journal* and *Ethnicity and Disease*.

The assessments co-morbid conditions including hyperlipidemia and hypertension with diabetes have identified significant improvements in the outpatient and inpatient settings. However, disparities in outcomes and control of risk factors remain evident. While the combination of conditions increases the risks of adverse outcomes for all individuals, the risks continue to occur earlier in life for African Americans identifying the need for early diagnosis and aggressive treatment and prevention. Analyses of the outpatient primary care patient data base from The Hypertension Initiative of South Carolina identified some improvements in the hypertension, glycemic and hyperlipidemia control levels of patients with diabetes in South Carolina. However, these analyses also identified a significant racial disparity in the control level with less than 10 % of the patients with all three conditions under control.

The Council has worked with the professional education activities to identify gaps in knowledge, behavior, and outcomes regarding the management of diabetes. Evaluations have identified the DSC professional education programs as effective regarding education and behaviors associated with the management of diabetes. Gaps have been identified and used to direct the professional education programs and efforts from DSC. In addition to the traditional education needs regarding the clinical guidelines and best practices associated with the management of diabetes, needs in the patient education and the involvement of providers in the delivery of education materials and information.

The Council continued to coordinate the scientific poster session for the Diabetes Symposium in 2010. This event continues to increase in numbers and quality of research findings, and functions as a forum for describing diabetes research in South Carolina. Likewise, the DSC webpage continues to be a major resource for information and data regarding diabetes in South Carolina. The number of contacts increases each month and the addition of a dedicated webmaster has increased this use. The major accomplishment of Council for 2010 has been the increase of the collaborative network of investigators and professionals focused on the assessment of diabetes in South Carolina.

### **Functions**

The Surveillance Council was established in 1995 to develop and implement a state-of-the-art system for the assessment of diabetes in South Carolina, and to provide a mechanism to evaluate interventions and control programs. The Council consists of diabetes care providers, epidemiologists, program specialists and researchers, and is staffed by data specialists at the South Carolina Department of Health and Environmental Control and the Medical University of South Carolina. The Council operates with formal meetings and communications.

The Council has established the following objectives:

- Develop, implement and evaluate surveillance protocols and methodologies to assess diabetes awareness and knowledge, prevalence of diabetes, access to primary care, quality of diabetes self-management, and utilization of monitoring guidelines. This includes the evaluation of patient and professional education programs. Specific efforts include:
- Develop and maintain a mechanism to analyze mortality, morbidity, hospitalization and survey data in production of reports to describe the burden of diabetes in South Carolina.
- Analyze the effects of co-morbidities with diabetes.
- Establish and maintain an ongoing evaluation of the role of insurance and managed care companies in control of diabetes.
- Function as a central unit composed of multiple organizations and disciplines involved in the surveillance of diabetes in South Carolina.
- Function as a data and information resource for DSC and DHEC and other organizations involved in diabetes control.
- Develop and maintain an Internet Website for distribution of information regarding diabetes in South Carolina.
- Establish a scientific forum to showcase diabetes research and projects in South Carolina.
- Establish a methodology to estimate the prevalence of diabetes in South Carolina based on clinical data.
- Establish a methodology to assess trends in diabetes-related outcomes and clinical practices.

### **Major Accomplishments**

The summary of the major accomplishments follows:

- Maintenance and distribution of the Burden of Diabetes in South Carolina report and updated data which is distributed in hard copy and through the webpage.
- Development and maintenance of a diverse group of investigators in South Carolina who focus their work on the study of diabetes.
- Development and maintenance of an Internet Webpage.
- The Council has organized several reports and manuscripts focused on lower extremity amputations, cardiovascular disease, stroke hospitalizations, and hypertension in South Carolina and associated trends that identified a possible positive effect from DSC interventions.
- Maintenance of DSC webmaster.
- Production of trends reports for the DSC 10 years
- Production and distribution of data slides which are distributed in hard copy and can be downloaded from the webpage
- Coordination of the scientific poster session in conjunction with the 2010 Diabetes Symposium. Thirty-seven abstracts and posters were presented with three SC students receiving cash awards, and three community awards.
- Establishment of a working committee to identify a methodology to assess trends in clinical practices, patient behaviors and outcomes related to diabetes.
- Maintenance of a working committee to use clinical data bases to estimate the prevalence of diabetes in South Carolina.
- Maintenance of a working committee to study Type 2 diabetes in young adults.
- Maintenance of collaboration with the Hypertension Initiative to use primary care office based data base to assess risk factor control.
- Establishment of a mechanism to evaluate the intervention and education programs.
- Evaluation of knowledge, behavior and outcomes gaps associated with the management of diabetes in SC.

**Specific accomplishments related to the DSC goals are:**

**Goal I:** To improve knowledge of diabetes, quality of life and access to prevention and intervention services for people at-risk and those affected by diabetes.

- Working with working team, the Council has identified baseline estimates of clinical practices regarding HbA<sub>1c</sub>, microalbumin, eye examinations, foot examinations and lipid profiles.
- Utilization of primary care was identified from the Medicaid database.

**Goal II:** To increase the utilization of short-term measures which lead to actions that will delay progression of complications of diabetes.

- Working with Hypertension Initiative and other collaborators including State Health Plan, the Council has identified baseline estimates of clinical practices regarding HbA<sub>1c</sub>, microalbumin, eye examinations, foot examinations and lipid profiles.
- Diabetes data and information was reported to providers through the distribution of the second Burden report as well as via the Website.
- Information regarding diabetes in South Carolina was also distributed via Diabetes Centers of Excellence, Carolina Center for Medical Excellence, DHEC, and through HMOs.

**Goal III:** To address the needs of people at-risk and those with diabetes by increasing services and education in health professional shortage area in South Carolina.

- The Council worked with the Office of Research and Statistics and SC AHEC to identify areas of shortages based on providers per population.
- Areas of shortage were also identified by area of underutilization based on Medicaid and similar databases.

**Goal IV:** To reduce the mortality and disability rates from diabetes-related complications.

- The Council has established access to a variety of data sources including vital records, Hypertension Initiative of SC data base, Medicaid, Medicare, hospital billing, insurance claims, and the Southeastern Kidney Council in order to establish a comprehensive data system for diabetes.
- The Council has helped establish an inventory of diabetes researchers and projects in South Carolina. The various investigators and projects will be listed on the Webpage. The annual Symposium continues to function as a forum for the investigators to meet and exchange ideas regarding diabetes in South Carolina.
- The Council has prepared and published several reports and manuscripts focused on lower extremity amputations in South Carolina and associated trends in racial disparities in diabetes-related hospitalizations that identified a possible positive effect from DSC interventions.

**Goal V:** To reduce the age-adjusted mortality rates from diabetes and its complications.

- Council has identified and plotted trends in mortality associated with diabetes in a manner that can be monitored and used to predict outcomes.
- The Council established measures and data sources to plot the trends.

**Goal VI:** To decrease risks for select groups of people with diabetes where the prevalence and complication rates exceed those of others.

- Maps have been generated to identify areas of excess risks of diabetes based on self-report, hospitalizations, and Medicaid, as well as the locations of CDEs.

**Goal VII:** To reduce preventable hospital admissions and charges for diabetes.

- The Council has developed a system of measures based on hospital billing data that assesses costs associated with hospitalizations associated with diabetes.

**Goal VIII:** To reduce preventable visits to the emergency room by people with diabetes.

- The Council has developed a system of measures based on hospital billing data that assesses costs associated with emergency room use due to conditions associated with diabetes. These results were presented at Student Research Day and the 2009 Diabetes Symposium.

**Goal IX:** To improve the statistical basis for estimating the prevalence of diabetes and diabetes-related complications in South Carolina.

- Trends in hospitalizations for cardiovascular disease with and without diabetes have been identified to estimate the burden of diabetes.

- A major effort in 2010 was the collaboration with the Hypertension Initiative of SC data base that includes 300,000 outpatients in SC with clinical and laboratory measurements. This data resource will be used to assess control of diabetes and associated risk factors.
- A committee was established to identify measures that estimate prevalence based on clinical values. The committee will assess Medicare, Medicaid, insurance claims, and hospital discharges to refine the estimates currently based on self-report.
- The Council has established a working relationship with the Southeastern Kidney Council to quantify the impact of diabetes on end-stage disease.

**DIABETES INITIATIVE OF SOUTH CAROLINA  
MIDLANDS SITE ANNUAL REPORT  
JANUARY 1, 2010 – DECEMBER 31, 2010**

**Diabetes Initiative of South Carolina  
Midlands Site  
January 1, 2010 – December 31, 2010  
Annual Board Report**

**Governing Committee Members:** **Ali Rizvi, MD, CDE**; Chief, Endocrine Division, USC School of Medicine; **Sue Haddock, PhD**, Associate of Staff for Research, Dorn VA Center; **Connie Hopkins, MSN, CDE**, Inpatient Diabetes Education, Palmetto Health Richland; **David Keisler, MD**, Associate Professor, Family Medicine; **Anwar Merchant, Sc.D, MPH, DMD**, Associate Professor, Norman Arnold School of Public Health; **Dero Myers, PhD**, Neuropsychiatry; **Al Pakalnis, MD**, Professor, Ophthalmology; **Sharm Steadman, PharmD, CDE**, Professor, Family Medicine; **Rebecca Wrenn, MS, RD, LD**, Program Coordinator, SC DHEC, Office of Public Nutrition; **Elizabeth Todd Heckel, MSW, CDE**, Program Director, Diabetes Initiative of SC, Midlands Site

**The Midlands Site** of the Diabetes Initiative was created in July of 1998. Members of the Governing Committee are multidisciplinary and contribute to the mission of the Diabetes Initiative. Collaborative accomplishments include:

- the publication of a newsletter reviewing key diabetes research,
- diabetes education provided at the Family Practice Center and for state employees through Prevention Partners,
- forming a Committee to establish glycemic control guidelines for the Palmetto Health Hospital System, and
- working with VA Medical Centers across the country to implement a nurse staffing methodology for the VA system nationwide, and evaluate the effectiveness of the new Clinical Nurse Leader role.
- nutritional education has been provided to over eight hundred K-5 children in SC.

The Midlands Site provides leadership to Camp Adam Fisher, Inc., SC's largest overnight camp for children with diabetes in the Carolinas.

**EDUCATIONAL ACTIVITIES:**

1. Diabetes Education Programs for State Employees through Prevention Partners
2. Diabetes Education Groups for patients, 1<sup>st</sup> and 3<sup>rd</sup> Tuesday of each month
3. Diabetes education for individuals every 2<sup>nd</sup> and 4<sup>th</sup> Tuesday mornings.
4. SC Legislative Screening Day, September 28, 2010.
5. Camp Adam Fisher, the Carolinas largest overnight camp for children with diabetes. 230 campers attended in 2010.
6. "Experiential Diabetes Education" to 3<sup>rd</sup> year USC Medical students every 6 weeks.
7. Taste testing with 1040 pre K children\_Sept – Dec

**PUBLICATIONS:**

1. **Merchant AT, Jethwani M, Choi YH, Morrato EH, Liese AD, Mayer-Davis EJ.** Associations between periodontal disease and selected risk factors of early complications among youth with type 1 and type 2 diabetes: a pilot study. *Pediatr. Diabetes* 2010 (In press)
2. Choi YH, McKeown RE, Mayer-Davis EJ, Liese AD, Song KB, Merchant AT. Association between Periodontitis and Impaired Fasting Glucose and Diabetes. *Diabetes Care* 2010 (In press)

**RESEARCH /GRANTS:**

1. Systolic Blood Pressure Intervention Trial (SPRINT): A randomized, multi-center clinical trial testing the effects of intensive lowering of systolic blood pressure (SBP) on preventing cardiovascular disease (CVD): *Principal Investigator*, Ali Rizvi, MD, CDE  
Sponsor: NIH/NHLBI, 2009-2017 (**\$789,477**)
2. *LEADER* Trial: To assess the effect of treatment with liraglutide compared to placebo for at least 3.5 years and up to 5 years on the incidence of cardiovascular events in adults with type 2 diabetes who are at high risk for cardiovascular events. *Principal Investigator*, Ali Rizvi, MD, CDE Sponsor: Novo Nordisk, 2010-2015 (**\$348,325**)
3. Molecular Profiling Analysis of Indeterminate Thyroid Nodule Fine Needle Aspirates to Determine Patterns Predictive of Benign or Malignant Disease (Protocol Number VERA001), Veracyte, Inc. South San Francisco, CA *Principal Investigator*, Ali Rizvi, MD, CDE (**\$9,224**)

4. Fellow Research Project: Prevalence, characteristics, and clinical significance of *normocalcemic primary hyperparathyroidism* encountered in a large community teaching hospital *Preceptor*, Ali Rizvi, MD, CDE (Applied for Grant-in-Aid Award, **\$400**)
5. Pervasive Patient Data Collection and Analysis for Chronic Disease Treatment and Monitoring (Wenyuan Xu, PI – USC Dept. of Computer Science and Engineering, submitted 9-15-10, *Co-PI*, Ali Rizvi, MD, CDE **\$1,009,523**)

#### **EDITORSHIP**

*Symposium Issue on Diabetes*, Journal of the South Carolina Medical Association, April 2010 Guest Editor, Ali Rizvi, MD, CDE

#### **PROFESSIONAL TALKS**

1. Rizvi, A. Southern College Health Association 2010 Conference, Columbia, SC: “Evaluation and Treatment of Thyroid Problems in Young Adults” March 2010
2. Rizvi, A. Southern College Health Association 2010 Conference, Columbia, SC: “Addressing Diabetes Issues in Young Adults” March 2010
3. Rizvi, A. Palmetto Health Baptist CME activity, Columbia, SC: “Guidelines for Prediabetes Diagnosis and Management” March 2010
4. Rizvi, A. Festival of Flowers Medical Symposium, Self Regional Health Care, Greenwood, South Carolina: “Management of Diabetes in 2010” June 2010
5. Rizvi, A. University of South Carolina-Palmetto Health Richland CME Organization *Internal Medicine Update* Sea Pines Resort, Hilton Head Island, South Carolina: “Office Management of Diabetes in 2010 – the Old and the New” July 2010
6. Rizvi, A. University of South Carolina-Palmetto Health Richland CME Organization *Internal Medicine Update* Sea Pines Resort, Hilton Head Island, South Carolina: “What’s Current in Inpatient and Perioperative Glucose Control” July 2010
7. Rizvi, A. University of South Carolina-Palmetto Health Richland CME Organization *Internal Medicine Update* Sea Pines Resort, Hilton Head Island, South Carolina: “Common Thyroid Issues in Clinical Practice” July 2010
8. Rizvi, A. University of South Carolina-Palmetto Health Richland CME Organization *Internal Medicine Update* Sea Pines Resort, Hilton Head Island, South Carolina: “A Potpourri of Endocrine Cases” July 2010
9. Rizvi, A. Palmetto Health Baptist CME activity, Columbia, SC: “Guidelines for Prediabetes Diagnosis and Management” August 2010

#### **POSTERS**

1. Hari Bhatt, Ali Rizvi. Stroke outcomes in elderly hospitalized patients: more diabetes, longer stay, and higher complications. 6<sup>th</sup> Annual Aging Research Day, Folly Beach, SC, Feb19-20, 2010
2. Sayed Aamir, Sallie Ruth Areford, Matthew Hix, and Ali A. Rizvi. Impact of a Multidisciplinary Supportive, Dietary Approach on ‘Diabetes Distress’ and Postprandial Hyperglycemia. 16<sup>th</sup> Annual Diabetes Symposium Scientific Poster Session, Charleston, SC – Sept 23-24, 2010
3. Sayed Aamir, Sallie Areford, Matthew Hix, Ali Rizvi. Relationship of Age and Gender to “Diabetes Distress” and Postprandial Hyperglycemia. 1<sup>st</sup> International Diabetes and Obesity Forum, Athens, Greece, 21-23 October 2010
4. Wrenn, R. “Taking Charge in Meadowland”, 16<sup>th</sup> Annual Diabetes Fall Symposium for Primary Health Care Professionals Poster Session. Award in Community Programs Division, September 22 & 23, 2010; Charleston, SC.

#### **ARTICLES**

1. Rizvi AA. The Challenge of Diabetes: a Time for Action. *Journal of the South Carolina Medical Association* 2010;106:46.
2. Rizvi AA. Diagnosis, Screening, and Prevention of Diabetes and Pre-diabetes. *Journal of the South Carolina Medical Association* 2010;106:47-49.
3. Jenkins C, Myers PJ, Heidari K, Gaffney TE, Hill R, Bowen S-A, Arnold P, Young PM, Lackland D, Rizvi A. Diabetes Disparities in South Carolina: Challenges, Programs, Progress, and Recommendations for Future Efforts. *Journal of the South Carolina Medical Association* 2010;106:50-55.
4. Rizvi AA. Use of Pharmacologic Agents for the Treatment of Hyperglycemia in Type 2 Diabetes: A Brief Overview for the Health Care Professional. *Journal of the South Carolina Medical Association* 2010;106:56-61.

5. Raines CH, Rizvi AA (*corresponding author*). Optimal Diabetes Management: Combating Misconceptions and Hurdles through Education and a Multidisciplinary Approach. *Journal of the South Carolina Medical Association* 2010;106:79-83.
6. Butler C, Butler WM, Rizvi AA (*corresponding author*). Sustained remission with the kinase inhibitor sorafenib in Stage IV metastatic adrenocortical carcinoma. *Endocrine Practice* 2010;16(3):441-445.
7. Rizvi AA, Chillag SA, Chillag KJ. Perioperative Management of Diabetes and Hyperglycemia during Orthopaedic Surgery. *Journal of the American Academy of Orthopaedic Surgeons* 2010;18:426-435.
8. Rizvi AA. Hypertension, Obesity, and Inflammation: The Complex Designs of a Deadly Trio. *Metabolic Syndrome and Related Disorders* 2010;8(4):287-294.
9. Bhatt H, Rizvi AA. Average Inpatient Glucose Levels during the first 72 hours, Clinical Outcomes, and Length of Hospital Stay in Patients with Acute Ischemic Stroke. *International Journal of Diabetes and Metabolism* 2010 (in press).

#### **COMMITTEES**

1. Collaborator with SCDHEC Diabetes Prevention and Control Project (E. Todd Heckel)
2. Co-chair with Dr. Carolyn Jenkins , Literature Review Committee for DSC (E. Todd Heckel)
3. SCDHEC, WISE WOMAN Advisory committee. (E. Todd Heckel)
4. American Diabetes Association Program Recognition Advisory Committee for Lexington Medical Center and Palmetto Richland Hospital (E. Todd Heckel)
5. Member, DSC Board and DSC Councils. (E. Todd Heckel)
6. Member, Statewide Diabetes Advisory Committee (E. Todd Heckel)
7. USDA FNS (Food Nutrition Services) Core Message Committee and Whole Grain sub-Committee (Rebecca Wrenn, MS, RD, LD)

#### **MIDLANDS AREA HEALTHCARE COLLABORATORS:**

- SC Department of Vocational Rehabilitation, Rehabilitation Counseling (2010 Statistics: 688 new referrals; 1,471 cases served; 351 cases rehabilitated)
- Prevention Partners, “Club Sugar”, SC Budget and Control Board, Office of Insurance Services (2010 Statistics: 210 persons)

**SOUTH CAROLINA DIABETES PREVENTION AND CONTROL PROGRAM  
S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL  
JANUARY 1, 2010 – DECEMBER 31, 2010**

**South Carolina Department of Health and Environmental Control**  
**Statewide Diabetes Activities**  
**January 1, 2010 – December 31, 2010**  
**Annual Board Report**

The South Carolina Department of Health and Environmental Control (DHEC) and the Diabetes Division are dedicated to the prevention chronic disease disparities such as diabetes. The overarching goals of the division and other diabetes efforts at DHEC are to prevent complications, disabilities, and burden associated with diabetes as well as to eliminate diabetes-related health disparities.

**Prominent 2010 Diabetes Related Initiatives  
That Have Assisted Us In Meeting Our Goals**

I. State and Federal Updates:

**South Carolina Statewide Diabetes Advisory Council**

The first meeting for the SC Statewide Diabetes Advisory Council (DAC) was held Thursday, September 16, 2010 from 10 AM – 2 PM at the Columbia Convention Center in Columbia, SC. The DAC was established to serve as the advisory council for DHEC's Diabetes Division and the REACH US: SEA-CEED Program. Dr. Gerald Wilson a general and peripheral vascular surgeon with Midlands Surgical Associates, P.A. in Columbia, will serve as the DAC Chair for 2010 – 2012. The DAC is representative of public and private partners that will coordinate the two organizations' activities that promote quality diabetes care deliver and improved quality of life for those living with diabetes across the state. The DAC will also advocate for legislation, policies, and programs to improve the treatment and outcomes of people with diabetes in South Carolina.

**Commissioner's Advisory Council for the Elimination of Health Disparities**

DHEC's Commissioner's Advisory Council on the Elimination of Health Disparities works to improve health outcomes among disparate populations. The council recently decided to focus their attention on diabetes for one year. At the August 13<sup>th</sup> meeting, the Diabetes Division gave a comprehensive presentation that outlined current statewide diabetes efforts so that the group could determine gaps and try to narrow down specifically what they would like to do to address the disease and its associated risk factors. During the meeting, each agency and organization represented were asked to write down what they are currently doing or what they feel needs to be done to address diabetes using Dr. Tom Freidan's Health Impact Pyramid as a framework. Comments and suggestions will be used to identify strengths and/or the gaps (opportunities) that the Council can address.

**Evaluating Diabetes Group Education (EDGE) Program**

The Diabetes Division continues to partner with Regions 7 (implementation group) and Region 8 (control group) to identify barriers and facilitating factors to using the US Diabetes Conversation Maps. To date, both the intervention group and the control group have met their deliverables for the first six months of the grant period. Surveys are collected on the 15<sup>th</sup> of each month and during this reporting period the intervention group collected 75 surveys and the control collected 67 surveys, which were all submitted to the evaluator to be analyzed. The control group met with partners over a three county area to discuss changes due to loss of staff and how it would affect the DSME classes being offered. There is a continuous dialogue between all three counties concerning the referral of patients to DSME classes. The program will conclude in July 2011.

**Collaborative Chronic Disease, Health Promotion, and Surveillance Program Initiative**

The SC Department of Health and Environmental Control's Diabetes Division, Tobacco Prevention and Control, and Healthy Communities continue their 5-year collaborative initiative funded through the Centers for Disease Control and Prevention. The continuation application for the third year of the five year cycle is expected to be released the first part of December with a due date some time in January 2011. The Diabetes Division's application will be centered on health systems changes related to improving delivery of the minimum standards of care to people living with diabetes in the state.

Nonrecurring State Funds for Diabetes

SC DHEC was fortunate to receive from the state legislators a non-recurring allocation of \$2,000,000 to address diabetes issues for FY 09-10. The following are outcomes of the funded projects:

PROGRAM	OUTCOME
WISEWOMAN	The one time funding enabled an additional 250 women (1643 total) 40-46 years old to be screened under the WISEWOMAN Program in Regions 4 & 6. The screenings took place at Community Health Centers through June 30 <sup>th</sup> and 8% of the participants were found to have pre-diabetes and 27% had diabetes. Approximately, 82% of the women were below 100% of the federal poverty level.
Statewide Diabetes Media Campaign	The annual Centers for Disease Control and Prevention's Division of Diabetes Translation's (DDT) National Diabetes Education Program (NDEP) Frankie Awards Ceremony was held on April 13 <sup>th</sup> in Kansas City, MO in conjunction with the DDT Conference. The SC Diabetes Division was awarded an Honorable Mention for the Frank Vinicor Award of Excellence for their 2010 multimedia prevention and awareness campaign for exemplary use or adaptation of NDEP resources in a comprehensive, multifaceted campaign to address behavior change.
NDEP Power to Prevent Partnership with DHEC's Office of Minority Health and Greenville Hospital System	<p>The five-month program consisted of 12 educational sessions regarding diabetes, nutrition, physical activity, partnering with health care providers, and involving family/friends. Clinical assessments (body weight, blood pressure, and BMI analysis) were administered to monitor the progress of participants throughout the program. The program also included assistance from a Certified Diabetes Educator, nutritionist, and a local physician.</p> <p>Fifty African American adults were enrolled in the program, which began January 16, 2010. Of those enrolled 80% completed the program. All participants lost 5% or more of their initial body weight (5-46 pounds lost); there was an overall decrease in BMI (Pre=29, Post=25.7) and blood pressure (Pre=143/79, Post=130/76), and an increase in healthy eating and physical activity.</p>
The 2010 South Carolina Conference on Diabetes	The South Carolina Conference on Diabetes, formally known as the African American Conference on Diabetes was held on Monday, November 1, 2010 at the Brookland Baptist Banquet and Conference Center in West Columbia. There were over 700 people in attendance representing 36 of 46 counties in the state. This was the 14 <sup>th</sup> statewide conference cosponsored by the SC Diabetes Today Advisory Council, a community-based organization and DHEC. The 2010 theme was, <i>What Can YOU Do About the Prevention and Control Of Diabetes?</i> Topics included an update of diabetes in South Carolina by our own Dr. Lisa Waddell; The FEARS of Diabetes; What Should/Can I Eat; What Did The Doctor Say: Health Literacy; Survival Skills for People With Diabetes and morning and afternoon exercise sessions. DHEC Health Services represented six of the 26 vendors at the conference.

<p>Community Diabetes Education and Screenings</p>	<p>The SC Diabetes Division partnered with local DHEC regions, community health centers, AstraZeneca and Merck to implement a Community Diabetes Education and Screening Event in four targeted counties. Through this initiative local community health centers provided free A1C, blood pressure, and cholesterol checks. The screenings took place in March, which is also celebrated as Diabetes Alert Month and National Kidney Month and was incorporated as part of one-day events already scheduled in the targeted communities. Participants who were screened and found to be in need of a healthcare home were given information on available providers and their contact information.</p> <p>Over 190 participants participated in the community screening events. Most participants reported attending the screening event to learn about diabetes (69%) followed by 53% who came to be screened. Those completing the survey reported that their last provider visit was within the last month (50%) or within the last six months (30%) and self-reported living with hypertension but not at high risk for diabetes.</p> <p>Most participants self-reported that they were not at risk for diabetes and their last regular provider visit was within the last month. However, based on the A1C values 42% of the participants were found to have abnormal A1C values. This suggests that many of those in our targeted communities do not know their diabetes status and are not getting checked for diabetes when they see their provider. A general recommendation is during screening initiatives make sure that those screened are in fact following up with a local provider in order to receive immediate checks and diabetes care that could prevent further complications.</p>
<p>Legislative Awareness Day</p>	<p>On April 28, 2010, DHEC staff and several partners (the Diabetes Initiative of South Carolina, Diabetes Today Advisory Council, American Diabetes Association, American Heart Association, and South Carolina Hospital Association, Hypertension Initiative) hosted a Legislative Day at the statehouse to address diabetes, heart disease and stroke in SC. Staff from across the agency assisted in this day to educate and screen approximately 100 legislators and staff. A number of participants received abnormal tests results for A1C (40%), cholesterol (36%), BP (6%), and BMI/waist circumference (88%). Of those with abnormal results 75% were referred to the physician on site to discuss their abnormal values and advise regarding 10-year cardiac risk.</p>
<p>Action Oriented Projects to improve physical activity and/or healthy eating in selected communities</p>	<p>Each of four regions have completed project(s) and submitted a success story. The projects completed were the Georgetown Senior Center Community Garden, improvements to the one mile walking trail at Scott Park in the City of Camden, development of a walking trail in Allendale town center, improvements to an existing Fairfax walking trail, improving an existing community garden in the Sugar Hill/Flat Street Neighborhood, and a walking trail in Estill to replace an inactive, non-functional trail that was constructed years ago. Each project was selected based on local needs assessments and grass-root motivation to pursue these projects.</p>
<p>Community Health Advocates (CHA)</p>	<p>CHAs were hired in four regions of the state to implement the Diabetes 101 Curriculum and during the past twelve months over 400 people in counties across the state participated in a Diabetes 101 session. Most participants were African American (87%), predominantly female (83%), and average age 52 years. The four counties that had highest attendees were Lee (31%), Orangeburg (13%), Kershaw (12%), and Bamberg (9%). Of those attending, 66% of participants had never been told by a doctor that they have diabetes. Participants chose to attend the session because of a need for general information (73%). The risk assessment test showed 44% were at risk for diabetes and 90% of those who were at risk reported that they intended to go and get tested. The Diabetes Division will continue to maintain current presenters while seeking to move the program into counties that presently have no Diabetes 101 presenters. Efforts will also be made to follow-up with participants who report they intend to get tested based on information they gained from the session.</p>

<p>American Health Care (AHC) and the Heart Disease and Stroke Prevention Division (HDSP) are actively involved in the continued planning of recruiting partners and worksites for the SC Stroke Belt Project.</p>	<p>On November 1, 2010, the City of Aiken implemented the SC Stroke Belt Project. The project for the city of Aiken will be called “COACH” (City Of Aiken Comprehensive Health) Program. Incentives are \$0 for generics, \$15 for preferred, and \$50 non-preferred drugs. The City of Aiken is providing testing strips for people with diabetes at no cost.</p> <p>HDSP has received baseline data and a reporting schedule from AHC for the city of Aiken. It identifies the percentage of the city of Aiken's overall employee base that would be targeted for intervention, percentage of who or how many are at-risk? As well as how will the city benefit cost wise managed vs. un-managed for this intervention.</p> <p>SC is 1 of 2 states piloting this project and the HDSP Division Director presented at the annual CDC HDSP Grantee Meeting on September 16th and the National Public Health Stroke Summit on October 27th.</p>
<p>SC DHEC 's "Don't Guess- Get Answers" Diabetes Self-Management Education (DSME) Program</p>	<p>DHEC received DSME recognition for 12-17-09 through 12-17-12. This recognition, from the American Association of Diabetes Educators, is for five sites (four sites in Region 8 and one in Region 7). AADE is now also approved by the Center for Medicare and Medicaid Services to recognize DSME programs. With this recognition, SC DHEC is able to bill all third-party payers who include DSME as a benefit.</p> <p>During the required phone interview, AADE was very complementary of the organization of our program. Region 7 is piloting a DSME site in an MD office, so we will be adding another site to the DSME recognition for this pilot.</p>
<p>The 8<sup>th</sup> Annual Diabetes/Heart Disease &amp; Stroke Winter Symposium – “Care in Challenging Times”</p>	<p>The Symposium was held March 5-6, 2010 at the Crown Reef Resort and Conference Center, Myrtle Beach, SC. DHEC’s Divisions of Diabetes and Heart Disease &amp; Stroke Prevention and the Medical University of South Carolina jointly sponsor the symposium. The Diabetes Initiative of South Carolina and the Diabetes Today Advisory Council provide additional support. The 198 participants with representation from 31 counties included primary health care providers, including physicians, pharmacists, physician assistants, doctors of osteopathy, diabetes educators, registered nurses, nurse practitioners, licensed practical nurses, podiatrists, social workers, and registered dietitians.</p> <p><b><u>The 2010 annual recognition awards recipients were:</u></b></p> <ul style="list-style-type: none"> <li>• Certified Diabetes Educator of the Year: Karen Kohn, RN, MSN, CDE, WCON</li> <li>• Diabetes Champion of the Year Award: Patricia Wilson Witherspoon, MS, MD, FAAFP</li> <li>• American Hospital Association/American Stroke Association – Get with the Guidelines Hospital of the Year: Piedmont Medical Center</li> <li>• Power to End Stroke Ambassador of the Year: Hilda D. Gadsden</li> </ul>

<p>Carolina Center for Medical Excellence Partnership for Surveillance</p>	<p>A contract with the Carolina Center for Medical Excellence will provide 2006 and 2007 Medicaid data on the following:</p> <ul style="list-style-type: none"> <li>• Percent of Medicare patients with diabetes: by race, gender, age group, and county</li> <li>• Percent of African American Medicare patients with Diabetes by county</li> <li>• Percent of Medicare Diabetes patients who received at least 1 A1c, an eye exam, <b>or</b> a lipid panel</li> <li>• Percent of Medicare Diabetes patients who received all 3 (A1c, eye exam, lipid panel)</li> <li>• Percent of Medicare Diabetes patients with at least one hospitalization, by race, gender, age group, and county</li> <li>• Percent of Medicare Diabetes patients with at least one readmission within 30 days by race, gender, age group, and county</li> <li>• Percent of Medicare Diabetes patients with at least one MD visit only for diabetes, by race, gender, age group, and county</li> <li>• Percent of Medicare Diabetes patients with at least one repeat visit within 6 months by race, gender, age group, and county</li> </ul> <p>The above data will be used for monitoring diabetes prevalence and risk factors in the Medicare population. Some elements of standards of care can also be monitored using this data. Results will be reported in the Burden Report as well as other surveillance documents.</p>
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**II. Diabetes Surveillance Systems:**

Goal: Monitor the statewide diabetes burden and identify gaps to assist with planning, decision-making, and evaluation

Hypertension Initiative Partnership

DHEC’s Diabetes Division and the Tobacco Prevention and Control Division have a joint contract with the Hypertension Initiative to provide the following:

- Number of patients in database broken down by race, gender, and age group
- Percent of patients diagnosed with hypertension, high cholesterol, chronic kidney disease, AMI, blindness, LEA’s, by race, gender, age group
- BMI by demographics (for those patients with height available).
- Percent with A1c and the mean A1c
- Percent with lipid panel, mean LDL, HDL, and total cholesterol
- Percent on insulin and/or on oral diabetes medication
- Percent on cholesterol and hypertension medication
- All of the above broken down by race, gender, age group

The above data will be used as ongoing monitoring of diabetes risk factors and complications with the capability of looking at race, age, and gender subpopulations. Results will be reported in the Burden Report as well as other surveillance documents.

**III. Health Systems Improvement:**

Goal: To increase the number of health care providers engaged in professional education on recommended standards of care.

South Carolina Primary Health Care Association (SCPHCA)

Information on best practices is provided to the SCPHCA during the Quarterly Clinical-Medical-Pharmacy Network Meetings and at the Annual Clinical Network Retreat. Staff from DHEC’s Health Services programs routinely shares updates, groundbreaking reports and best-practice developments at the quarterly meetings.

The Diabetes Division provided financial support for the SCPHCA 2010 Clinical Network Retreat June 11- 13 at the Charleston Convention Center. In attendance were 130 providers and clinical support staff. Program staff participated on the retreat planning committee and facilitated two of the sessions. The first was a June 11 pre-conference workshop on “Chronic Disease Evidenced-Based Prevention Programs”.

The workshop presentations included the WISEWOMAN Lifestyle Intervention Program and Chronic Disease Self-Management. The second was a June 13 session on “Diabetes and Cardiovascular Health.”

DHEC's WISEWOMAN Lifestyle Intervention program is being implemented at six community health centers in the Pee Dee and Coastal areas of the state. This collaboration includes lifestyle intervention classes and coaching for patients and professional development opportunities for clinical staff.

The Clinical Quality Improvement Director at SCPHCA serves on the statewide Diabetes Advisory Council (DAC) formed by the Diabetes Division and REACH and chairs its Strategic Planning Committee. The DAC brings together several different organizations that will, among other issues, address minimum standards of care for diabetes in SC.

#### **IV. Community Awareness and Outreach:**

**Goal: Increase diabetes knowledge and awareness across disparate and hard to reach communities.**

##### IMARA Woman Partnership (Media Campaign)

IMARA Woman Magazine held their 10<sup>th</sup> year anniversary scholarship and awards gala on Friday, February 12<sup>th</sup> in Columbia, SC. DHEC's Diabetes Division along with the Women's Infants and Children's Program received the 2010 Public Sector award, which marks the 8<sup>th</sup> time that DHEC has received this award.

IMARA Woman Magazine held their 9<sup>th</sup> Annual Health Ministry Empowerment Tour, and DHEC's Diabetes Division provided a session on the *ABC's of Diabetes*. This year's theme was "Back by Popular Demand", which featured three previous keynote speakers during the following dates: October 16<sup>th</sup> in Columbia with Rev. Telley Gadson; October 23<sup>rd</sup> in Chester with Ms. Katrina Spigner; and October 30<sup>th</sup> in Sumter and Dr. Tonia Stewart. IMARA Woman also hosted its first Health Ministry Empowerment Tour Kick off Dinner on Thursday, October 14<sup>th</sup> at the Medallion Center. The dinner featured gospel-recording artist Ms. Ce Ce Winans and several choirs performed renditions of her music as a special tribute.

##### 7<sup>th</sup> Annual Mid-Year Community Partners Meeting & Diabetes Mini Grants

The 7<sup>th</sup> Mid-Year Statewide Community Partners Meeting took place on Thursday, April 1, 2010 in Columbia, SC as a result of that meeting five community groups submitted mini-grant applications and each of them were funded up to \$5000. The 2010-2011 funded groups are Charleston County Diabetes Coalition (Region 7), Georgetown County Diabetes CORE Group (Region 6), Ephesus Seventh Day Adventist Church (Region 3), St. John Baptist Church (Region 3), and Williamsburg County Diabetes Education Coalition (Region 6). Each has been funded to implement one or more of the following:

- NDEP's The Power to Prevent Curriculum
- Expand partnerships to develop community gardens
- Implementation of a Healthy Women, Healthy Families Project
- Partner with a local recreation department to replace outdated equipment that will attribute to more people utilizing the center for physical activity.
- Develop or expand existing health and physical fitness ministries, and
- Expand their current partnership with their local Community Health Center

Several successful outcomes have already been reported and will be shared in the next quarterly DSC report.

##### Tenth Annual Statewide Community Partners Meetings

The Diabetes Division held the 10<sup>th</sup> Annual Statewide Community Partners Meeting on Thursday, September 23, 2010 in collaboration with the 16<sup>th</sup> Annual Diabetes Fall Symposium for Primary Health Care Providers. There were 39 participants representing 16 community groups from SC, NC, and TN. The day was filled with information related to the diabetes mini-grants, effective program evaluation, National Kidney Foundation overview, importance of safe and quality record keeping, and recruitment strategies in community settings. Eight groups entered the 11<sup>th</sup> Annual Scientific Poster Session and the Diabetes Initiative of South Carolina awarded a certificate and monetary award to the top three (1<sup>st</sup> Place – SC DHEC Office of Public Health Nutrition, 2<sup>nd</sup> Place – Williamsburg County Diabetes Coalition, and 3<sup>rd</sup> Place – Charleston Diabetes Coalition).

##### South Carolina Commission for Minority Affairs (SCCMA)

DHEC's Diabetes Division and the Tobacco Prevention and Control Division have a joint contract agreement with SCCMA to try and reach disparate members of our population. One hundred fifty random surveys were administered face-to-face or via telephone to the Hispanic/Latino population in ten geographical locations across the state. Information pertaining to diagnosis of pre-diabetes and diabetes, smoking, and tobacco use by type was assessed. Response information provided by the respondents indicated that:

- 49.9% or 57 respondents indicated that they were told they have diabetes, and

- 68.6% or 59 (of 86) respondents were told that someone in their household was at risk for developing diabetes.

SCCMA is in the process of collecting data on health conditions from the Native American population. They are seeking to obtain a minimum of 100 and 150 completed surveys. Last report indicates that sixty completed surveys have been received and follow up through December will ensure that the remaining surveys are collected and then analyzed.

#### **National and Local Oral, Poster, and Written Presentations and Articles**

DHEC was highly represented in both diabetes related oral and poster presentations as well as written publications during the 2010 fiscal year:

- *The Journal of the South Carolina Medical Association*; Volume 106, Number 2; April 2010, Pages 41 - 99 was devoted to diabetes, several DHEC authors.
- Presentation on WIS-TV, April 18, for Minority Health Month.
- Presentations at the April 2010 CDC Division of Diabetes Translation Conference, whose theme was *Looking to 2020: Keeping Our Eyes on the Prize of Diabetes Prevention and Control*.
- Podium presentation April 16 at the SC Dietetic Association Annual Meeting in Columbia
- July/August/September 2010 issue of *The South Carolina Nurse* presented a special issue: Diabetes Update for SC Nurses, several DHEC authors.
- July/September 2010 issue of *Topics in Clinical Nutrition*, Vol. 25, No. 3, pp.280-288.
- August 24, 2010 South Carolina was featured on the Sustainable Food System Work Group monthly conference call.
- Ms. Sheena Cretella, a graduate student in USC's epidemiology program and a Diabetes Division GA, was awarded second prize for her work in *Identification of Confounders on the Association between Self-Selected Body Figure and Diabetes- A Study of Overweight African-American Women* at the 2010 Fall Symposium on Diabetes in Charleston. Her poster was also accepted at the USC's Women's Research Forum held on October 29th at the Daniel-Mickel Center.
- "Diabetes Lower Extremities Amputation " 2010 CSTE Annual Conference, Portland, OR; also presented as a poster at the 2010 Winter Symposium, which won first place in the non-student category.
- "Gestational Diabetes Burden in South Carolina", poster presented at the 2010 Winter Symposium, which won second place in non-student category.
- *Efforts to Decrease Diabetes-Related Amputations in African Americans by the REACH Charleston and Georgetown Diabetes Coalition*. Journal of Family and Community Health (in press), 2010.

**DIABETES INITIATIVE OF SOUTH CAROLINA  
BOARD OF DIRECTORS AND COUNCIL MEMBERS**

# Diabetes Initiative of South Carolina

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SC DHEC – Diabetes Prevention and Control Program  
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SC DHEC – Diabetes & Disparities  
SC DHEC – Diabetes Prevention and Control Program  
SC DHEC – Diabetes Prevention and Control Program  
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SC DHEC – Diabetes Prevention and Control Program  
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MUSC, Dept. of Biostatistics & Epidemiology  
Presbyterian College, School of Pharmacy  
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MUSC, Dept. of Biostatistics & Epidemiology  
SC DHEC, Home Health Services  
Lowcountry AHEC  
College of Pharmacy, MUSC  
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SC DHEC – Diabetes Prevention and Control Program  
BJH Comprehensive Health Services  
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SC DHEC, Office of Minority Health  
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## **Intensive Management of Hospitalized Diabetic Patients (IMDH) Task Force**

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Ronald K. Mayfield, MD	Endocrinology, Spartanburg
Charles H. Raine, III, MD	Endocrinology, Orangeburg
Ali Rizvi, MD	USC, Department of Internal Medicine

### **Advisory Member:**

John A. Colwell, MD, Ph.D.	Past DSC Board Chair; Professor Emeritus, MUSC
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### **IMDH Steering Committee Members:**

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