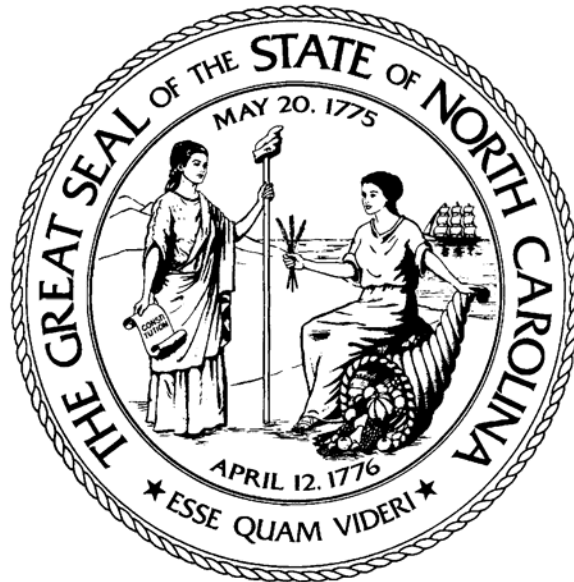


COORDINATION OF DIABETES PROGRAMS

BI-ANNUAL REPORT



G.S. 130A-221.1

State of North Carolina

Department of Health and Human Services

Division of Medical Assistance

Division of Public Health

Department of the State Treasurer

State Health Plan for Teachers and State Employees

January 1, 2015

**COORDINATION OF NORTH CAROLINA DIABETES PROGRAMS
BI-ANNUAL REPORT
PRESENTED JANUARY 1, 2015**

I. Executive Summary

North Carolina General Statute 130A-221.1 requires the Department of Health and Human Services and the State Health Plan for Teachers and State Employees, a division of the Department of the State Treasurer, to report by January 1 of every odd-numbered year how North Carolina is working to reduce the incidence of diabetes, improve diabetes care, and control the complications associated with diabetes.

Scope of the Problem

The Division of Public Health (DPH), the Division of Medical Assistance (DMA), and the State Health Plan (Plan) collectively offer diabetes-related programs and services to all North Carolinians. Diabetes afflicts one out of every ten North Carolinians. The rate of diabetes has steadily increased over the past two decades rising from less than 5 percent in 1994 to 10 percent in 2012. An additional 9 percent of North Carolinians had pre-diabetes in 2012. Diabetes affects 122,000 Medicaid recipients and 100,000 Plan members.ⁱ

Financial Impact

One in five health care dollars spent across the nation is spent on persons with diabetes, and health care costs for this population average 2.3 times more than those without diabetes. North Carolina Medicaid spent an estimated \$781million on medical care for beneficiaries with diabetes in 2013. The Plan's members with diabetes incurred \$933 million in allowed claims in 2013.ⁱ

Effectiveness of Programs

A variety of evidence-based programs and interventions targeting diabetes management and risk factors is available to persons with diabetes. Plan members and Medicaid beneficiaries are able to receive diabetes self-management education, diabetes prevention programs, health coaching and care alerts for both prevention and disease management. Several of these programs and services are extended to other North Carolinians through DPH and the NC Division of Aging and Adult Services (DAAS). Health care providers serving Plan members and Medicaid beneficiaries must also report and achieve quality measures for diabetes prevention and management.

Coordination

The Plan, DPH and DMA coordinate efforts on diabetes prevention programs; delivery of Eat Smart, Move More, Weigh Less, an evidence-based weight management program; education of providers on new clinical guidelines; and worksite wellness programs.

Action Plan

The following coordinated action items aim to improve diabetes prevention and management:

- Develop a campaign to increase awareness of pre-diabetes and diabetes, and promote evidence-based diabetes self-management education among North Carolinians.
- Evaluate and enhance the benefit design of the Plan and DMA covered services to impact the identification and improved management of diabetes and pre-diabetes.
- Support and foster a statewide network of recognized Diabetes Self-Management Education (DSME) providers through training and certification.
- Establish common quality metrics that will monitor the prevalence, impact and complications associated with pre-diabetes and diabetes across the State.
- Promote third party coverage of Diabetes Prevention Lifestyle Change Programs for persons with pre-diabetes.
- Extend pregnancy Medicaid from 8 to 12 weeks post-partum to allow for use of Hemoglobin A1c glucose screening (instead of glucose tolerance test) for diabetes in women who have had gestational diabetes.

I. General Statute 130A-221.1, Coordination of Diabetes Programs

G.S. 130A-221.1, as established by Session Law 2013-192 and as amended by Session Law 2014-100, Section 12E.7, reads:

“(a) The Division of Medical Assistance and the Diabetes Prevention and Control Branch of the Division of Public Health, within the Department of Health and Human Services; in addition to the State Health Plan Division within the Department of State Treasurer; shall work collaboratively to each develop plans to reduce the incidence of diabetes, to improve diabetes care, and to control the complications associated with diabetes. Each entity's plans shall be tailored to the population the entity serves and must establish measurable goals and objectives.

(b) On or before January 1 of each odd-numbered year, the entities referenced in subsection (a) of this section shall collectively submit a report to the Joint Legislative Oversight Committee on Health and Human Services and the Fiscal Research Division. The report shall provide the following:

- (1) An assessment of the financial impact that each type of diabetes has on each entity and collectively on the State. This assessment shall include: the number of individuals with diabetes served by the entity, the cost of diabetes prevention and control programs implemented by the entity, the financial toll or impact diabetes and related complications places on the program, and the financial toll or impact diabetes and related complications places on each program in comparison to other chronic diseases and conditions.
- (2) A description and an assessment of the effectiveness of each entity's programs and activities implemented to prevent and control diabetes. For each program and activity, the assessment shall document the source and amount of funding provided to the entity, including funding provided by the State.
- (3) A description of the level of coordination that exists among the entities referenced in subsection (a) of this section, as it relates to activities, programs, and messaging to manage, treat, and prevent all types of diabetes and the complications from diabetes.
- (4) The development of and revisions to detailed action plans for preventing and controlling diabetes and related complications. The plans shall identify proposed action steps to reduce the impact of diabetes, pre-diabetes, and related diabetic complications; identify expected outcomes for each action step; and establish benchmarks for preventing and controlling diabetes.
- (5) A detailed budget identifying needs, costs, and resources required to implement the plans identified in subdivision (4) of this subsection, including a list of actionable items for consideration by the Committee."

The three named agencies in the legislation aligned their efforts and vision to provide this coordinated report.

Agency Descriptions

Division of Public Health

The NC Division of Public Health's Chronic Disease and Injury (CDI) Section, along with local health departments and other partners, works to reduce death and disabilities related to chronic disease and injury. This is accomplished through policy development and environmental changes that support healthy behavior and improvements in systems of care, as well as through education, screening, direct medical service and community engagement. Interventions that support diabetes prevention and reduction of risks for those North Carolinians who have diabetes are a top priority for the CDI Section given the health burden and health disparities associated with diabetes. Two risk factors, obesity and tobacco use, are particularly important to diabetes prevention and management. Recent data have shown that the risk of developing diabetes is 30-40 percent higher for active smokers than nonsmokers, and there is a positive dose-response relationship between the number of cigarettes smoked and the risk of developing diabetes. The relationship between obesity and diabetes has also been well-documented. Weight loss is a strategy employed for both diabetes prevention and management.

Division of Medical Assistance

The NC Division of Medical Assistance (DMA) administers the state and federal health insurance programs for low-income individuals and families who cannot afford health care. DMA serves low-income parents, children, seniors, and people with disabilities. In collaboration with other community partners, DMA addresses the needs of individuals living with diabetes through Clinical Coverage Policy 1A-24, Diabetes Outpatient Self-Management Education (DSME, <http://ncdhhs.gov/dma/mp/1A24.pdf>). DSME is an interactive, ongoing process of teaching the knowledge, skills and abilities needed for diabetes self-care. The process combines the needs, goals, and life experiences of the diabetic beneficiary with a certified diabetes educator(s), and is guided by evidence-based standards. This process includes:

- (a) assessment of the individual's specific education needs;
- (b) identification of the individual's specific diabetes self-management goals;
- (c) education and behavioral intervention directed toward helping the individual achieve identified self-management goals; and
- (d) evaluation of the individual's attainment of identified self-management goals.

Additionally, DMA contracts with North Carolina Community Care Networks, Inc. (N3CN) to provide primary care case management for most Medicaid beneficiaries. N3CN works with local Community Care of North Carolina (CCNC) networks to achieve long-term quality objectives through a patient-centered "medical home" model. N3CN implemented a Diabetes Quality Improvement Initiative based on the core components of process and patient outcome improvement. The program includes screening for prevention and early diagnosis, improved glucose control, improved blood pressure control and improved lipid control. These interventions can delay the onset and progression of diabetes complications. In addition, CCNC Case Managers intervene with those persons identified as being most at risk, including those beneficiaries with a new diagnosis of diabetes, and hospital utilization.

State Health Plan

The Plan provides health care coverage to more than 679,000 teachers and local school personnel, State employees, retirees, current and former lawmakers, State university and community college faculty and staff, and their dependents. The Plan is self-insured and exempt from the Employee Retirement Income Security Act as a government-sponsored plan. The Plan operates as a division of the Department of State Treasurer. The Treasurer is responsible for administering and operating the Plan as described in Article 3B of Chapter 135 of the General Statutes subject to certain approvals by and consultations with the Board of Trustees. An Executive Administrator oversees the day-to-day operations of the Plan. The State Treasurer, Board of Trustees and Executive Administrator are required to carry out their duties and responsibilities as fiduciaries for the Plan and report to the General Assembly as directed by the President Pro Tempore of the Senate and the Speaker of the House of Representatives.

The Plan's Third Party Administrator (TPA) for medical claims and benefit administration is Blue Cross Blue Shield of North Carolina (BCBSNC). The Plan currently provides active employees and non-Medicare retirees a choice of three self-funded Preferred Provider Organization (PPO) plan designs, including a Consumer-Directed Health Plan (CDHP) option with a health reimbursement account. Medicare retirees can enroll in one of four fully insured Medicare Advantage Plan options or a self-insured 70/30 PPO option. The Medicare Advantage Plans are provided through United Healthcare and Humana. In addition, the Plan contracts with other vendors to provide Consolidated Omnibus Budget Reconciliation Act (COBRA) administration and billing services, pharmacy benefit management (PBM), and population health management (PHM).

Improving members' health is a strategic priority for the Plan. Maximizing patient-centered medical homes (PCMH), assisting members to effectively manage high cost, high prevalence chronic conditions including diabetes, offering health promoting and value-based benefit designs, and promoting worksite wellness are included in the Plan's strategic plan for achieving that goal. The Plan's healthy living initiative, NC HealthSmart, offers resources and supports to assist members in addressing their health care needs. This includes case and disease management and health coaching through the Plan's population health management vendor, Active Health Management (AHM). AHM employs evidence-based clinical decision support, predictive modeling and analytics to identify and risk stratify members with various health conditions including diabetes. Once identified, innovative communications strategies are used to engage members and providers with a suite of integrated clinical services, including care management and on-line technologies that support adherence to provider care plans and help improve blood glucose and blood pressure control, manage lipids, and monitor renal, vascular and eye health. In addition, NC HealthSmart provides access for members to QuitlineNC and *Eat Smart Move More Weigh Less*. Through benefit design, population health management, and other initiatives aimed at improving care coordination and health outcomes, the Plan believes it can improve its members' long-term diabetes outcomes and overall health.

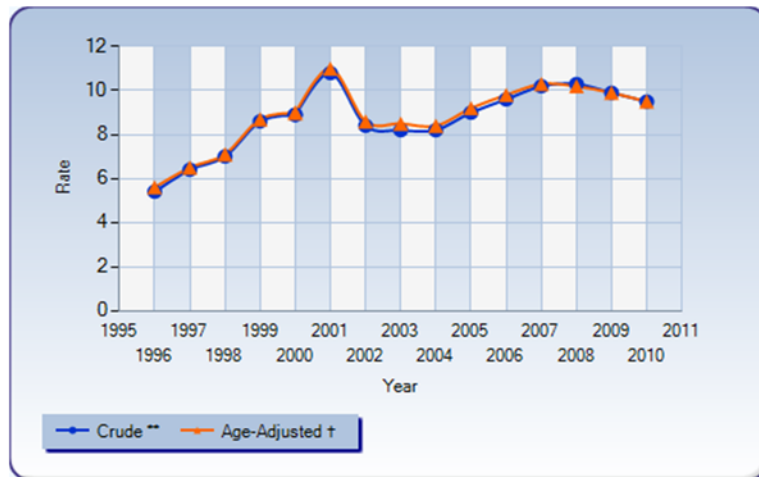
II. Scope of Diabetes in North Carolina

The World Health Organization (WHO) defines diabetes as a chronic disease that occurs either when the pancreas does not produce enough insulin or when the body cannot effectively use the insulin it produces. Insulin is a hormone that regulates blood sugar. Hyperglycemia, or raised blood sugar, is a common effect of uncontrolled diabetes and over time can lead to serious complications such as heart attack, stroke, renal failure, blindness and lower limb amputations. The prevalence of diagnosed diabetes in North Carolina increased from 6.4 percent of the adult population in 1998 to 10.4 percent in 2012, an increase of 62.5 percent. Despite recent improvements in overall ranking, North Carolina still has the 14th highest prevalence of diabetes among the 50 states and the District of Columbia. North Carolina adults with lower education levels and lower incomes were more likely to report being diagnosed with diabetes. Adults in North Carolina aged 35-44 are almost twice as likely to have diabetes compared to North Carolinians of the same age group a decade ago. Type 2 diabetes in the State is also marked by significant racial, economic, and geographic disparities.

Diabetes Incidence

Diabetes rates among North Carolinians have almost doubled since the 1990s, going from an age-adjusted rate of 5.6 new cases per 1,000 people in 1996 to 9.5 per 1,000 people in 2010. This rate of new diagnoses continued to outpace the national growth rate of 8.1 new cases per 1,000 people in 2010 (Graph 1). ^{ii, iii}

Graph 1: North Carolina - Rate of New Cases of Diagnosed Diabetes per 1,000 Adults (Aged 18-76 Years), 1996-2010



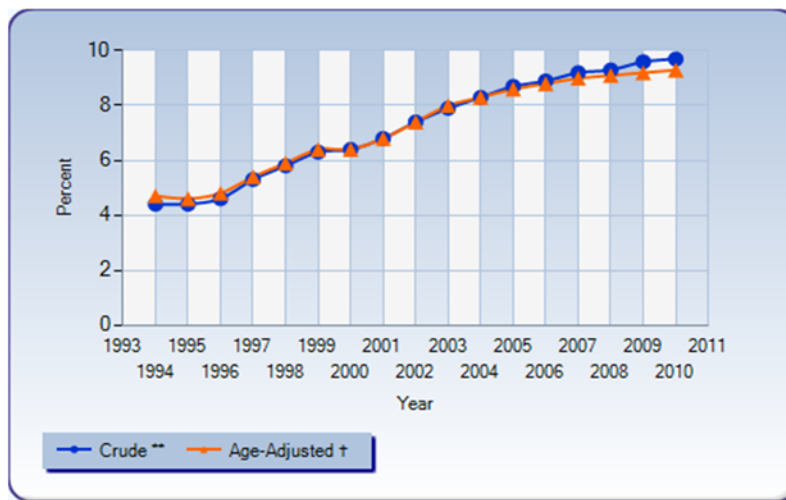
Source: *North Carolina - Rate of New Cases of Diagnosed Diabetes per 1000 Adults (Aged 18-76 Years), 1996-2010*, Centers for Disease Control and Prevention

Only nine percent of North Carolinians (630,000) reported having pre-diabetes in 2012. Many people remain unaware that they have pre-diabetes.

Diabetes Prevalence

In 2012, approximately 10.4 percent (age-adjusted) of North Carolinians, representing 750,000 individuals, had received a diabetes diagnosis (Graph 2).^{iv} The estimated prevalence of diabetes nationally in 2012 was 9.7 percent of the age-adjusted civilian, non-institutionalized population. Note that these data reflect all cases of diabetes, including both type 1 and type 2. However, type 1 diabetes only accounts for approximately 5 percent of the total cases of diabetes, so the bulk of this increase is attributable to the rise in type 2 diabetes.

Graph 2: North Carolina – Percentage of Adults (aged 18 years or older) with Diagnosed Diabetes, 1994-2010



Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System

Diabetes Prevalence by Agency

Division of Medical Assistance

Diabetes affected more than 45,000 CCNC-enrolled Medicaid beneficiaries, representing 7.1 percent of total enrollees, in State Fiscal Year (SFY) 2013. Of those diagnosed, 21.4 percent of Medicaid adults and 25.5 percent of Aged, Blind, and Disabled (ABD) beneficiaries are diabetic.

State Health Plan for Teachers and State Employees

In 2013, 99,966 or 14.7 percent of Plan members had a diagnosis of diabetes, including more than 44,000 active State employees and pre-Medicare retirees. More than 11,000 of those members had at least one evidence-based clinical alert indicating some kind of gap in expected care for their condition.

Diabetes and Age

Prevalence of type 2 diabetes increases markedly with age. While only 2.2 percent of North Carolinians aged 18 to 34 reported a diagnosis of diabetes in 2012,^v this percentage increased within the following age groups:

- 5.4 percent of 35 to 44 year olds;
- 11.5 percent of 45 to 54 year olds;
- 16.9 percent of 55 to 64 year olds;
- 23.3 percent of 65 to 74 year olds; and
- 20.1 percent of people over 75 years of age.^v

For people ages 45-64, diabetes was the fifth leading cause of death in 2012, while for people 65 and over it ranked sixth.^{vi}

Racial/Ethnic Inequalities in Diabetes Prevalence and Mortality

North Carolina is a diverse state. In 2012, of its 9,748,364 residents:

- 64.7 percent identified as non-Hispanic whites;
- 22 percent as African American;
- 8.7 percent as Hispanic or Latino; and
- 1.5 percent as American Indian^{vii}

Type 2 diabetes is not distributed equitably among these racial and ethnic groups. In 2012, 14.5 percent of African-Americans and 19.0 percent of American Indians reported a diabetes diagnosis, compared to 9.7 percent of non-Hispanic whites and 6 percent of Hispanics, though the particularly low reported rate for Hispanics is likely due to under-sampling and under-reporting.^{viii} While diabetes prevalence increases with age for all racial groups, the disease disproportionately affects older African Americans, affecting 28.1 percent of African Americans aged 55 to 64, and more than a third (36.3 percent) of African Americans between the ages of 65 and 74 in 2012.^{ix}

Statewide, diabetes was the third leading cause of death for Native Americans, the fourth leading cause of death for African Americans, and the seventh leading cause of death for non-Hispanic whites in 2012.^x

Education and Income

Diabetes prevalence also correlates with education levels. In fact, diabetes prevalence for those without a high school diploma is more than double the prevalence for college graduates. In 2012, almost one in six North Carolinian adults (15.9 percent) who had less than a high school diploma had been diagnosed with diabetes, compared with only 7.4 percent of adults with college degrees.^{xi}

The disparities in diabetes rates by income level are also significant. Of those with less than \$15,000 in household income, 15.3 percent of people had diabetes in 2012. This group had almost twice the chance of having diabetes as people earning from \$50,000 to \$74,999 (8.4

percent). People earning more than \$75,000 were two and a half times less likely (5.9 percent) to have received a diabetes diagnosis than those in the lowest income bracket.^{xii}

Geographic Disparities

A regional analysis of North Carolina diabetes rates shows stark geographic differences across the state. North Carolina is generally divided into three broad geographic areas: the Mountains (western region); the Piedmont (central region); and the Coastal Plains (eastern region).

In the Piedmont, where most of the State's largest cities are located—including Charlotte, Raleigh, Greensboro, and Durham - the rate of diagnosed diabetes is 9.9 percent. In the eastern and western regions, the rate of diagnosis is significantly higher at 11.1 percent.^{xiii}

Racial disparities are pronounced within geographic regions. African Americans living in the eastern region have the highest reported rate of diabetes of any group in the State, at 15.3 percent, compared to 9.9 percent of non-Hispanic whites in the region. In the Piedmont, 13.7 percent of African Americans report a diabetes diagnosis, while 9 percent of non-Hispanic whites do so.^{xv} The western region sees the highest rate of diabetes among non-Hispanic whites; at 11.6 percent (African Americans are not included as a category for the Western region).^{xvi}

III. Financial Impact of Diabetes in North Carolina

The American Diabetes Association estimated that the total national costs associated with diabetes rose from \$174 billion in 2007 to \$245 billion in 2012, increasing 41 percent over just 5 years.^{xvii} Across the nation, one in five healthcare dollars is spent to care for people who have been diagnosed with diabetes; over half of this amount is used to treat diabetes-related issues.^{xviii} People with diabetes have medical expenditures approximately 2.3 times higher than what they would have incurred if they did not have diabetes.^{xix} A majority (62.4 percent) of the costs are paid for by government programs, including Medicare, Medicaid and military health programs.^{xx} Seventy-two percent of national diabetes costs are attributed to direct health care expenditures while 28 percent represent lost productivity from work-related absenteeism, unemployment and premature mortality.^{xxi}

Like the rest of the nation, North Carolina continues to face significant increases in diabetes-related spending. In 2012, roughly \$8.3 billion of excess medical costs and lost productivity were attributable to diabetes within the State.^{xxii} In SFY 2008, North Carolina Medicaid expenditures for diabetes-related medical care and prescription drugs for adults totaled roughly \$525 million.^{xxiii} If the State does not control the diabetes epidemic, annual healthcare costs are projected to surpass \$17 billion by 2025.^{xxiv}

In SFY 2014, North Carolina's General Fund budget totals approximately \$20.6 billion.^{xxv} While the State does not pay the entire cost of diabetes directly out of the State budget today, if it did it would consume nearly a third of the annual budget. North Carolina should prioritize diabetes prevention and management in order to reduce these unaffordable future costs.

Financial Impact of Diabetes by Agency

Division of Public Health

When assessing statewide data, diabetes is the primary cause of many hospitalizations in North Carolina (n=18,101). It is associated with an elevated admission rate (1.9 per 1,000 population), with an average stay of 4.73 days. Hospital charges with diabetes as a primary cause are also high (\$378 million), with an average charge of nearly \$21,000 per case in North Carolina for 2010.

Division of Medical Assistance

In SFY 2013, more than 45,000 CCNC-enrolled Medicaid beneficiaries with diabetes had expenditures for all health care services totaling \$781,384,529, with an average PMPM of \$1,535. During 2013, the average cost of an inpatient hospitalization related to diabetes was \$4,849 for adults and \$4,061 for children age 0-20. The total cost of adult inpatient hospitalizations related to diabetes was \$103,400,835 and \$5,173,603 was paid for child (0-20) inpatient hospitalizations related to diabetes.

State Health Plan for Teachers and State Employees

While the Plan covers only a subset of the State's population, the impact of chronic conditions, such as diabetes, parallels patterns seen in the State as a whole. Fifteen percent of the Plan's members (including the members who are active, pre-Medicare retirees and Medicare primaries) have diabetes. These members account for 26 percent of total claims incurred. More than \$933 million was incurred in CY2013 for medical and pharmacy services for members with diabetes. These expenditures represent all the claims related to these members, not just claims related to this specific chronic condition. The cost for medical and pharmacy services specific to care for diabetes for this population exceeded \$91.66 million during the 12-month period ending in January 2014. This is a paid per member per month (PMPM) cost of \$14.19, and a 7.9 percent increase in spending from the previous 12-month period.

Cost of Diabetes Programs

Division of Public Health

Due to the variation in diabetes programming in North Carolina, it is difficult to establish programming costs. The cost to participate in Diabetes Prevention Programs (DPP) at YMCAs throughout the nation is set at \$429 per person; however, this not necessarily the cost to deliver the program. The cost to deliver the DPP that has been implemented by Wake Forest University varies but is generally less than the cost to deliver DPP nationally (average \$424 per participant).^{xxvi} As of 2014, a total of 514 North Carolinians attended at least one DPP class provided by the YMCA. The YMCA of Western North Carolina reported that as of 2014, 196 adults had participated in its program with an average reduction in blood glucose greater than 6 percent and more than 2,000 pounds lost.^{xxvii} In 2012, 82 people participated in the Wake Forest

DPP that was delivered in five local health departments. Participants demonstrated a significant weight loss and reduction in blood pressure that was sustained over a year after the program ended. ^{xxviii}

A recent report commissioned by the Kate B. Reynolds Charitable Trust estimated that DSME Programs recovered a maximum of 33 percent of the cost to deliver the program through billing. A 2012 economic analysis of the NC Diabetes Education Recognition Program (DERP) estimated the costs of program delivery at that time to be approximately \$375 per participant per year. Analysis of 310 program participants in 18 counties suggests that DERP generates \$1.21 in medical care cost-avoidance benefits for every \$1 spent on this intervention.

Division of Medical Assistance

In SFY 2013, more than 45,000 CCNC-enrolled Medicaid beneficiaries with diabetes had expenditures for all health care services totaling \$781,384,529, with an average PMPM of \$1,535. Education and counseling on diabetes prevention are critical in primary care of Medicaid beneficiaries to control overall expenditures arising from complications from or conditions exacerbated by diabetes. CCNC's Diabetes Quality Improvement Initiative for persons with diabetes includes screening for prevention and early diagnosis, improved glucose control, improved blood pressure control, and improved lipid control. In addition, CCNC Case Managers work with people with diabetes who are identified as being newly diagnosed with diabetes, those at most risk, and those with diabetes who have been hospitalized.

State Health Plan for Teachers and State Employees

In 2013, the Plan spent approximately \$2.6 million on diabetes-related disease management and intervention programs through its Population Health Management vendor, ActiveHealth Management. These programs included the following:

1. Identification and targeted outreach to members with pre-diabetes and diabetes;
2. Targeted communications campaigns;
3. Identification and closure of evidence-based clinical alerts;
4. Expanded outreach campaigns focused on members with high cost and utilization trends;
5. Online and community resources for members with diabetes; and
6. Care management services aimed at self-management, education, reduced utilization, and coordination of care for engaged members.

IV. Diabetes Prevention and Control Programs

Division of Public Health

Most diabetes programs in North Carolina fall into two categories- programs to prevent diabetes and programs to empower individuals with diabetes to manage their health. Diabetes management programs have been operational for many years. In 1997, the NC General Assembly required that Diabetes Self-Management Education (DSME) programs recognized by the American Diabetes Association and Indian Health Services be reimbursed by private insurance and Medicaid.

DSME is available in most counties in North Carolina. DSME can be delivered by hospitals, local health departments and other entities. As of 2014, 34 Local Health departments throughout the State participate in the NC Diabetes Education Recognition Program (DERP). Since July of 2010:

- 6,668 patients have received diabetes self-management education through the NC DERP.
- Of these patients, 11 percent had Medicaid, 16 percent Medicare, 11 percent Blue Cross Blue Shield, 2 percent had other insurance and 57 percent were self-pay or had no insurance.
- Most participants are 45-64 and 28 percent are 65 or older.
- The population served is 57 percent white or Caucasian; 28 percent African American; 11 percent Latina and 1 percent American Indian.
- Local Health Departments fund positions that support DERP through a mixture of local appropriations, billing and grant funding. The state provides technical assistance and leadership for DERP sites through grant funding.

The NC Division of Aging and Adult Services (DAAS) expanded Stanford Diabetes Self-Management Program (DSMP) programs, known in North Carolina as “Living Healthy with Diabetes,” to all of its 16 Area Agencies on Aging (AAAs) statewide. Since April 1, 2010:

- 7,323 participants have enrolled in (5,516 participants completed) a chronic disease self-management program, which includes Chronic Disease Self-Management (CDSMP), diabetes self-management, Tomando Control de Su Salud (Spanish CDSMP), Positive Self-Management Program for HIV/AIDS, and Chronic Pain Self-Management Program.
- For all programs, 707 workshops were held (average class size of 10.4 enrolled and 7.8 completers)
- The Diabetes Self-Management Program (DSMP) represents about one-third of the total classes (240 workshops, 2487 enrolled participants, and 1876 completers). Some characteristics of the participants are: 60-74 years old; 58.8 percent white, 38.2 percent black, 3.2 percent Hispanic/Latino; 70.7 percent have multiple chronic conditions.

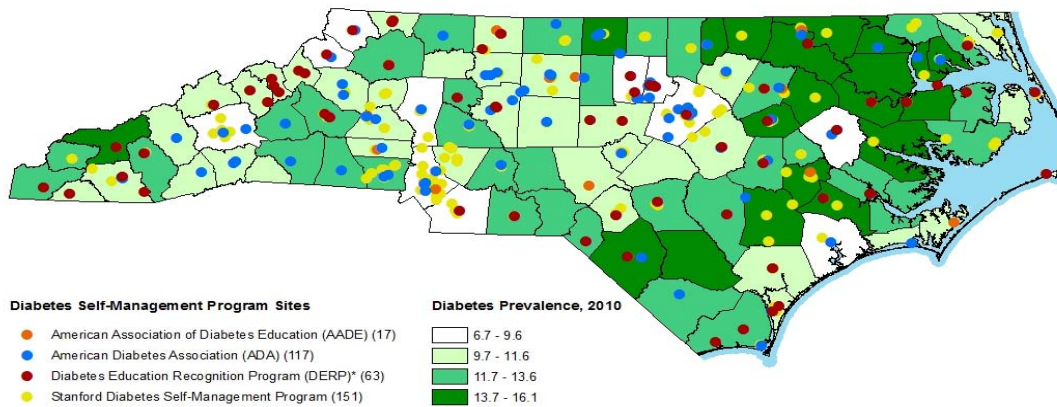
The Area Agencies on Aging (AAAs) are required to use Administration on Aging (AoA) health promotion funding for Evidence-Based Programs (EBPs). Living Healthy is embedded into:

- Grant proposals (like DPH’s Office of Minority Health CFEHDI Grant)
- Programs and Policies – DAAS and DPH (e.g., NC Stroke Plan)
- Local Grants (Vidant and Kate B. Reynolds have funded projects that include CDSME programs)

- Offered through in-kind and financial partnerships between AAAs and
 - Local Health Departments
 - Primary care clinics
 - Hospitals
 - Community Care of NC networks
 - Cooperative Extension
 - AARP
 - Faith-based groups

The map attached as Figure 1 shows diabetes self-management programs in North Carolina as of 2014, layered over the diabetes burden.

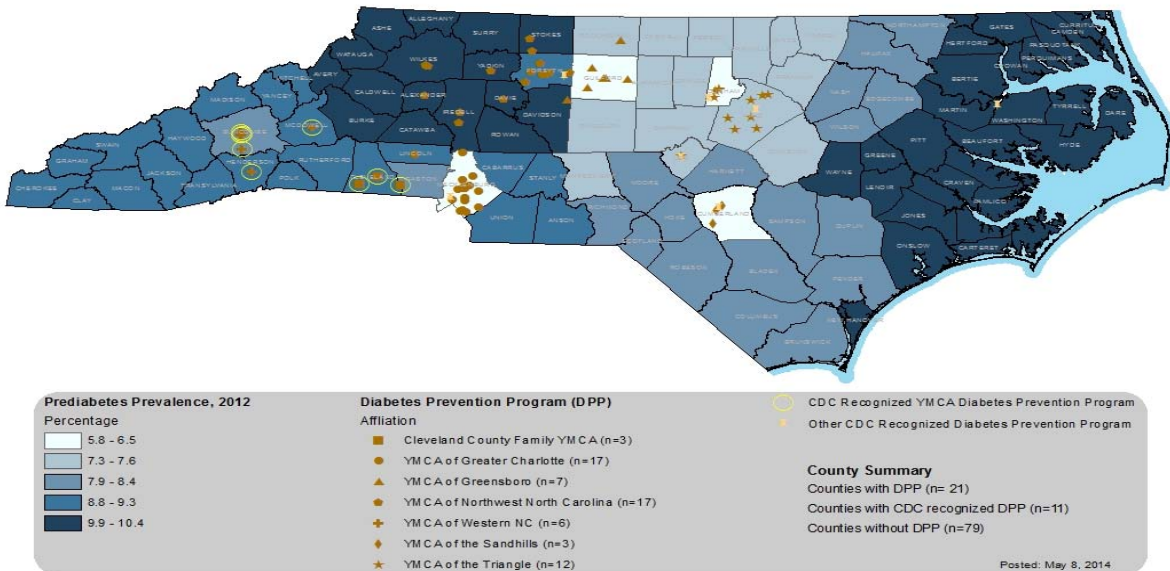
Figure 1



Several initiatives in different parts of North Carolina have already begun to slow the progression of pre-diabetes among at-risk individuals. The Centers for Disease Control and Prevention (CDC) recognizes programs that use an approved curriculum to deliver the Diabetes Prevention Program (DPP). Most programs meet weekly for 16 weeks and monthly for six months. The primary goals of the DPPs are to increase physical activity to at least 150 minutes per week and help individuals lose 7 percent of their body weight. In addition to several programs operating through the YMCA system, Wake Forest University has developed its own DPP curriculum that has been offered in some local health departments.

The map attached as Figure 2 shows diabetes prevention programs in North Carolina as of 2014 layered over the burden of pre-diabetes.

Figure 2



Division of Medical Assistance

Built on the core components of process improvement and patient outcome improvement, the goals of N3CN’s Diabetes Quality Improvement Initiative include screening for prevention and early diagnosis, improved glucose control, and improved blood pressure control and lipid control which can delay the onset and progression of diabetes complications. Improvements require primary care, follow-up care and education that is consistent with evidence-based practice guidelines. This initiative has been designed based on guidelines developed by the American Diabetes Association (ADA) and national models for improvement.

The core elements of the Diabetes Initiative are:

1. Criteria for Screening, Prevention, Diagnosis and Standards for Best Practice
 - Clinical Directors adopt ADA (American Diabetes Association) criteria for diagnosing diabetes and ADA Clinical Practice Recommendations to define Best Practice guidelines and quality measures.
2. Identify the Target Population

- Using CCNC analytics tools, the following criteria defines the population of patients with diabetes that will benefit most from Care Management and engagement with the medical home:
 - Emerging Diabetes
 - Provider Referrals
 - Patients with diabetes who meet CCNC Transitional Care Priority and are hospitalized
 - Patients with diabetes who meet CCNC Priority based on medication and utilization data
 - Patients with diabetes who have care alerts and/or gaps in care as indicated by CCNC Quality Measures and Feedback Data
 - Patients with diabetes with recent ED visits, identified by the CCNC Call Center as needing local Care Management services and/or linkage to their medical home
3. Disease Management
 - Deploy a multidisciplinary care management team to assess the needs of the Diabetes target population on both a population as well as individual level
 - Develop and implement interventions based on assessment findings.
 - Interventions delivered at the patient level through multidisciplinary care management teams.
 - Interventions delivered at the population level through quality improvement activities with the medical home.
 - Evaluate and utilize results to facilitate program improvement.
 4. Define and Develop Diabetes Resources and Tools
 - Develop and customize tools and education, tailored to meet the varying needs of providers and patients identify and meet new needs on an ongoing basis
 - Ensure medical homes have a process for referring patients to community resources specific to diabetes education and self-management (e.g., NC's Stanford Chronic Disease Management Model – Living Healthy, Quitline NC, and Diabetes Education Recognition Programs)
 5. Enhance Partnerships with Community Resources
 - Identify, collaborate, and coordinate with existing community resources.
 - Seek new partnerships and/or leverage relationships to assess and plan for new resources targeted at areas of un-met need
 6. Performance measures to assess patient's progress include:
 - Hemoglobin testing and control
 - Lipid screening and management
 - Blood pressure control
 - Smoking status and cessation advice/treatment
 - Foot exams
 - Eye Exams

- Nephropathy screening
- Hypertension control for patients with hypertension and diabetes

State Health Plan for Teachers and State Employees

The Plan utilizes ActiveHealth Management, its Population Health Management vendor, to administer disease management programs for members with diabetes. The goals and criteria of the Plan's diabetes program are as follows:

- Educate patients on the fundamental nature of diabetes, both type I and type II.
- Evaluate and manage to significant targets in LDL, HDL cholesterol, triglycerides, blood pressure level, urine albumin/protein and creatinine level.
- Ensure that patients understand the key clinical issues, self-management issues, and monitoring issues (e.g., control of diabetes, evaluation for complications through regular eye, teeth and foot exams).
- Evaluate and educate patients on important co-existent health and self-management issues such as smoking, obesity, flu and pneumonia vaccination, exercise, and diet.
- Understand that diabetes is a risk factor for heart and vascular disease, with an equivalent risk of heart attack. Assessment for evidence of existing vascular disease.
- Ascertain if the patient's family has a history of early heart disease - a significant additional risk factor for heart attack if positive, followed by education for aggressive risk reduction, especially in young people and women.
- Ascertain whether the patient's symptoms are controlled by their regimen.
- Ascertain whether the patient is compliant with their regimen and if not, understand and address barriers to compliance.
- Understand warning signs of poor glycemic control (hyper- or hypo-glycemic) and the new onset or worsening of complications of diabetes.
- Understand the warning signs of other vascular conditions (e.g., heart attack, stroke, and aneurysm) as diabetes is a risk factor for vascular disease.
- Understand the risk for peripheral arterial disease (PAD), how to reduce that risk, and when to get screened for PAD by ankle-brachial index (ABI) testing.
- Identify gaps in care (evidence-based clinical care alerts): absence of eye exam, HbA1c, flu vaccine or pneumovax, lipid panel, urine for albumin/ protein, smoking history; ED visits, hospitalizations, elevated creatinine, cholesterols, triglycerides, and use of steroids.

In addition, the Plan contracts with DPH to provide members with preventive services such as the evidence-based smoking cessation program, QuitlineNC and the weight management program, *Eat Smart, Move More, Weigh Less*, which reduces the risk of complications for members with diabetes. The QuitlineNC is available to members statewide. If members enroll in the multi-call program they receive two months of free Nicotine Replacement Therapy (NRT). In September 2013, the program expanded the NRTs to include gum for all members participating in the multi-call program and combination therapy for heavy smokers. As of January 2015, the Plan will provide NRTs for 3 months instead of 2 and will also include nicotine lozenges as part of the combination therapy. Also, to comply with ACA requirements, prescription generic Bupropion SR 150mg and brand Chantix (varenicline) are \$0 cost share (for

6 months) for those members in the 80/20 and Consumer-Directed Health Plan (CDHP). The Plan also actively promotes the CDC’s “Tips from former smokers’ campaign” among its membership. The ESMMWL program is offered online statewide and onsite in five counties (Wake, Orange, Mecklenburg, Guilford and Pitt)

V. Assessment of Benefits of Diabetes Prevention and Control Programs

Division of Public Health

The Diabetes Education Recognition Program (DERP) has been operational in North Carolina since 2007, with more than 7,000 persons that have matriculated through the program. A 2012 data analysis showed that most participants demonstrated a reduction in average blood glucose that was statistically significant and more pronounced among people without insurance, in men and in people of Latin ethnicity.

DPH is currently working with various local health departments to offer diabetes prevention programs in 2015. These programs will receive pending recognition by the Centers for Disease Control and Prevention (CDC) and should have the same effectiveness as national programs which have been proven to prevent diabetes, lower blood pressure and reduce body mass index.

Division of Medical Assistance

From 2009 to 2013, diabetes quality measures in the CCNC-enrolled Medicaid population improved across the State, including cholesterol control, blood pressure control, nephropathy screenings and HbA1C control. North Carolina outperformed the National Medicaid Health Maintenance Organization (HMO) Healthcare Effectiveness Data and Information Set (HEDIS) Mean in each of these measures, with cholesterol control and HgbA1C control better than the HEDIS 90th percentile.

State Health Plan for Teachers and State Employees

The Plan has seen significant improvement relative to a key set of clinical metrics for diabetes between 2010 (baseline year) and 2013 (Table I and II). Medicare Primary members are not included in either table.

Table I. Diabetes Clinical Performance, SHP 2010, 2013

Clinical Measures	2010 Performance*	2013 Performance*
Diabetes: HbA1c Rate	82.6%	90.0%
Diabetes: LDL Monitoring	74.6%	82.4%
Diabetes: Nephropathy Monitoring or Treatment	86.0%	88.4%

* Data presented is limited to claims received from the Plan’s third party administrator, BCBCNC, on members managed by ActiveHealth Management (Actives, Cobra’s, Pre-65 retirees).

Table II. Diabetes Related Service Utilization, SHP 2010, 2013

Utilization	Actives		Actives/Pre-Medicare Retirees	
	2010	2013	2010	2013
Diabetes Admits per 1,000	0.8	0.8	0.9	0.9
Diabetes ER per 1,000	4.7	7.0	4.9	7.5
Diabetes Office PMPY	0.2	0.2	0.2	0.2
Diabetes Outpatient. per 1,000	24.7	14.4	29.2	17.0

*Excludes Medicare Primary population

VI. Funding

Division of Public Health

The CDI Section received \$927,519 in federal funds to implement initiatives designed to prevent and manage diabetes at a population level in 2014.

Division of Medical Assistance

DMA reimburses fee-for-service diabetes self-management education covered under Clinical Coverage Policy 1A-24. Expenditure for state fiscal year (SFY) 2013 totaled \$612,407.

State Health Plan for Teachers and State Employees

The Plan receives funding from the State through premium contributions for employees and retirees. Premium dollars are not allocated by disease state or member acuity. Currently, fees paid by the Plan to medical and case/disease management vendors include comprehensive coverage for a wide array of chronic diseases.

VII. Current Level of Coordination Among Agencies

A high level of coordination exists currently between the Plan and the Division of Public Health in the development and implementation of programs that impact prevention as well as the treatment and management of diabetes. The Plan currently contracts with DPH to provide the members with preventive services, such as the smoking cessation program NC Quitline, and the weight management program Eat Smart, Move More, Weigh Less. The Plan also has initiatives already in place or currently under development specifically addressing the prevention and management of diabetes. Ongoing work with DPH and the Plan include:

- Development of a business case to provide Diabetes Self-Management Education (DSME) and access to Certified Diabetes Educators (CDE) as covered benefits;
- Collaboration with DPH and BCBSNC to distribute hypertension and diabetes clinical guidelines to the Plan's network of providers;
- Collaboration in the development of a campaign to raise awareness of pre-diabetes among Plan members and increase early identification and treatment;

- Potential collaboration with DPH on assessment of worksite wellness and the development of sustainable and replicable models of worksite wellness programs;

While DMA does not receive discrete state or federal funding to implement diabetes specific initiatives, DMA does draw FFP to support regional consultants who assist local health department efforts. In addition, DPH and DMA are exploring the potential to collaborate to promote DSME to the Medicaid population with Diabetes before the end of the 2015 state fiscal year. Some of the DERP sites already coordinate with DMA's vendor, Community Care of North Carolina to teach classes and to refer patients to DSME.

VIII. Action Plans

The legislature has charged the three state agencies with the “development of and revisions to detailed action plans for preventing and controlling diabetes and related complications. The plans shall identify proposed action steps to reduce the impact of diabetes, pre-diabetes, and related diabetic complications; identify expected outcomes for each action step; and establish benchmarks for preventing and controlling diabetes.”

Diabetes Prevention and Control

The Plan will coordinate with the Divisions of Public Health and Medical Assistance in the development of an action plan that will:

- Design and implement a campaign to increase awareness of pre-diabetes and diabetes, and promote evidence-based diabetes self-management education among North Carolinians.
- Evaluate and enhance, as appropriate, the benefit design of the Plan and DMA-covered benefits to impact the early identification and management of diabetes.

The Division of Public Health, in partnership with the Plan and the Division of Medical Assistance, would like to enhance the recommendations above with the following:

- Promote third party coverage of Diabetes Prevention Lifestyle Change Programs for individuals with pre-diabetes and diabetes;
- Implement a statewide focus on promoting Diabetes Self-Management Education as an evidence-based strategy among people with diabetes and pre-diabetes.
- Extend pregnancy Medicaid from 8 to 12 weeks post-partum to allow for mandatory HbA1c screening for diabetes in women who have had gestational diabetes.
- Enable DERP sites to coordinate with DMA's vendor, Community Care of North Carolina, to teach classes and to refer patients to DSME.
- Educate decision makers about the benefit of having DMA promote DSME to the Medicaid population with Diabetes before the end of the 2015 state fiscal year.

Expected Outcomes

- Early identification of North Carolinians with diabetes and pre-diabetes.
- Increased delivery of care to those with diabetes consistent with clinical care guidelines.

- Increased referrals to, and participation in, disease management and life style coaching programs.
- Reduction in the inpatient admissions, avoidable admissions, ED admissions and hospital readmissions associated with diabetes and its complications.
- Increased participation of people with pre-diabetes in Diabetes Prevention Programs.
- Increased management of diabetes through evidence-based programs and best practices with eventual reduction in complications such as blindness, heart attacks, and end stage renal disease
- Early identification of women of child bearing ages to help reduce risk of diabetes among children.
- Increased sustainability for programs that assist patients with managing their disease and promote secondary prevention of complications.

Goals and Benchmarks

- Reduction of the incidence of diabetes and pre-diabetes;
- Reduction in inpatient admissions from a diabetes related complication;
- Reduction in hospital readmissions with diabetes as an associated diagnosis;
- Reduction in ED admissions with diabetes as a primary diagnosis;
- Reduced rates of diabetes related complications;
- Increase the number of women who receive follow-up testing for diabetes following gestational diabetes pregnancy (short term);
- Increase the number of people who participate in diabetes prevention programs;
- Increase the number of people who participate in diabetes self-management programs;
- Increase medication adherence.

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