EXAMINING THE IMPACT OF THE PATIENT PROTECTION AND AFFORDABLE CARE ACT IN NORTH CAROLINA

CHAPTER 8: NEW MODELS OF CARE

One of the goals of the Affordable Care Act is to reign in escalating health care costs. Over the last ten years, health insurance premiums have increased at more than three times the rate of general inflation. The average employer-sponsored premium for single coverage in North Carolina increased 80% between 2000-2001 and 2009-2010 and 85% for family coverage.[1] Nationally, the comparable premiums increased 109% and 115% respectively during the same time period. In contrast, general inflation increased 24%.[2] Absent major interventions, health care spending is expected to continue to rise faster than other spending in our society.[3]

OVERVIEW

There is more than a three-fold variation in per capita health care spending across the country.[4] Most of the variation in health care spending across the country is due to differences in the types and quantity of services. This variation has not been found to be as related to differences in price of services, severity of health problems, or patient preferences.[5] Further, communities that spend more on health care services do not achieve better health outcomes. In fact, some experts suggest that the amount spent on health care is associated with lower health care quality.[6]

In general, our current fee-for-service (FFS) health care payment system rewards health care providers based on the volume of the services provided, not outcomes or quality.[7] Health care professionals receive payment each time they provide health care services. Payments are not tied to quality or outcomes. In addition, the existing reimbursement structure creates incentives for health care professionals to provide care based on whether a service can be reimbursed. This can create a financial disincentives and discourage health care professionals from providing certain health care services that could have a greater positive impact on an individual's health, but which are not currently reimbursed. The current FFS system also contributes to more fragmented care, as health care professionals get paid regardless of whether care is coordinated among different health care professionals.

The NCIOM New Models of Care workgroup recognized that we—as a state and a nation—need to rethink how we pay for and deliver health care services. We cannot continue to pay increasing amounts of our state or nation's wealth on health care services without receiving a commensurate improvement in health care quality and outcomes. The development and implementation of new models of care is essential to face the challenge of improving the value delivered by our health care system. We need to develop new models of care that expand access to and utilization of needed services; incentivize providers to improve quality as well as individual and community health outcomes; involve patients more directly in their own care; reduce redundant, ineffective, and inefficient utilization (i.e., unnecessary utilization); and moderate rising health care costs. In addition, we need to focus more on prevention and improving the health status of the population (i.e., improving overall population health) to reduce the need for more costly health care services. This will require a more holistic view of health care, one which recognizes that the health of a population is profoundly influenced by more than the health care services that the population receives. Population health is also influenced by the

individuals'environment, socioeconomics (including income, education, and housing), lifestyle choices, and racial/ethnic disparities.[8]

The workgroup developed a set of principles that should guide the state, as well as other private organizations, as they implement new delivery and finance models. An abbreviated version of the principles is included below. The complete version is included in Appendix G:

1. Individual patients' and their families' needs and preferences should be the central focus of any health system.
2. North Carolina will be best served by developing models that will improve access, quality, and population health, and reduce unnecessary utilization and the rate of increase in health care expenditures. The availability of funding should not drive the development of new models; rather models should be pursued to address North Carolina specific needs.
3. North Carolina should aggressively test new models, building on existing initiatives but continuing to explore other options with the goals of improving health care quality and outcomes, population health, improved access, increased efficiencies, and reduced costs.
4. North Carolina should continue testing different models of patient-centered interdisciplinary teams that address the health needs of the whole person.
5. Consumers should be given the information, training, and support to be active participants in managing their own health and informed consumers in a redesigned health system.
6. In order to improve the capacity of our health care system to be able to serve all the newly insured, we need to consider new models that will utilize health professionals and paraprofessionals to the fullest extent of their education and competency.
7. Models of care should be designed to improve quality, health care outcomes, and health care access for populations that have been traditionally underserved including, but not limited to, low-income populations, the chronically ill, racial and ethnic minorities, and people with disabilities.
8. Data should be collected and analyzed in a manner that allows for the ongoing redesign and improvement of our care delivery systems, and pertinent health care information and performance data should be made available to consumers.
9. Models of care should be thoroughly evaluated in a timely manner to determine if these innovations are leading to the stated goals, and to understand what models work best for different populations in different communities and with different configurations of providers. Any new model tested in the state should be transparent in terms of design, outcomes, and costs.
10. Successful initiatives should be disseminated throughout the state.
11. To the extent possible, the new models of care should involve other payers in addition to Medicaid and Medicare.
12. If savings are realized from the changes in the health care delivery and financing systems, these savings should be reinvested to support additional improvements in access, quality, health care outcomes, and population health and/or be shared with consumers, taxpayers, payers, and providers.

North Carolina is a leader in testing new delivery and payment models, particularly within its Medicaid program. Community Care of North Carolina (CCNC) is a nationally recognized PCMH model that has helped improve the quality of care and reduce health care costs provided to Medicaid recipients.[9] This PCMH model is now being expanded to include some commercially insured populations (i.e., Blue Cross Blue Shield of North Carolina enrollees), and Medicare recipients (described more fully below). In addition, some of our large insurers and health care systems are also testing new models of care. The ACA provides some opportunities to partner with the federal government to test new models or expand existing models to the Medicare or Medicaid population. However, North Carolina's efforts have not focused solely on opportunities offered through the ACA. This chapter describes some of the new funding opportunities made available under the ACA to test new models of care, as well as some of North Carolina's existing demonstrations, including value-based plan designs and broader population health interventions.

ACA Provisions and North Carolina Models

The ACA includes provisions aimed at testing new models of delivering and paying for health services with the goals of reducing unnecessary utilization and health care expenditures, while improving individual health outcomes and overall population health. To encourage innovations in health care delivery design and payment models, the ACA created the Center for Medicare and Medicaid Innovation (CMI) within the Center for Medicare and Medicaid Services (CMS). The stated intent of CMI is "to test innovative payment and service delivery models to reduce program expenditures under … [Medicare and Medicaid] while preserving or enhancing the quality of care furnished to individuals under such titles."[10] Three of the signature models include PCMHs, episode of care/patient bundling, and accountable care organizations. However, the ACA also gives CMI, and CMS more broadly, the authority to test other delivery models in the Medicare, Medicaid, and Child Health Insurance Program (CHIP) programs, including, but not limited to, community-based care transitions, state demonstrations to fully integrate care for Medicare and Medicaid dual eligibles, independence at home, medication therapy management, telehealth or telemonitoring for chronically ill individuals at high risk of hospitalizations, and co-location of primary care and behavioral health.

Private insurers are also exploring similar models to improve quality of care and population health, and to reduce health care costs. Many of the private efforts predate the enactment of the ACA, but the ACA provides additional incentives that will encourage insurers to implement similar initiatives in their commercial products. For example, insurers that offer qualified health plans within the Health Benefit Exchange (Exchange) are required to include quality improvement activities.[11] The ACA defines allowable quality improvement strategies to include increased reimbursement or other incentives to improve health outcomes (e.g., through quality reporting, case management, care coordination, chronic disease management, medication management, or a medical home model), prevention of hospital readmissions, improvement in patient safety and reduction of medical errors, implementation of wellness and health promotion activities, or reduction in health care disparities.

These different models, along with some of the similar delivery and payment models being tested in North Carolina are described briefly below. A more complete listing of new models being tested in North Carolina is included in Appendix H.

Patient-Centered Medical Homes (PCMH)[12]
PCMH are teams of health care professionals and other ancillary staff who provide comprehensive primary care to patients including preventive, acute, and chronic care management.[13] The care should be patient-centered, actively engage the patient in their own care and tailored to meet the patient's needs and preferences. In addition, PCMHs often include electronic health records and other technology to improve quality of care and patient outcomes. PCMH models sometimes include payment reform, including pay-for-performance or separate payments for care coordination and care management.

CMS and/or CMI have developed several initiatives to promote PCMHs in Medicare and Medicaid. For example, CMI is testing a multi-payer PCMH initiative in seven markets (called the Comprehensive Primary Care Initiative).[14] CMS has a demonstration to support federally qualified health centers (FQHC) in pursuing Level 3 PCMH recognition from the National Committee for Quality Assurance (FQHC Advanced Primary Care Practice demonstration).[15] The ACA includes funding to encourage every state to develop "health homes" in their Medicaid program.[16] Essentially, "health home" is another name for a type of PCMH that focuses on care management, care coordination and health promotion, and patient and family support for Medicaid beneficiaries with chronic illnesses. States that agree to the terms of the federal health home requirements are eligible for a 90% federal medical assistance percentage (FMAP) match for certain covered services for eight fiscal quarters after their state plan amendment (SPA) is approved.

Community Care of North Carolina (CCNC) is a nationally recognized, award winning, non-profit, practitioner-led, PCMH model that links more than one million Medicaid recipients (80% of all North Carolina Medicaid recipients) and others in the state, to primary care practices.[17,18,19] CCNC originated over a decade ago as a collaborative effort between the North Carolina Division of Medical Assistance (DMA), the local CCNC networks, and the North Carolina Office of Rural Health and Community Care (ORHCC). There are 14 autonomous non-profit regional CCNC network entities across North Carolina covering all 100 counties. North Carolina Community Care Network, Inc. (NCCCN) serves as the umbrella coordinating organization for the 14 networks. In developing the CCNC model, there was an understanding that many factors affect health, and that networks needed to include more than health care providers to have an impact on the health of the Medicaid population. Thus, each network incorporates primary care providers, FQHCs and other safety net organizations, hospitals, social services agencies, local health departments, and other community resources that work together to provide high quality care and care coordination for the enrolled population. A significant portion of the care coordination provided by CCNC is in person, rather than remotely through the telephone.

Each of the CCNC networks has a clinical director, network director, nurse and social worker care managers, pharmacist, psychiatrist, quality improvement coordinator, and informatics system manager. Primary care providers under contract with CCNC receive a per-member-per-month (pmpm) payment from the state to help manage the care provided to their enrolled patients. In addition, the network receives an additional pmpm payment to help pay for care management, disease management, and quality improvement activities; an informatics system that undergirds the quality improvement initiatives; and other resources needed to improve the care provided to the enrollees.

CCNC networks are all involved in clinical improvement initiatives, including specific disease management programs (including diabetes, asthma, congestive heart failure), medication management, chronic care and transitional care programs, and emergency room initiatives. CCNC, working with primary care providers, helps build comprehensive teams that coordinate services for Medicaid and other enrolled patients. Some of the ancillary team members are available at the network level (e.g., pharmacists and psychiatrists), and others (e.g., nurse and social work care managers) are embedded within the practices—particularly larger practices — and 38 hospitals. The team focuses on care for people with chronic, or complex health conditions, working to improve the quality of care provided as well as patient self-management skills.

In addition, CCNC has a pregnancy home initiative which is intended to improve the quality of maternity care provided to Medicaid recipients. Medicaid currently covers approximately half of all births in the state, including many women who are at risk of poor birth outcomes such as preterm birth or low birth weight. Improving care for this higher risk population can help improve the state's birth outcomes. This is a collaborative effort between CCNC networks, DMA, the Division of Public Health, and local health departments. Participating Medicaid providers will be measured on four performance measures: no elective deliveries before 39 weeks; providing progesterone shots to women at risk of preterm births (17P); reducing the primary c-section rate; and performing standardized initial risk screening of all obstetrical patients. In addition, the Pregnancy Medical Home provider must coordinate with local public health pregnancy case management to ensure that high-risk patients receive case management. The initial goals of the pregnancy home model are to reduce the rate of low birth weight by 5% in each of the first two years and to achieve a primary c-section rate at or below 20%.

DMA has also submitted a SPA to the CMS to implement the health home option. Health home services are limited to Medicaid recipients who have two or more chronic conditions, one chronic condition with a risk of a second chronic condition, or one serious and persistent mental illness. Once the SPA is approved by CMS, the state will use the enhanced funding to support comprehensive care management, care coordination transitional care, individual and family support services, and referrals to community and social supports to qualified Medicaid participants. The care coordination function will be split between CCNC (for patients with more significant medical needs and less acute behavioral health problems), and Local Management Entities/Managed Care Organizations (LME/MCOs) (for patients with more significant behavioral health problems and less acute medical needs).

Although CCNC began as a Medicaid-only initiative, the enrolled population has gradually expanded over time to include additional populations. In 2011, the North Carolina General Assembly expanded CCNC to include North Carolina Health Choice recipients.[a] As of October 2012, CCNC managed the care of 143,736 North Carolina Health Choice recipients, or 94% of all North Carolina Health Choice enrollees. In addition, as part of the Medicare 646 waiver, CCNC is now managing the care of 102,690 dual eligibles (described more fully below). More recently, CCNC has begun to work with the State Health Plan, Medicare, Blue Cross and Blue

[a] North Carolina Health Choice, North Carolina's CHIP program, is open to children whose family income is below 200% of the federal poverty guidelines but exceeds Medicaid income requirements.

Shield of North Carolina (BCBSNC), and some large employers to provide PCMHs to commercially insured populations. For example, North Carolina was one of the first eight states awarded a demonstration grant through CMI. The demonstration was awarded to test a multi-payer partnership between DMA, CCNC, Blue Cross Blue Shield of North Carolina, and the State Health Plan in seven rural counties: Ashe, Avery, Bladen, Columbus, Granville, Transylvania, and Watauga. CCNC medical homes currently serve more than 40,000 Medicaid recipients in these seven counties. The new partnership is expected to expand the patients served by CCNC practices to more than 20,500 Medicare beneficiaries and more than 20,800 privately insured or State Health Plan enrollees. Medicare will pay a pmpm payment to participating primary care practices, and BCBSNC and the State Health Plan are also providing financial support for participating primary care practices.

In addition to the multipayer initiative, CCNC is also partnering with several large employers to offer PCMHs to self-funded populations.[20] This effort, called "First in Health," is a collaboration between CCNC, GlaxoSmithKline (GSK), the State Health Plan, Kerr Drug, SAS, and BCBSNC. Beginning with GSK and the State Health Plan, these self-funded employers are offering their employees the option of joining a CCNC PCMH, with the goal of improving quality of care and reducing costs for their employees, dependents, and retirees.

There are also other initiatives across the state to try to support and expand the availability of PCMHs. BCBSNC has an initiative—Blue Quality Physicians Program (BQPP)—which provides enhanced funding to primary care practices based on four areas of provider performance: quality of care, patient experience, administrative efficiency, and cost and efficiency of care.[21] The amount of the enhanced payment is based on the physician's performance in these four areas, with more of the assessment weighted towards quality of care measures. Certain performance criteria are mandatory, others are optional. BQPP is an optional program available to physicians in family medicine, internal medicine, pediatrics, obstetrics/gynecology, or general practice.

More recently, BCBSNC and UNC Health Care have partnered to create a new delivery model—Carolina Advanced Health in Chapel Hill. Carolina Advanced Health is a health care center that includes a comprehensive team of health care professionals who will work with patients to improve health care outcomes, increase patient satisfaction, and reduce health care costs. The center will focus on caring for patients with chronic illnesses or more complex health problems. This is a unique arrangement between two independent entities, a health system and a private payer, in which both organizations are helping to share in both the costs and savings of the center.

Other private insurers are also supporting innovative payment and care delivery models. For example, WellPath[b] has entered into new agreements with health systems and medical group practices designed to improve the quality and value of services provided and enhance patient outcomes. WellPath believes that health care professionals are in the best position to redesign the health care delivery system to enhance quality, outcomes, and efficiency. As a result, WellPath has focused on designing and implementing collaborative approaches to support redesign efforts

[b] WellPath is a Coventry health care plan operating in North and South Carolina since 1996.

to remove barriers and financial disincentives that make it difficult for provider groups to achieve these goals. Some of the key elements include:

- Support for PCMHs. WellPath has worked with the provider organizations to change provider compensation to support necessary but previously non-revenue producing activities and more closely align with evidence-based quality measures.
- Support for provider-led system redesign by aligning benefit plan design and compensation systems for the purpose of meeting the comprehensive needs of the patient/members and providing increased affordability.
- Comprehensive information sharing between WellPath and the provider organizations to support quality, improved health outcomes, and greater efficiency.

Episode of Care/Patient Bundling[22]

Under this model, a group of health care professionals and providers are incentivized to work together to manage all of the services needed by the patient during that episode of care.[23] An episode of care may be based around a discrete medical event (such as treatment for a heart attack), treatment for a chronic health problem over a certain period of time (such as care provided to someone with diabetes over a year), or may be focused on a specific procedure (such as knee or hip replacement). The episode of care payment can be designed to include hospitals, physicians, home health, or other health care providers necessary for the care of a patient for a specific episode of care, or it can be limited to only a subset of this group of health professionals. Episode of care models are intended to encourage greater coordination of care across providers and health care professionals, and to reduce unnecessary utilization. If the provider group saves money under this episode of care payment, the group of providers/professionals could keep the savings. Conversely, if there are complications that require additional expenditures—the group would need to absorb the additional costs. Insurers could develop tiered payment levels, based, in part, on health care outcomes.

CMI is testing four limited episode of care/bundled payment models in the Medicare program.[24] In three of the models--acute care hospital stay only, acute care with post-acute care associated with the stay, and post-acute care after discharge—the providers are paid a negotiated discount off their traditional Medicare payment (e.g., fee-for-service or inpatient prospective payment system), with the potential for sharing savings with the federal government. This is a retrospective bundled payment, because the potential for shared savings occurs after comparing total costs to a “target” price at the end of the year. CMI is also testing a prospective acute care hospital payment. Under this model, Medicare will pay hospitals a single, prospective bundled payment that would pay for all the services rendered during inpatient stay by the hospital, physician, and other practitioners.[25] All of the participating providers and health professionals would be paid out of the bundled payment to the hospital. The participating health professionals and providers can keep any savings that are achieved through greater coordination amongst the different individuals and entities. Several North Carolina health care organizations are in discussions with CMS about testing an episode of care payment model in Medicare.

This model is also being tested in the commercial population. BCBSNC, the State Health Plan, and CaroMont are testing a comprehensive episode of care payment for knee replacement

surgery. The episode of care payment will cover preoperative, inpatient stay, and post-acute care for up to 180 days after surgery. Payments will be based, in part, on health care outcomes. This initiative began April 2011 and will be evaluated.

Accountable Care Organizations (ACO)[26]

An ACO is a group of providers and health care professionals who agree to be accountable for the quality, cost, and overall care of their assigned beneficiaries. The performance of the ACO is based on the cost and quality of care provided to the beneficiaries that are attributed to their ACO. This attribution is "virtual" in that it is based on where the beneficiary chooses to go to receive most of their primary care services. Beneficiaries continue to have complete freedom of choice in health care providers (in or outside the ACO). CMI has released regulations with different options for ACOs

One of the CMS ACO options is a Medicare Shared Savings program.[27] Under this program, the ACO will share in Medicare savings if it meets program requirements and quality standards, and has achieved savings against a targeted spending threshold. Because of the potential for shared savings, providers have an incentive to better coordinate services, reduce unnecessary health care utilization, and improve quality of care. Under the Medicaid Shared Savings regulations, there are two options for shared risk and shared savings: a one-sided model (the ACO can share in up to 50% of the savings, but assumes none of the risks if costs exceed the spending target) or a two-sided model (the ACO can share in up to 60% of the savings, but will also share in between 5%-10% of the excess costs if spending exceeds the target). ACOs in the Medicaid Shared Savings program will be measured against 33 performance measures that capture the patient/care giver experience, care coordination, preventive health services, and services for at-risk populations or the frail elderly.

CMI has also created a number of other ACO models to test other variations of ACOs. For example, CMI has created an Advance Payment ACO model to make it easier for smaller organizations or groups of health professionals to participate in an ACO. The intent is to provide some up-front capital to smaller ACOs to help them build the infrastructure needed to actively manage their assigned Medicare FFS beneficiaries.[28] CMI also has a shared savings model, the Pioneer ACO Model, which is targeted to health care organizations and providers that have more experience coordinating care across different health care settings and who are willing to share risk.[29] To date, five organizations in North Carolina have applied for and been named as shared savings ACOs: Accountable Care Coalition of Caldwell County (Lenoir), Accountable Care Coalition of Eastern North Carolina (New Bern), Cornerstone Health Care (High Point), Meridian Holdings (which includes organizations in North Carolina as well as seven other states and the District of Columbia), and the Triad Healthcare Network. In addition, one organization has qualified as an Advance Payment ACO: Coastal Carolina Quality Care (New Bern).

Prior to the enactment of the ACA, Section 646 of the Medicare Modernization Act created a five-year demonstration program to test models to improve patient safety, effectiveness, efficiency, patient centeredness, and timeliness of care for Medicare recipients. CCNC was one of two organizations authorized to participate in this demonstration. The CCNC demonstration program operates in 26 counties across the state: Bertie, Buncombe, Cabarrus, Chatham, Chowan, Edgecombe, Gates, Greene, Hertford, Hoke, Lincoln, Madison, Mecklenburg, Mitchell,

Montgomery, Moore, New Hanover, Orange, Pasquotank, Pender, Perquimans, Pitt, Sampson, Stanly, Union, and Yancey. The program assigns dual eligibles and Medicare-only beneficiaries, on a volunteer basis, to a primary care professional, offers care coordination services, enhances the data available to help manage patient care, and includes quality of care performance measures. Under the 646 waiver, CCNC can share in the savings with CMS if it meets certain quality standards and shows cost savings.

Community-Based Care Transitions[30]

Medicare began reducing payments to hospitals that have "excess readmissions" for discharges occurring on or after October 1, 2012. Under this system, hospitals are held accountable for a readmission that occurs within 30 days of discharge for heart attack, heart failure, and pneumonia (this list of conditions will expand in FY 2015).[31] CMS has funding to test models to reduce hospital-acquired conditions, improve transitions in care, and reduce preventable hospital readmissions.[32] Improving care transitions and reducing preventable readmissions can help reduce health care costs, as one study showed that approximately one-fifth of Medicare beneficiaries are readmitted within 30 days of discharge, and one-third are readmitted within 90 days.[33]

One of these programs focuses on improving care transitions (in order to reduce preventable hospital readmissions). Hospitals that have high 30-day readmission rates that fall within the top quartile for the state in at least two of the three following conditions: acute myocardial infarction, heart failure, or pneumonia can serve as lead organizations for this funding. To qualify, the hospital must partner with community-based organizations (CBOs) that provide transition services. CMS identified 16 North Carolina hospitals that can serve as a lead organization under this program, including: North Carolina Baptist Hospital, University of North Carolina Hospital, Rutherford Hospital, Lenoir Memorial Hospital, Franklin Regional Hospital, Southeastern Regional Medical Center, Watauga Medical Center, Presbyterian Hospital, Morehead Memorial Hospital, WakeMed, Raleigh Campus, Thomasville Medical Center, Sandhills Regional Medical Center, Lake Norman Regional Medical Center, Martin General Hospital, Nash General Hospital, and Person Memorial Hospital.[34] If a CBO is the applicant, the CBO can partner with other hospitals (even if they are not currently listed as a high readmission hospital). CMS, working in conjunction with the United States Agency on Aging, has also funded other care transitions programs, including: The Care Transitions Intervention,[35] The Transitional Care Model,[36] Project BOOST,[37] Re-engineered Discharge,[38] and Transforming Care at the Bedside.[39] CMS will have a rolling application period for the Community Based Care Transition program.

A subcommittee of the New Models of Care workgroup met with a subcommittee of the Quality of Care workgroup to make recommendations on how to improve care transitions. (See Recommendation 7.8 in Chapter 7 and Appendix F.) Subsequent to this work, the North Carolina Hospital Association has taken the lead in pulling together different stakeholder groups, including representatives of hospitals, CCNC, North Carolina Department of Health and Human Services (NCDHHS), nursing facilities, North Carolina Healthcare Quality Alliance, Carolinas Center for Medical Excellence, home health and hospice, AHEC, aging and disability resource centers, area agencies on aging, foundations, and other community-based organizations to examine strategies to improve care transitions, including the possibility of applying for federal

funds to support this effort. One North Carolina program, the Northwest Triad Care Transitions Community Program, received funding through the CMI Community-based Care Transitions program.[40] Northwest Community Care Network is the lead organization and will be working with other community partners and seven acute care hospitals including Forsyth Medical Center, Hugh Chatham Memorial Hospital, Lexington Medical Center, Medical Park Hospital, Northern Hospital of Surry County, Thomasville, Medical Center, and Wake Forest Baptist Health.

State Demonstrations to Integrate Care for Dual Eligible Individuals[41]

CMI also has funding to test models to improve the care provided to dual eligibles (i.e., those individuals who are eligible for both Medicaid and Medicare). The goal of this initiative is to coordinate preventive, primary care, acute, behavioral, and long-term care services for dual eligibles, thereby improving quality and reducing costs. Because of their health needs, dual eligibles are generally among the most expensive of Medicaid and Medicare beneficiaries. Nationally, dual eligibles comprise 15% of the Medicaid population but account for 39% of Medicaid costs and 16% of Medicare beneficiaries using 27% of Medicare costs.[42]

North Carolina is one of 15 states that received planning grant funds to better integrate care for dual eligibles.[43,44] CCNC, DMA, and other NCDHHS agencies, including the Division of Aging and Adult Services, Division of Vocational Rehabilitation, and Division of Mental Health, Developmental Disabilities, and Substance Abuse Services worked with other state and community partners to develop a model of care and an implementation plan to better integrate are for dual eligibles. More than 180 stakeholders participated in the planning and development of the *Dual Eligible Beneficiary - Integrated Delivery Model*.

North Carolina's *Dual Eligible Beneficiary - Integrated Delivery Model* has the triple aims of improving responsiveness to beneficiary goals, improving care outcomes and achieving shared savings. Under this three-year demonstration initiative with CMS, North Carolina will support PCMH for community-residing dual eligible beneficiaries and extend medical home offerings to dual eligible beneficiaries in nursing homes and non-medical residential care (adult care home) settings; develop an integrated independent needs assessment and functional need-based resource allocation processes for medical need/level of care determination and authorization; and develop cross-stakeholder opportunities for communication through greater access to electronic information. The plan also includes strategies to develop provider and beneficiary capacity, skills and use of actionable data, and to maximize the flexible use of public funds available for supports to dual eligible beneficiaries. The proposal was submitted to CMI on May 1, 2012. At this time, the state is awaiting further discussions with CMS on the Memorandum of Understanding (MOU) which will guide the implementation of the demonstration. CCNC expects that implementation will not begin until April 1, 2013 or sometime thereafter. Once implemented, it will subsume the existing 646 waiver.

Independence at Home[45]

CMS has the authority to test models that provide primary care services to certain frail Medicare beneficiaries in their homes.[46] To be eligible for services, the Medicare beneficiary must have two or more chronic illnesses, two or more functional dependencies, or have had a non-elective hospital admission within the past 12 months. Primary care services will be provided by a team of practitioners lead by a physician or nurse practitioner. CMI funded Doctors Making

Housecalls (Durham) as one of the first 18 Independence at Home demonstration organizations.[47]

Duke University Health System and Lincoln Community Health Center developed a similar initiative, called Just for Us. Care is provided to older adults or people with disabilities age 30 or older who have access to care problems. The care team is comprised of a physician, physician assistant, nurse practitioner, occupational therapist, social worker, community health worker, and phlebotomist. Just for Us is currently serving approximately 350 residents in 14 housing complexes. Duke's evaluation showed that this program reduced emergency room use and inpatient hospital costs and improved quality of care.[48]

Medication Therapy Management[49]

The ACA includes several provisions which authorize CMI or CMS to create demonstration projects to test medication therapy management for patients who take four or more medications, high-risk medication, or have multiple chronic diseases.

North Carolina has several medication therapy management models. The Health and Wellness Trust Fund (HWTF) launched ChecKMeds in North Carolina in 2007, which reimburses pharmacists to provide medication reviews to Medicare beneficiaries age 65 and older across the state who have a Part D drug plan. When the HWTF was defunded, ChecKmeds NC was moved to the North Carolina Office of Rural Health and Community Care. The program is funded through June 2013. The North Carolina General Assembly approved the Medication Therapy management pilot which charges CCNC with establishing a pilot that will explore options, including funding options, to continue the ChecKmeds program.

In addition, CCNC also has a medication therapy management component. CCNC has pharmacists embedded in each of the 14 networks. The network pharmacists help provide consultation to primary care professionals when they have questions about medication management. In addition, CCNC has a medication management system that collects medication data from Surescripts, administrative claims, medical records, case managers, patients, and physicians. The data can be accessed by CCNC case managers, pharmacists, and primary care providers. The system helps identify potential adverse events due to drug interactions, as well as addressing poor medication adherence. This enables CCNC care managers and other health care professionals to intervene before adverse events occur.

The State Health Plan also has a medication adherence pilot project.[50] Under this initiative, started in December 2009, all State Health Plan retirees using diabetes or cardiovascular medications were eligible for a reduction in their copayment. Retirees were targeted due to the high prevalence of these diseases among the retiree population and the potential to improve adherence through reduced cost sharing. By October 2011, approximately 26,000 retirees had participated in the program. Medco, the Plan's Pharmacy Benefit Manager, determined that the program saved members more than $1 million in co-payments, and reduced pharmacy costs to the State Health Plan by more than $2.3 million. In addition, the medication adherence rate improved by more than 14% for oral diabetes and cholesterol medications, and by more than 19% for blood pressure medications.

At the local level, Senior PharmAssist has provided medication management to seniors in Durham since 1994. Program evaluation demonstrated a 51% reduction in the rate of any hospitalizations and a 27% reduction in the rate of any emergency department use after two years in medication management.[51]

Telehealth or Telemonitoring for Chronically Ill Individuals at High Risk of Hospitalization[52]
CMI is also authorized to test a number of models that involve the use of telehealth or telemonitoring for individuals with chronic illness, behavioral health problems, or other health conditions. The goal is to help monitor and treat individuals more effectively in the community, in order to reduce unnecessary hospitalizations and improve health outcomes. In addition, telehealth—which links patient data to practitioners located in other parts of the state—offers opportunities to expand access to services and increase the quality of care provided to individuals who live in medically underserved communities.

North Carolina has implemented several successful telehealth and telemonitoring initiatives. Roanoke Chowan Community Health Center received funding from the North Carolina Health and Wellness program in 2006 to establish a telemonitoring program for low-income, chronically ill patients with health disparities in northeastern North Carolina. Patients with diabetes, cardiovascular disease, and hypertension are given monitoring equipment, including a scale, blood pressure/pulse monitor, blood glucose monitor, and pulse oximeter to monitor their health on a daily basis. A registered nurse (RN) monitors the daily data, and contacts the patients and/or the patient's primary care provider if the readings are abnormal. Over the last six years, this initiative has also received funding through the Kate B. Reynolds Charitable Trust, US Department of Health and Human Services, Office for the Advancement of Telehealth, ORHCC, and other state and local foundations. Wake Forest University conducted an independent, objective evaluation of the program and found a reduction in hospitalization costs of more than $1.2 million for the 64 patients studied. Roanoke Chowan Community Health Center currently provides remote monitoring for people with cardiovascular disease, diabetes, hypertension, and pulmonary disease in 14 counties across the state.[53]

The Brody School of Medicine at East Carolina University has one of the longest running telemedicine operations in the country. One of ECU's core telemedicine programs is its telepsychiatry program. ECU employs three full-time equivalent psychiatrists to provide services to patients in 13 eastern counties (Beaufort, Bertie, Craven, Edgecombe, Gates, Greene, Hertford, Jones, Nash, Northampton, Pamlico, Pitt, Wilson). The ECU psychiatrists provide services to patients through videoconferencing and face-to-face visits, consultation with other clinicians for complicated care, and coordination with the mobile crisis teams covering the 13 counties.

In addition, North Carolina Foundation for Advanced Health Programs (NFAHP) recently completed a congestive heart failure telehealth program funded by The Duke Endowment. This program operated in selected CCNC networks. A CCNC nurse care manager established a relationship with patients before they were discharged from the hospital. The care manager then met with the patients in their homes, and provided telemonitoring equipment as well as ongoing support and education. Evaluation results from the CCNC Informatics Center showed an improvement in the medication adherence rate and a decrease in the inpatient hospital rate. In

addition, the total cost per member per month decreased from $2,374 to $1,400—excluding drugs. DMA is pursuing a policy change to cover telemonitoring for patients with congestive heart failure.

Co-location of Primary Care and Behavioral Health[54]

The ACA also includes potential grant funding to support co-location of primary care and behavioral health services. These funds could be used to support the provision of behavioral health services in primary care practices, or primary care services within community-based mental health settings. This demonstration grant opportunity was not specific to Medicare or Medicaid.

North Carolina has been working to expand efforts to integrate behavioral health and primary care services in both primary care practices and in behavioral health settings for many years. In 2006, a coalition of medical and behavioral health organizations, state agencies, and patient advocacy groups created the ICARE partnership to prepare for and pilot integrated practices with primary care, mental health, and substance abuse professionals.[55] This work was supported by Kate B. Reynolds Charitable Trust, The Duke Endowment, and AstraZeneca. In 2007, the North Carolina General Assembly provided support to the ORHCC to help integrate behavioral health and primary care services in both primary care and specialty mental health offices. ORHCC continues to support practices in the adoption of best practices for integrated care. In April 2010, DMA began providing funding to CCNC networks to embed a psychiatrist into each network. These psychiatrists support the care coordinators and providers within the CCNC practices.

NCFAHP has provided additional support to help CCNC practices integrate behavioral health and medical services bi-directionally. NCFAHP is helping behavioral health providers integrate medical screening and chronic disease monitoring and helping integrate behavioral health into primary care. NCFAHP is home to the North Carolina Center of Excellence for Integrated Care which provides technical assistance, training collaborative, and capacity building for health providers to integrate behavioral and medical care. NCFAHP has a contract with the ORHCC for the Center of Excellence to promote integrative care focused on children with special health care needs in selected CCNC-enrolled pediatric practices, family practices, and health departments.[56] The Center of Excellence is also supporting initiatives targeting autism spectrum disorder, maternal depression, oral health, and childhood obesity. The Center of Excellence is under contract to the Governor's Institute on Alcohol and Substance Abuse to provide technical assistance and training to FQHCs to improve early identification and treatment of patients with substance abuse conditions. In addition, Kate B. Reynolds Charitable Trust provided additional grant support to enable NCFAHP to work with safety net providers and mental health/substance abuse providers in more than 30 counties. All models, including integration, reverse co-location, reverse integration, and co-location, are being tested and implemented.

State Innovation Model (SIM)[57]

CMI recently announced a competitive funding opportunity for states to design and/or test multi-payer payment and delivery models designed that will improve health care quality, while helping lower health care costs in Medicare, Medicaid, and/or the Children's Health Insurance Program. North Carolina submitted its application for SIM funding on September 24, 2012. No decisions have yet been made. If funded, the SIM Initiative will help strengthen North Carolina's PCMH

model through workforce development, academic education and residencies, allied health worker training, consumer education and engagement to better health status, health information technology support for providers, and assistance to providers to improve quality and achieve NCQA PCMH recognition.

Value Based Insurance Product Design

Another "new model" that is being tested among private insurers is value based insurance design (VBID). With VBID, insurers encourage enrollees to use services or medications with greater efficacy by reducing or eliminating the out-of-pocket cost sharing (for example, eliminating cost sharing for highly effective medications), or by increasing the cost sharing on services, procedures, or medications that are less useful.[58] VBID products can also be designed to provide financial incentives to enrollees to encourage them to obtain care from high quality, lower-cost health care providers. Unlike a traditional Preferred Provider Organization (PPO) insurance product—which have differential cost-sharing arrangements for in-network and out-of-network providers—value-based insurance products may have multiple tiers of cost sharing. The amount of the cost-sharing may differ depending on the procedure/service and the provider. Thus, a large health care system may be considered a best value provider for open heart surgery, but not for knee or hip replacement. BCBSNC is testing a value-based insurance product design for one large employer group.

Improving Population Health

In addition to the new models that focus on changes in the health care delivery system and payment methodologies, some communities are testing new models focused on improving overall population health. Population health programs include some of the changes in delivery and payment models discussed previously, but also include community-based efforts to address socioeconomic, transportation, literacy, and other broader societal issues that affect population health. The Durham Health Innovation (DHI) is an example of this broader community-focused health intervention. This is a collaboration between Duke Medicine, the Durham County Department of Public Health, and the Durham community that seeks to improve the health status of Durham County residents, focusing on areas in the county that are low-income, more heavily comprised of racial and ethnic minorities, and which have greater health disparities. In 2009, DHI funded 10 planning teams to find ways to reduce death or disabilities from diseases or other health problems prevalent in the community. These teams identified seven strategies that could improve the health and health care delivery in Durham, including: increasing health care coordination and eliminating barriers to services and resources; integrating social, medical, and mental health services; expanding health-related services provided in group settings; leveraging information technology; using social hubs (such as places of worship, community centers, salons and barber shops) as sites for clinical and social services and information; increasing local access to nurse practitioners, physician assistants, and certified nurse midwives; and using traditional marketing methods to influence health behaviors.

EVALUATION AND DISSEMINATION OF SUCCESSFUL MODELS

North Carolina has many different pilots or demonstrations under development, both in the public and private sector. The New Models of Care workgroup attempted to catalogue the different initiatives under development across the state, including basic information about program design, goals, evaluation data (if any), and contact information. (See Appendix H.) To

the knowledge of workgroup members, this was the first time that such pilots and demonstrations were catalogued and maintained in one location. The New Models of Care workgroup recommended that funding be provided to NCFAHP to maintain a similar centralized tracking system and update it on an ongoing basis. Rather than "reinvent the wheel," North Carolina public and private payers, health systems, and health care professionals should learn from existing initiatives about what works and what does not. Once NCFAHP identifies successful strategies, it should help disseminate the information across the state and provide technical assistance to health care organizations seeking to replicate similar models.

In addition, NCFAHP could play a role in bringing together different public and private payers, health care systems, and health care providers to identify patient safety, quality of care, and cost drivers affecting the state or particular regions in the state. Public and private payers and health systems have some capacity to analyze their own internal data to identify cost drivers or potential quality concerns for their specific enrollees. However, no group is currently charged with examining these issues for a state as a whole. The workgroup recommended that NCFAHP assume this analytical and facilitative role, and help link potential partners to potential health care delivery or payment models that could address statewide quality and cost concerns. To accomplish these goals, the NCIOM recommended:

RECOMMENDATION 8.1: DEVELOP A CENTRALIZED NEW MODELS OF CARE TRACKING SYSTEM

North Carolina state government and North Carolina foundations should provide funding to the North Carolina Foundation for Advanced Health Programs (NCFAHP) to create and maintain a centralized tracking system to monitor and disseminate new models of payment and delivery reform across the state. The role of NCFAHP would be to:

a) Monitor federal funding opportunities and new regulations identifying new models of care.
b) Identify and/or convene stakeholder groups to examine existing data on costs and utilization, geographic areas of the state that are outliers in terms of costs, quality, or population health measures, and help identify appropriate new payment or delivery models of care to test.
c) Maintain a data base of existing North Carolina demonstrations that test new payment and delivery models of care, whether funded through private or public funds.
d) Collate evaluation data on these demonstrations and, to the extent possible, identify what models work best to address specific problems. The NCFAHP should help identify whether the new payment and delivery models are evidence-based, promising practices, or unsuccessful models.
e) Disseminate information across the state to other health care providers, health systems, insurers, consumer groups, and state policy makers about the success of these initiatives.
f) Provide technical assistance to communities, health care providers, insurers, or others who are interested in replicating a new model of payment or health care delivery, and encourage groups to involve consumers in the development of new initiatives.

As noted earlier, the workgroup members felt strongly that North Carolina needs to continually examine the way we provide and pay for health care services, to ensure that we are achieving optimal individual and population health outcomes, while providing care in the most efficient manner possible. While we should encourage the development of new models, we must also obtain unbiased data about the effectiveness of these models, whether the models work equally well for different populations, and how well the models work in different health care environments. For example, the CCNC medical home model has been shown to work well among the Medicaid populations, but there is less evidence of the outcomes for the commercially insured population. Similarly, the PCMH model holds great promise to improve care coordination, quality of care, and patient engagement. However, some populations may not choose to seek care through a comprehensive primary care home, preferring episodic care when they are sick from urgent care or retail clinics.

We can learn both from our successes and our failures. But to do this requires strong, independent evaluations. The evaluations should examine common quality, outcome, and cost metrics, so that different models of care can be compared to one another. We should identify what works, for whom, and in what environment. Further, the evaluation data should be shared publicly among insurers, other health systems, and the public. Thus the NCIOM recommended:

RECOMMENDATION 8.2: EVALUATE NEW PAYMENT AND DELIVERY MODELS

a) Any health system, group of health care providers, payers, insurers, or communities that pilot a new delivery or payment model should include a strong evaluation component. The evaluation should, to the extent possible, be based on existing nationally recognized metric and should include:
   - **i. Quality of care metric that includes process, appropriateness, and outcome measures**
   - **ii. Patient satisfaction data**
   - **iii. Access to care measures**
   - **iv. Cost information, including changes in per member per month costs over time**
   - **v. The potential to improve population health**
   - **vi. The effect on health disparities**

b) Evaluation data should be made public and shared with other health systems, groups of health care providers, payers, insurers, consumer groups, or communities so that others can learn from these new demonstrations.

c) North Carolina foundations, payers, insurers, or government agencies that fund pilot or demonstration programs to test new payment or delivery modvels should pay for and require the collection of evaluation data and make this data available to others as a condition of funding or other support for new models of care.

Several of the NCIOM health reform workgroups noted the need for enhanced data to improve the functioning of the current health care system. State government, public and private payers, health systems, health care professionals, employers, and consumers need information about diagnosis, utilization, costs, and outcomes in order to evaluate new delivery or payment models.

The Health Benefits Exchange workgroup identified the potential need for diagnosis and utilization data to develop a risk adjustment system that can help stabilize the individual and small group insurance market inside and outside the Exchange (See Chapter 2.) The ACA also requires health care providers (e.g., hospitals, nursing facilities) and health care professionals (e.g., doctors, physician assistants, nurse practitioners) to report quality measures to the federal government. However, the Quality workgroup recognized the importance of also collecting and analyzing these data at the state level and making data available to individual health care systems or providers so that we can more rapidly to develop appropriate interventions to improve patient safety and quality. (See Chapter 7.) This is especially important as Medicare moves towards value-based purchasing. As noted previously, Medicare started reducing payments to hospitals that have "excess readmissions" for discharges beginning October 1, 2012. Hospitals are held accountable for a readmission that occurs within 30 days of discharge, however, hospitals do not always know whether their patients were readmitted if the patients were admitted to another hospital. Hospitals need the data to assess readmission rates and examine cause of readmissions across hospitals. Similarly, the New Models of Care workgroup recognized the importance of creating a data system that could evaluate quality, costs, and patient experience as we move to test new payment and delivery models.

Several states have created all payer claims data (APCD) systems to help provide the necessary state-level data that can support quality improvement activities, compare disease prevalence or utilization patterns across the state, identify successful cost containment measures, and evaluate health care reform efforts on costs, quality, and access. As of 2012, 10 states had fully functional APCD systems, six states were in implementation, 17 states expressed strong interest, and two states had existing voluntary activities.[59] The NCDHHS has created a workgroup to examine the possibility of creating a similar APCD or a confederated data system that can capture data from multiple existing data systems that could be used in North Carolina to examine similar population health, cost, and quality issues across the state. North Carolina's efforts are currently on hold, while the state is implementing other major health information technology.

The NCIOM recommended that NCDHHS, in collaboration with the North Carolina Department of Insurance, continue this effort to examine the state's existing data systems, gaps in the existing systems, and different options to address data gaps.

RECOMMENDATION 8.3: CAPTURE DATA TO SUPPORT NEW MODELS OF CARE

a) **The North Carolina Department of Health and Human Services (NCDHHS) should take the lead in working with the North Carolina Department of Insurance and various stakeholder groups to develop a plan that examines options to capture health care data necessary to improve patient safety and health outcomes, improve community and population health, reduce health care expenditure trends, and support the stabilization and viability of the health insurance market.**
b) **NCDHHS should examine what other states are doing to meet similar data needs and assess the scope, costs, technical requirements, feasibility, impact, and sustainability for different approaches. As part of this study:**

i. **NCDHHS should examine existing sources of data to determine whether existing systems can provide the necessary data, and, if not, identify the gaps in existing systems.**
ii. **NCDHHS should examine the feasibility, costs, technical requirements, and sustainability of collecting and/or aggregating different types of data to serve different purposes, including, but not limited to, clinical, operational, population, policy, and evaluation.**

c) **The plan should ensure that:**
   i. **The new data system uses data already collected in the system for other purposes. Such data sources include, but are not limited to: the Health Information Exchange, Community Care of North Carolina Quality Center, Thompson Reuters, and the State Center for Health Statistics.**
   ii. **All providers, payers, and administrators are required to contribute necessary data.**
   iii. **All providers, payers, and administrators have access to their own data, as well as aggregated data for allowable purposes.**
   iv. **The new data system meets strict patient confidentiality and privacy protections in accordance with North Carolina laws.**

d) **NCDHHS should prepare a plan with recommendations, including a timeline and potential financing mechanisms, and report it to North Carolina General Assembly.**

REMOVING BARRIERS TO THE TESTING AND IMPLEMENTATION OF NEW PAYMENT AND DELIVERY MODELS

While several public and private health care organizations in our state have taken advantage of federal funding opportunities that could lead to improved outcomes and reduced cost escalation, public and private payers, health care systems, and health care professionals have experienced certain barriers which prevent them from being more innovative. Some of the workgroup's efforts focused on identifying the barriers that prevent North Carolina from more aggressively testing new models that can help reduce health care cost escalation while at the same time improving outcomes. The workgroup recognized that North Carolina will need to more fully utilize all types of health care professionals with the increased demand for health care that is likely to occur as more of the uninsured gain coverage. However, current health professional licensure laws prevent some members of the health care team from practicing to the full extent of their education and competence. The workgroup recommended that we explore options to more effectively utilize all members of the health care team, substituting less highly paid health professionals for more highly paid professionals when this substitution is appropriate and can lead to improved care for lower costs. The workgroup also discussed the challenges in coordinating care across different types of health care providers and systems.

In addition, the workgroup heard concerns about current reimbursement policies that make it difficult for clinicians to offer certain services, even if these services could lead to improved outcomes and lower costs. For example, insurers generally do not reimburse providers for the time they spend answering patient emails or on telephone calls. As a result, some individuals who could have their concerns appropriately addressed through a quick email or phone call are forced to come into the office for a visit—adding both time and costs to the health care

encounter. Some insurers also talked how current state insurance laws make it difficult to create new provider payment models that shift some of the financial risk for a defined population to a health care system or group of health care providers. Additionally, the workgroup heard about barriers some insurers face in developing value-based tiered insurance products, in which insurers can offer lower cost health services to enrollees if they agree to obtain care from higher quality, lower-cost health care providers.

We also heard from provider groups about how multiplicity of different insurer administrative requirements, including provider credentialing, utilization review, and quality initiatives has led to higher administrative costs and reduced clinical time for health care professionals. Further, the workgroup heard examples of how state health professional licensure laws have not kept pace with changes in electronic health records in terms of who is allowed to enter what type of health information into health records. These state regulatory policies can create barriers to effective use of health information systems or the implementation of other innovative system reforms.

A broader group of stakeholders need to be involved in discussions to address potential barriers as well as solutions to overcome those barriers, including licensure boards, the North Carolina Department of Insurance, health professional associations, and health care systems. Thus, the NCIOM recommended:

RECOMMENDATION 8.4: EXAMINE BARRIERS THAT PREVENT TESTING OF NEW PAYMENT AND DELIVERY MODELS

a) The North Carolina Institute of Medicine (NCIOM) should seek funding to convene a task force to examine state legal or other barriers which prevent public and private payers and other health care organizations from testing or implementing new payment and delivery models that can improve health outcomes, improve population health, and reduce health care cost escalation. Some of the barriers should include, but not be limited to:

- **i. Health professional licensure restrictions that prevent health professionals from practicing, being held accountable, and receiving payment for care delivered within the full scope of their education, training, and competency.**
- **ii. Insurance laws which impair the development of value-based insurance design or products which shift some of the financial risk to health care professionals or provider groups.**
- **iii. Anticompetitive contractual arrangements which prevent insurers from implementing insurance designs that incentivize use of high-quality, lower cost health care providers or professionals.**
- **iv. Health professional reimbursement issues which reduce the ability of health care professionals from providing evidence-based clinical services that could lead to improved patient outcomes at lower costs.**
- **v. Lack of coordination between public and private payers that create differing and uncoordinated quality and outcome measures for health care professionals.**
- **vi. Uncoordinated and costly administrative requirements stemming from multiple payers with differing administrative requirements.**
- **vii. Resistance to the adoption of new models of care among insurers, health care providers, professionals, and consumers.**

b) **The NCIOM Task Force should examine other health-related policies and regulations that impede implementation of new models of care or otherwise prevent effective use of electronic health records.**
c) **The NCIOM Task Force should identify barriers and potential solutions. The NCIOM should present the potential recommendations to the North Carolina General Assembly, licensure boards, or appropriate groups within two years of initiation of this effort.**

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