



**DIABETES
INITIATIVE**
*of
South Carolina*

1998-2008

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Chairman, Board of Directors
Diabetes Initiative of South Carolina



PROMOTE PROTECT PROSPER
South Carolina Department of Health
and Environment Control
DIABETES CONTROL PROGRAM



American
Diabetes
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INTRODUCTION

The Diabetes Initiative of South Carolina (DSC) was established by legislative action in July 1994. A governing Board was created, and an administrative structure which included three Councils: Diabetes Center, Outreach, and Surveillance was established. The Board and Councils have liaisons with the Diabetes Control Program of the SC Department Health and Environmental Control (DHEC) and with the American Diabetes Association, SC Affiliate. In 1996, a report, *The Burden of Diabetes in South Carolina* was released by DHEC, which reflected the scope, impact, and costs of diabetes and its complications in South Carolina, using the most recently available data. The report was the result of close cooperation between the Diabetes Initiative Board, the Surveillance Council, and the Diabetes Control Program of DHEC.

The major findings in the report serve as the basis for the Strategic Plan of the Diabetes Initiative of South Carolina. Major issues are identified by the Board, and long range diabetes health status goals and aims are highlighted. Each Council is charged with developing programs that will directly attack these issues. Broadly speaking, professional education issues are the responsibility of the Diabetes Center Council, patient and public awareness and information are the province of the Outreach Council, and data base establishment, maintenance, and follow-up are handled by the

Surveillance Council. Close integration with activities of the Diabetes Control Program of DHEC and the ADA-SC is accomplished where indicated.

This document is therefore prepared in such a way as to: (1) Define the major health-related issues about diabetes in SC. (2) Describe a 10-year plan (1998-2008) that will address those issues. (3) Create an ongoing evaluation process. (4) Define specific responsibilities for addressing defined goals and aims, and (5) Indicate constraints/assumptions that are inherent in the Strategic Plan.

The Strategic Plan was initiated by a committee, appointed by the DSC Board Chairman. Members of the committee were: Fran Wheeler, Ph.D., (Chair), Pamela Arnold, R.N., M.S.N., Yaw Boateng, M.P.H., M.S., R.D., Ted Bransome, M.D., John Colwell, M.D., Ph.D., Ira Horton, M.D., Carolyn Jenkins, R.D., R.N., Dr.P.H., Gardenia Ruff, M.P.H., and Elizabeth Todd, M.S.W. The Plan was circulated widely to all Board and Council members and was revised and updated on many occasions. In addition to the above Committee members, the following individuals provided key input: Daniel Lackland, Dr.P.H., Beth Hoyt, William Robinson, M.A., Ellen Babb, M.P.H., R.D., Lisa Ellis, M.P.H., and Deyi Zheng, M.B., Ph.D. and Deborah Carson, Pharm.D.

Final drafts were prepared by Carolyn Jenkins and John Colwell, and Board approval was granted on December 5, 1997.

MISSION STATEMENT

The Diabetes Initiative of South Carolina will maintain a leadership position in providing education about diabetes and its complications to the general public, individuals with diabetes, health professionals, and health care systems. The Diabetes Initiative will develop and sustain educational programs in medicine, nursing, pharmacy, and other health-related professions and will promote the highest standards of health care for diabetes and its complications. It will develop methods to assure the recognition (certification) of optimal numbers of health professionals and programs as providers of superior knowledge and care for diabetes and its complications. The Diabetes Initiative will develop community-based diabetes programs to promote life-style changes that have the potential to prevent or delay the onset of diabetes and its complications. The Diabetes Initiative will organize and supervise programs that provide ongoing epidemiological information and surveillance of health care costs, scope and impact of diabetes and its complications in South Carolina. The Diabetes Initiative will work closely with other organized groups that are active in improving outcomes for diabetes and its complications. Finally, the Diabetes Initiative of South Carolina will conduct research on selected clinical issues in diabetes, as defined and approved by peer reviewed research protocols.

RATIONALE

Diabetes mellitus affects over 310,000 people in South Carolina, accounts for one in every six hospital beds, leads to hospital costs of over \$700 million yearly and is a leading cause of blindness, kidney failure, fetal mortality, amputations, and heart attacks. Recently completed surveys have indicated patients, their families, the general public, and health professionals of all types may not be aware of these issues.

Standards of care are changing rapidly as new knowledge about prevention and treatment emerges. There has been an explosion of new agents for the prevention and treatment of diabetes and its complications, and improved medical devices for insulin delivery and self-glucose monitoring are appearing at a rapid rate.

A consensus is emerging in the medical scientific community that intensive management of glucose, blood pressure, and blood lipids will forestall or prevent many of the complications of diabetes. Further, careful observation by trained health professionals will pick up early, treatable problems related to the eyes and feet, and laboratory testing at intervals will clearly indicate which patients need aggressive therapy for elevated blood glucose, kidney damage, or altered blood lipids.

It is likely that the high costs of diabetes mellitus and its complications can be lowered substantially by advanced planning and implementation of strategies that are known to be effective. Nevertheless, there are large problems with bringing this new information to patients and convincing health professionals that such extra efforts will yield positive results. Further, health policy makers and payers must be convinced that such programs deserve emphasis and support.

A consensus is emerging in the medical scientific community that intensive management of glucose, blood pressure, and blood lipids will forestall or prevent many of the complications of diabetes.

This Strategic Plan of the Diabetes Initiative of South Carolina is an attempt to deal with these issues. A 10-year plan, comprehensive in nature, is developed so as to focus on specific issues, define strategies to deal with these issues, and assign responsibilities to achieve our aims by Year 2008. An evaluation

component is included.

We define interim and long-range goals. Thus, it may be unrealistic to expect (for instance) a decline in the incidence of end stage renal disease if patients do not have periodic checks for micro-albuminuria and blood pressure, and health care providers do not take action if abnormal results are found. We expect that critical attention to short term goals will ultimately affect the rates of long term complications of diabetes. In view of slow progression of these complications, a 10-year strategic plan is proposed.

OVERVIEW

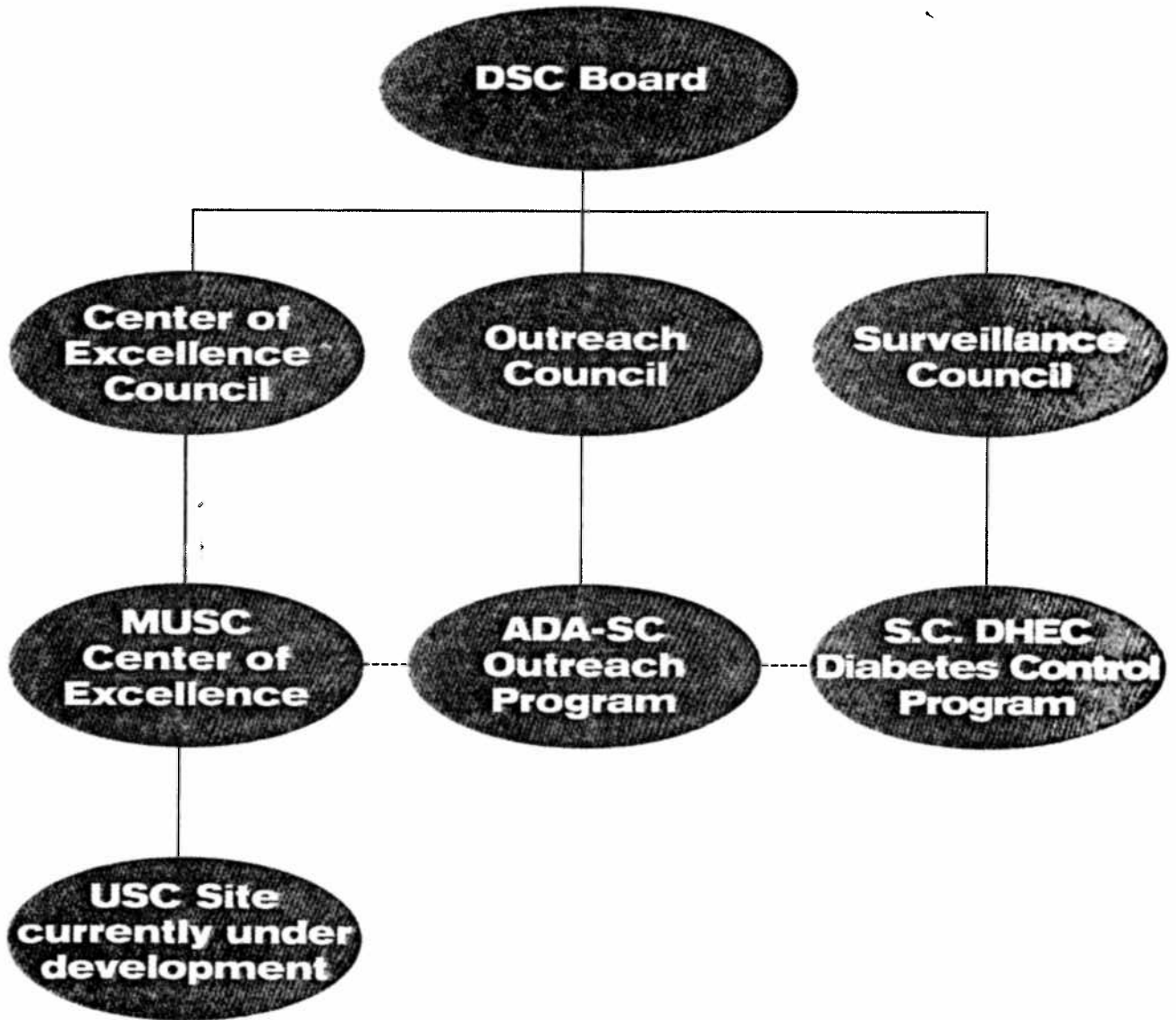
We define nine major goals:

- 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 that lead to actions that will delay progression of complications of diabetes.
- Goal III:** To address the needs of persons at risk and those with diabetes by increasing services and education in health professional shortage areas in South Carolina.
- Goal IV:** To reduce the morbidity and disability 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 and diabetes-related complications in South Carolina.


For each goal, we have defined the major issues that are presently recognized, and have indicated major quantifiable objectives (aims). Specific tasks and programs of the Outreach, Diabetes Center of Excellence, and Surveillance Councils are defined, and integration of the programs with the Diabetes Control Program of South Carolina Department of Health and Environmental Control, and with the activities of the American Diabetes Association, South Carolina Affiliate is described. Oversight is provided by the Diabetes Initiative of South Carolina Board. Figure 1 shows the organizational structure of the Diabetes Initiative, and is followed by current Board and Council members.

DIABETES INITIATIVE OF SOUTH CAROLINA

ORGANIZATIONAL CHART



**Board of Directors and
Council Members**



**DIABETES
INITIATIVE**
*of
South Carolina*

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Diabetes Center, MUSC
Catawba Indians
Office of the Governor
SC HHS Finance Comm.
Outreach Council, MUSC
SC Academy of Family Physicians
Ophthalmology, MUSC
Epidemiology/Biometry, MUSC
Internal Medicine
SC Medical Association
University of SC
At Large
SC DHEC
ADA, SC Affiliate
SC DHEC
USC School of Public Health
AADE

ADVISORY MEMBERS

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Nelson Gunter, MD
John Little, MD
Sabra Slaughter, PhD

Academic Center
Carolina Medical Review
Companion, HMO
SC AHEC

EX-OFFICIO

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Beth Hoyt
Stephen Smith

SC DHEC
MUSC
President, MUSC
ADA SC Affiliate
ADA

Diabetes Center Council

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James Thomas, MD
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Chair, Diabetes Center, MUSC
Diabetes Center, MUSC
DCP-DHEC
Community Pharmacy, MUSC
Primary Care Medicine, MUSC
Family Medicine, MUSC
Endocrinology, MUSC
Family Medicine, MUSC
Endocrinology, MUSC
Outreach Council, MUSC
Ophthalmology, MUSC
Endocrinology, MUSC
OB/GYN, MUSC
Roper Hospital Diabetes Center
SC AHEC
Internal Medicine, UDC
Pediatric Endocrinology, MUSC
EDIC/IDEAL, MUSC

Surveillance Council

MEMBERS

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Yaw Boateng, RD, MS, MPH
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D. Edwin Bransome, MD
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Diabetes Center, MUSC
SC Office of Research and Statistics
DCP-DHEC
South Carolina State University
Medical College of Georgia
SC DHEC
Diabetes Center, MUSC
SC Office of Research & Statistics
SC DHEC
Endocrinology, MUSC
Carolina Medical Review
Outreach Council, MUSC
Family & Preventive Medicine, SC
Carolina Medical Review
Biometry/Epidemiology, MUSC

Outreach Council

MEMBERS

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Diabetes Center, MUSC
Center for Public Education/MUSC
Companion Health Care
DCP-DHEC
Community Pharmacy/MUSC
Private Practice, Charleston
DHEC
Diabetes Center, MUSC
Private Practice/Florence
Private Practice/Myrtle Beach
DHEC
College of Health Professions, MUSC
St. Frances Xavier Home Health
Low Country AHEC
Pfizer Pharmaceuticals
Biometry/Epidemiology, MUSC
Vocational Rehabilitation
Low Country Health District
College of Nursing, MUSC
Eli Lilly Company
College of Pharmacy, MUSC
SC-ADA

DIABETES INITIATIVE OF SOUTH CAROLINA

Figure 2

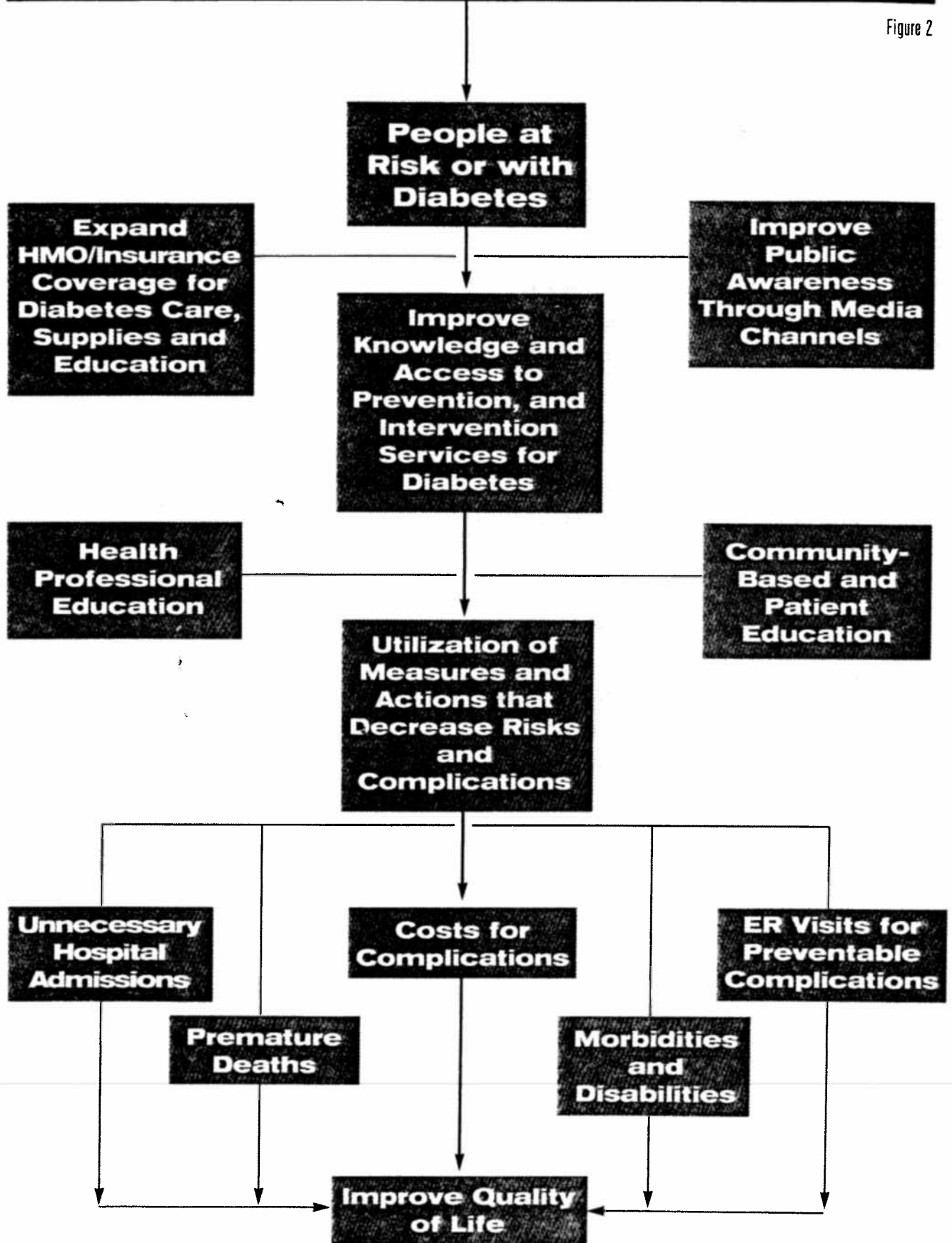


Figure 2 describes the major goals and aims of the strategic plan and gives an overview of how these goals and aims would fit in the organizational structure of the Diabetes Initiative of South Carolina. The primary focus is on people affected by diabetes, and those at increased risk. Major goals are to improve knowledge and behaviors related to diabetes self-management, to improve quality of life, and to increase access to preventative and intervention approaches at a reasonable cost. These efforts are primarily the responsibility of the Outreach Council. The focus of the Diabetes Center Council is on professional education, with a major goal of increasing utilization of key surrogate measures and taking action, as indicated by regularly updated consensus guidelines for care.

With these two major targets of focused efforts (people affected by or at increased risk for diabetes and health professionals who deal with diabetes), a planned integrated approach, under the guidance of the DSC Board, will ultimately result in decreases in the major endpoints: hospital admissions, morbidity and disability, emergency room visits, mortality, and costs of care. Each of these major endpoints is included in the Plan, with long range goals and aims. Estimates of time frames and change are included to provide some quantitative goals for the Plan.

To determine the impact of these programs, it is critical to provide ongoing surveillance of key measurement data. This is the province of the third major component of the Diabetes Initiative of South Carolina, the Surveillance Council. This Council works closely with the Diabetes Control Program of the SC Department of Health and Environmental Control (DHEC). A report, the Burden of Diabetes in South Carolina, was released in November 1996, and provides quantitative data on prevalence, mortality, morbidity/disability, and costs of diabetes and its complications in South Carolina in 1994. These data serve as the baseline estimates, and provide initial quantification which guides long range planning. The Surveillance Council and DHEC will provide longitudinal data which will track major endpoints, including hospital admissions, morbidity/disability and disability, eye, kidney, heart, peripheral vascular and other diabetic complications, emergency room visits, mortality and cost estimates.

With this approach, we are optimistic that major inroads can be made on the devastating problems of diabetes and its complications in South Carolina, and that accurate documentation of these results will be reviewed and modified as needed to achieve defined goals and aims.

ASSUMPTIONS AND CONSTRAINTS

- 1.** The Diabetes Initiative of South Carolina will continue as a state-supported program, with justified budgetary support that is subject to review and approval by the General Assembly on a regular basis.

- 2.** Additional DSC sites, as defined in the 1994 Report, will be developed.


- 3.** The DHEC Diabetes Control Program will be maintained, with appropriate growth.

- 4.** The ADA-SC will continue to be a voluntary health agency with a direct linkage to the Diabetes Initiative.

- 5.** The Strategic Plan will be viewed as a dynamic document, subject to periodic review, updating, and/or revision.

- 6.** It is recognized that because of increased attention to diabetes-related issues that ascertainment may lead to a temporary apparent increase in the burden in certain areas.

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.

ISSUES

Survey data, focus groups, and interviews indicate that people affected by diabetes desire an increased knowledge of the disease, improved access to prevention and intervention services, and an increased quality of life. Additionally, survey data, focus groups and interviews with persons with diabetes, health care professionals, as well as national leaders in diabetes care, indicate that a major barrier to diabetes care is the costs of self-management supplies, ongoing care, and education. Lastly, data indicate that, in general, people at risk for diabetes are not well informed/educated about risk factors and how these risk factors can be reduced.

AIMS

- Increase the number of people who report healthier lifestyles (nutrition, exercise, and/or weight control) by 2% yearly.
- Increase the number of people who are aware of the risk factors, signs and symptoms, and burden of diabetes by 5% yearly.
- Increase the number of persons who have access to care for preventive services, screening, and interventions to decrease the burden of diabetes by 5% yearly.
- Increase the number of persons with diabetes and their families who receive formalized systematic diabetes education by 5% yearly.
- Increase the number of persons with diabetes who report utilization of key monitoring guidelines.
- Expand insurance and managed care coverage for prevention and intervention services for diabetes that have documented cost-effectiveness.
- Improve quality of life for persons with diabetes through learning and self-management.

OUTREACH COUNCIL

The Outreach Council will:

- Develop, implement, and evaluate programs that support healthier lifestyles (nutrition, exercise, and/or weight control) to assist persons decrease risks for diabetes and its complications. (DHEC-DCP)
- Develop, implement, and evaluate programs and tailor ADA signature programs for South Carolinians to increase awareness of risk factors, signs and symptoms, and burden of diabetes. (ADA-SC)

GOAL I

- Develop, implement, and evaluate techniques to increase the number of persons with diabetes and their families who receive formalized systematic diabetes education, and who report utilization of key monitoring guideline. (Diabetes Center)
- Work with insurance and managed care companies to expand coverage for prevention and interventions that decrease complications of diabetes. (DSC and ADA-SC Boards - Insurance and Managed Care Task Force)
- Work with insurance and managed care companies to develop diabetes disease management programs that decrease complications of diabetes. (DSC and ADA-SC Boards - Insurance and Managed Care Task Force)
- Develop, implement, and evaluate innovative programs that expand awareness and knowledge, improve self-care behaviors by persons with diabetes and their families in an effort to decrease costs for ongoing diabetes care and education and improve quality of life. (Outreach Council)

DIABETES CENTER OF EXCELLENCE COUNCIL

The Diabetes Center of Excellence Council will:

- Develop, implement, and evaluate activities that assist health professionals in decreasing the risks of diabetes and its complications, and improving quality of life for persons with diabetes and their families. (Diabetes Center and DHEC-DCP)
- Work collaboratively with insurance and managed care companies to identify, evaluate, and translate needed data for implementing quality diabetes care key indicators into health professionals practice patterns. (Diabetes Center, DHEC-DCP, and ADA-SC)

SURVEILLANCE COUNCIL

The Surveillance Council will:

- Develop, implement and evaluate surveillance protocols and methodology to assess:
 - ~ Quality of life for persons with diabetes.
 - ~ Diabetes awareness (risk factors, signs and symptoms, and burden).
 - ~ Prevalence of diabetes and related complications.
 - ~ Access to community based primary care services and specialized care (if indicated) for all levels of prevention.
 - ~ Access and quality of diabetes self-management education.
 - ~ Utilization of key monitoring guidelines (i.e., HbA_{1c}, microalbumin, eye and foot examinations, lipids).

GOAL II

To increase the utilization of short-term (surrogate) measures which lead to actions that will delay progression of complications of diabetes.

ISSUES

Survey data (BRFSS), focus groups and self-reports from primary care physicians indicate that major guidelines for care are implemented less than 50% of the time for people with diabetes.

AIMS

- Increase the number of people with diabetes by 10% yearly in targeted areas of South Carolina who have:
 - Foot examinations
 - Eye examinations (dilated pupil or non-mydratic camera)
 - Urine checks for microalbumin
 - Lipid panel
 - Hemoglobin A_{1c}
 - Formalized diabetes education
- Increase specific actions to decrease progression of complications by 10% yearly:
 - Foot care instructions
 - Laser therapy
 - ACE inhibitor therapy
 - Diet and/or drugs for abnormal lipids
 - Intensive glycemic management program
 - Other risk factor reduction strategies: aspirin, smoking cessation programs, exercise
 - Diabetes education related to self-management for risk factor reduction
- Expand coverage/reimbursement by managed care and insurance for the following according to ADA guidelines:
 - Hemoglobin A_{1c} at least semiannually
 - Microalbumin assessment and interventions, if elevated
 - Lipid panel and interventions, if elevated
 - Foot examination and interventions as needed
 - Dilated eye examination annually with interventions as indicated
 - Diabetes education with annual assessment and update
- Expand diabetes disease management programs in collaboration with managed care organizations.
- Evaluate ongoing research findings related to improved clinical care for diabetes, and translate to 90% of South Carolina primary care providers to decrease preventable progression of complications.

GOAL II

OUTREACH COUNCIL

The Outreach Council will:

- Increase public awareness of the importance of utilization of short-term measures and specific activities/treatments, which lead to actions that will delay progression of complications, related to diabetes. (ADA-SC and DHEC-DCP)
- Utilize the latest research finding and translate information to South Carolinians to prevent/decrease complications. (ADA-SC and DHEC-DCP)
- Expand community awareness, capacity for actions, and actions that will assist persons with diabetes to request short-term measures and utilize specific activities/treatments to delay the progression of complications related to diabetes. (DHEC-DCP)
- Develop and test innovative programs in specific geographical areas and for specific populations that are at increased risk for morbidity/disability, and mortality related to complications of diabetes, and expand efforts to increase utilization of surrogate measures for identification and early interventions. Specific areas include but are not limited to those with highest complications/morbidity and disability/mortality rates, communities with organized capacity for actions, and those with greatest identified needs. (Diabetes Center and DHEC-DCP)

DIABETES CENTER OF EXCELLENCE COUNCIL

The Diabetes Center of Excellence Council will:

- Develop, implement and evaluate innovative programs that increase the utilization of short-term (surrogate) measures that have the potential for delaying the progression of diabetes and its complications. (Diabetes Center)
- Evaluate ongoing research findings related to surrogate markers for the prevention of complications. Translate findings to at least 90% of South Carolina's primary care providers. (Diabetes Center and DHEC-DCP)

SURVEILLANCE COUNCIL

The Surveillance Council will:

- Evaluate utilization of short-term (surrogate) measures which lead to action that will delay progression of diabetes complications through:
 - ~ Companion HealthCare survey
 - ~ Carolina Medical Review (ACQIP)
 - ~ Ongoing tally by Diabetes Center (programs)
 - ~ Reports related to Internet DSC Homepage use

GOAL II

- ~ Behavioral Risk Factor Surveillance System for Diabetes
- ~ Quality Improvement Program: Ambulatory Care in Diabetes
- ~ Other appropriate sources
- Identify specific geographical areas that are at increased risk for morbidity, disability, and mortality related to complications of diabetes, and expand efforts to increase utilization of surrogate measures for identification and early interventions. Specific areas include but are not limited to those with highest complications/morbidity and disability/mortality rates, communities with organized capacity for actions, and those with greatest identified needs. (Diabetes Center)
- Evaluate education/needs related to use of short term (surrogate) measures by counts and feedback from DSC continuing education programs. (Diabetes Center)
- Develop and analyze other appropriate databases to determine changes in provider practices related to adherence to guidelines for diabetes care and education.

GOAL III



To address the needs of persons at risk and those with diabetes by increasing services and education in health professional shortage areas in South Carolina.

ISSUES

- Twenty-three of forty-six counties are classified as health professional shortage areas.
- There is a shortage of physicians involved in the primary care of diabetes.
 - 1 family practitioner for every 4,819 people
 - 1 internist for every 9,137 people
 - 1 endocrinologist for every 327,000 people
- There is a shortage of other health professionals.
 - Eye specialists
 - Certified diabetes educators: 85 in 1994
 - Podiatrists: 102
 - Registered dietitians: 751
 - Pharmacists are under-represented
 - Advanced practice nurses with training in diabetes are in short supply
 - Physician's assistants are in short supply

AIMS

- Increase access to diabetes education for those at risk and those diagnosed with diabetes in health professional shortage areas by 10% each year.
- Increase the number of health professionals with updated training in diabetes for health professional shortage areas at a rate of 5% per year.
- Identify high risk, underserved communities and collaborate with other agencies to improve health promotion, disease prevention, and diabetes care.
- Decrease cost barriers to diabetes services and education through collaboration with insurance and managed care companies.
- Expand education to reduce identified risk factors for diabetes and its complications.

GOAL III

OUTREACH COUNCIL

The Outreach Council will:

- Organize and activate CDEs and other health professionals to expand diabetes care and education for those at risk and those with diabetes. (ADA-SC and Diabetes Center)
- Work with agencies, organizations, and health care systems to improve diabetes care and education services with emphasis on health professionals shortage areas. (Diabetes Center and DHEC-DCP)
- Expand community-based diabetes care and education services for underserved populations through asset mapping, collaborative efforts with other agencies and creative approaches for addressing identified priority issues. (DHEC-DCP in collaboration with ADA-SC, and Diabetes Center)
- Identify and decrease cost barriers to diabetes care and education through collaborative actions with communities, health care systems, other agencies/organizations, and insurance/HMOs. (Outreach Council, Diabetes Center, and DSC and ADA-SC Boards)

DIABETES CENTER OF EXCELLENCE COUNCIL

The Diabetes Center of Excellence Council will:

- Develop professional education programs to increase the number of trained health professionals. (Diabetes Center)
- Use innovative approaches to translate updated information to health professionals in health professional shortage areas. (Diabetes Center and DHEC-DCP)
- Expand diabetes care and education services to persons at risk and with diabetes in health professional service areas. (Diabetes Center and DHEC-DCP)
- Increase collaborative efforts with those health professionals currently practicing in health professional shortage areas to identify and address needs of persons at risk and with diabetes. (Diabetes Center)

SURVEILLANCE COUNCIL

The Surveillance Council will:

- Develop and implement methods to identify needs, and evaluate diabetes care services, education, and self management in health professional shortage areas and provide:
 - ~ Yearly reports of health professionals by their organizations in South Carolina.
 - ~ Yearly reports of underserved and health professional shortage areas with review of specific collaboration and implemented interventions.
- Monitor participation and evaluate application of learning for health professionals in DSC-sponsored courses.
- Evaluate participation and outcomes related to the needs of persons at risk and with diabetes in under served areas.

GOAL IV



To reduce the morbidity and disability rates from diabetes-related complications.

ISSUES

Morbidity and disability rates from diabetes-related complications are high and many are increasing:

- Prevalence of end-stage renal disease (ESRD) in SC increased from 16.9 - 28.1/100,000 from 1990 - 1994.
- Amputation rates for people with diabetes in South Carolina are almost twice the average of the US.
- Hospitalization rates for major vascular complications (myocardial infarction, ESRD, amputations) rose 60-75% from 1985-1993.
- There is an increase in perinatal mortality and morbidity/disability in diabetic pregnancies.
- Deaths from diabetic ketoacidosis (DKA) were 34 in 1994.
- Diabetes is the leading cause of blindness in adults, ages 25-74; SC does not have a registry for blindness.

AIMS (By 2008)

- Reduce the prevalence of ESRD attributed to complications of diabetes by 10% from 28.1 to 25.3/100,000 population.
- Reduce the number of amputations with diabetes as the cause by 10% from 1,348/year to 1,213/year.
- Reduce the average length of stay in the hospital for amputation (for persons with diabetes) by 10% from 16.3 to 14.7 days.
- Reduce hospitalization rates for major vascular complications for persons with diabetes by 10% including:
 - Myocardial infarction from 7.4/10,000 population.
 - Chronic renal failure from 7.7/10,000 population.
 - Amputations from 3.7 to 3.3/10,000 population.
- Reduce complication rates from diabetes pregnancies by 10% including:
 - Perinatal mortality from 22.6 to 20.3/1,000 deliveries.
 - Infant mortality from 12.1 to 10.9/1,000 live births.
 - Abnormal conditions of newborn from 15.5% to 14.0%.
- Reduce deaths from diabetic ketoacidosis (DKA) from 34 to 30.

GOAL IV

- Establish a Registry for cases of blindness due to diabetes.
- Increase the number of risk reduction activities at the community level.

OUTREACH COUNCIL

The Outreach Council will:

- Expand public awareness related to morbidity and disability for persons at risk and with diabetes. (ADA-SC and DHEC-DCP)
- Expand risk reduction activities at the community level. (DHEC-DCP)
- Develop and test innovative methods for increasing public awareness and expanding risk reduction activities in specified groups and geographical areas. (Diabetes Center and DHEC-DCP)
- Examine the use of media and other methods for translating risk reduction activities to South Carolinians with diabetes. (DSC and ADA-SC Boards: Media Task Force)

DIABETES CENTER OF EXCELLENCE COUNCIL

The Diabetes Center of Excellence Council will:

- Translate methods for reducing morbidity and disability to health care providers throughout the state. (Diabetes Center)
- Identify and work collaboratively with at least 4 new professional groups or organizations each year to implement morbidity and disability reduction actions. (Diabetes Center and DHEC-DCP)
- Identify and publish information related to cost-effective techniques for reducing morbidity and disability. (Diabetes Center)

SURVEILLANCE COUNCIL

The Surveillance Council will:

- Further develop, expand, and evaluate a network of collaborators and experts on diabetes, surveillance and assessment in South Carolina.
- Develop and maintain an ongoing mechanism to analyze mortality data and produce routine data reports on diabetes related mortality outcomes and trends.
- Develop and maintain a mechanism to analyze hospitalization data related to diabetes and produce reports on outcomes, co-morbidity, and procedures.

GOAL IV

- Develop, establish and maintain a registry of blind South Carolinians that identify diabetic individuals.
- Establish and maintain an assessment mechanism of the SC Medicaid database.
- Establish and maintain an assessment of quantity and quality of care for the Medicare and Medicaid beneficiaries in South Carolina.
- Establish and maintain an ongoing evaluation of insurance and managed care coverage for diabetes screening and care.
- Establish and maintain an ongoing evaluation of the role of insurance and managed care companies in providing care and improving outcomes related to diabetes.

GOAL V

To reduce the age-adjusted mortality rates from diabetes and its complications.

ISSUES

Although diabetes is under reported as a primary or contributing cause of death on death certificates, mortality rates for diabetes as one of the listed causes of death in SC rose from 50.7 to 73.5/100,000 population between 1980-1993. There is a 4 to 5-fold difference in mortality rates for diabetes as an underlying cause between counties with high rates (35.1 to 59.3/100,000) versus those with low rates (8.2-14.4/100,000).

AIMS (By 2008)

- Reduce age-adjusted mortality rates for diabetes as a listed cause of death by 10% from 73.5 to 66.0 per 100,000 population.
- Target efforts to decrease mortality rates by 10% in the 8 counties with highest rates.
- Develop systems to increase accuracy of reporting diabetes on death certificates. Adjust above aims to take increased reporting into account, if accomplished.

OUTREACH COUNCIL

The Outreach Council will:

- Collaborate with Surveillance and Diabetes Center of Excellence Councils to examine the effects of activities on morbidity/disability and mortality for South Carolinians and identify and implement those outreach activities that have been demonstrated to reduce morbidity and disability and premature deaths.

DIABETES CENTER OF EXCELLENCE COUNCIL

The Diabetes Center of Excellence Council will:


- Collaborate with Surveillance and Outreach Councils and other organizations to examine the effects of activities on morbidity/disability and mortality for South Carolinians and identify and implement those activities related to professional education that have been demonstrated to reduce morbidity/disability and premature deaths.

SURVEILLANCE COUNCIL

The Surveillance Council will:

- Develop and maintain mechanisms to analyze mortality data and produce routine data reports on diabetes related mortality outcomes and trends.
- Collaborate with other organizations, the Diabetes Center of Excellence and Outreach Councils to examine the effects of activities on morbidity/disability and mortality for South Carolinians and identify and implement those activities related to surveillance that have been demonstrated to reduce morbidity/disability and premature deaths.

GOAL VI



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

ISSUES

Prevalence of diabetes is doubled among African-Americans and more than doubled in Native Americans.

African-Americans have increased rates of diabetic complications.

- Mortality in African Americans: 26.7(M), 32.5(F)/100,000 (1990-1994) versus mortality in Caucasians 12.0(M), 9.9(F)/100,000 (1990-1994)
- Perinatal Mortality: 29.0 versus 18.9/1,000 deliveries (1994)
- Infant Mortality: 17.4 versus 9.1/1,000 live births (1994)
- Amputations: 31.6% in NWF versus 19.8% in WF
- ESRD (Dialysis): 48.5% NWF, 25.6% in NWM versus 12.5% WF, 13.1% WM

Native Americans have increased rates of diabetic complications; however, statistical data is limited for Native Americans living in South Carolina.

AIMS (By 2008)

- Decrease the rate of complications among African-Americans and Native Americans by 10%:
 - Mortality from 32.5 to 29.2/100,000 (NWF) and 26.7 to 24.0/100,000 (NWM)
 - Perinatal mortality from 29.0 to 26.1/1,000 deliveries
 - Infant mortality from 17.4 to 15.7/1,000 live births
 - Amputations from 31.6% to 28.4% (NWF)
 - ESRD (Dialysis) from 48.5% to 43.6% (NWF) and 25.6% to 23.0% (NWM)

OUTREACH COUNCIL

The Outreach Council will:

- Develop, implement, and evaluate specific programs to address issues related to identified groups with increased prevalence and complications related to diabetes. (Diabetes Center and DHEC-DCP)
- Translate the most recent information related to prevention of diabetes and its complications into activating communities to proactively address risks. (DHEC-DCP)

GOAL VI

- Increase public awareness in identified groups to expand risk reduction activities of individuals. (ADA-SC)
- Evaluate overall activities using the continuous improvement model to identify needed changes to decrease prevalence and complication rates in high-risk groups. (Outreach Council)

DIABETES CENTER OF EXCELLENCE COUNCIL

The Diabetes Center of Excellence Council will:

- Develop and implement programs and activities for health professionals that improve cultural sensitivity related to diabetes and its complications. (Diabetes Center)
- Develop/identify/distribute culturally sensitive educational materials to be used by health professionals to decrease risks for selected populations. (Diabetes Center and DHEC-DCP)

SURVEILLANCE COUNCIL

The Surveillance Council will:

- Develop and maintain a mechanism to analyze mortality data related to specific population groups and the population as a whole, and produce routine data reports on diabetes related mortality outcomes and trends.
- Develop and maintain a mechanism to analyze hospitalization data related to specific population groups and the population as a whole, related to diabetes and produce reports on outcomes, co-morbidity, and procedures.
- Establish and maintain an assessment of the burden of diabetes for SC Medicaid beneficiaries.
- Establish and maintain an assessment of the burden of diabetes for Medicare beneficiaries in South Carolina.
- Develop culturally competent mechanisms to assess and report reasons for disparity among African Americans and other select groups.
- Document barriers to diabetes care, education, and self-management.
- Identify selected populations and communities that are at increased risks.
- Monitor and assess effectiveness of interventions for African Americans, Native Americans, and other high-risk communities.
- Establish a mechanism to examine the burden of diabetes on uninsured and/or underinsured individuals and their families in South Carolina.

GOAL VII



To reduce preventable hospital admissions and charges for diabetes.

ISSUE

In 1994, there were 51,100 admissions for diabetes as related diagnosis.

In 1994, hospital charges of individuals with a primary diagnosis of diabetes were \$61 million and were \$651 million for those with diabetes as a secondary diagnosis (total: \$712 million).

AIMS (By 2008)

- Reduce admissions for diabetes and related complications by 10%: from 51,000 to 46,000.
- Reduce total charges for diabetes and complications by 10% from \$712 million to \$641 million.

OUTREACH COUNCIL

The Outreach Council will:

- Develop, implement and evaluate a statewide media campaign to implement specific actions that can prevent unnecessary hospitalizations for diabetes and its complications. (DSC and ADA-SC Boards: Media Task Force)
- Increase public awareness related to activities that prevent hospitalizations for diabetes and its complications. (ADA-SC and DHEC-DCP)
- Implement community action programs to recognize early signs and symptoms of problems and prevention of complications by improved care-seeking behaviors and improved self-care. (DHEC-DCP)
- Test innovative methods and programs in specific populations to decrease preventable hospital admissions and charges. (Diabetes Center and DHEC-DCP)

DIABETES CENTER OF EXCELLENCE COUNCIL

The Diabetes Center of Excellence Council will:

- Translate recommended diabetes care activities (testing, appropriate treatment and referral) to practicing health professionals and integrate these methods into education of new health professionals. (Diabetes Center and DHEC-DCP)
- Develop and test new methods, materials, and activities that reduce preventable hospitalizations for diabetes and its complications. (Diabetes Center and DHEC-DCP)

GOAL VII

SURVEILLANCE COUNCIL

The Surveillance Council will:

- Develop, maintain, and analyze hospitalization data related to diabetes and produce reports on outcomes, co-morbidity, and procedures.
- Develop and maintain a system to analyze costs associated with diabetes.
- Examine epidemiological information related to hospital admissions in special populations groups (African Americans, Native Americans, children, and Medicare and/or Medicaid beneficiaries).

GOAL VIII



Reduce preventable visits to the emergency room by people with diabetes.

ISSUES

- From 7/1/95 to 12/31/95, there were 5,314 unduplicated emergency room visits for diabetes, for an annualized estimate of 10,628 visits.
- Seventy-nine percent (79%) of these visits were for uncomplicated diabetes.

AIMS (By 2008)

- Reduce the annual number of emergency room visits for diabetes by 10% per year from 10,628 to 9,565.
- Decrease the percentage of visits for uncomplicated diabetes from 79% to 71%.

OUTREACH COUNCIL

The Outreach Council will:

- Test innovative methods and programs in specific populations to decrease preventable emergency room visits and charges. (Diabetes Center and DHEC-DCP)
- Develop, implement and evaluate a statewide media campaign to implement specific actions that can prevent unnecessary emergency room visits for diabetes and its complications. (DSC and ADA-SC Boards: Media Task Force)
- Increase public awareness related to activities that prevent unnecessary emergency room visits for diabetes and its complications. (ADA-SC and DHEC-DCP)
- Implement community action programs to recognize early signs and symptoms of problems and prevention of complications by improved primary care-seeking behaviors and improved self-care. (DHEC-DCP)
- Implement creative training for children attending Diabetes Camp to develop preventive behaviors to prevent acute and chronic complications. (ADA-SC)
- Develop, implement, and evaluate activities to decrease acute complications in children and adolescents with diabetes. (Diabetes Center and ADA-SC)

GOAL VIII

DIABETES CENTER OF EXCELLENCE COUNCIL

The Diabetes Center of Excellence Council will:


- Translate recommended diabetes care activities (testing, appropriate treatment and referral) to practicing health professionals and integrate these methods into education of new health professionals. (Diabetes Center and DHEC-DCP)
- Develop and test new methods, materials, and activities that reduce preventable hospitalizations for diabetes and its complications. (Diabetes Center and DHEC-DCP)
- Develop, implement, and evaluate programs and activities to decrease and manage acute complications in children and adolescents with diabetes. (Diabetes Center)

SURVEILLANCE COUNCIL

The Surveillance Council will:

- Develop and maintain an ongoing assessment of emergency room utilization for diabetes.
- Examine epidemiological information related to emergency room visits in special populations groups (African Americans, Native Americans, children, and Medicare and/or Medicaid beneficiaries).

GOAL IX



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

ISSUES

- South Carolina ranks number 2 in the US in the prevalence of diabetes, but is estimated to have one undiagnosed individual for every diagnosed individual. Current prevalence data are only based upon self-reporting in a telephone survey. Questions are part of a general health survey.
- Diagnostic criteria for diabetes changed in June 1997.
- Early diagnosis and therapy may be shown to prevent or delay the progression of diabetes.

AIMS (By 2008)

- Screen high-risk individuals so as to identify undiagnosed individuals with diabetes.
- Establish a Registry (or statewide database) for diabetes.

OUTREACH COUNCIL

The Outreach Council will:

- Educate the public about the importance of screening and participation in activities/research/surveillance to document the burden of diabetes.
- Increase public awareness related to the number of persons with diabetes and its complications. (ADA-SC)
- Translate statistics to communities and community action programs so as to reduce the burden of diabetes and its complications. (DHEC-DCP)
- Develop measures to evaluate the effectiveness of public awareness and community programs in reducing the burden of diabetes. (Diabetes Center and DHEC-DCP)

DIABETES CENTER OF EXCELLENCE COUNCIL

The Diabetes Center of Excellence Council will:

- Work collaboratively with health professionals and systems to integrate routine screening (according to ADA standards) and data collection activities into ongoing primary care. (Diabetes Center and DHEC-DCP)
- Develop collaborative efforts with Managed Care Organizations to document statistical outcomes related to the burden of diabetes. (DSC and ADA Boards: Insurance and Managed Care Task Force)

SURVEILLANCE COUNCIL

The Surveillance Council will:

- Develop and implement new protocols and methodology to assess diabetes prevalence in South Carolina.
- Obtain the most accurate and latest data related to prevalence of diabetes and its complications.

Summary of Task Groups and Programs

Task Groups and Programs currently implemented or under development that address the aims are listed according to Councils that provide oversight for activities:

Diabetes Initiative of South Carolina Board (in collaboration with ADA-SC and DHEC/DGP):

- Insurance and Managed Care Task Force
- Media Task Force

DSC Outreach Council:

- Model Diabetes Education Programs
- Diabetes Head to Toe Patient Education Program
- Diabetes Today: Columbia, Orangeburg, Anderson, Myrtle Beach, Catawba Nation
- Diabetes Information and Action Line (D.I.A.L.)
- Enterprise Hypertension and Diabetes Management and Education
- Diabetes Alert
- Diabetes Sundays
- ADA Camp Fisher for children with diabetes
- African American Initiative
- Historically Black Colleges and Universities (HBCU) program
- Catawba Indian Program
- Low Country AHEC Community-Oriented Primary Care Program
- Closing the Gap Initiative

DSC Diabetes Center of Excellence Council:

- Health Professional Education:
 - Certified Diabetes Educators
 - Pharmacists Diabetes Disease Management Program
 - Nursing Students (graduate and undergraduate)
 - Medical Students
 - Rural Interdisciplinary Program (SCRIPT)
 - Diabetes Advanced Practice Nurses
 - Dietetic Intern Program
 - Foot Care Course for Nurses
 - Emergency Medical Technicians
 - Eye Care Specialists
- Annual Symposium for Primary Care Health Professionals
- Office-Based Primary Care Diabetes Education and Evaluation Program
- Health Professional Education in Community Health Centers
- DCP Office-Based Provider Education Programs for Companion Health Care and Community Health Centers
- Quality Improvement Program: Ambulatory Care in Diabetes
- Newsletter: Initiative News

DSC Surveillance Council:

- Behavioral Risk Factor Surveillance System for Diabetes
- Quality Improvement Program: Ambulatory Care in Diabetes
- Secondary Analysis of Databases
- DSC Internet Home Page
- Analysis of Medicaid Utilization and Costs
- Burden of Diabetes in South Carolina

Task Group and Program Descriptions

Most task groups and programs are collaborative efforts of the many partners involved with the Diabetes Initiative of South Carolina. The lead agency for each program is listed.

Diabetes Initiative of South Carolina Board

(in collaboration with ADA-SC and DHEC-DCP):

Insurance and Managed Care Task Force

The Insurance and Managed Care Task Force is a group appointed by DSC and ADA-SC Boards to work with insurance and managed care groups to improve services and coverage for diabetes care, supplies, and education.

Media Task Force

The Media Task Force is a group appointed by DSC and ADA-SC Boards to improve public awareness related to diabetes risk factors, complications, and the tremendous burden of diabetes for South Carolinians. The goal of the group is to improve outcomes related to diabetes.

DSC Outreach Council:

Model Diabetes Education Program

This program aids hospitals, centers, and other diabetes units to become certified for their patient education programs in diabetes. It includes a comprehensive manual to assist in implementing the

model program, along with site visits, consultation, support and feedback throughout the process. Outcomes are tracked throughout the program. Completion of the process assists those hospitals, centers, and other diabetes units to apply for recognition of their Patient Education Program by the American Diabetes Association. The program is supported by an Advisory Committee and is co-sponsored by DSC and the DHEC Diabetes Control Program.

Diabetes Head to Toe Patient Education Program

This program is a community-based diabetes education program that focuses on underserved areas of South Carolina and is coordinated by the MUSC Diabetes Center. A group of certified diabetes educators use the same curriculum about diabetes, its causes, treatment, and complications, along with audiovisual aids to provide education to interested lay groups throughout the state.

Diabetes Today

Diabetes Today is coordinated by the DHEC Diabetes Control Program and is a CDC approved interactive program designed to educate community leaders to plan and implement community-based health programs on diabetes. The program is community-based and community-owned.

Task Group and Program Descriptions

Diabetes Information and Action Line (D.I.A.L.)

D.I.A.L. is an American Diabetes Association Signature program and is a telephone helpline and referral system. Callers can receive up-to-date information on diabetes or be referred to a health-care professional in South Carolina by dialing 1-800-DIABETES or 799-4246 (in Columbia). A trained staff and volunteers answer questions, mail current information, and serve as a guide to community resources.

Enterprise Hypertension and Diabetes Management and Education

The Enterprise Hypertension and Diabetes Management and Education Program was developed by the MUSC Diabetes Center and the College of Nursing in response to identified community needs. The Enterprise program was initially funded by US-HUD and is presently funded by an MUSC program: Healthy South Carolina to address diabetes and hypertension education and management for the inner city of Charleston and North Charleston. The program provides community-based diabetes education and case management, along with foot care and eye screening, to reduce complications and improve outcomes for diabetes and hypertension.

Diabetes Alert

Diabetes Alert Day is a signature program of the American Diabetes Association. It is held on the last Tuesday in March with a nationwide call to

take the risk test and know the score. Of the 16 million with diabetes in the US, and about one-third do not know they have it. In South Carolina, an estimated 312,000 people have diabetes and the emphasis is on identifying those with increased risks and encouraging them to request screening for diabetes from their primary care provider.

Diabetes Sundays

Diabetes Sundays is a program sponsored by the American Diabetes Association and expanded by the Diabetes Initiative. The focus is on disseminating information about diabetes through local churches during February.

ADA Camp Fisher for children with diabetes

Camp Adam Fisher is a program sponsored by the American Diabetes Association, South Carolina Affiliate, and is a week-long camping experience for children and adolescents 7-17 years old with diabetes. The camp is held at the Cooper 4-H Leadership Center in Summerton, South Carolina. Camp provides young people with an organized environment to practice healthy management skills and interact with others with diabetes. Volunteers and health professionals with expertise in diabetes function as camp counselors.

African American Initiative

The African American Initiative is a combined effort of the American Diabetes Association's

Task Group and Program Descriptions

African American Program, DHEC's Diabetes Control Program and the Diabetes Initiative of South Carolina to educate African Americans that **DIABETES IS A SERIOUS DISEASE THAT CAN BE CONTROLLED**. The focus is on raising awareness about risk factors and ways to avoid or delay complications, and improving outcomes for diabetes for African Americans. The program focuses on providing education and improving care and education services.

Several activities and programs are linked to the Initiative and include:

- **Historically Black Colleges and Universities (HBCU) program** which supports South Carolina State University in establishing a center for improving diabetes prevention, screening, and care on HBCU campuses and African American communities throughout the state.
- **Closing the Gap** is a five county health initiative designed to reduce the disparities in African-American health risks through improving education, prevention, and treatment. The initiative will be implemented in a contiguous area of Fairfield, Kershaw, Lee, Richland and Sumter counties, and links African-American agencies, organizations, programs, and businesses to address specific health problems including diabetes.

Catawba Indian Program

The Catawba Indian Program is a program to assist Native American residents of the Catawba

Tribe in Rock Hill improve diabetes prevention, screening, care through educational activities. DHEC Diabetes Control Program has conducted Diabetes Today and MUSC Faculty are working collaboratively to establish links for improving health related to diabetes.

Low Country AHEC Community-Oriented Primary Care Program

Through collaboration with Low Country AHEC, DSC is working with PRO-Hampton and AHEC to create community-based programs to improve diabetes care. The focus is on continuing education programs for health professionals, assistance with training community members to link people with diabetes to needed services, and obtaining funds for creating a diabetes interdisciplinary team to provide continuous improvement in services and outcomes related to diabetes.

DSC Diabetes Center of Excellence Council:

Health Professional Education Programs

Certified Diabetes Educators: Certified Diabetes Educator (CDE) Course (2 days) are given twice yearly in rotating geographic sites in South Carolina. Faculty review key advances in pathophysiology, care, complication, and education for people with diabetes. The course is designed to prepare health care professionals for testing for certification as diabetes educators.

Task Group and Program Descriptions

Pharmacists Diabetes Disease Management Program: This course is conducted yearly, under the direction of the College of Pharmacy, Medical University of South Carolina. This course includes 4 days of lectures on all aspects of diabetes, a ten-week practical experience with case studies, evaluation of the case studies, and a concluding series of discussions/workshops/lectures over a twelve-week period. Credit may be applied toward a Pharm.D. degree.

Nursing Students (graduate and undergraduate):

Medical Students:

Dietetic Intern Program:

Emergency Medical Technicians:

Eye Care Specialists:

Educational presentations are provided for students enrolled in the listed programs. Members of the MUSC Diabetes Center give the presentations and the focus is on improving care for persons with diabetes.

Foot Care Course for Nurses

Foot care courses are held 6-8 times yearly in Charleston. These courses are designed to completely cover all aspects of foot care for people with diabetes and other disorders.

Annual Symposium for Primary Care Health Professionals

The Annual Symposium for Primary Health Care Providers is held each Fall in Charleston.

Nationally recognized experts present the latest advances in diabetes management, and a review of ongoing Diabetes Initiative activities is presented to participating health professionals.

Office-Based Primary Care Diabetes Education and Evaluation Program

The Diabetes Center offers office-based education and evaluation, as well as consultation and hands-on education to primary care providers. A manual to update guidelines and strategies for diabetes care is currently under development and will be distributed to all primary care providers in South Carolina. The goal is to assist providers in establishing quality diabetes care that is tailored to the individual provider needs while instituting those surrogate measures and care that are known to decrease complications.

DCP Office-Based Provider Education Program

This program provides office-based education to primary care providers and their staff as well as updates on the latest recommended diabetes care activities. Specific providers are approached to receive the class through agreements with Companion Health Care and the South Carolina Primary Care Association. Future contract will also include Rural Health Centers. It is expected that at least half of the primary care providers and 75% of the primary care center providers/sites in the state can be reached.

Task Group and Program Descriptions

Quality Improvement Program: Ambulatory Care in Diabetes

The Quality Improvement Program: Ambulatory Care in Diabetes in a program of the Carolina Medical Review and the information is used by DSC and the Diabetes Center of Excellence Council as a basis for improving care provided to persons with diabetes.

Newsletter: Initiative News

The Diabetes Initiative publishes Initiative News, a newsletter for primary care providers. The goal is to provide the latest advances in diabetes care, along with practical tips for improving diabetes care and education. The Newsletter is distributed to all primary care providers and those who have attended one or more diabetes education seminars sponsored by DSC.

DSC Surveillance Council:

The DSC Surveillance Council obtains data from multiple sources to monitor the burden of diabetes for South Carolinians and the quality of care. Some of the sources include:

- Behavioral Risk Factor Surveillance System for Diabetes
- Secondary Analysis of Databases

DSC Internet Home Page

The Diabetes Initiative maintains a Home Page on the Internet that provides a listing of activities of DSC, the latest guidelines for diabetes care and education, and statistics related to the burden of diabetes in South Carolina. The Home Page is available through the MUSC home page or <http://www.musc.edu/diabetes/>

Analysis of Medicaid Utilization

The Surveillance Council is currently examining the Medicaid database to determine types of services, continuity of care and other information related to diabetes.

Burden of Diabetes in South Carolina

The Burden of Diabetes in South Carolina was released in November 1996 and systematic updates of available information will be compiled and released. The report is a collaborative effort among DHEC-DCP, DSC, and ADA-SC. The first report was written by Sandra Carnesale, M.D., M.P.H., Director of Medical Services for the Palmetto Health District. Many persons provided help and assistance with the report. The Office of Research and Statistics of the South Carolina Budget and Control Board provided hospital discharge and emergency room visit data.



SUMMARY

South Carolina

DSC Long Range Plan – Goals and Aims: 1994 Database

I. Improve knowledge of diabetes, quality of life, and access to prevention and intervention services

- Healthier lifestyles: nutrition, exercise, weight control
- Risk factor awareness: prevention, signs/symptoms of diabetes and complications
- Improve access to preventive services, screening and ongoing care: formalized systematic care and education
- Improve self-management: use of key monitoring guidelines by persons with diabetes
- Expand financing: insurance and managed care coverage for education and care

II. Increase utilization of short-term (surrogate) measures and actions (Yearly)

- Feet: Foot care instruction
- Eyes: Eye specialist, laser
- Urine Microalbumin: ACE inhibitor Rx
- Lipid Panel: Diet/drug Rx
- HbA_{1c}: Intensive glycemic management
- Education: Self-management
- Other: ASA, smoking cessation program, exercise program

III. Increase Services and Education in Health Professional Shortage Areas

- 23 of 46 counties are classified as health professional shortage areas
- Health professional shortages:
 - Family Medicine: 1/4,819 people
 - Internal Medicine: 1/9,137 people
 - Endocrinologist: 1/327,000 people
 - Certified Diabetes Educators: 85
 - Podiatry: 102
 - Registered Dietitians: 751
 - Pharmacists
 - Advanced Practice Nurses
 - Physician Assistants
 - Eye Care Specialists

IV. Reduce Morbidity and Disability

- End Stage Renal Disease: 28.1/100,000
- Amputations: 348/year
 - Length of Stay 16.3 days
- Hospitalization Rates:
 - Myocardial Infarction: 7.4/10,000 discharges
 - Chronic Renal Failure: 7.7/10,000 discharges
 - Amputations: 3.7/10,000 population
- Pregnancies:
 - Perinatal Mortality: 22.6/1000
 - Infant Mortality: 12.1/1000
 - Abnormal conditions: 15.5%
- DKA Deaths: 34
- Blindness: Registry

V. Reduce (Age-Adjusted) Mortality Rates

- DM as a primary or secondary cause of death: 73.5/100,000
- Highest counties
- Improve reporting on death certificates

VI. Target High Risk Groups

- African Americans: Prevalence doubled
 - Complications increased 50-300%
- Native Americans: Prevalence up to 50% in some age groups

VII. Decrease Preventable Hospital Admissions and Charges

- Admissions: 51,100
- Total charges: \$712 million

VIII. Decrease Preventable Emergency Room Visits

- Emergency Room visits for diabetes: 10,628/year
- Uncomplicated DM is the diagnosis for 79% of those visits

IX. Improve Statistical Basis for Estimating Prevalence of Diabetes and Diabetes Complications

- Screen high-risk populations
- Establish a Diabetes Registry

TO STATE HEALTH PLAN



**DIABETES
INITIATIVE**
*of
South Carolina*

1998-2008