CHRONIC DISEASE REDUCTION AND STATEWIDE COORDINATION

LEGISLATIVE REPORT

G.S. 130A-222.5

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

NORTH CAROLINA CHRONIC DISEASE REDUCTION AND STATEWIDE COORDINATION

Executive Summary

Per Session Law 2013-207, which amended North Carolina General Statute §130A-222.5, the Department of Health and Human Services' Division of Public Health (DPH) and Division of Medical Assistance (DMA), as well as the Department of State Treasurer's State Health Plan for Teachers and State Employees (Plan) shall report by January 1 of every odd-numbered year on activities undertaken to reduce the incidence of chronic disease and improve chronic care coordination within the State.

Scope of the Problem

Of the approximately 160 North Carolinians who die every day, 144 residents die as a result of a chronic disease. Cancer, heart disease, chronic lung disease, and stroke comprised four of the five leading causes of death in the State in 2010. Risk factors for chronic disease are increasing, and more than two thirds of North Carolinians have one or more major risk factors for a preventable chronic disease. Obesity (28%), nutritional deficits (80%), physical inactivity (>50%), and smoking (20.9%) are the most common risk factors. Chronic disease disproportionately affects some racial groups, particularly non-Hispanic African Americans who having higher rates of chronic disease than other groups. Chronic disease impacts a significant number of Plan members and Medicaid beneficiaries and is a major cost driver for the two agencies.

Financial Impact

Chronic diseases are the leading cause of hospital utilization. Cardiovascular disease was the most common cause for both Emergency Department (ED) visits and inpatient admissions in 2010. Patients with chronic disease cost significantly more than those without. The Plan has found that the annual cost for members with multiple comorbidities is more than six times the cost for members who do not have any chronic condition-related claims ($7,664 vs. $1,283). Medicaid patients with one or more chronic conditions have been found to be at higher risk of admission and readmission. Patients with multiple conditions have the highest risk of readmission and benefit from intense care management to reduce hospital utilization.

Effectiveness of Programs

A variety of evidence-based programs and interventions targeting chronic disease management and risk factors are provided to Plan members and Medicaid beneficiaries including: weight management, health coaching, tobacco treatment and control, cancer screening and treatment, and care alerts for both prevention and disease management. Several of these programs and services are also extended to all North Carolinians through DPH, including QuitlineNC (1-800-QUIT-NOW).

Coordination

DPH, DMA and the Plan have coordinated efforts around several of the chronic disease initiatives in the State. Examples of collaboration include: Justus-Warren Heart Disease and Stroke Prevention Task Force; Eat Smart, Move More, Weigh Less (in partnership with NC State University); and provider education around new hypertension guidelines. Other areas of

collaboration include diabetes care, provider education, preventive care, and expanding coverage for evidence-based patient programs.

Action Plan

A variety of coordinated action steps have been proposed to reduce the burden of chronic disease for NC. Initial goals include: reducing readmission rates, increasing transitional care, and providing comprehensive medication management. Policy and programmatic change recommendations include: expanding tobacco cessation program access, expanding access to Eat Smart, Move More, Weigh Less, and expanding coverage for evidence-based patient education programs.

I. Introduction

The North Carolina Department of Health and Human Services' (DHHS) Division of Medical Assistance (DMA), Division of Public Health (DPH), and the State Treasurer's State Health Plan for Teachers and State Employees (Plan) aligned their efforts and vision to produce this coordinated report. These agencies shared wellness and prevention plans and identified goals and benchmarks to both improve care coordination and reduce the incidence of multiple chronic health conditions. In addition, the above named agencies collaboratively developed action plans to address care coordination and reduce the financial impact of multiple chronic health conditions.

II. Agency Descriptions

A. North Carolina Division of Public Health

Chronic Disease and Injury (CDI) is a Section within DPH. The CDI Section is comprised of the following:

1) the Cancer Prevention and Control Branch, including the Breast and Cervical Cancer Control Program, the WISEWOMAN (Well-Integrated Screening and Evaluation for Women Across the Nation) Program, and the Comprehensive Cancer Control Program;
2) the Community and Clinical Connections for Prevention and Health Branch (formerly Physical Activity and Nutrition, Diabetes Prevention and Control, and Heart Disease and Stroke Prevention);
3) the Forensic Tests for Alcohol Branch;
4) the Injury and Violence Prevention Branch; and
5) the Tobacco Prevention and Control Branch.

CDI supports North Carolinians in achieving and maintaining healthy lifestyles to reduce death and disability from chronic diseases by enabling individuals to make healthy choices through promotion and implementation of evidence- and practice-based interventions, system changes and policies. This involves strong partnerships with local health directors, local community members, health care providers and systems, and State agencies. Preventing and reducing the burden of chronic disease in NC will help reduce unnecessary medical treatment, medications and hospitalizations.

For the purposes of this workgroup, the involved Branches of the CDI Section include:

- Community and Clinical Connections for Prevention and Health (CCCPH),
- Cancer Prevention and Control, and
- Tobacco Prevention and Control.

B. Division of Medical Assistance

North Carolina Medicaid provides health insurance for low-income parents, children, seniors, and people with disabilities. It covers approximately 1.8 million North Carolinians. The goal of the program is to provide high quality, medically necessary health care for eligible North Carolina residents through cost-effective purchasing of health care services and products. The program provides preventive and acute medical care, prescription drug coverage, dental services, long-term services and supports for people with disabilities or health issues, and mental health and substance

abuse treatment. DMA is divided into 9 sections and offices, and manages the Medicaid and NC Health Choice programs.

The Clinical Policies and Programs section is responsible for the overall administration of programs and clinical services covered in the North Carolina Medicaid Program. The section's staff develops clinical coverage policies and procedures, administers those policies and procedures, manages associated programs and contracts, and provides related educational activities. Clinical Policy coordinates with other sections within the Division that are responsible for determining eligibility, reimbursement, and program integrity of all covered services.

In addition, DMA contracts with North Carolina Community Care, Inc. (N3CN) to improve the value of care provided to Medicaid enrollees through care management and quality improvement activities. N3CN is comprised of 14 regional Community Care of North Carolina (CCNC) networks of physicians, nurses, pharmacists, hospitals, health departments, social service agencies and other community organizations who provide cooperative care through the patient-center medical home (PCMH) model that matches each patient with one primary care physician.

C. State Health Plan for Teachers and State Employees

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 (ERISA) 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) Continuation Health Coverage 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, 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 Health *Smart,* 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). In addition, NC Health*Smart* 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' health.

II.1. Scope of Chronic Disease in North Carolina

The World Health Organization (WHO) defines chronic diseases as diseases that are not communicable, develop slowly, and persist for long periods of time. According to WHO, the four main types of chronic diseases are cardiovascular diseases (heart attack, stroke), cancer, chronic respiratory diseases (chronic obstructive pulmonary disease, asthma), and diabetes.[1]

Of the approximately 160 North Carolinians who die every day, 144 residents die as a result of a chronic disease. Altogether, chronic diseases, injury and violence were responsible for three-quarters of North Carolina resident deaths and resulted in over 58,000 resident deaths in 2010; cancer, heart disease, chronic lung disease, and stroke were among the five leading causes of death in the State. Residents dying from chronic diseases had a mean of 6.3 years prematurely lost prior to age 75.

North Carolina's 2010 age-adjusted mortality rates were higher than US death rates for cancer, stroke, and chronic lower respiratory diseases. North Carolina's age-adjusted rate for heart disease is the only rate where North Carolina is lower than the national rate for 2010. Age-adjusted mortality rates for some cancers, heart disease, stroke, and diabetes all declined substantially over the last decade.

Racial disparities in chronic disease mortality persist in North Carolina. Non-Hispanic African Americans have higher rates than non-Hispanic whites for the majority of chronic diseases. During 2006-2010, non-Hispanic African Americans had age-adjusted mortality rates that were more than two times higher than non-Hispanic whites for prostate cancer, diabetes, and kidney disease.

Over half of North Carolina resident deaths may be due to preventable causes. Among the leading contributors to preventable death in the State are tobacco use, unhealthy diet and/or physical inactivity.

Chronic Disease and Health Care Utilization

In 2010, cardiovascular disease (CVD) was the leading cause of hospitalization in the State, with the highest discharge rate (17 discharges per 1,000 residents) and the highest total cost ($5.5 billion).[2] Non-Hispanic African Americans had hospital discharge rates more than two times

[1] North Carolina Division of Public Health, State Center for Health Statistics. Special data query based on North Carolina electronic mortality data files.

[2]Inpatient hospital utilization and charges by principal diagnosis and county of residence. State Center for Health Statistics. http://www.schs.state.nc.us/schs/data/databook/

higher than non-Hispanic whites for asthma (2.9), and diabetes (2.8). Cancers also resulted in high average charges, overall averaging more than $41,000 per hospitalization.

Chest pain and ischemic heart disease associated with CVD were the leading cause of chronic disease-related emergency department visits in the State – followed by lower respiratory diseases and arthritis – responsible for more than one in ten emergency department visits in 2009.

Chronic Disease Incidence and Prevalence

Cancer. The North Carolina Central Cancer Registry projects that more than 55,000 North Carolinians will receive a cancer diagnosis yearly and approximately four in ten North Carolinians will develop cancer during their lifetime. North Carolina's 2005-2009 age-adjusted cancer incidence rate was 7.5 percent higher than the national rate. North Carolina males consistently have higher age-adjusted cancer incidence rates than females. North Carolina has significant disparities in cancer incidence, with non-Hispanic African Americans having the highest age-adjusted cancer incidence rate, and Hispanics experiencing the lowest rates during 2005-2009. In 2009, approximately one in ten North Carolina adults reported that they had been diagnosed with cancer and 8.5 percent indicated that they were currently receiving treatment for cancer.

Cardiovascular Disease (CVD). Almost one in ten North Carolina adults reported a history of CVD (heart attack, coronary heart disease or stroke) in 2010. Approximately 3 percent of adults in the State reported a history of stroke, 4.5 percent reported a history of heart attack, and almost 4.6 percent reported a history of angina or coronary heart disease. North Carolina's cardiovascular disease prevalence rate places it among the quartile of states with the highest CVD rates in the nation.

Chronic Obstructive Pulmonary Disease (COPD) and Asthma. In 2009, nearly 6 percent of North Carolina adults reported that a health professional had diagnosed them with COPD, emphysema, or chronic bronchitis. COPD rates were highest among those over the age of 65 (9.8%), adults having less than a high school education (9.7%), and those with annual household incomes of less than $15,000 (11.5%). Approximately 85-90 percent of COPD deaths are smoking related. In 2010, over 10 percent of North Carolina adults reported that they had been diagnosed with asthma and almost 8 percent reported that they currently had asthma. North Carolina's child health survey reveals that approximately one in ten North Carolina parents report that their child currently has asthma. In 2010-11 asthma was the most common chronic health condition reported among K-12 public school students, affecting approximately 7.2 percent of all students enrolled in public schools in the state, and was a leading cause for hospitalizations among children.

Diabetes. 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. North Carolina's 2012 diabetes rate of 10.4 percent was higher than the U.S. average rate (9.7%). 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.

North Carolina's prevalence of type 2 diabetes is higher than the national average, and 35-44 year-old North Carolinians 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.

Mental Health. Mental health conditions are the most common chronic disease among Medicaid beneficiaries, with over 360,000 having at least one chronic mental health diagnosis. A person with a mental health disease is more likely to have other chronic conditions and is also more likely to have higher costs and utilization than those with chronic conditions without a mental health diagnosis. From October 2012 to September 2013, 132,008 Plan members incurred a mental health or substance abuse diagnosis, an increase of 8.5 percent from the previous year. During the same period, $35,937,503 was paid for mental health and substance abuse-related services for Plan members. This is an increase of over 11 percent from the previous year.

Since April 2013, North Carolina's mental health and substance abuse delivery system has operated under a Medicaid 1915(b)/(c) managed care waiver, supplemented with State funds managed by the Division of Mental Health, Developmental Disabilities and Substance Abuse Services (DMHDDSAS). Under this waiver, North Carolina's Local Management Entities, which once coordinated and offered publicly supported behavioral health care services, have become managed care organizations (LME-MCOs). The role of the LME/MCOs is to:

- coordinate care;
- manage provider networks;
- ensure access to mental health and substance abuse treatment and supports for individuals with intellectual and developmental disabilities;
- monitor for fraud, and abuse; and
- pay providers for services out of capitation income received from DMA for each enrollee.

In addition, they manage State-appropriated funds and federal grants and pay for services and coordinate care for those without insurance or means to pay for services related to mental illness, substance abuse, intellectual/ developmental disabilities, and traumatic brain injury.

Risk factors for Chronic Disease

Tobacco Use. Tobacco use remains the leading preventable cause of death in NC, and the nation, and is responsible for more than 14,200 deaths each year in the State. For each one of these deaths, the Surgeon General estimates that another 30 people are sick or disabled due to smoking-attributable illnesses. One in five (20.2%) North Carolina adults currently smokes cigarettes (1,540,000 adults) according to the 2013 Behavioral Risk Factor Surveillance System (BRFSS) and NC census data. Additionally, 1,600 adults, children and infants in North Carolina die each year from exposure to others' secondhand smoke. Tobacco use is a costly problem for North Carolina; health care costs from smoking are $3.8 billion per year. Health care costs from exposure to secondhand smoke are estimated to be an additional $293 million per year. The Plan estimates

that the annual direct medical cost to the Plan per tobacco user is $2,660. The total estimated annual direct medical cost for the Plan due to tobacco use is $178,220, 000. [3]

Obesity. The issue of excess weight and obesity continues to be one of the most pressing public health problems of our time. North Carolina has the 14th highest adult obesity rate in the country. The percentage of North Carolina adults who are obese has more than doubled over the last two decades from approximately 13 percent of adults in 1990 to 29.4 percent of the population in 2013. In all, more than six in ten North Carolina adults (66.2%) were overweight or obese in 2010. Like adults, a high percentage of North Carolina children are overweight or obese. According to 2010 child health survey data, 17.1 percent of children ages 10 through 17 were obese and another 13 percent were overweight based on their body mass index.

Nutrition. According to the 2013 BRFSS, only 12.3 percent of North Carolina adults reported consuming five or more servings of fruits and vegetables recommended daily. North Carolina children and adolescents have similar nutritional patterns to adults. Based on 2010 parental report survey data, only 28 percent of children were eating five or more fruits and/or vegetables on a typical day.

Physical Activity. Over half of North Carolina adults did not meet physical activity recommendations in 2013. North Carolina's recommended physical activity rates rank the State in the bottom quartile of states with the lowest rates of physical activity in the country. Similarly, among North Carolina high school students, over half did not meet physical activity recommendations.

Chronic Disease and Mortality in North Carolina

North Carolina Compared to United States in 2010. North Carolina age-adjusted mortality rates were comparable to the US for asthma and arthritis. North Carolina age-adjusted mortality rates were lower than the US for heart disease, diabetes, chronic liver diseases/cirrhosis, colon cancer, and pancreatic cancer. Chronic diseases with age-adjusted rates more than 20 percent higher than the US rates included kidney disease (27% higher) and Alzheimer's disease (21% higher).

Trends in Mortality: 2000 – 2010. North Carolina's age-adjusted mortality rates have declined over the last decade for most chronic diseases, with the exception of Alzheimer's disease (26% increase), kidney disease (11% increase), other chronic respiratory diseases (3% increase), and pancreatic cancer (no change). Several chronic diseases experienced declines of over 30 percent between 2000 and 2010, including emphysema (50% decline), stroke (42% decline), asthma (38% decline), cardiovascular diseases (35% decline), heart disease (34% decline), and prostate cancer (32% decline).

Premature Mortality. Cancer and cardiovascular diseases claimed the highest percentage of NC lives in 2010, together comprising over half (52.2%) of all resident deaths. Among the chronic diseases, three had average years of potential life lost greater than ten years, including asthma (19 years), chronic liver disease/cirrhosis (15 years), and female breast cancer (11 years).

[3] http://publichealth.nc.gov/hnc2020/docs/objectives/tobacco-obj1-final.pdf

Racial Disparities in Mortality. North Carolina's age-adjusted mortality rates for non-Hispanic African Americans were more than two times greater than non-Hispanic whites for prostate cancer (3.0), diabetes (2.7), kidney disease (2.7), and asthma (2.6). In North Carolina in 2010, non-Hispanic African Americans had lower age-adjusted mortality rates than non-Hispanic whites for chronic lower respiratory diseases.

II.2. Financial Impact of Chronic Conditions to Division of Medical Assistance (DMA)

The average cost of a North Carolina Medicaid beneficiary enrolled with CCNC is $385.96 per month, of which $99.37 is pharmacy costs. Approximately 36.7 percent of the Medicaid population has at least one chronic condition and the average cost of a beneficiary with multiple chronic conditions is $787.35.

The table below shows the total paid claims and per member per month (PMPM) costs for those Medicaid beneficiaries enrolled with CCNC with diabetes, ischemic vascular disease, asthma, COPD, hypertension, and mental health diagnoses. The most common chronic condition is mental health, with more Medicaid beneficiaries having more mental health conditions than diabetes, ischemic vascular disease and asthma combined.

CCNC Chronic Condition - JULY 1, 2012 - JUNE 30, 2013			
Chronic Disease	Members	Total Paid Claims	PMPM Cost
Diabetes	45,321	$ 781,384,529.35	$ 1,535.03
Ischemic Vascular Disease	13,194	$ 309,262,784.55	$ 2,078.39
Asthma	141,035	$ 983,215,368.07	$ 599.03
COPD	27,123	$ 529,891,677.94	$ 1,701.95
Hypertension	92,621	$ 1,391,592,252.56	$ 1,335.99
Mental Health	255,875	$ 2,607,771,504.53	$ 878.88

DATA SOURCE - S1 MONTHLY REPORTING
TABLE QUARTER 201302
REPORT IS DATE OF SERVICE ANALYSIS, EXTRACTED JULY 1, 2012 - JUNE 30, 2013.
MEDICAID CLAIMS ONLY (NCHC EXCLUDED)
DUALS, UNENROLLED PARTIAL ELIGIBLES, AND DECEASED PATIENTS ARE ALSO EXCLUDED

II.3. Financial Impact of Chronic Conditions to the State Health Plan

While the Plan covers only a subset of the State's population – State employees, teachers and State university staff and faculty – the prevalence and financial impact of chronic conditions and related utilization parallels patterns seen in the State. Fifty one percent of the Plan's members have a chronic condition. Those members account for 78 percent of claims incurred. The Plan's actuarial services firm, Segal Company, has confirmed that members with multiple comorbidities on average, cost nearly six times as much as Plan members without any claims related to a chronic condition annually ($7,664 vs. $1,283).

Over $2 billion was incurred in 2013 for medical and pharmacy services for members with at least one of the following conditions: diabetes, coronary artery disease, asthma, chronic obstructive pulmonary disease (COPD) and hypertension. Hypertension prevalence was the highest among Plan members, affecting nearly 280,000 members. Coronary artery disease and COPD represented the highest per member cost. Average total allowed cost for members with coronary artery disease and COPD was more than $13,000 per member per year.

III. Assessment of Benefits of Wellness and Prevention Programs

DPH, DMA and the Plan have compiled an assessment of benefits derived from wellness and prevention programs implemented within the State, with the goal of coordinating care. The above agencies have also included, where possible, State, federal, and other funds appropriated to the Divisions for wellness and prevention programs. It is important to note that each agency has distinct levers to use to incent wellness and prevention programs. The Plan can offer premium and copay credits for participating in wellness activities while DMA has significantly less latitude per federal law and regulation to change member cost sharing. A description of current wellness and prevention activities by each agency, and an assessment of benefits and funds, is detailed below.

III.1.a. DPH Current Activities for Wellness and Prevention

The Chronic Disease and Injury (CDI) Section supports North Carolinians in achieving and maintaining healthy lifestyles to reduce death and disability from chronic diseases by enabling individuals to make healthy choices through promotion and implementation of evidence- and practice-based interventions, system changes and policies. This involves strong partnerships with local health directors, local community members, health care providers and systems, and State agencies. Preventing and reducing the burden of chronic disease in NC will reduce unnecessary medical treatment, medications and hospitalizations.

For the purposes of this report, the involved Branches of the CDI Section include:

- Community and Clinical Connections for Prevention and Health (CCCPH) (formerly Diabetes, Heart Disease and Stroke and Physical Activity and Nutrition),
- Cancer Prevention and Control, and
- Tobacco Prevention and Control.

The CDI Section's current wellness and prevention activities strive to create a North Carolina where:

- All individuals and families have access to healthy foods and access to environments safe for physical activity;
- Employers, educational institutions, and governmental agencies enact policies that ensure access to healthy foods, beverages and opportunity for physical activity;
- Individuals live, learn, work, play and pray in 100 percent smoke-free/tobacco-free environments;
- Current tobacco users are encouraged and supported by health providers, employers and third party payers to quit and stay quit;
- Tobacco cessation treatment and programs, such as QuitlineNC, are more widely available and accessible, and well supported from the investment of employers and insurers to assist all North Carolinian tobacco users who want to quit;
- Health care professionals routinely address tobacco use and refer patients, as needed, to treatment programs;
- Infrastructure exists to support access to widespread community-based programs which assist people in managing/preventing chronic diseases;
- All North Carolinians have access to and receive the recommended cancer screenings, referrals, and cancer care;
- Health care professionals are aware of, and able to, refer patients with chronic disease(s) to self-management programs that empower individuals to address healthy behaviors (e.g., QuitlineNC, Diabetes Self-Management Program, Eat Smart, Move More, Weigh Less); and
- Death and disability from chronic disease are reduced.

DPH CDI key efforts include addressing modifiable health behavior risk factors, improving community and clinical linkages, and surveillance and evaluation.

Addressing modifiable health behavior risk factors

The CDI Section's programs and activities assist North Carolinians achieve healthy lifestyles and healthy choices through:

Community Mobilization*:* Activities educate and engage all key sectors of a population in a community-wide effort to address health issues through social, policy or environmental change. These include:

- The statewide obesity prevention movement, Eat Smart, Move More NC;
- Statewide tobacco prevention health communications combined with education and community mobilization of youth groups and college students;
- Vision 2020: North Carolina's Plan to Reduce the Health and Economic Burdens of Tobacco Use and Exposure to Secondhand Smoke; and
- Task Forces and Advisory Councils (Justus-Warren Heart Disease and Stroke Prevention Task Force, Stroke Advisory Council, Advisory Committee on Cancer Coordination and Control, Asthma Alliance of North Carolina).

Public Awareness/Education: Support education campaigns and messages to increase awareness of the impact of chronic diseases and inform communities, organizations, health care providers and policy makers of prevention programs and initiatives. This includes:

- Mass reach health communication campaigns to prevent and reduce chronic disease risk (e.g., QuitlineNC promotion, teen tobacco use prevention campaign, CDC's "Tips from Former Smokers" campaign);
- Early detection for cancer through appropriate cancer screenings;
- National Diabetes Prevention Program;
- Marketing of Diabetes Self-Management Education (collaboration with Medicaid);
- Statewide obesity prevention resources provided by Eat Smart, Move More NC;
- Weight management programs (Eat Smart, Move More, Weigh Less);
- Early childhood and school-based health promotion initiatives;
- Community-based healthy eating and physical activity initiatives, such as access to farmer's markets, awareness of greenways, trails and parks, and breastfeeding promotion;
- Asthma home-visiting program (to assess home-based, multi-trigger, multi-component interventions to reduce asthma risk for children); and
- Education on the new scientific findings of the Surgeon General's 50th Anniversary 2014 report on tobacco and health.

Policy**:** Support policies that promote evidence-based efforts to reduce risk to North Carolinians such as those that:

- Maintain 100 percent tobacco free school campuses in all NC School districts and 36 of 58 NC community colleges; provide technical assistance to all colleges that want to go smoke-free/tobacco free;
- Educate and inform the public and decision makers about the evidence-based impact of increasing the price of tobacco products through increases in the NC cigarette/tobacco taxes;
- Eliminate tobacco use in NC mental health hospitals and substance abuse treatment facilities in partnership with the Division of State Operated Healthcare Facilities and Division of Mental Health, Developmental Disabilities and Substance Abuse Services (DMHDDSAS);
- Promote smoke-free multi-unit housing;
- Increase public-private partnerships to expand access to evidence-based tobacco treatment through QuitlineNC;
- Support partners that choose to work on strategies in the Eat Smart Move More NC Policy Strategy Platform;
- Support healthy food financing efforts;
- Maintain insurance coverage for diabetes medication, testing supplies and diabetes self-management education;
- Encourage insurance coverage for diabetes prevention program, and
- Ensure that NC students have access to asthma and diabetes medications.

Improving Community and Clinical Linkages

The CDI Section's programs and activities enable individuals, community partners and health system partners to address population risk and chronic disease burden through:

Improvements in the ability of individuals to:

- Quit tobacco use (QuitlineNC);
- Maintain a healthy weight by participating in Eat Smart, Move More, Weigh Less
- Receive recommended cancer screenings;
- Receive appropriate self-management support in local communities to address diabetes, tobacco use, and weight management;
- Improve medication adherence for diabetes or hypertension treatment; and
- Avoid unnecessary hospitalizations and emergency room visits.

Health system changes to improve care delivery through:

- Health professional training (e.g., blood pressure measurement);
- Electronic health record adoption and technical support in partnership with NC Area Health Education Centers (AHEC) and CCNC;
- Diabetes and hypertension quality improvement (partnership with local health departments);
- School health use of the School Health Application;
- Evidence-based tobacco treatment training (e.g., 5A's) and consultation to help ensure clinical practice guidelines are followed;
- Promotion of the QuitlineNC fax referral system;
- Promotion of Eat Smart, Move More, Weigh Less on-line classes;
- NC Stroke Care Collaborative (Acute Stroke Quality Improvement);
- Breast and Cervical Cancer Control and Prevention (BCCCP) and WISEWOMAN quarterly provider trainings; and
- Asthma and diabetes education training for school nurses and child care providers.

Surveillance and Evaluation

The CDI Section collects, evaluates and shares data regarding chronic disease and risk factors including:

- NC State Center for Health Statistics (SCHS) (Incidence and Prevalence Rates) including but not limited to cancer, smoking, secondhand smoke exposure, obesity, diabetes, gestational diabetes, and hypertension;
- Costs of overall chronic disease burden as well as specific costs of tobacco-attributable and obesity/overweight-related diagnoses; and
- Clinical Partner/Provider Assessments (Breast and Cervical Cancer Prevention, WISEWOMAN).

III.1.b. NC DPH State, Federal and Other Funds for Wellness and Prevention Programs

DPH receives a majority of its funding to address wellness and prevention from the Centers for Disease Control and Prevention (CDC); however, there are additional resources available from

State appropriations and other sources. As of September 2014, the federal resources available to DPH from CDC for addressing and preventing tobacco use, diabetes, heart disease and stroke were $4,625,761 for the federal grant cycles that overlap with State Fiscal Year (SFY) 2014-2015. During this same time period, $1,997,359 was also provided by State funds or funds from the Plan for DPH's wellness and prevention programs.

III.2.a. NC DMA Current Activities for Wellness and Prevention

DMA contracts with N3CN and the CCNC networks to implement a population health approach to wellness and prevention through the support provided to the medical homes. A variety of claims-based adult and pediatric data on wellness and prevention measures are provided on a quarterly basis. Quality Improvement teams work with the medical homes to improve in these areas.

In November 2011, N3CN established a Call Center to support its fourteen local networks' goals and initiatives through telephonic patient contact. The Call Center makes more than 10,000 call attempts each month. One of the services offered by the Call Center is health coaching for the CCNC Medicaid population. Registered nurses (RNs) who are also certified health coaches work with patients referred to them for wellness and disease management coaching. Coaches use their experience and skills to motivate patients to accept responsibility as primary caretaker of their own health and wellness by setting and reaching health-related goals they set for themselves.

The Call Center also provides information to newly-enrolled CCNC patients on appropriate emergency department use, urgent care utilization, available local resources, information specific to their medical home provider, co-pay for visits or prescriptions and how to access specialists. This patient education is provided primarily to patients who have been enrolled within the past 90 days, had an emergency department visit within the past 90 days and are currently classified as a CCNC priority patient.

Addressing the rate and prevalence of obesity among 0-5 year olds is a new and important collaborative activity between DHHS and N3CN. The project seeks to explore ways that primary care clinicians (in CCNC networks) can leverage the principles of the medical home model to address this issue and, as a result, improve health quality in their respective communities. The workgroup assigned to this project is also preparing for a Maintenance of Certification (MOC-IV) module as part of the DHHS Secretary's initiative on preventing obesity in young children.

The Behavioral Health Integration Initiative is focused on two main areas. One area of focus is assisting primary care providers and CCNC care managers in working with individuals with mild to moderate behavioral health issues that can be addressed in a primary care setting, and on knowing how and who to refer to, when specialty behavioral health care is needed. The other area of focus is on working with the specialty system (both at the State, LME/MCO, and behavioral health provider level) to connect them with physical healthcare services for individuals with serious and persistent mental illness (SPMI).

The Quality Improvement (QI) Practice Support teams at CCNC work to strengthen and support the CCNC provider network by engaging practices and assisting them in achieving high quality, cost effective, and patient-centered care. A critical element to Community Care's success centers

on the ability of the networks to locally implement system changes needed to improve quality in practices. The network Clinical Directors are instrumental in engaging community providers to implement the quality initiatives. Providing credible and provider friendly reports are powerful tools, particularly when accompanied with benchmarks and comparisons to peers, to help motivate providers to improve processes that will enable them to provide best care.

CCNC has the following disease management initiatives in place in every CCNC network:

- Asthma
- Diabetes
- Hypertension
- Ischemic Vascular Disease
- Congestive Heart Failure
- Chronic Obstructive Pulmonary Disease (COPD)
- Depression
- Chronic Pain
- Sickle Cell

For each of these initiatives, centralized support is provided to each network in order to deliver the following:

- Clinical expertise and leadership to meet with physicians and medical practices on targeted care and disease management initiatives.
- Clinical staff that are available to meet onsite with medical practices and their staff and provide disease management "101" on targeted diseases.
- Provider toolkits that summarize best practice guidelines and provide office-based tools for adoption and/or customization.
- Provider and patient education materials/templates that can be printed and customized for individual practices (e.g., medical home brochure with space to print the practice name and contact information).
- A web-based case management information system (CMIS, described below in the Informatics Module) that supports the case manager's efforts and contains useful tools, such as uniform screenings and assessments for targeted disease initiatives (e.g., quality of life assessment for enrollees with COPD, Hypertension Self-Management Module).

NC DMA Assessment of Benefits of Wellness and Prevention Programs

Over the past 5 years, Medicaid beneficiaries in the CCNC population have experienced improved control or treatment for many chronic diseases, which is reflected through improved performance on related quality measures. In 2013, CCNC exceeded Healthcare Effectiveness Data and Information Set (HEDIS) mean for 8 out of the 11 chronic disease quality measures with benchmarks. For example, as part of the childhood obesity initiative, primary care providers are being encouraged to document Body Mass Index (BMI) percentiles; to date, rates of BMI percentile coding have increased from 2 percent to 14 percent statewide.

III.2.b. NC DMA State, Federal and Other Funds for Wellness and Prevention Programs

DMA does not receive targeted funding for wellness and prevention programs, although the full range of preventive primary care services and screenings are covered.

III.3.a. NC State Health Plan Current Activities for Wellness and Prevention

NC Health*Smart* is the Plan's healthy living initiative. By providing resources and supports, the Plan seeks to empower members to make healthier lifestyle choices and to become partners in addressing their health care needs. The compilation of resources provided by the Plan to its members ranges from health-related information, weight management programs and health coaches to assist in the management of a chronic illness, to a 24-hour nurse line, which responds to health-related concerns and questions. Plan member utilization of these resources and participation in programs developed is voluntary. These resources are collectively referred to as NC Health*Smart* and are described below:

1. Disease Management (DM) and Case Management (CM): DM and CM services are available to individuals with asthma, COPD, congestive heart failure, coronary artery disease, diabetes, hypertension, chronic kidney disease and end stage renal disease. This program provides comprehensive and customized support for members with chronic conditions based on the individual's clinical issues and medical needs.
2. Health Coaches: A health coach is available to assist with managing health conditions, to provide any needed information about conditions and related medications, and to assist with questions that members may want to ask their doctor. The health coach is a highly trained and experienced nurse, registered dietitian or respiratory therapist. Members are identified for outreach by a health coach in several ways, including review of claims data, online health assessments and referrals from providers and family members. A member can also directly contact a health coach to ask for services.
3. Lifestyle Health Coaching: Active lifestyle coaching is available to members to help with achieving their personal health goals. Programs are individually customized for weight management, tobacco cessation, healthy nutrition choices, healthy living goals, physical activity and stress management. Maternity Coaching is available to members who are pregnant. The Plan currently offers an incentive program which encourages members to participate in maternity coaching from 12 weeks gestation to the birth of their child hopefully resulting in better health outcomes for both the mother and child.
4. Personal Health Portal: A member can take a health assessment, develop an action plan, obtain nutritional scores, utilize weight tracker tools, find healthy recipes, and use digital health coaching.
5. Weight Management Programs: Plan members have access to Eat Smart Move More Weigh Less, an online and onsite weight management program.
6. QuitlineNC: Plan members have access to smoking cessation support and nicotine replacement patches and gum free of cost.
7. 24/7 Nurse Line: Plan members have access to a 24/7 Nurse Line to answer health concerns.
8. Reduced member prescription drug copays for chronic and preventive medications: To make it easier for members to stay healthy and take their chronic medications as directed by their provider, the Plan provides a special benefit to retired members taking medications

for high cholesterol, hypertension and diabetes. Retired members can order a 90-day supply of their diabetes and cardiovascular medications from a participating pharmacy for 2½ times the copay instead of 3 copays. In addition, all plans, except the Consumer-Directed Health Plan (CDHP), provide members with $10 copays on a 90-day supply of generic cholesterol lowering medication. Although not required due to grandfather status, the Plan covers preventive services and medications, as defined under the Affordable Care Act (ACA) at 100 percent under the Enhanced 80/20 Plan. As a non-grandfathered plan, ACA preventive services and medications are required to be covered at 100 percent under the CDHP, and the Plan also covers certain medications, identified as CDHP preventive medications, without requiring the member to meet the deductible first. These lower member cost shares enable members to afford their medications and to be adherent long term.

NC State Health Plan Assessment of Benefits of Wellness and Prevention Programs

In 2013, the Plan's population health management vendor reached out to active, COBRA and non-Medicare retiree members including those most at risk. Over 3.9 million member contacts were made averaging over seven contacts per member. Over 976,000 of these contacts included:

- Care Considerations – messages to members, and sometimes their providers, identifying a potential gap in care based upon claims and guided by medical evidence. These messages provided information regarding the identified care gap, the reference, and suggested action to close that gap.
- Wellness Alerts – messages that are similar to Care Considerations, but focused on preventive care, such as vaccinations and cancer screenings. Wellness Alerts were sent only to the member.
- Patient Safety Alerts – messages based on FDA Safety Alerts, differed from Care Considerations and Wellness Alerts in that they did not address a gap in care. Instead, Patient Safety Alerts provided timely education to members about potential risks and symptoms associated with medications they were taking.

These messages resulted in over 99,000 closed gaps in care (a gap in care is lack of a required medical test or treatment as evidenced by clinical standards of care). NC Health*Smart* engaged 63,481 unique members (12%) of the active, COBRA and non-Medicare retiree population. Of those 63,481 members, 16,585 unique members of the most at-risk population within the Plan, which is the pre-65 retiree population, were engaged. Member satisfaction rates reached 94 percent across all programs. For every member contacted, 88 percent engaged in a care management program during 2013, resulting in an overall engagement rate of 12 percent of the non-Medicare population.

Health management and wellness programs offer solutions to engage employees across the entire health spectrum to improve the health of each individual, from those with complex health needs to those who are at risk for developing conditions later in life. Specifically, NC Health*Smart* showed a third consecutive year of continual improvement on 19 clinical measures, including specific clinical measures for asthma, diabetes, cancer screening and heart failure readmissions. From 2010-2012 the Plan's health management and wellness programs reduced health risks and improved the health of the membership, producing annual return on investments (ROI) of 6.07:1

in 2011 and 5.74:1 in 2012 with a combined total savings of over $292 million across the two years. Measureable improvements to the health of large populations translate into lower medical costs for employers. These results validate the finding that these population health management programs can enable proactive, sustainable, outcomes in the future.

III.3.b. NC State Health Plan State, Federal and Other Funds for Wellness and Prevention Programs

The General Assembly does not appropriate funds directly to the State Health Plan. Instead, it provides funds to State agencies, universities, community colleges, local school systems and the retirement system to pay an "employer contribution" or monthly premium on behalf of employees and retirees. As such, the Plan is 100 percent receipt-supported, with premium receipts, including employer contributions and amounts paid by employees and retirees for their own and dependent coverage, representing nearly all Plan revenues.

The Plan does not receive dedicated funds for wellness and prevention programs; however, a portion of its administrative budget each year is devoted to population health management and wellness initiatives. The State Fiscal Year (SFY) 2013-14 administrative budget for the Plan included $28.6 million for disease and case management contracts and $3.5 million for wellness initiatives such as smoking cessation, obesity prevention, and worksite wellness efforts.

IV. Level of Coordination Among Agencies

The Divisions of Public Health and Medical Assistance, and the State Health Plan for Teachers and State Employees describe in this report the level of coordination of activities, programs, and public education on the prevention, treatment, and management of chronic health conditions.

Chronic Disease Prevention, Treatment and Management

Tobacco

We know what works to prevent tobacco use among youth and to help tobacco users who want to quit.[4] Since most NC tobacco users are trying to quit (62.8%[5]), and tobacco use is extremely addictive, all NC tobacco users need access to evidence-based tobacco treatment, including coaching and FDA approved medications. These interventions combined double or triple a person's chances of quitting, over quitting on their own. Further, research indicates that access to and use of the full course of nicotine replacement therapy (NRT) and combination medications therapy are effective in boosting quit rates.

Currently, State and federal funding allows about 1 percent of the NC population who smoke access to QuitlineNC, including both Plan and Medicaid members. State Health Plan members who used QuitlineNC and the full course of NRT had quit rates that were higher (50%) than Plan members who did not use the full course (35%). Combination therapies have been shown to be effective smoking cessation treatments. Therefore, the Plan provides the option of a combination cessation therapy of nicotine patches, nicotine

[4] http://www.thecommunityguide.org/tobacco/index.html

[5] NC Behavioral Risk Factor Surveillance System 2012

gum and lozenges to help increase quit rates among its members who use tobacco. Our vision for reducing costs and improving lives is to promote evidence-based tobacco treatment for Plan members and to promote and implement evidence-based tobacco treatment for all Medicaid enrollees through CCNC.

The Plan provides members over the age of 18, who participate in the Quitline multi-call program, with free access to Nicotine Replacement Treatment (NRT) products including over the counter nicotine gum, patches and lozenges. Also prescription generic drugs (such as Chantix) are $0 cost share (for 6 months) for those members in the 80/20 and Consumer-Directed Health Plan (CDHP) to support tobacco cessation efforts among members. The Plan will continue to design benefits to support and incent tobacco cessation among its membership. Medicaid provides full coverage of all NRT free of cost.

Obesity/Overweight

Currently all Plan members have access to Eat Smart, Move More, Weigh Less which is a 15-week adult weight management program that uses evidence-based strategies for weight maintenance. Professionals from North Carolina State University and the NC Division of Public Health developed and manage the program. Methods for planning and tracking lifestyle behaviors along with mindful eating concepts are included in each lesson. Evaluation of the program indicates that participants learn strategies to eat smart, move more and as a result, reduce weight, reduce blood pressure, and are more mindful about health behaviors. [6,7]

Hypertension, Cardiovascular Disease (CVD) and Stroke

DPH supports the legislatively mandated Justus-Warren Heart Disease and Stroke Prevention Task Force and its Stroke Advisory Council. The Task Force, as part of its mission, works with diverse stakeholders and partners across the state in the development and facilitation of *The NC Plan for the Prevention and Management of Heart Disease and Stroke*. The State Health Plan has been an active partner in the development and implementation of this comprehensive approach. In addition, DMA is also a significant partner to this statewide cardiovascular work, through the Justus-Warren Heart Disease and Stroke Prevention Task Force seat held by the Director or his/her designee.

Hypertension is a leading risk factor for heart disease and stroke. It is also the leading chronic disease diagnosis for Plan enrollees. Collaboration between the Plan and DPH to address hypertension has included a number of initiatives (e.g., hypertension awareness and education campaigns, sharing of educational materials, and participation on an ad hoc

[6]Dunn C, Kolasa KM, Vodicka S, et al. Eat Smart, Move More, Weigh Less, a weight management program for adults - revision of curriculum based on first-year pilot. Journal of Extension. 2011;49(6). Available at http://www.joe.org/joe/2011december/pdf/JOE_v49_6tt9.pdf

[7]Dunn C, Whetstone LM, Kolasa KM, et al. Delivering a Behavior-Change Weight Management Program to Teachers and State Employees in North Carolina. Am J Health Promotion 2013;27(6):378 – 383.

hypertension committee in conjunction with other key stakeholders). These efforts have targeted both health care providers and consumers.

With federal funding from CDC, the CCCPH Branch (DPH) has worked with the Plan to summarize the 2014 Evidence-Based Guideline for the Management of High Blood Pressure in Adults (Joint National Committee 8) and the American College of Cardiology and American Heart Association 2013 Cholesterol Guidelines into a single document. This document has been shared with the medical and dental directors of the NC Community Health Center Association. This document will also be shared with Plan providers, DMA, CCNC networks, and the NC Academy of Family Physicians to guide quality improvement in all practice settings.

Asthma
DMA and the Plan are working with the Asthma Alliance of North Carolina and DPH to increase the utilization of evidence-based asthma management practices and strategies as per CDC recommendations.

Diabetes
The agencies have many initiatives in place and under development specifically addressing the prevention and management of diabetes. Included are:

- Development of a business case by the Plan to provide Diabetes Self-Management Education (DSME) and access to Certified Diabetes Educators (CDE) as covered benefits.
- Collaboration between the Plan, DPH and BCBSNC to distribute recent hypertension and diabetes clinical guidelines to the Plan's network of providers.
- Collaboration in the development of a program to raise awareness of pre-diabetes among Plan members and increase early identification and treatment of the same.
- Work with the Plan's population health management vendor, Active Health Management (AHM), and the DPH on a comprehensive diabetes outreach and engagement campaign starting in early 2015.
- Collaboration between CCNC and DPH through staffing at local health departments for providing recognized diabetes self-management education.
- Plans for increasing marketing of diabetes self-management education to the Medicaid population in 2015.

V. Action Plan for Chronic Disease Care Coordination

V.1. Proposed Action Steps

To reduce the financial impact of the chronic health conditions that are most likely to cause death and disability, the collaborative efforts of the DPH, DMA and Plan will address factors of care coordination of multiple chronic health conditions in the same patient. The action plans listed include a range of recommended legislative actions.

V.1.a. Reduction of Hospital Readmission Rates

Division of Medical Assistance

Through its contract with N3CN, DMA seeks to reduce avoidable hospital readmission for beneficiaries. In a study conducted on hospital readmissions among Medicaid beneficiaries, it was determined that thirty-day hospital readmission rates for Medicaid beneficiaries also correlate directly with the number of chronic conditions these beneficiaries have, ranging from 13 percent for patients with a single chronic condition to 36 percent for those with ten or more. [8]

State Health Plan

In 2013, the hospital admission rate per 1,000 active Plan members was 54 with an all cause readmission rate of 7.9 percent. The average cost of an admission was $14,806. The hospital admission rate per 1,000 Pre-Medicare Retirees was 69 with an all cause readmission rate of 15.7 percent. The average cost of admission was $22,782. In addition, emergency department costs represented $146 million in annual medical costs (4.2% of spend) for the Plan. Reducing avoidable hospital admissions and readmissions is a strategic initiative for the Plan.

The Plan is working with the North Carolina Hospital Association to facilitate daily feeds of Admission Discharge and Transfer (ADT) data to the Plan, to be used by the population health management vendor, AHM, to identify members who are considered to be high priority to receive transitional care and case management. This is expected to be in place by December 2014. This initiative is expected to impact the hospital readmission rates among Plan members as early as 2015.

The Plan also has monthly meetings with its primary vendors, BCBSNC, AHM and BCBSNC's subcontractor, Value Options, to coordinate care and case management for high priority members with multiple chronic conditions in an effort to reduce adverse events such as hospital admissions and readmissions. This coordination effort between the Plan vendors will continue.

Division of Public Health

Division of Public Health's role in reduction of hospital admission and readmissions is to prevent and reduce North Carolina's chronic disease burden. DPH does this through monitoring and tracking; environmental approaches that promote health and support and reinforce healthful behaviors (statewide in schools and childcare, worksites, and communities); health system interventions to improve the effective delivery and use of clinical and other preventive services; and strategies to improve community-clinical linkages ensuring that communities support and clinics refer patients to programs that improve management of chronic conditions.

V.1.b. Development of Transitional Care Plans

Division of Medical Assistance

[8]Gilmer T, Hamblin A. Hospital readmissions among Medicaid beneficiaries with disabilities: identifying targets of opportunity. Hamilton (NJ): Center for Health Care

As a DMA contractor, CCNC networks partner with hospitals in all 100 counties in an effort to decrease readmission rates. Of North Carolina's approximately 150 hospitals, over one-third provide CCNC networks with twice-a-day ADT (admission/discharge/transfer) feeds detailing clinical encounters with program participants, while many others provide access to hospital information systems. Many participating hospitals also host embedded CCNC care managers. These elements of real-time access enable care management teams to interact with patients and provide transitional care interventions in a timely manner, which is critical in facilitating successful transition between care setting and preventing re-admissions.

Key components of the CCNC Transitional Care Model:

- Face-to-face patient encounters, including visits to the patient homes;
- CCNC medication management;
- Patient self-management notebook and patient education;
- Follow-up calls and contact; and
- Post-discharge follow-up with the primary care provider or specialist in a timely manner.

Hospitalized patients are identified as "Transitional Care Priority" if they fall into disease and severity clusters that have been found to benefit from transitional care. Transitional care priority clients receive additional support following an inpatient stay through the CCNC Transitional Care program. CCNC Care Managers are embedded in large hospitals and routinely round at smaller ones to visit patients at the bedside, interact with the hospital team, and coordinate discharge planning. Local care managers perform post-discharge home visits to perform medication reconciliation (with a full review of the client's medications by a network pharmacist when necessary), educate patient and family on "red flags" that could signal complications and appropriate actions to take, and subsequent follow-up activities aiming to ensure that the client is following discharge instructions and seeing their primary care provider soon after hospital discharge.

In addition to the care management focus on transitional care, the Call Center uses real-time hospital data to identify and contact patients who are linked to a CCNC provider who have a non-emergent visit to the ED. Through these calls, the Call Center staff emphasizes the importance of using the medical home and identifies any needed follow up or links to local resources within the patient's community. While most of these calls are made to the patient only once, RNs in the Call Center attempt to call back a subset of the contacted patients who continue to over utilize the ED. The RNs assess these patient situations closely to identify gaps in care or new issues that can be referred to the networks for assistance. From February 2012 to October 2012, the Call Center was able to see a 49 percent reduction in ED visits per 1,000-member month, from 374.90 to 191.3 visits after just one call.

Registered Nurses who are also Certified Health Coaches are available in the Call Center to work with patients on wellness topics and disease management. Additionally, the local care managers refer patients who want to take more responsibility for setting their own health goals and for managing their own health to a Health Coach. Topics covered include tobacco cessation, weight management, stress management, nutrition, exercise and diseases such as congestive heart failure, diabetes, asthma, chronic kidney disease and hypertension. Coaches are also in contact with local CCNC care managers for any issues that need to be handled locally.

State Health Plan

As discussed above, access to the hospital ADT feeds will allow the Plan and its population health management vendor to develop criteria for identification of members who can benefit from transitional care and build a robust transitional care program for its membership.

The Plan through its third party administrator, BCBSNC, offers transitional care to members who are admitted to the hospital for surgery. A comprehensive member assessment is provided prior to surgery as well as a post-operative assessment to re-assess member needs and to avoid possible complications and readmissions. BCBSNC works with the Plan's Population Health Management vendor, AHM, to ensure the member's needs are met before leaving the hospital, including medication reconciliation and verifying follow-up appointments have been scheduled with the member's provider. The Medicare population enrolled in either the Humana or the UnitedHealth Medicare Advantage Plans is contacted within 72 hours of discharge to identify needs and for engagement with a case manager if needed.

Division of Public Health

Division of Public Health's role in transitional care plans is to support the work of DMA and the Plan to prevent and reduce North Carolina's chronic disease burden through environmental approaches that promote health and support and reinforce healthful behaviors (statewide in schools and childcare, worksites, and communities), collaboration to support health system interventions, and strategies to improve community-clinical linkages.

V.1.c. Implementation of Comprehensive Medication Management

Division of Medical Assistance

As part of DMA's contract with N3CN for an enhanced primary care management system, pharmacists are part of the care team to provide medication management services. Pharmacists review medication reconciliations completed by care managers and perform comprehensive reviews to communicate medication issues to the patients' primary care provider with the goals of improving the quality of care, reducing preventable hospital readmissions, and emergency department (ED) visits. Medication management is the main focus of the clinical pharmacist's activities and is performed for both transitional care and identified chronic care patients.

Pharmacists working with CCNC collaborate closely with care managers to jointly provide medication management services to patients at risk of poor outcomes associated with medication use. This includes patients with:

- Polypharmacy;
- Low adherence to chronic medications;

- Medication-related gaps in care; and
- Presence of medications that are high risk or require intense monitoring.

Medication management is the process of gathering, organizing and sharing medication use information in order to identify and resolve duplications, interactions, possible adverse events, poor adherence or other suboptimal medication-taking behavior(s). Medication management is a key function of care management. Pharmacists serve as a resource for medication management as part of the care management team. Medication use information can be obtained from multiple sources including the patient/caregiver, medical chart, prescription fill history, and discharge instructions. Pertinent findings regarding medication use must be communicated to the primary care provider and/or all applicable community-based providers. Follow-up on clinically relevant, identified medication use issues is essential as the failure to do so can result in poor patient outcomes, including re-hospitalization.

- Medication reconciliation consists of the following steps:
  - Identification of adherence issues;
  - Identification of discrepancies between medication lists;
  - Clarification and follow-up of discrepancies with the patient/caregiver;
  - Clarification and follow-up of discrepancies with primary care provider and other healthcare team members;
  - Follow-up communication of information and education to the patient/caregiver; and
  - Follow-up communication of findings/recommendations to the Network Pharmacist.

At a minimum, this process identifies duplications and/or discrepancies between the gathered medications lists arising from uncoordinated care or patient non-adherence. The patient/caregiver interview takes place in the home, clinic, or via telephone utilizing the medication list(s) to enhance the gathering of patient drug use information.

If any medication discrepancies that could negatively impact patient outcomes are identified, it is the responsibility of the Primary Care Manager (PCM) to follow up with the appropriate care team member, including physicians, and to document their efforts in CMIS/Pharmacy Home. The PCM or Pharmacist is also responsible for providing any pertinent information, including education, to the patient/caregiver.

State Health Plan

Comprehensive medication management is defined in the Patient-Centered Primary Care Collaborative[9] as the standard of care that ensures each patient's medications are individually assessed to determine that each medication is appropriate for the patient, effective for the medical condition, safe given the comorbidities and other medications being taken, and able to be taken by the patient as intended. It includes an individualized care plan that achieves the intended goals of therapy with appropriate follow-up to determine actual patient outcomes. Currently, the Plan's medication management initiatives include the promotion of medication

[9]Nace D, Grundy P, Nielsen M, et al. The Patient-Centered Medical Home: Integrating Comprehensive Medication Management to Optimize Patient Outcomes. Patient Centered Medical Home Collaborative June 2012 http://www.pcpcc.org/sites/default/files/media/medmanagement.pdf

adherence through benefit design and medication copay incentives, use of the Plan's Pharmacy Benefit Manager resources, and medication therapy management offered through its Medicare Advantage vendors.

Medication Therapy Management (MTM) is offered to Plan members using the Express Scripts pharmacy by pharmacist specialists in the disease specific therapeutic resource centers (TRCs) and members using specialty medications. TRCs are specialty pharmacy practices for patients with certain chronic and complex conditions. They offer personalized clinical care to ensure patients get the information and counseling they need to be adherent to their therapies and achieve healthier outcomes. The pharmacists also provide proactive member services for the start of a new medication and support for ongoing maintenance medication refills and monitoring of drug therapy response.

The Medicare Advantage Plans offer MTM for the Plan covered members. Humana provides retail pharmacy MTM through the vendor Outcomes, Inc. The delivery channels include in-house, telephonic as well as retail face-to-face and provider face-to-face. United Healthcare offers an annual comprehensive medication review of a member's therapy by a clinician, typically a pharmacist. United Healthcare uses a vendor to administer these reviews telephonically.

The Plan recognizes the benefits of comprehensive medication management as outlined in the Patient-Centered Primary Care Collaborative to help patients achieve improved clinical and therapeutic outcomes. Historically, the Plan has been challenged in offering these services due to varying reimbursement methodology for pharmacists or vendors and procurement issues. In order to effectively expand medication management services to more members and additional care settings in the future, the Plan recommends an environmental scan of available outside resources including its current vendor capabilities. The Plan would like to incorporate MTM into its disease and case management programs, PCMH, transitional care plans and value based pharmacy benefit design to improve coordinated care for their members.

Provided with the appropriate resources, the Plan would perform the MTM services environmental scan in 2015 including the following components:

1) Value Based Benefit Design Review – The Plan will evaluate opportunities to redesign its pharmacy and medical benefits to incent effective chronic disease management. Many states currently offer reduced pharmacy member cost shares to members that engage in disease and case management, MTM, adhere to chronic medications, and/or choose preferred networks or the least costly site of care. This benefit redesign would be for implementation in 2016.

2) MTM Vendor Resource Evaluation – The Plan will identify MTM resources including the Plan's Pharmacy Benefit Manager (PBM), Disease and Case Management vendor as well as outside vendors and evaluate the capabilities of each to coordinate care within the PCMH and integrate care across the spectrum of the Plan's services. A vendor's ability to integrate data will be a large part of this evaluation as pharmacy and medical data will be used by the care team to conduct

Medication Therapy Management. Procurement for MTM services will be necessary due to contracting requirements of the Plan.

3) MTM Service Deliverables – The Plan would like to explore delivery of comprehensive and targeted pharmacist-initiated medication reviews for members transitioning out of the hospital and for members embedded in PCMH to address care gaps, provider consultations for cost and quality, patient adherence consultations, patient education and monitoring, and cost effective reviews of members' medication regimens. Specifically, transitional care would address admissions related to a drug therapy problem, ensure the inpatient care plan includes the patient's chronic medications and that medications to be continued on an outpatient basis have the necessary approvals, as well as reconcile medications prescribed before and during the hospitalization with the discharge medication list.

4) Financial Analysis – The Plan will evaluate the MTM services identified by the Plan as essential to offer including transitional care support and PCMH coordination, to propose a reimbursement methodology to pay pharmacists and/or vendors based on clinical outcomes and performance. Once the services, population and payment methods are agreed upon, the Plan will need to perform a financial analysis including a proposed return on investment and performance guarantees to identify the cost to the Plan for providing these services.

   Upon completion of the environmental market scan in 2015, the Plan will provide recommendations to the State Treasurer and the Plan's Board of Trustees to incorporate a value based benefit design and MTM and coordinate care among its current disease and case management vendor, pharmacy benefit manager and PCMH. The Plan's goal will be to implement expanded MTM services for a larger population in 2016.

Division of Public Health

Division of Public Health's role in the implementation of comprehensive medication management is to support the work of DMA and the Plan to prevent and reduce North Carolina's chronic disease burden through implementing and supporting best practices for prevention interventions to reduce the risk factors for chronic disease and the need for chronic disease medications.

V.1.d. Quality Standards

Division of Medical Assistance

DMA approves CCNC network use of performance measurement and feedback to help meet its goals of improving the quality of care for Medicaid beneficiaries while controlling costs. Quality measurement is intended to stimulate or facilitate quality improvement efforts in CCNC practices and local networks, and to evaluate the performance of the program as a whole. Goals are to identify a broad set of quality measures with:

1) clinical importance (based on disease prevalence and impact, and potential for improvement),
2) scientific integrity (strength of evidence underlying the clinical practice recommendation; evidence that the measure itself improves care; and the reliability, validity, and comprehensibility of the measure),
3) implementation feasibility, and 4) synergy with other State and national quality measures or quality improvement programs.

Quality measures are reviewed on an annual basis, and final measures are approved by vote of the CCNC Clinical Directors. Patients with any of four qualifying conditions (diabetes, asthma, heart failure, or ischemic vascular disease) are eligible for the sample. Sampled patients with multiple co-morbidities (including hypertension) are audited for all confirmed conditions.

In 2013, CCNC reported on a total of 59 measures at the practice, county, network and program level. The measures are distributed across chronic conditions as follows:

- Asthma – 9 measures
- Ischemic Vascular Disease – 4 measures
- Hypertension – 2 measures
- Diabetes – 12 measures
- Heart Failure – 7 measures
- Adult Cancer Screenings – 3 measures
- Pediatric Preventive Services – 18 measures
- Behavioral Health – 2 measures

State Health Plan

The Plan aims to improve the health of members while reducing costs. Multiple health management activities and resources are deployed to engage members in their own healthcare and management to monitor and evaluate the effectiveness of such activities; quality metrics are produced and monitored on an ongoing basis. In particular, the Plan's population health management (PHM) vendor reports on 29 quality measures, including

- Asthma – 4 measures
- Diabetes – 5 measures
- Heart Failure – 4 measures
- Adult Preventive Care – 5 measures
- Well-Child – 7 measures
- Pediatric Preventive Care – 3 measures
- Ischemic Vascular Disease – 1 measure

The PHM vendor has performance guarantees associated with asthma, heart failure, breast cancer screening, colorectal cancer screening, LDL (cholesterol level) monitoring and nephropathy monitoring. The Plan also receives data from the State Center for Health Statistics from the Behavioral Risk Factor Surveillance Survey (BRFSS) subset for the Plan population.

Division of Public Health

The Division of Public Health's role in the implementation of quality standards is to support the work of DMA and the Plan to prevent and reduce North Carolina's chronic disease burden. Examples of these joint efforts include the attention to clinical community systems to support those individuals who use tobacco, are overweight, or who have hypertension or diabetes. This work focuses on strategies to improve community-clinical linkages ensuring that communities support and clinics refer patients to programs that improve management of chronic conditions.

Coordination

DPH, DMA and the Plan have a long history of coordination and collaboration in order to prevent and reduce risk factors that lead to North Carolina's leading chronic disease burdens, as well as manage and treat those individuals with chronic diseases. Current and future coordination among the three agencies includes:

- Continue to manage QuitlineNC such that Plan and Medicaid-eligible tobacco users who want to quit have access to evidence-based tobacco cessation services. This includes continued provision of technical assistance to improve the quality of those services.
- Continue to promote QuitlineNC (1-800-QuitNow) to make sure all Plan and Medicaid-eligible tobacco users who want to quit are aware of this service, through clinic referrals, earned media, social media and other communication channels.
- Support the continued development and dissemination of a comprehensive statewide "Know your Numbers" campaign for providers, beneficiaries of Medicaid and Plan members. This campaign highlights appropriate targets for blood pressure, cholesterol and glucose control.
- Continue to promote and deliver evidence-based weight management programs such as Eat Smart, Move More, Weigh Less among Medicaid beneficiaries, Plan members, and other North Carolinians who are at-risk for chronic conditions due to weight maintenance issues.
- Expand and refine the current transition of care programs offered to members to address inpatient admission, readmission and emergency department admission rates among Plan members.
- Explore continued opportunities for Pharmacists to work in conjunction with physician practices to support the management of chronic conditions.

V.2. Expected Outcomes

During the succeeding fiscal biennium, DPH, DMA and the Plan seek to achieve the following expected outcomes from the aforementioned action plan.

Division of Public Health

- Increased referrals to, and participation in, Disease Management and prevention programs (Diabetes Self-Management and Diabetes Prevention Programs);
- Cost savings in health care utilization as risk factors (e.g., exposure to secondhand smoke, asthma triggers, obesity, hypertension) decrease;
- Increased early detection and screening (tobacco addiction, breast, cervical cancer, CVD risk factors, renal disease);
- Decreases in the need for medications as chronic conditions improve;

- Increased awareness of QuitlineNC, and utilization of evidence-based tobacco treatment by Medicaid beneficiaries and State Health Plan members;
- Increased reimbursement for diabetes self-management, diabetes medications, and weight loss/maintenance programs (Eat Smart, Move More, Weigh Less);
- Weight loss or appropriate weight maintenance; and
- Reduced smoking and tobacco use prevalence for adults, youth and pregnant women.

Division of Medical Assistance

- Decreased hospital readmissions;
    - For patients receiving transitional care interventions, there is a 20 percent reduction in readmissions, and 12-month readmission rates are consistently lower for participants, regardless of clinical severity. For every six patients receiving the intervention, one hospital readmission is avoided.
- Increased cost savings from reduced hospital and ED utilization;
    - Patients who appeared on the CCNC Priority Patient List (PPL) saw a 5.7 percent reduction in total spending relative to the control group, or a difference of $73 per member per month.
- Improved compliance with medication regimens;
- Decreased medication discrepancies and drug therapy problems; and
- Continued improvement in CCNC Quality Measures.

State Health Plan

- Increased early detection and screening (breast, cervical cancer, CVD risk factors, renal disease);
- Reduced cost through reduced hospital and ED utilization;
- Improved adherence to medication regimens;
- Increased referrals to and participation of members in smoking cessation and Active Life Coaching (ALC) programs provided by the Plan's partners and Population Health Management Vendor;
- Expanded and refined transitional care programs to reduce inpatient readmissions and ED admissions among high priority Plan members;
- Completed environmental scan for medication therapy management (MTM) services and identification of potential value-based pharmacy benefit design for chronic disease care among Plan members;
- Defined plan for MTM services and initiation of contract procurement for the Plan, if current vendor resources do not support the plan;
- Availability of evidence-based strategies including home assessments for high risk members with asthma; and
- Availability of evidence-based strategies for Diabetes Self-Management Education, such as Diabetes Prevention Program, and access to Certified Diabetes Educators for members with diabetes.

V.3. Goals and Benchmarks for reduction

Goals and benchmarks for reduction of chronic disease align with *Healthy North Carolina 2020: A Better State of Health*, which serves as the State of North Carolina's health improvement plan to address and improve the State's most pressing health priorities. Since 1990, the State of North Carolina has identified decennial health objectives with the goal of making North Carolina a healthier State. The proposed action plan described in this report includes benchmarks for coordinating care and reducing the incidence of multiple chronic health conditions.

The Healthy NC 2020 objectives were developed through a collaborative process with NC Institute of Medicine (NC IOM), DPH, DMA, State Center for Health Statistics (SCHS), etc. The Healthy NC 2020 objectives have measureable targets and the data are routinely captured and progress documented annually. These public health, population-based measures include:

Healthy North Carolina 2020 Objective	**Baseline**	**Current**	**Target**
Decrease the percentage of adults who are current smokers*	20.3 % (2009)	20.2% (2013)*	13.0%
Decrease the percentage of high school students reporting current use of any tobacco product	25.8% (2009)	22.5% (2011)	15.0%
Increase the percentage of high school students who are neither overweight nor obese	72.0% (2009)	72.3% (2013)	79.2 %
Increase the percentage of adults getting the recommended amount of physical activity**	46.4% (2009)		60.6%
Increase the percentage of adults meeting CDC Aerobic Recommendations**		48.1% (2013)	
Increase the percentage of adults who consume five or more servings of fruits and vegetables per day**	20.6 % (2009)		29.3%
Increase the percentage of adults who consume fruit one or more times per day.**		57.1% (2013)	
Increase the percentage of adults who consume vegetables one or more times per day.**		76.3% (2013)	
Reduce the cardiovascular disease mortality rate (per 100,000 population)	256.6 (2008)	222.3 (2013)	161.5
Decrease the percentage of adults with diabetes*	9.6% (2009)	11.4% (2013)*	8.6%
Reduce the colorectal cancer mortality rate (per 100,000 population)	15.7 (2008)	13.1 (2013)	10.1

*In 2011, the BRFSS methodology changed, so results are not directly comparable to the baseline or target values.
**In 2011, the definition for recommended amount of physical activity and fruit and vegetable consumption changed. We have added similar, but not comparable measures.

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While the agencies share the Healthy NC 2020 goals, NC DMA also uses specific measures to track goals and benchmarks for reduction. CCNC utilizes both claims and chart review data to track quality measures, which are based on nationally recognized Healthcare Effectiveness Data and Information Set (HEDIS) or Physician Quality Reporting System (PQRS) measures. Where possible, CCNC utilizes benchmarks set by HEDIS, as well as National Committee for Quality Assurance (NCQA) Diabetes and Heart/Stroke Recognition Programs to set goals and evaluate progress.

State Health Plan

Much like DMA, the Plan also utilizes measures that are based on national standards such as HEDIS and NCQA to help monitor the health of the Plan's population. This not only includes measures specific to chronic disease but also other measures such as preventive and timely care. These measures are produced using claims data and are reported on a regular basis to identify trends and most importantly to identify when intervention may be needed.

V.3.a. Care Coordination and V.3.b. Incidence Reduction of Chronic Health Conditions

All agencies will continue collaborative efforts with the Division of Medical Assistance and State Health Plan to address chronic disease prevention and reduction of risk factors while supporting programs that enhance care coordination between agencies, health care providers and community based resources.

VI. Budget Fiscal Note

There is no fiscal note associated with this report.