



# **N.C. Medicaid Reform:**

## **A Bipartisan Path Forward**

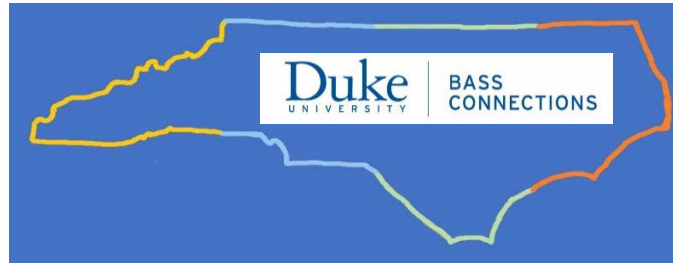
**A policy document prepared by students and faculty  
of Duke University's Bass Connections Program**

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## DUKE UNIVERSITY BASS CONNECTIONS NORTH CAROLINA MEDICAID REFORM RECOMMENDATIONS

### **Executive Summary**

The North Carolina Medicaid program currently constitutes 32% of the state budget and provides insurance coverage to 18% of the state's population. At the same time, 13% of North Carolinians remain uninsured, and even among the insured, significant health disparities persist across income, geography, education, and race. The Duke University Bass Connections Medicaid Reform project gathered to consider how North Carolina could use its limited Medicaid dollars more effectively to reduce the incidence of poor health, improve access to healthcare, and reduce budgetary pressures on the state's taxpayers.

We submit the accompanying report to North Carolina's policymakers, which include the following highlights:

- Federal Medicaid policy is likely to reduce future federal dollars, putting additional budgetary strains on North Carolina's Medicaid program. Proposals to convert federal Medicaid funding to per capita block grants will translate into a disproportionately large reduction for North Carolina compared to other states because of the state's recent reductions in per-enrollee spending, the state's above-average spending trajectory for children and adults, and the projected growth in the state's elderly population.
- As North Carolina ushers in Medicaid Managed Care (MMC), policymakers should ensure the market exhibits robust choice and competition. Lessons from other states' experiences reveal that policymakers should:
  - (a) develop a reasonable implementation timeline, including preparing for early losses from MCOs
  - (b) reduce administrative burdens and assure timely payments to providers, to keep providers participating in Medicaid networks
  - (c) endeavor to encourage MCO entry and sustained market participation, to foster MCO competition and ensure sufficient plan choice
- A transition to MMC should incorporate successful elements of the state's Primary Care Case Management (PCCM) model with Community Care of North Carolina (CCNC): MCOs should rely on regional networks, which enabled local flexibility and allowed providers to tailor care to local communities. Moreover, MCOs should adopt CCNC's data-driven patient

management to navigate chronically ill patients and target interventions, which according to a 2015 audit reduced total spending by 9% and inpatient admissions by 25%.

- Recent Medicaid reforms in Indiana, Michigan, and Iowa offer lessons for any reforms that rely on consumer-driven financial incentives, such as monthly premiums, lockout policies, and healthy behavior incentives. These states' experiences suggest that any behavioral program should be within a simple, streamlined Medicaid design to reduce patient confusion and lower administrative costs to the state.
- Because a small percentage of patients account for the majority of Medicaid's costs, "super-utilizers" should be targeted within a *hotspotting* program. Hotspotting employs multidisciplinary teams to address patients' medical needs and environmental factors that exacerbate poor health. Similar models in other states have led to 49% reductions in healthcare costs and a 44% reduction in hospitalizations. Medicaid should expand reimbursement policies to enable hotspotting strategies and should encourage shared savings programs so providers are financially incentivized to do so.
- The Medicare and Medicaid dually eligible (duals) population are among the sickest and most expensive beneficiaries. In North Carolina, duals represent 17% of the Medicaid population but require over 30% of state Medicaid spending. North Carolina should continue efforts to reform care delivery and payment to address enrollment complexity and integrate delivery. In addition, hotspotting holds considerable potential to reduce expenditures among Medicaid dual-eligibles and improve health outcomes in rural populations.
- Telemedicine provides a low-cost solution to rising healthcare prices, provider shortages in rural counties, and limited access to specialists. North Carolina currently follows a hub-and-spoke telemedicine model, in which provider hubs offer services to patient originating spoke sites, and limits telemedicine reimbursement to live video interactions with originating site location requirements. Policymakers should expand telemedicine coverage to include remote patient monitoring, and should relax originating site requirements.
- Graduate Medical Education (GME) training should be updated to reflect and facilitate needed changes in the delivery system. Current GME programs do not focus on utilizing patient data and technology for efficient patient management. GME should develop hotspotting and telemedicine professionals for the future physician workforce.

## Section 1: Introduction to NC Medicaid Reform Advisory Team

In 2006, Duke University released a strategic plan entitled *Making a Difference*. Its opening paragraph recalled James B. Duke's founding Indenture, which directed the University to "provide real leadership in the educational world" and to pursue scholarship that would "most help to develop our resources, increase our wisdom, and promote human happiness."

It is with this spirit that we, an interdisciplinary collection of Duke faculty and students, gathered to study North Carolina's Medicaid program and to submit proposals for policymakers' consideration. We developed these recommendations with the explicit hope of offering a constructive path forward for North Carolina, recognizing the state's ideological diversity and political tensions. We fully appreciate that new heights of political partisanship have made responsible policymaking ever more difficult, that new forms of communication have impeded the search for common ground, and that health policy is becoming another "third rail" of politics. When the political process is most challenged, perhaps universities and other civic, nonpartisan institutions have their greatest opportunity to contribute to constructive discourse and political debates through disciplined research and the presentation of evidence.

We use this opening section to introduce ourselves, the Duke University programs that sponsored us, and the disciplines we gathered to produce this report.

### *Bass Connections*

Our group was created under the banner of Bass Connections, a university-wide initiative to foster inquiry across disciplines, develop mentorship in teams, and intersect the academy with the broader world. It is designed to focus academic resources towards tackling complex societal problems and to harness student and faculty creativity to advance the university's public mission.

The Bass Connections leaders promptly recognized that North Carolina's Medicaid program, which serves 2 million of the state's citizens and consumes 17% of the state's budget, is an ideal subject for a Bass Connections project. We deeply appreciate the continued support from Bass Connections and their shared commitment to improving the state's program.

### *The Duke-Margolis Center for Health Policy*

Our primary faculty are affiliated with the Duke-Margolis Center for Health Policy, a university-wide institute established in January 2016. The Center is designed to integrate the expertise of Duke University scholars and the academic health system with a community of policy analysts and policy stakeholders.

The Duke-Margolis Center for Health Policy is motivated to translate academic research into better health policy and healthcare delivery. Our Medicaid project reflects the Center's core mission to produce tangible benefits to the public. We have received enthusiastic support from the Center and from its founder, Dr. Robert Margolis, and we submit this report as part of the Center's broader commitment to inform policymaking and policymakers.

### *Who We Are*

The North Carolina Medicaid Reform Advisory team was led by committed faculty and an unparalleled collection of enormously talented students. Together, we represent five departments, multiple disciplines, several native North Carolinians, and a diversity

of experiences. This report is submitted as a reflection of our commitment to North Carolina's Medicaid program, the taxpayers who fund it, the citizens who benefit from it, the healthcare providers who work each day to deliver quality care, and the state's political leaders who dedicate themselves to improving North Carolina's future.

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## **Section 2: Current Profile of North Carolina’s Medicaid Program: Budget, Beneficiaries, and Providers**

### *Executive Summary*

The NC Medicaid program currently provides insurance coverage to over 2 million low-income North Carolinians. NC Medicaid primarily serves children, pregnant women, parents, elderly adults, and people with disabilities. Approximately 70% of Medicaid beneficiaries are children and families, while less than a quarter are aged, blind, or disabled. At present, childless adults are not eligible for Medicaid in North Carolina.

Under current federal law, the federal government contributes approximately \$9 billion annually to the state’s \$13 billion program. The state’s \$4 billion contribution constitutes 31% of the state’s annual budget. The state’s aged, blind, and disabled beneficiaries comprise less than a quarter of all beneficiaries but consume 60% of Medicaid spending. Although North Carolina’s Medicaid average annual growth in Medicaid spending has declined over the years, the state still faces tension between growing enrollment and the need to contain costs.

Although Medicaid provides coverage to low-income individuals, people who are not categorically eligible (such as childless adults) may be uninsured if they do not qualify for Medicare, have access to private employer-sponsored insurance, or are unable to afford premiums on the Affordable Care Act (ACA) exchanges. In North Carolina, most uninsured individuals are non-elderly individuals with incomes below 400% of the federal poverty line (FPL). There are approximately 219,000 uninsured North Carolinians who fall into the “coverage gap”—too “rich” to qualify for Medicaid, but too “poor” to qualify for federal subsidies in the ACA exchanges. Of the individuals who fall in the coverage gap, 77% are adults without dependent children, and 63% are in a working family.

Adequate insurance coverage is clearly important, and those who are both poor and uninsured experience worse health outcomes than wealthier, insured individuals. However, insurance coverage is not the exclusive component of ensuring health equity and reducing disparities for all North Carolinians. Some groups consistently experience poorer health outcomes, such as higher incidence of chronic diseases, shorter life span, and higher rates of disability: people of color, residents of rural counties, people with lower levels of education, and people living in poverty. Medicaid beneficiaries are more likely than the general population to be included in these groups.

North Carolina’s rural counties are less equipped to handle poor health outcomes, as they are home to fewer physicians, per capita, than the state’s urbanized counties. Some have complained that the shortage of physicians in rural counties has limited healthcare access to residents of these counties. In recent years, North Carolina has experienced significant growth of “physician extenders” such as nurse practitioners and physician assistants. However, North Carolina has a restrictive practice environment relative to other states, which limits the ability of the state to leverage these physician extenders to fill the gaps in healthcare needs of North Carolinians, particularly in rural areas.

It is well-documented that social determinants of health—the conditions in which people are born, work, live, grow, and age—have a significant impact on health outcomes. Improving the health of the most vulnerable North Carolinians requires understanding the social disparities that generate and perpetuate health disparities and direct efforts to eradicate them.

## Section 2: Current Profile of North Carolina’s Medicaid Program: Budget, Beneficiaries, and Providers

Before presenting our in-depth analysis to Medicaid policymakers, we assess North Carolina’s current Medicaid program. In this section, we provide an overview of current NC Medicaid coverage and budgetary pressures, health disparities among North Carolinians, and challenges facing the healthcare provider workforce.

### 2a. Current NC Medicaid Overview & Coverage

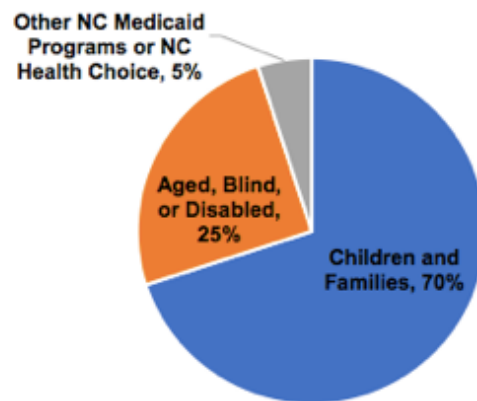
North Carolina (NC) Medicaid and NC Health Choice are joint federal-state programs providing healthcare coverage for low income individuals.<sup>2</sup> Medicaid beneficiaries must be NC residents with either US citizenship or legal immigrant status. NC Medicaid serves primarily children, pregnant women, parents, elderly adults, and people with disabilities.<sup>2</sup> Childless adults, regardless of income, do not currently qualify for Medicaid benefits.<sup>3</sup> The NC Medicaid program is funded jointly by federal and state resources. NC’s Federal Medical Assistance Percentage (FMAP) is currently 66.88%, which means that for every dollar spent by the state, the federal government contributes \$2.02.<sup>4</sup>

North Carolina Medicaid is not one uniform program. Given federal Medicaid requirements and the varying needs of the state’s diverse population, NC Medicaid functions as an amalgam of nearly 30 smaller programs. Each program serves a different set of individuals and offers services ranging from birthing services to acute care to long-term care. Many of these services are mandated by federal law, but others are optional and offered at the discretion of the state (see **Appendix 1**).<sup>5</sup> Each of the programs within NC Medicaid has unique eligibility guidelines that vary by patient group, age, and income (see **Appendix 2**).<sup>3</sup>

During State Fiscal Year (SFY) 2015, NC Medicaid processed more than 174 million claims for approximately 1.9 million beneficiaries.<sup>2</sup> Approximately 70% of these beneficiaries were children and families using programs such as Medicaid for Children and Infants (MIC) and Medicaid for Families with Dependent Children (see **Figure 1**).<sup>2,3</sup> A quarter of NC Medicaid recipients were aged, blind, or disabled and used programs such as Medicaid for the Aged, Blind, and Disabled or Medicare Aid.<sup>2,3</sup> The remaining 5% of beneficiaries were enrolled in other Medicaid programs or NC Health Choice, an insurance program for low-income children who do not otherwise qualify for Medicaid.<sup>2,3</sup>

Costs for provision of this care vary dramatically between groups. In SFY 2008, the most current year for which Medicaid expenditures by eligibility category are available, the aged, blind, and disabled made up approximately 30% of Medicaid recipients but accounted for more than 65% of expenditures.<sup>6</sup> In contrast, families and children made up almost 70% of

**Figure 1. NC Medicaid Beneficiaries, SFY2015.**



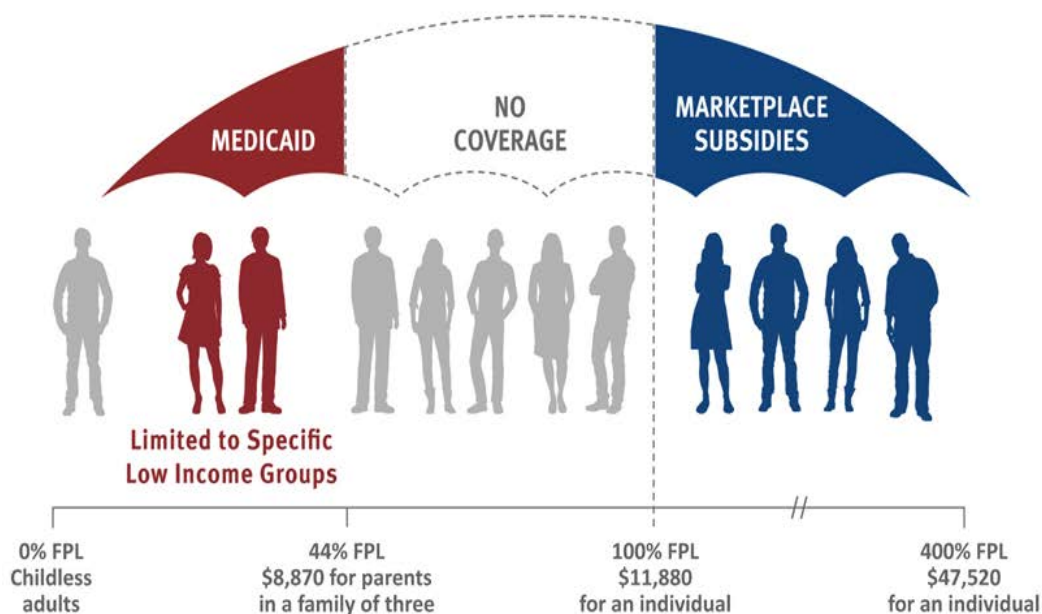
Source: Created by authors; generated using data from the NC Medicaid and NC Health Choice Annual Report for SFY2015.



beneficiaries and were responsible for approximately 34% of spending.<sup>5</sup> This dynamic is common to state Medicaid programs across the country, and consistent with national healthcare spending trends.<sup>7</sup>

Kaiser Family Foundation (KFF) estimates there are approximately 219,000 uninsured North Carolinians who fall into the “coverage gap”—too “rich” to qualify for Medicaid, but too “poor” to qualify for federal subsidies in the ACA exchange (see **Figure 2**). Of the individuals who fall in the coverage gap, 77% are adults without dependent children, and 63% are in a working family. KFF estimates there are another 39,000 North Carolinians currently eligible for Medicaid and 121,000 individuals eligible for ACA federal subsidies on the ACA exchange.<sup>8</sup>

**Figure 2. Gap in Coverage for Adults in States that Did Not Expand Medicaid Under the Affordable Care Act.**



Source: [Kaiser Family Foundation](#).<sup>8</sup>

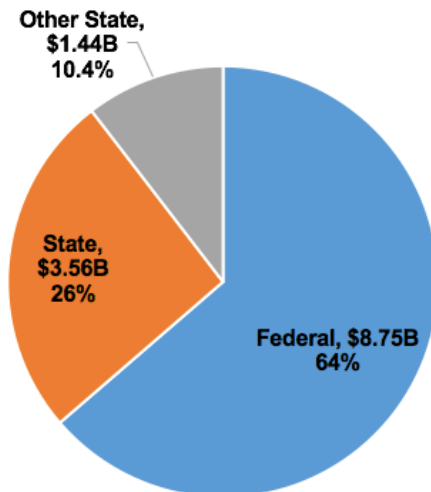
## 2b. Medicaid Budgetary Pressures

### *NC Medicaid Program Financing*

Medicaid is financed through a federal-state partnership, with the contributions of the federal government determined through a matching formula called the Federal Medical Assistance Percentage (FMAP). The matching formula was designed to offer states with lower per capita incomes greater levels of federal funding, recognizing that the nation's poorest states often had the widest health disparities.

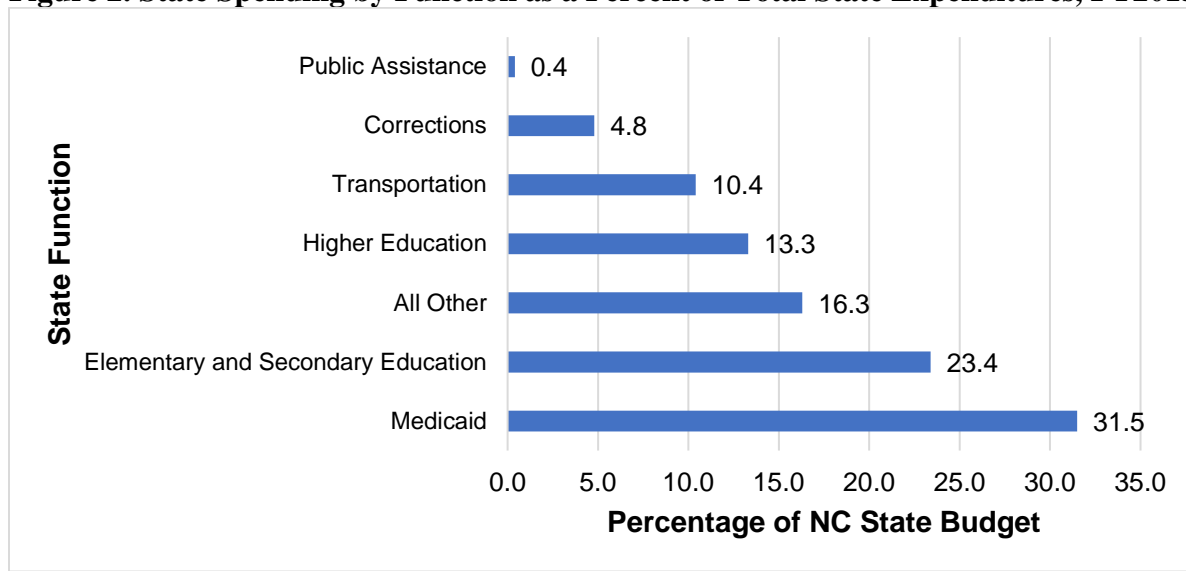
The North Carolina (NC) Medicaid program's budget has swelled in response to rising enrollment and the growing cost of care over the years. The total NC Medicaid budget approached \$14 billion in State Fiscal Year (SFY) 2015—a nearly \$7 billion increase since 2000.<sup>9</sup> The federal government contributes approximately \$9 billion in funds based on an FMAP rate of 66.88% in FY 2017, which has increased by 7% over the past twenty years.<sup>10</sup> The state contributes \$3.6 billion in SFY 2015, which has increased by \$1 billion over the past five years. **Figure 1** illustrates the federal and state contributions to the NC Medicaid program. Finally, the NC Medicaid program is the state's largest expenditure, with Medicaid spending comprising nearly 32% of the state budget in 2015 (see **Figure 2**).<sup>11-13</sup>

**Figure 1. Sources of NC Medicaid Funding, FY2015.**



Source: Figure created by authors using data from Division of Medical Assistance [Annual Report Tables, FY2015](#).<sup>2</sup>

**Figure 2. State Spending by Function as a Percent of Total State Expenditures, FY2015.**

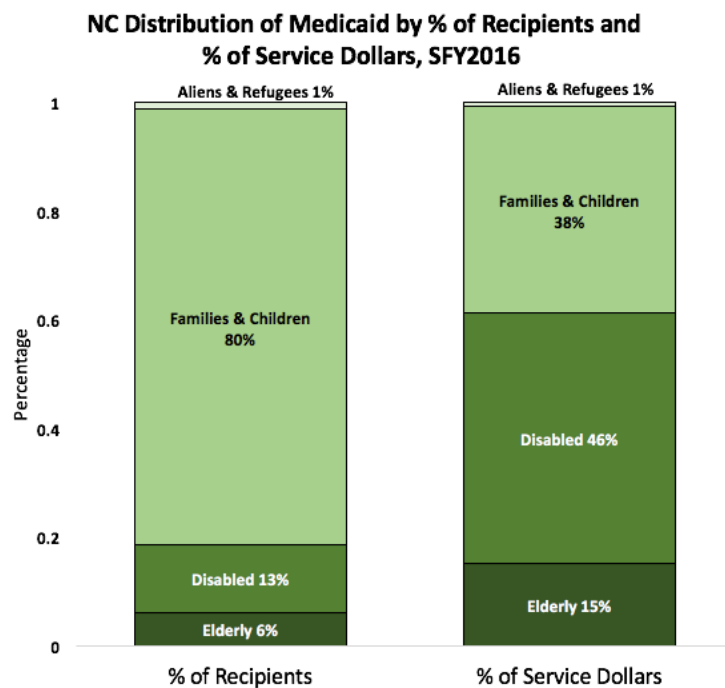


Source: Figure created by authors using data from the National Association of State Budget Officers 2014-2016 [State Expenditure Report](#).<sup>14</sup>

#### *Cost Distribution for the NC Medicaid Population*

Today one in every five North Carolinians are covered by Medicaid.<sup>2</sup> However, NC Medicaid patients are not equal vis-à-vis the budget. Although enrollees are primarily children, the elderly and disabled patients account for the majority of expenditures (see **Figure 3**).<sup>2,15</sup>

**Figure 3. Distribution of NC Medicaid Dollars by Percent of Recipients and Percent of Services Dollars, SFY2016.**



Source: [NC Medicaid and NC Health Choice](#), Annual Report for State Fiscal Year 2016.<sup>16</sup>

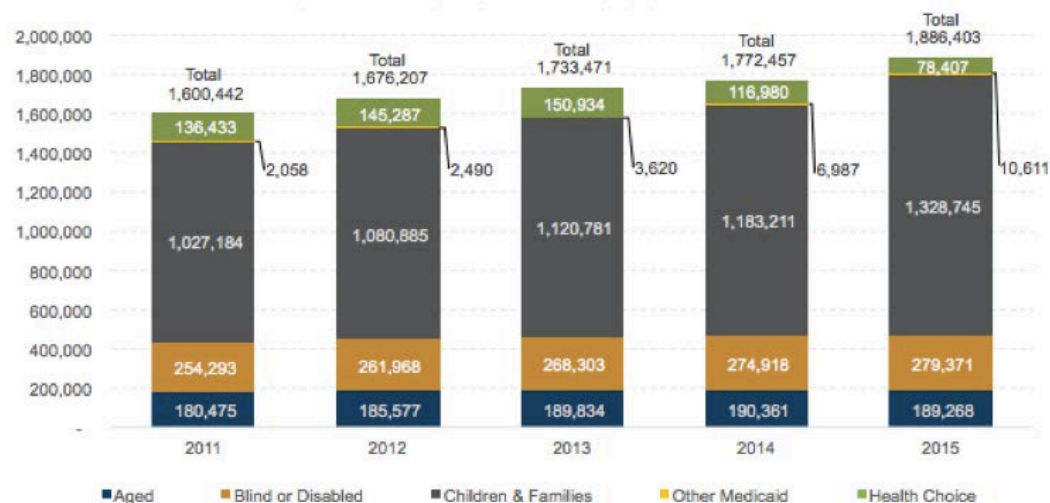
This phenomenon of “super-utilizers” has been documented across the nation. A seminal study by the US Government Accountability Office attributed 50% of Medicaid dollars to 5% of patients.<sup>17</sup> In NC specifically, the aged, blind, and disabled accounted for less than a quarter of all Medicaid enrollees in SYF 2016, but were responsible for 61% of the program’s spending. Indeed, four of the five most expensive services billed to NC Medicaid (between \$10,000-\$30,000 per patient) are primarily consumed by this population (e.g., the Program of All-Inclusive Care for the Elderly, Community Alternatives Program for Disabled Adults).<sup>16</sup>

Although NC Medicaid’s spending trends mirror those of other states, the program’s cost distribution differs slightly. Unlike many other states that have capitation contracts with managed care organizations (MCOs) to provide health services to Medicaid beneficiaries, North Carolina’s dominant care delivery model is Community Care of North Carolina (CCNC). CCNC is a primary care case management model (PCCM) that has improved access to services (e.g., ambulatory care) and reduced high-cost service utilization (e.g., acute care) while maintaining high quality of care.<sup>18</sup> While CCNC has generated hundreds of millions of dollars in annual savings for the state, it still operates within a fee-for-service (FFS) model of provider compensation, which policymakers have criticized for failing to align financial incentives and population health.<sup>19</sup> As the cost of care continues to rise, the mechanisms used to pay for health services have come under increased scrutiny in NC.

### *Recent Budgetary Challenges*

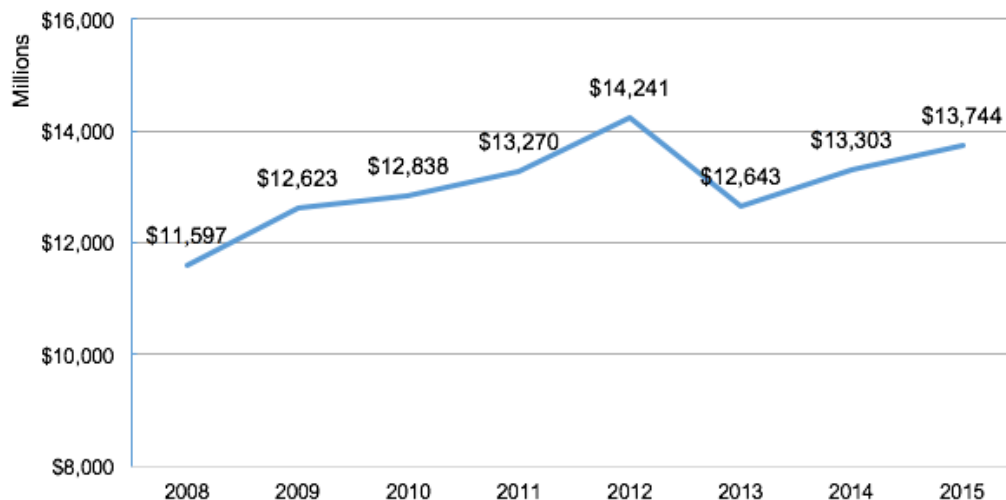
Policymakers’ concerns about the sustainability and solvency of NC Medicaid’s budgets were amplified by the 2008 financial crisis. As a countercyclical program, Medicaid’s enrollment increases during economic downturns, during which hundreds of thousands of beneficiaries enroll in Medicaid. **Figure 4** shows that between 2011 and 2015, the share of children and families enrolling in Medicaid increased substantially. Due to increasing enrollment, expenditures have generally increased, despite a drop in 2013 (see **Figure 5**). The Perdue administration contended the pre-recession rates set by the NC General Assembly (NCGA) were insufficient to meet the new demand for care, raising the possibility that Medicaid would run significantly over budget.<sup>20</sup>

**Figure 4. Average Medicaid Enrollment by Program Category, FY2011-2015.**



Source: NC Medicaid and NC Health Choice, [Annual Report](#) for State Fiscal Year 2015.<sup>2</sup>

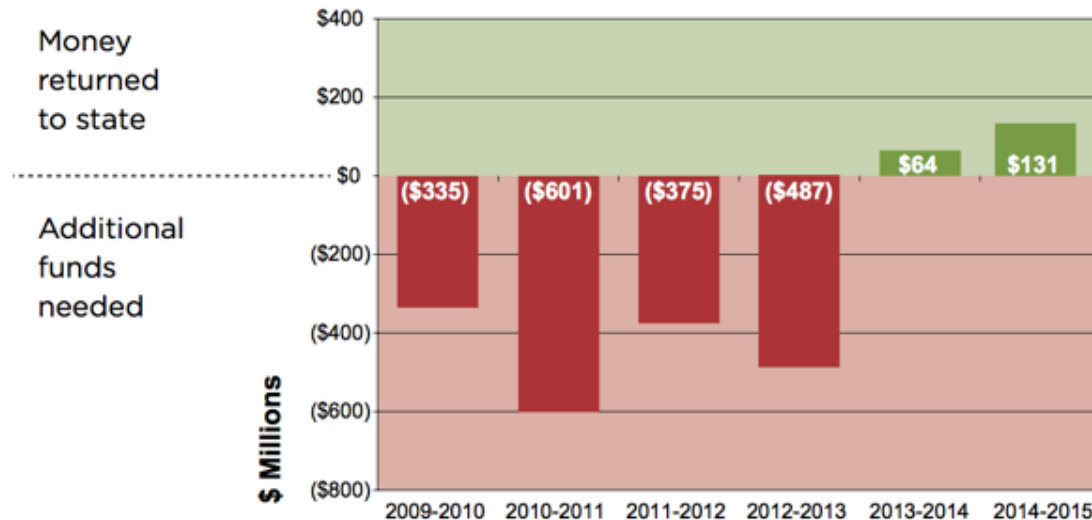
**Figure 5. NC Medicaid Program Total Expenditures, FY2008-2015.**



Source: Figure created by authors using data from the NC Division of Medical Assistance [Annual Report Tables SY2015](#).<sup>21</sup>

However, budget targets remained static and fears of overspending were confirmed in a 2013 state audit (see **Figure 6**). According to the audit, the state incurred an additional \$375 million in expenditures as a result of budget overruns.<sup>22</sup> Auditors also pointed to a \$40 million gap in CCNC's projected savings and a \$180 million disparity in administrative costs between NC and comparable state Medicaid programs.

**Figure 6. Medicaid Budgets Relative to Targets.**



Source: [Annual Report](#) for State Fiscal Year 2015. NC Medicaid and NC Health Choice.<sup>2</sup>

Although policymakers agreed that the Medicaid budget faced significant challenges, they differed widely in diagnosing the cause of overruns. The McCrory administration attributed the budgetary pressures to gaps in agency oversight and poor caseload management on the part

of CCNC. Consequently, results from the 2013 audit became the foundation of a Section 1115 waiver to transform NC Medicaid from a PCCM to a collection of private MCOs.

Department of Health and Human Services (DHHS) officials contested this interpretation, attributing the budgetary overruns to incomplete financial projections. Previously, NC Medicaid did not include all potential expenses in their forecasts, and based projections on single-year estimates. DHHS officials also pushed back against claims of agency mismanagement, stating that the excess healthcare consumption (a primary driver of costs in a FFS system) is contingent on enrollment and the price of care, which are outside of DHHS' control.

Furthermore, independent analysis performed by the NC Fiscal Research Division suggests that NC's administrative expenditures were actually lower than comparable Medicaid programs.<sup>20</sup> In fact, research from the Kaiser Family Foundation indicates that NC Medicaid had the lowest average annual growth in Medicaid spending (3.5%) nationwide from FY2007-2010 (with an overall 11.4% decline since 1990).<sup>9</sup> This suggests that the recession-induced budgetary crisis may have been an aberration from DHHS's overall success at controlling Medicaid costs. In the last two years, DHHS has achieved positive returns for the state after revising their forecasting models following the audit (see **Figure 6**).<sup>2</sup>

## 2c. North Carolina's Insured and Uninsured Population

The Affordable Care Act (ACA) dramatically expanded health insurance coverage in the United States. As of 2015, 91% of the total American population had insurance coverage. Of the insured population, 20% of people were covered by Medicaid nationally. In NC, 89% of the total population is insured, of which 18% are covered by Medicaid (**Figure 1**). About 11% percent of all North Carolinians are uninsured, making North Carolina the state with the 9th highest uninsured rate in the country. This section will focus on the uninsured non-elderly population, as they account for the majority of uninsured individuals.

**Figure 1. Health Insurance Coverage in the United States and North Carolina, 2015.**

	Employer-based	Medicaid	Medicare	Non-group	Other public	Uninsured
United States	49	20	14	7	2	9
North Carolina (total)	48	18	13	7	N/A	11
North Carolina, (non-elderly)	54	N/A	20	8	5	13

Source: Figure created by the authors using information from [Kaiser Family Foundation](#) State Health Facts.<sup>23</sup>

### *Demographics of the Uninsured in North Carolina*

North Carolina's non-elderly population (individuals under 65 and not Medicare eligible) has an uninsured rate of nearly 13%, with certain income and racial and ethnic groups disproportionately represented (see **Figure 1**). Uninsured individuals are more likely to be poor: about 86% of the uninsured population are non-elderly individuals with incomes  $\leq 400\%$  of the federal poverty level (FPL) (see **Figure 2**). About 30% of the uninsured have incomes below 100% FPL, which is approximately \$12,000 for a single individual and \$24,000 for a family of four (see **Figure 2**). This percentage is also four percentage points higher than the national average. The individuals in this group fall into the coverage gap: those who are ineligible for both Medicaid and subsidies for insurance marketplace coverage. About 20% percent of the population within 100-199% of the FPL is uninsured, despite being eligible for subsidies (see **Figure 2**).

Disparity exists in insurance coverage between racial and ethnic groups in NC. Most strikingly, 30% of NC's Hispanic population is uninsured (**Figure 3**). This is significantly higher than the national average of 17%. No analogous coverage disparity has been demonstrated by sex.

**Figure 2. Percent Uninsured in North Carolina by Age, FPL, and Race, 2013-2015.**

	2013	2014	2015
Adults, 18-64	17%	14%	13%
Children, 0-18	6%	8%	7%
Under 100% FPL	30%	24%	23%
100-199% FPL	28%	20%	20%
200-399% FPL	14%	13%	12%
400+% FPL	7%	5%	5%
White	14%	11%	15%
Black	16%	14%	14%
Hispanic	38%	29%	30%
Other	19%	10%	6%

Source: Figure created by the authors using information from [Kaiser Family Foundation](#) State Health Facts.<sup>23</sup>

**Figure 3. Uninsured Rates for the Nonelderly by Race/Ethnicity, 2015.**

	White	Black	Hispanic	Other
United States	8	12	17	9
North Carolina	10	14	30	6

Source: Figure created by the authors using information from [Kaiser Family Foundation](#) State Health Facts.<sup>9</sup>

### *Time Trends in Uninsured Populations*

Since 2013, several notable insurance trends have emerged, both nationally and in NC (**Figure 4**). The national uninsured rate fell by 5%, and the rate in North Carolina fell by 4%. Specifically in North Carolina, uninsured rates for individuals under 100% of FPL, and 100—199% of FPL fell by 7% and 8% respectively, suggesting that access to subsidies for ACA marketplace plans significantly improved coverage for low-income families (**Figure 5**). About 8% of the Hispanic population and 13% of those self-identified in “other” ethnic/racial groups also gained coverage between 2013-2015. However, the increase in health insurance coverage was not seen among children, who are likely covered under CHIP, or those within 200-300% of the FPL.

**Figure 4. Comparison of U.S. and NC Medicaid and Uninsured Rates, 2013-2015.**

	2013		2014		2015	
	Medicaid	Uninsured	Medicaid	Uninsured	Medicaid	Uninsured
United States	19%	15%	22%	12%	22%	10%
North Carolina	20%	17%	20%	14%	20%	13%

Source: Figure created by the authors using information from [Kaiser Family Foundation](#) State Health Facts.<sup>23</sup>

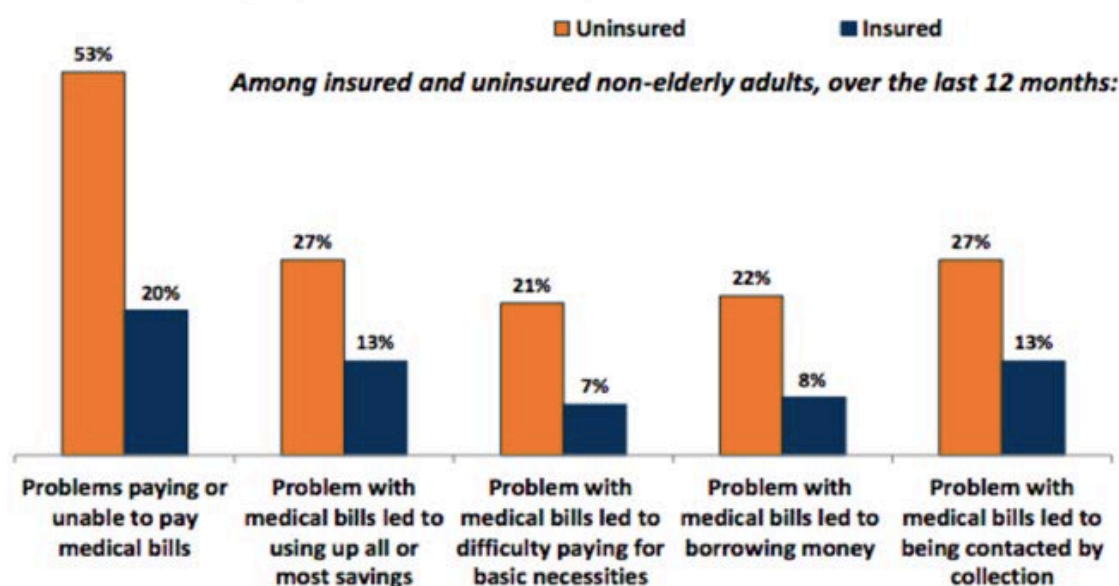
### *Trends in Underinsurance*

With a national trend of rising deductibles, copays, and premiums, health insurance alone does not guarantee affordable or accessible healthcare. Ultimately, many people are underinsured, which can be defined as having health insurance benefits that do not adequately



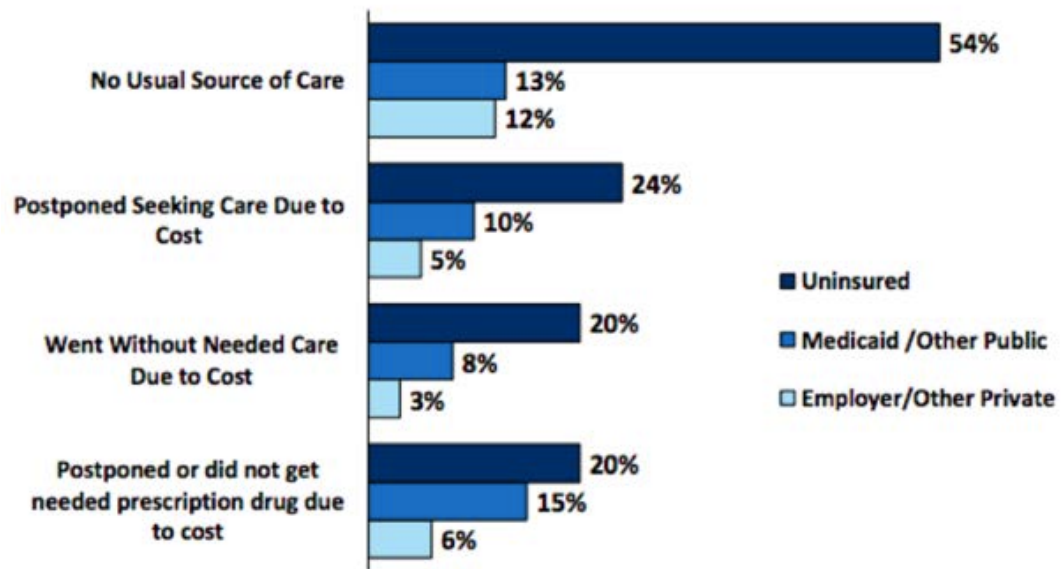
cover medical expenses. This may thwart access to care, compliance with care, or result in financial debt.<sup>24</sup> **Figure 5** shows that 20% of insured adults nationwide have trouble affording medical bills (in the last 12 months), and 13% have debt sent to collections despite being insured. **Figure 6** illustrates the differences in coverage between Medicaid and private insurance. For example, 10% of Medicaid patients have postponed care due to costs, compared to the 5% with private insurance. These data suggest that Medicaid patients could benefit from more comprehensive benefits. **Figure 6** illustrates that the number of patients with “no usual source of care” only differs by 1% between Medicaid and privately insured patients. This suggests that access to care is a problem regardless of insurance status. Put another way, additional factors—such as socioeconomic disparities and provider shortages—impact the ability of some North Carolinians to access care.

**Figure 5. Problems Paying Medical Bills by Insurance Status, 2015.**



Source: [Kaiser Family Foundation](#).<sup>25</sup>

**Figure 6. Barriers to Healthcare Among Nonelderly Adults by Insurance Status, 2015.**



Source: [Kaiser Family Foundation](#).<sup>25</sup>

## 2d. Health Disparities

Health disparities are inequalities in health outcomes, healthcare quality, and care access between groups of people. Health disparities are often described in terms of race, ethnicity, or gender, though these categorizations belie the complex combination of factors that affect the health of individuals and populations. In North Carolina, health disparities are the results of social and economic histories that have shaped different environments and opportunities for different groups.<sup>26</sup> Some groups consistently experience poorer health outcomes, such as higher incidence of chronic diseases, shorter life span, and higher rates of disability. These groups include people of color, residents of rural counties, people with lower levels of education, and people living in poverty.<sup>27-29</sup>

The social determinants of health—the conditions in which people are born, work, live, grow, and age—have been demonstrated to have significant effects on health outcomes.<sup>30,31</sup> Therefore, understanding health disparities requires exploring the social disparities that generate and perpetuate them.

### *Income disparities*

With a median household income of \$46,868 in North Carolina and 16.4% of the population living in poverty, the effects of income on health outcomes warrant analysis.<sup>32</sup> Health outcomes and income are typically inversely related, leaving those with the least means (less than \$25,000 per year) at the greatest risk of negative outcomes. **Figure 1** shows that poor health outcomes of obesity, diabetes, mental distress, smoking, and high blood pressure are more prevalent among poorer groups.

**Figure 1. Health Measures by Income, 2016.**

Income Level	Obesity (% of pop)	Diabetes (% of pop)	Frequent mental distress (days/30 days)	Smoking (% of pop)	High blood pressure (% of pop)
\$75,000 or more	25	6	2	8	30
\$50,000-\$74,999	31	9	3	16	31
\$25,000-\$49,999	34	11	3	20	42
Less than \$25,000	38	19	6	28	46

Source: Figure created by authors using information from [America's Health Rankings](#).<sup>32</sup>

### *Racial disparities*

In North Carolina, blacks comprise 22% of the population and experience significantly higher rates of cancer death, obesity, diabetes, low birthweight, and other health issues than their white, Hispanic, and Asian counterparts (**Figure 2**).<sup>32</sup> Native Americans, who comprise just 1.6% of the population, face disproportionate burdens of obesity, diabetes, and smoking compared to whites. Hispanics (9.1%) and Asians (2.8%) in North Carolina generally perform better on health measures compared to whites.<sup>32</sup>

**Figure 2. Health Measures of North Carolinians by Race/Ethnicity, 2016.**

Race/ Ethnicity	Cancer deaths (per 100,000)	Obesity (% of pop)	Cardiovascular deaths (per 100,000)	Diabetes (% of pop)	Low birthweight (% of births)	Smoking (% of pop)
Whites	191	28	241	10	7	20
Blacks	225	40	305	15	14	22
Hispanics	73	25	94	4	7	9
Asians	105	15	118	2	N/A	5
Native Americans	164	46	245	13	N/A	30

Source: Figure created by authors using information from [America's Health Rankings](#).<sup>32</sup>

### *Educational Disparities*

Compared to whites, the state's black, Native American, and Hispanic populations have lower high school graduation rates, higher poverty rates, and lower median incomes (**Figure 3**).<sup>33</sup> In North Carolina, 28% of the population have a Bachelor's degree or higher, 58% have a high school diploma, and 14% have less than a high school diploma.<sup>32</sup> Those with a college degree are more likely experience better health than those with less education (**Figure 4**).<sup>34</sup> Overall, the higher the level of educational attainment, the more positive the health measure.

**Figure 3. Education, Poverty, and Median Income by Race/Ethnicity, 2015.**

Race/Ethnicity	High School Graduation Rate	Poverty All Ages	Median Income
Whites	89%	13%	\$53,273
Blacks	83%	25%	\$32,884
Native Americans	82%	26%	\$35,521
Hispanic	80%	31%	\$34,935
Other	93%	13%	\$75,558

Source: Figure created by authors using information from [NC DHHS Resident Population Health Data](#) by Race and Ethnicity.<sup>33</sup>

### *Rural-Urban Divide*

Sixty of the 100 counties in North Carolina are rural, defined by the Office of Management and Budget as counties not part of a Metropolitan Statistical Area. One-fifth of North Carolinians, or 2.2 million, live in rural areas.<sup>35</sup> Poverty is more prominent in rural settings. In 2015, the poverty rates in rural and urban North Carolina populations were 20.3% and 15.3%, respectively.<sup>36</sup> At the extremes, 14.3% of children in Wake County children live in poverty compared to 46.6% in Robeson County.<sup>35</sup> Rural populations also face higher unemployment rates and are less educated overall.<sup>35</sup>

**Figure 4. Health Measures by Education Level, 2016.**

Education Level	Diabetes (% of pop)	Smoking (% of pop)	Obesity (% of pop)	Frequent mental distress (days/ 30 days)	High blood pressure (% of pop)	Heart attack (% of pop)
College graduate	7	6	23	2	28	3
Some college	12	27	32	4	39	4
High school graduate	15	25	36	4	45	6
Less than high school	17	20	39	6	51	10

Source: Figure created by authors using information from [America's Health Rankings](#).<sup>32</sup>

Compared to urban residents, North Carolina rural residents experience poorer health. They face higher rates of mortality for cardiovascular disease and cancer, mental health-related emergency department visits, overweight and obesity, diabetes, and suicide (**Figure 5**).<sup>35</sup> Counties with the highest cancer mortality rates were nearly all rural.<sup>27</sup> A national study found that life expectancy in rural communities is consistently lower than in urban areas.<sup>27</sup> In 2014, the life expectancy in Wake County was seven years longer than that in Robeson County.<sup>35</sup> Urban counties make up a disproportionate share of counties with high health outcome ranks, as measured by length and quality of life.<sup>37</sup> A comparison of the ten counties with the best and worst health outcomes revealed an association between health ranking and uninsured status, median household income, unemployment, and college education (**Figure 6**).<sup>37</sup>

**Figure 5. Health Outcomes Stratified by Rural/Urban Setting.**

Health Outcome	Rural	Urban
Mortality Rate for Cardiovascular Disease (#/1,000)	255.6	228.0
Mental health related ED visits (#/10,000 pop)	126.4	95.6
Overweight or obese (% pop)	68.9	63.3
Diabetes (% pop)	12.5	9.5
Suicide rates (#/100,000)	13.4	12.8

Source: Figure created by authors using information from the 2014 [North Carolina Institute of Medicine](#) NC Rural Health Action Plan.<sup>35</sup>

**Figure 6. Comparison of Top Five and Bottom Five Ranked Counties for Health Outcomes.**

County (Urban/Rural)	Health Outcome Rank	Uninsured (%)	Median Household Income	Unemployed (%)	High School Graduation Rate (%)	Some College (%)
Statewide		18	\$46,596	6.1	83	65
Wake (U)	1	14	\$66,950	4.8	81	78
Orange (U)	2	15	\$60,304	4.4	88	80
Union (U)	3	16	\$64,381	5.1	91	67
Camden (R)	4	16	\$61,730	6.0	88	77
Mecklenburg (U)	5	19	\$59,049	5.9	81	72
Columbus (R)	96	21	\$34,321	8.3	84	58
Halifax (R)	97	17	\$31,674	9.5	78	50
Vance (R)	98	18	\$33,609	9.2	65	47
Scotland (R)	99	18	\$32,782	11.7	73	47
Robeson (R)	100	25	\$30,414	9.2	85	46

Source: Figure created by authors using information from [Robert Wood Johnson Foundation](#) County Health Rankings.<sup>37</sup>

#### *Disparities in Rural Insurance Status*

In 2011-2012, the uninsured rate was 20.8% and 19.5% in urban and rural residents, respectively.<sup>38</sup> Rural residents are more likely to have government-sponsored health insurance than urban residents (**Figure 7**). Medicaid patients comprise a greater share of rural hospital patients than those in urban settings at 75.4% and 68.2%, respectively.<sup>35</sup> In county-specific analysis, there is some evidence that uninsured status and health outcomes are correlated. Wake County and Robeson County have the best and worse health outcomes; 14% and 25% of their populations are uninsured, respectively.<sup>37</sup>

**Figure 7. Type of Insurance Coverage in Rural and Urban Populations.**

Type of Insurance	Rural	Urban
Medicare (%)	21	15
Medicaid (%)	18	11
Employer (%)	40	48

Source: Figure created by authors using information from the 2014 [North Carolina Institute of Medicine](#) NC Rural Health Action Plan.

#### *Rural settings have less physician density and access*

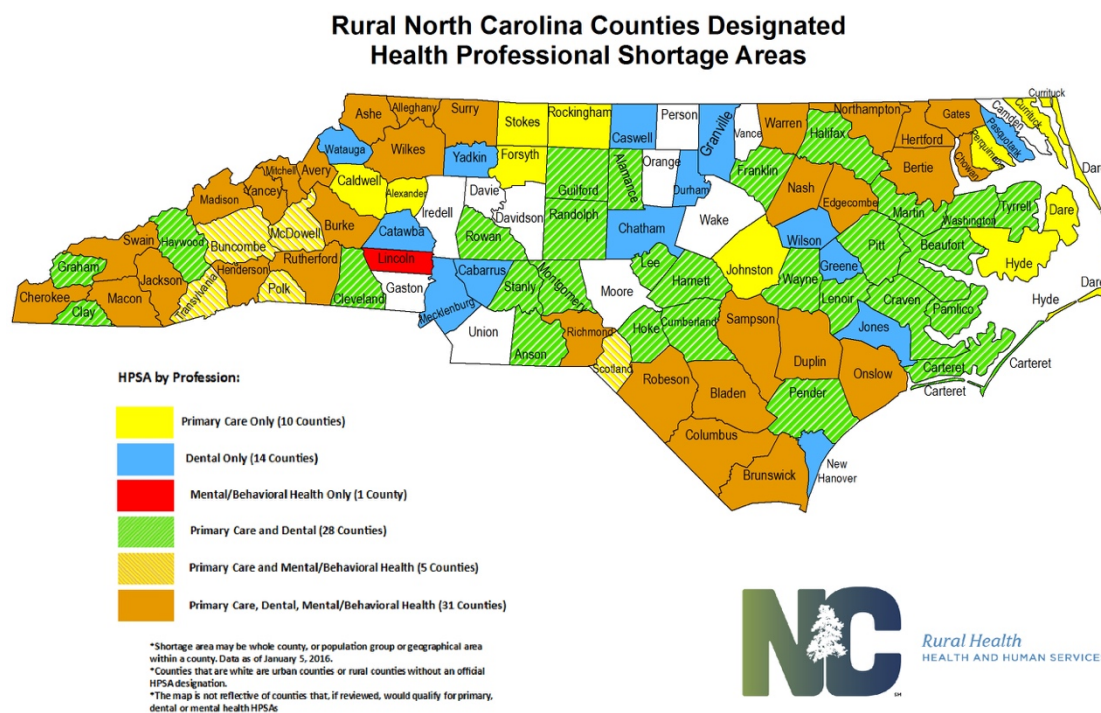
North Carolina's physicians are concentrated in urban centers.<sup>35</sup> Urban areas have nearly double the physician density of rural areas, contributing to less access to healthcare services for rural residents. The disparity in workforce distribution extends to nurse practitioners and physician assistants. Access to care and health-promoting resources will be explored further in the following section.

## 2e. Provider Misallocation

### *Workforce Challenges*

Supply and demand of healthcare delivery in North Carolina can be examined at the state and county levels. This distinction highlights some of North Carolina's challenges in meeting the healthcare need for its citizens. County-level metrics include recognition that a region is a Health Professional Shortage Area (HPSA), a designation from the federal Agency for Healthcare Research and Quality (AHRQ). A region is classified as a HPSA based on the number of citizens per provider, and a three-tier system used by the North Carolina Department of Commerce to highlight economically disadvantaged counties across the state (Tier 1 is the most economically depressed).<sup>39</sup> **Figure 1** shows the NC counties that are designated HPSAs.

**Figure 1. Rural North Carolina Counties Designated Health Professional Shortage Areas (HPSAs).**



Source: NC DHHS, [Office of Rural Health](#).<sup>40</sup>

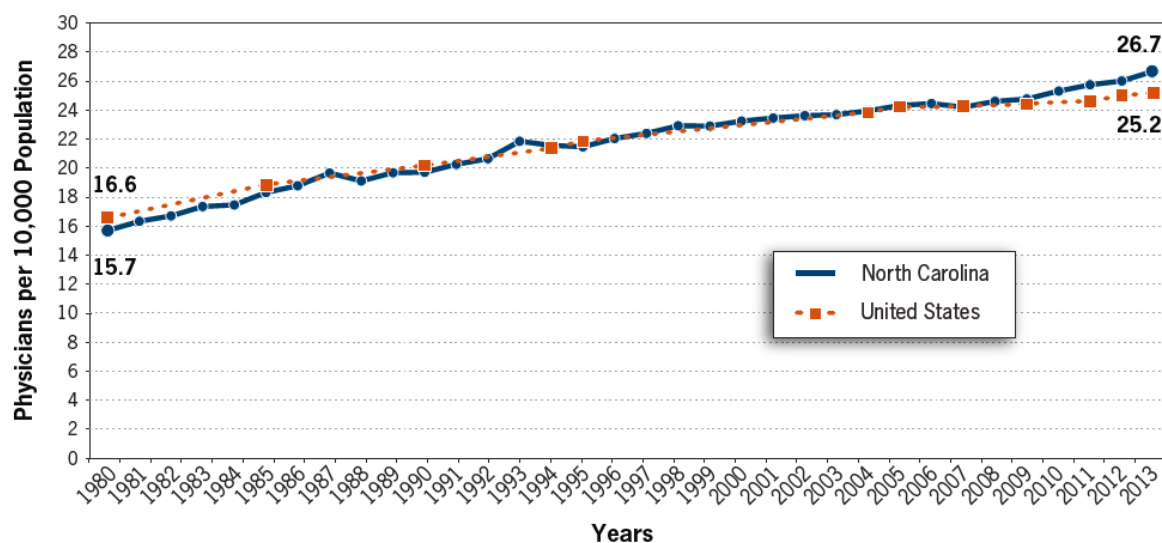
### *Physician Supply*

From 1980-2013, physician supply in NC remained consistent with the national average—rising slightly above average since 2010—indicating that NC is able to adequately attract and retain physicians (see **Figure 2**). Distribution between primary care and specialists is similar to national figures, with NC and national primary care physicians (PCPs) representing 47.8% (12,224) and 47.7% of the physician workforce, respectively.<sup>41</sup> Interestingly, the PCP



growth rate in NC has increased more rapidly in recent years relative to total physician supply (see **Figure 3**).

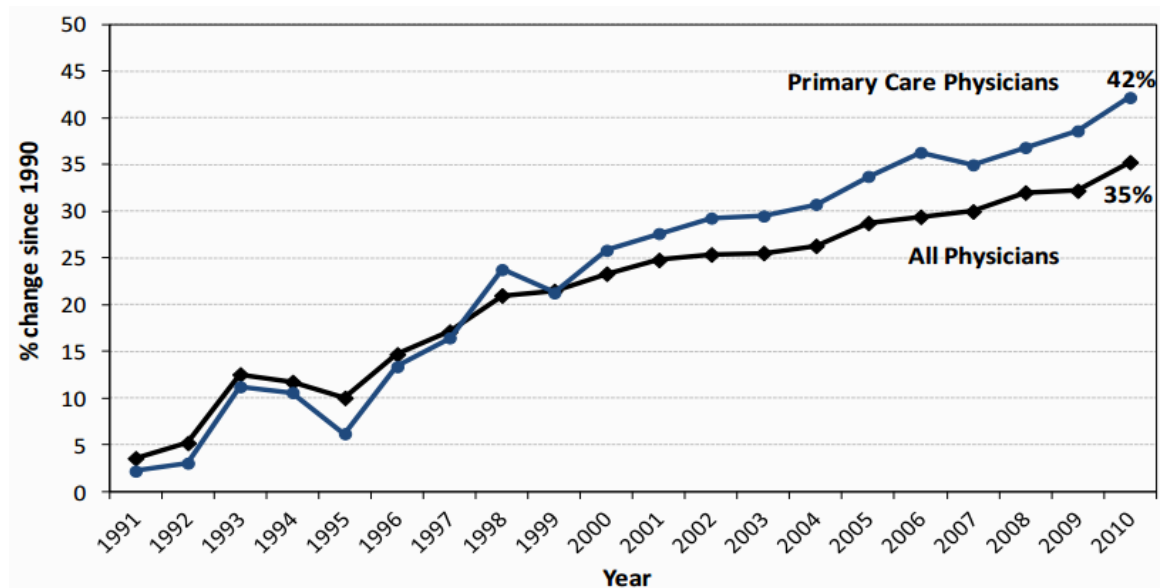
**Figure 2. Physicians per 10,000 Population. NC and United States, 1980-2013.**



Sources: North Carolina Health Professions Data System, 1979 to 2013; American Medical Association Physician Databook, selected years; US Census Bureau; North Carolina Office of State Planning. North Carolina physician data include all licensed, active, physicians practicing in-state, inclusive of residents in-training and federally employed physicians, US data includes total physicians in patient care, which is inclusive of residents in-training and federally employed physicians. US physician data shown for 1980, 1985, 1990, 1994, 1995, 2004, 2005, 2007, 2009, 2011, 2012, 2013; all other years imputed.

Source: Medical Education in North Carolina: What is the Return on Investment? [Cecil G. Sheps Center for Health Services Research](#).<sup>42</sup>

**Figure 3. Percentage Growth Since 1990 of Physicians and Primary Care Physicians per 10,000 Population, NC 1991-2010.**

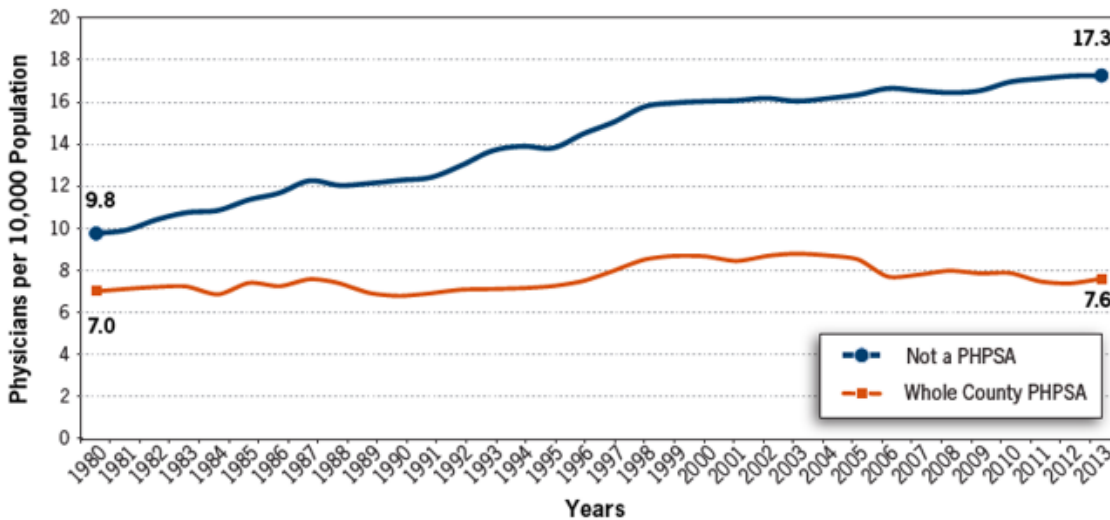


Source: NC's Rural Health Workforce: Challenges and Strategies. [North Carolina Institute of Medicine](#), 2013.<sup>43</sup>



In recent years, physician macro-supply projections have become highly politicized, with the American Association of Medical Colleges (AAMC) offering data to support a shortfall and other researchers countering their assumptions.<sup>44-46</sup>

**Figure 4. Physicians per 10,000 Population by Persistent Health Professional Shortage Area (PHPSA) Status, North Carolina, 1980-2013.**



**Notes:** Figures include active, in-state, nonfederal, non-resident-in-training physicians licensed as of October 31st of the respective year. North Carolina population data are smoothed figures based on 1980, 1990, 2000 and 2010 Censuses. As of 2012, Primary Care PHPSA calculations updated with data from most recent AHRF release. Persistent HPSAs are those designated as HPSAs by HRSA using most recent 7 HPSA designations (2004, 2007-2012).  
**Sources:** North Carolina Health Professions Data System, 1980 to 2013; North Carolina Office of State Planning; North Carolina State Data Center, Office of State Budget and Management; Area Health Resource File, HRSA, Department of Health and Human Services.

Source: Medical Education in North Carolina: What is the Return on Investment? [Cecil G. Sheps Center for Health Services Research](#).<sup>42</sup>

Regardless of future projections, North Carolina's current supply of physicians has not been equitably distributed to chronically underserved Health Professional Shortage Areas (HPSAs). From 1980-2013, HPSAs gained 0.6 physicians per 10,000 citizens, while non-HPSAs gained 7.5 physicians per 10,000 citizens (see **Figure 4**).<sup>46</sup>

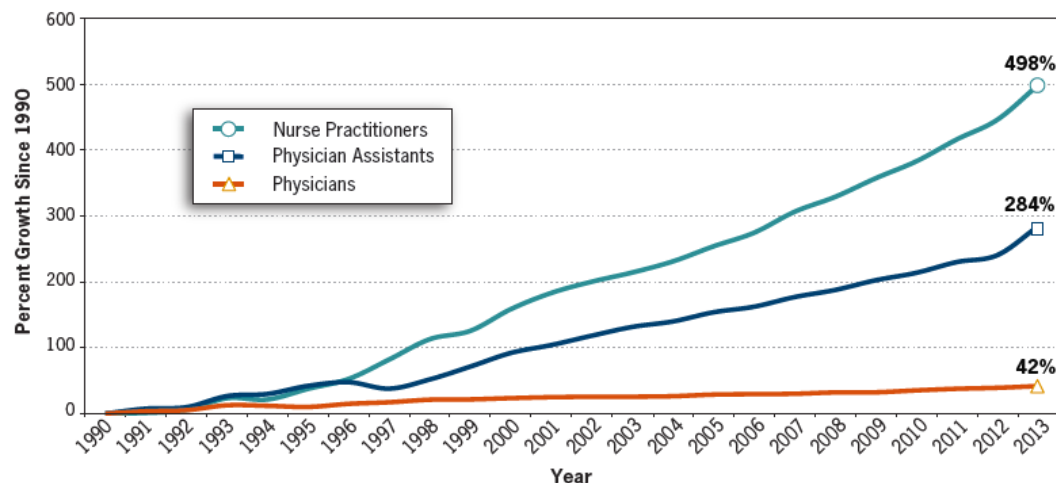
This skewed distribution is consistent across primary care physicians (PCPs) in the NC tiers as well, with the 40 tier 1 counties averaging a panel size of 3337 patients per PCP, tier 2 averaging 2644 patients per PCP, and tier 1 averaging 1464 patients per PCP. The AHRQ recommends panel sizes of 1,500-2,000 patients per PCP.<sup>47</sup> In 2015, two counties (Tyrell and Camden) did not have any physicians, and four counties (Camden, Gates, Northampton, and Hoke) had patient to PCP ratios exceeding 10,000 to 1.<sup>37</sup> By comparison, a 2011 Medical Group Management Association survey of national PCPs identified a median panel size of 1,906 and an average of 2,184.<sup>48</sup>

Compared to other southern states, more physicians in NC accept Medicaid. The North Carolina Academy of Family Physicians (NCAFP) estimated that 90% of family physicians accepted Medicaid, while a 2011 *Health Affairs* analysis estimated a 76% acceptance rate among ambulatory care physicians in NC (both PCP and non-PCP).<sup>49,50</sup>

### Physician Extender Supply

While NC physician supply has slowly increased, nurse practitioner (APRNs or NPs) and physician assistant (PA) supply has grown significantly (see **Figure 5**). Use of ‘physician extenders’ has been hypothesized to improve the urban-rural provider supply gap for NC, but have thus far demonstrated similar misallocation challenges (see **Figure 6**).<sup>35</sup> Although the PA-to-physician ratio is growing in HPSAs (see **Figure 6**), this is more reflective of poor physician allocation than true movement into whole county HPSAs (see **Figure 7**). A 2003 study from California highlighted the potential of NPs and PAs to practice in HPSAs and treat a larger proportion of minority patients.<sup>51</sup> Much like North Carolina’s population distribution, 28% of the population in California resided in primary care HPSAs. The largest proportion of California PAs worked in areas with vulnerable populations, and the majority of NPs practiced in rural areas and HPSAs. Furthermore, compared with physicians, non-physician clinicians in California had a substantially greater proportion of Medicaid, uninsured, and minority patients.

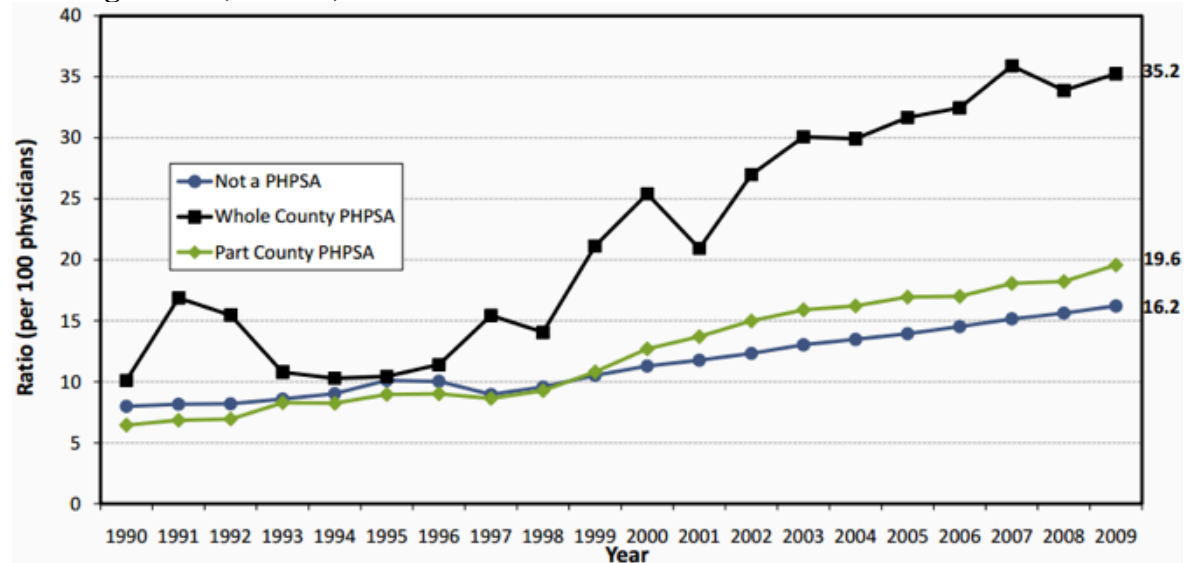
**Figure 5. Cumulative Growth Rate per 10,000 Population Since 1990: Physicians, Nurse Practitioners, and Physician Assistants in NC.**



Sources: North Carolina Health Professions Data System with data derived from the North Carolina Medical Board and North Carolina Board of Nursing, 1990 to 2013. Figures include all active, in-state, non-federal, non-resident-in-training physicians, PAs and NPs licensed as of October 31 of the respective year. Produced by: Program on Health Workforce Research and Policy, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.

Source: Medical Education in North Carolina: What is the Return on Investment? [Cecil G. Sheps Center for Health Services Research](#), 2015.<sup>42</sup>

**Figure 6. Ratio of Physician Assistants to 100 Physicians by Persistent Health Professional Shortage Area (PHPSA) status.**

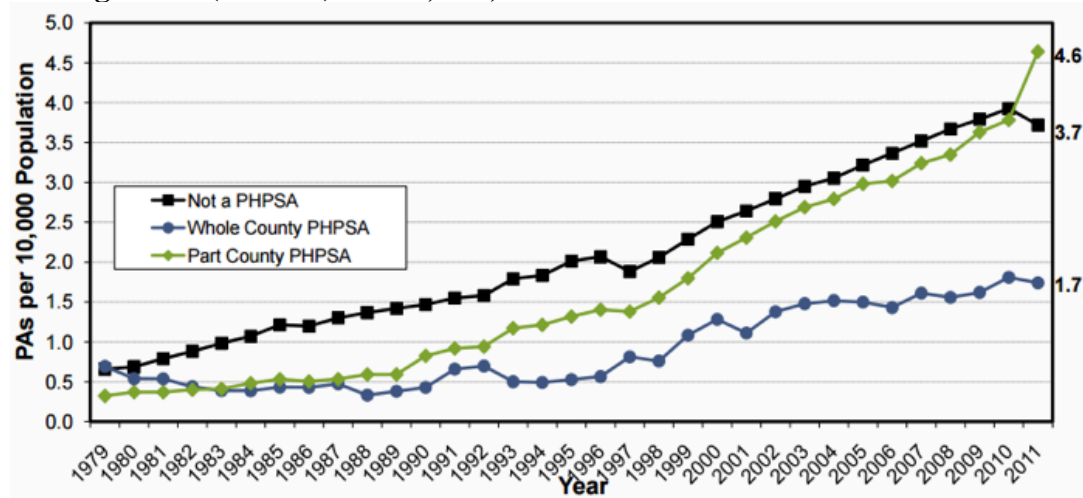


Source: NC's Rural Health Workforce: Challenges and Strategies. [North Carolina Institute of Medicine](#), 2013.<sup>43</sup>

Numbers of practicing NPs and PAs in NC's highest need areas—the HPSAs—are similar to those of physicians, and demonstrate equally slow growth (**Figures 7-9**). This is not consistent with national trends, however, which demonstrate more rapidly increasing numbers of NPs and PAs practicing in HPSAs. (**Figures 10-11**)

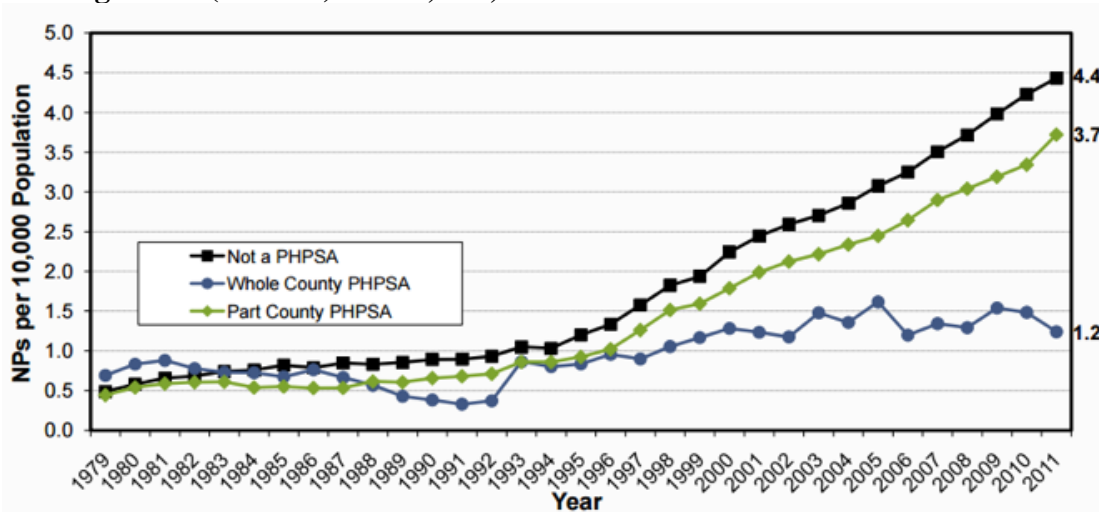
North Carolina has one of the more restrictive practice environments for these physician extenders (specifically NPs), who must be supplemented by a “back-up supervising physician.” This role is defined by the North Carolina Medical Board and North Carolina Board of Nursing as a “licensed physician who, by signing an agreement with the nurse practitioner and the primary supervising physician(s), shall provide supervision, collaboration, consultation and evaluation of medical acts by the nurse practitioner in accordance with the collaborative practice agreement when the Primary Supervising Physician is not available.”<sup>52</sup> These restrictions are inconsistent with recommendations in the 2011 Institute of Medicine report, *The Future of Nursing: Leading Change, Advancing Health*, which stated “what nurse practitioners are able to do once they graduate varies widely for reasons that are related not to their ability, education or training, or safety concerns, but to the political decisions of the state in which they work.”<sup>53</sup> Nurse practitioners have proven to perform as well as physicians on clinical outcome measures such as mortality, improvement in pathological condition, reduction of symptoms, health status, and functional status.<sup>53</sup> Legislation on expanding the scope of practice of advanced practice registered nurses (APRNs or NPs) is pending in the NC General Assembly (HB88/SB 73).<sup>54</sup>

**Figure 7. Physician Assistants per 10,000 Population by Persistent Health Professional Shortage Area (PHPSA) Status, NC, 1979-2011.**



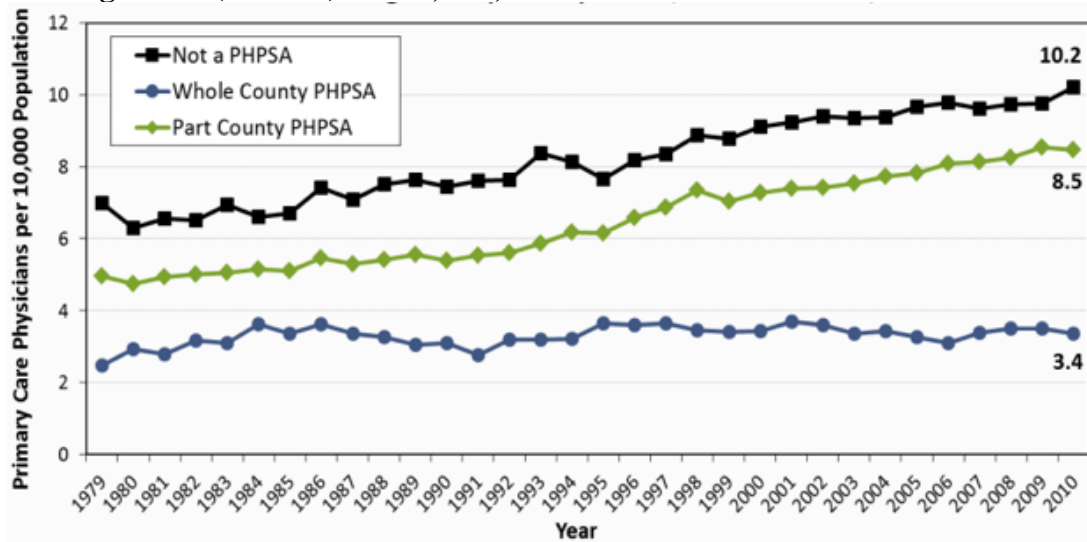
Source: NC's Rural Health Workforce: Challenges and Strategies. [North Carolina Institute of Medicine](#), 2013.<sup>43</sup>

**Figure 8. Nurse Practitioners per 10,000 Population by Persistent Health Professional Shortage Area (PHPSA) Status, NC, 1979-2011.**



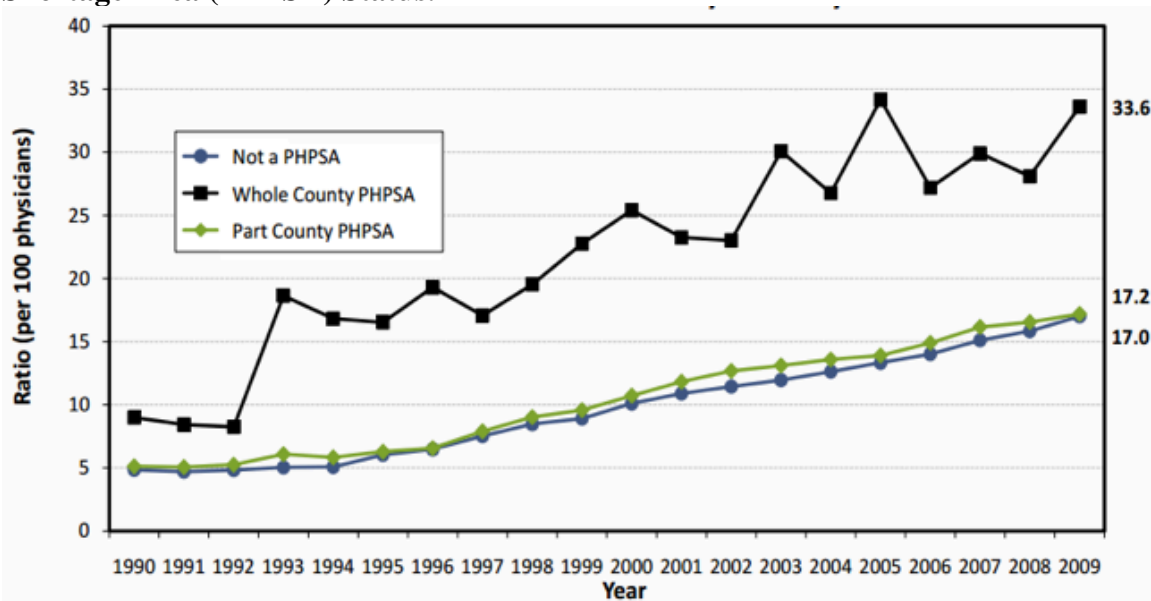
Source: NC's Rural Health Workforce: Challenges and Strategies. [North Carolina Institute of Medicine](#), 2013.<sup>43</sup>

**Figure 9. Primary Care Physicians per 10,000 Population by Persistent Health Professional Shortage Area (PHPSA) Status, NC, 1979-2011.**



Source: NC's Rural Health Workforce: Challenges and Strategies. [North Carolina Institute of Medicine](#), 2013.<sup>43</sup>

**Figure 10. Ratio of Nurse Practitioners to 100 Physicians by Persistent Health Professional Shortage Area (PHPSA) Status.**



Source: NC's Rural Health Workforce: Challenges and Strategies. [North Carolina Institute of Medicine](#), 2013.<sup>43</sup>

**Figure 11. Ratio of Healthcare Professionals to Population (Professionals per 10,000 Population).**

Indicator	State	Rural	Urban
All Physicians	22.1	13.71	25.56
Primary Care Physicians	7.8	6.11	8.47
Nurse Practitioners	4.1	2.9	4.6
Physician Assistants	4.0	2.86	4.5
Psychiatrists	1.0	0.52	1.21
General Surgeons	0.63	0.54	0.66
Dentists	4.3	3.04	4.89

Source: Calculations based on 2011 Health professionals state and county totals. North Carolina Health Professions Data System, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. (2011).<sup>37</sup>

Source: North Carolina Rural Health Action Plan: A Report of the NCIOM Task Force on Rural Health. [NC Institute of Medicine](#), 2014.<sup>35</sup>

### *Provider Demand*

As of July 2016, approximately 10.1 million people lived in North Carolina.<sup>55</sup> Based on AHRQ estimates of 3.19 PCP visits per patient per year, we estimate that North Carolinians visited PCPs 32.22M times in one year. This rate requires 2.685M PCP workdays per year, based on twelve 30-minute appointments per day. If physicians work 200 days per year, North Carolina would require 13,245 full-time PCPs to meet demand, significantly more than the 12,224 PCPs currently practicing in NC. The current gap may actually be worse, as it fails to differentiate between full time and part time PCPs. This estimate does not include physician extenders or changes in care models that allow for such things as group visits or telehealth delivery.

## **Section 2 Conclusion**

In summarizing the current state of NC Medicaid's budget, beneficiaries, and providers, we intended to give Medicaid policymakers and thought leaders baseline preparation for the deeper analytical dive that follows. We begin with federal options for Medicaid reform, and follow with in-depth analysis of NC's Section 1115 waiver, including relevant case study comparisons from around the US. We then explore primary care case management and managed care options and possibilities in NC, followed by assessment of NC Medicaid's enrollment, renewal, and outreach, including comparisons with other states. In the delivery reform section, we explore cutting-edge techniques and technologies with proven track records for improving health and reducing costs that could not only benefit the most vulnerable North Carolinians, but position our state in the forefront of innovative, efficient, and effective state Medicaid programs

## Section 3: Proposed Federal Reforms to Medicaid

### *Executive Summary*

Proposed federal reforms to Medicaid’s funding, structure, and services would have significant impact on NC Medicaid and current reform efforts. Although the 114<sup>th</sup> Congress did not vote on the American Health Care Act (AHCA), the proposed legislation still offers valuable insight about the national health policy environment, providing NC with the opportunity to anticipate future reforms.

The AHCA sought to convert Medicaid funding from a means-based entitlement program to a block grant, in the form of a per capita cap. Under this model, the government would allocate money based on 2016 state expenditures for four patient categories—children, adults, the disabled, and the elderly. Federal contributions would be indexed to the Medical Consumer Price Index (M-CPI), which would lag the real rate of Medicaid spending by 0.7%. Additional provisions include a phase-out of federal funding for states that expanded Medicaid under the Affordable Care Act, as well as changes to federal mandates for essential health benefits and eligibility.

The AHCA and per capita caps generally would negatively impact NC Medicaid and leave state policymakers to make difficult choices. First, per capita caps based on 2016 expenditure levels would result in a disproportionate loss of funding for NC relative to others. This is because NC has been effective in reducing its per-enrollee spending over time, and thus a match based on 2016 levels would result in less federal money for NC compared to states with larger, less efficient budgets. Second, the rate of spending growth in NC for children and adults outpaces the national average, suggesting that federal funds would be insufficient to cover the service cost for those beneficiaries. Third, NC’s most expensive eligible population—the elderly—is projected to grow by 66%, which may cause state Medicaid spending to outpace the growth of the M-CPI.

As NC works to anticipate and accommodate future changes to Medicaid funding, the state may choose to alter one or more of the following levers for cost control—service utilization, provider reimbursement, hospital payments, and eligibility requirements. Each choice carries potential consequences worth considering. For example, attempting to reduce utilization through cost sharing mechanisms may lead patients to delay care and experience negative health outcomes. Additionally, reducing provider reimbursements may cause physicians to exit the Medicaid program, which would only widen the gaps in care capacity created by the deactivation of 10,000 NC providers earlier this year. Alternatively, reducing payments to hospitals may further limit access to care in rural areas, where beneficiaries rely more heavily on safety net systems. Finally, modifying eligibility could both increase administrative costs for the state and negatively impact the long-term health of high-risk patients.

Although the present national structure of Medicaid remains intact, policymakers must consider the potential for future gaps in federal funding when designing and implementing changes to the state program. We recommend that legislators leverage the current momentum for state reform to proactively safeguard long-term access to care for NC residents, while working to close any internal gaps in funding and care capacity.



## Section 3: Proposed Federal Reforms to Medicaid

NC Medicaid policy is taking place against a backdrop of potential federal reforms. In this section, we will outline the potential federal changes to the Medicaid program, and contextualize national policy proposals to the healthcare environment of NC.

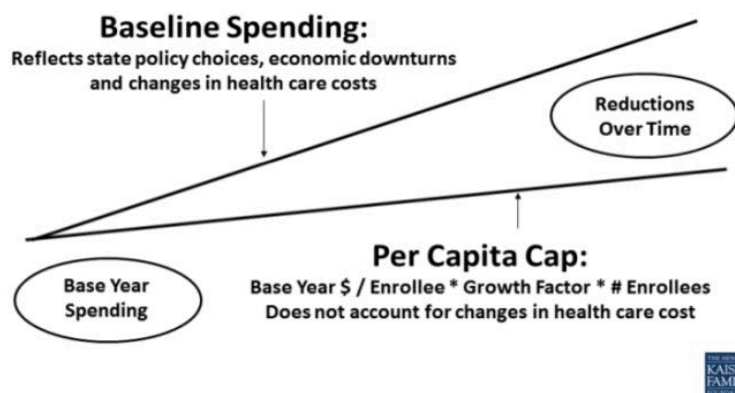
Currently, Medicaid is an entitlement program that is financed by a federal-state partnership. States have a Federal Medical Assistance Percentage (FMAP), which determines the level of federal payments to states. In the present environment, funds to states depend on eligibility, local healthcare costs, and benefit design of the Medicaid program.

The Trump Administration and Congressional leaders are considering changes to funding formulas for state Medicaid programs. Such changes include proposals for the federal government to provide fixed Medicaid payments to states through block grants or per capita caps. Block grants typically have an indexed growth rate, such as the Consumer Price Index, to account for inflation and rising healthcare costs. However, depending on the chosen index, the federal block grant payments to state may not keep pace with actual state Medicaid expenditures.

The American Health Care Act introduced by Speaker Paul Ryan in March 2017 and the version passed in the House of Representatives in May 2017 use per capita caps, which would establish per-enrollee rates for four enrollment categories—children, adults, the elderly, and individuals with disabilities. In the proposal, rates would be determined by the per eligible expenditure levels in the 2016 base year. To generate savings for the federal government, rates would evolve according to the medical care component of the Consumer Price Index. According to the Congressional Budget Office (CBO), this index is expected to grow 0.7% slower than the actual rate of per enrollee Medicaid spending over the next ten years.<sup>56</sup> The resulting reduction in funding over time is illustrated in **Figure 1**.

**Figure 1. Effect of Per Capita Caps on Medicaid Funding.**

**Under a per capita cap, reductions in federal spending are obtained by setting caps below expected spending.**



Source: [Kaiser Family Foundation](https://www.kff.org/medicaid/issue-brief/2017/07/11/per-capita-caps-reduce-federal-medicare-spending/).<sup>57</sup>

### *Projecting the Impact of Per Capita Caps on NC Medicaid*

The implications of per capita caps, as proposed in the AHCA, would significantly reduce the federal funding for NC compared to the status quo. In SFY2016, the NC Medicaid program received approximately \$9 billion in federal funds last year, and has a match rate of 67.61%.<sup>2,4</sup>

Switching to per capita caps, which are based on enrollment group expenditures, may be inadequate for NC since allocations are directly proportional to amount spent per enrollee (at \$5,450, NC is one of the lowest spenders, ranking 42<sup>nd</sup> nationwide).<sup>58</sup> The projected national per-enrollee Medicaid cost exceeds the AHCA M-CPI rate by 0.7%, which suggests the future federal payments will not keep pace with actual expenditures. Moreover, NC outpaces national growth in spending for two eligibility groups—children (+0.7%) and adults (+0.9%), suggesting the adjusted federal funding in this new model could be particularly detrimental (see **Figure 2**).<sup>58</sup>

**Figure 2: Growth in Eligibility Group Expenditures, 2000-2011.**

Population	Children	Adults	Disabled	Elderly
North Carolina	6%	6.50%	3.30%	3%
United States	5.30%	5.60%	4.50%	3.70%

Source: Figure generated by authors using data from the 2017 [State Health and Value Strategies Report](#).<sup>58</sup>

Although NC has a lower spending growth rate for disabled and elderly individuals than the national average, those two enrollment groups have increased state Medicaid expenditures substantially for the past decade. In SFY2016, disabled and elderly individuals alone accounted for 61% of the NC Medicaid program's spending.<sup>16</sup> That combined population increased by over 30,000 over four years and is expected to continue to rise, as NC's elderly is projected to grow by 66% over the next 20 years.<sup>59</sup>

Consequently, 2016 spending levels may be a poor financial baseline to meet the health needs of NC's population over the years to come—particularly considering that this growth in expenditures and health burden has occurred in the absence of Medicaid expansion.

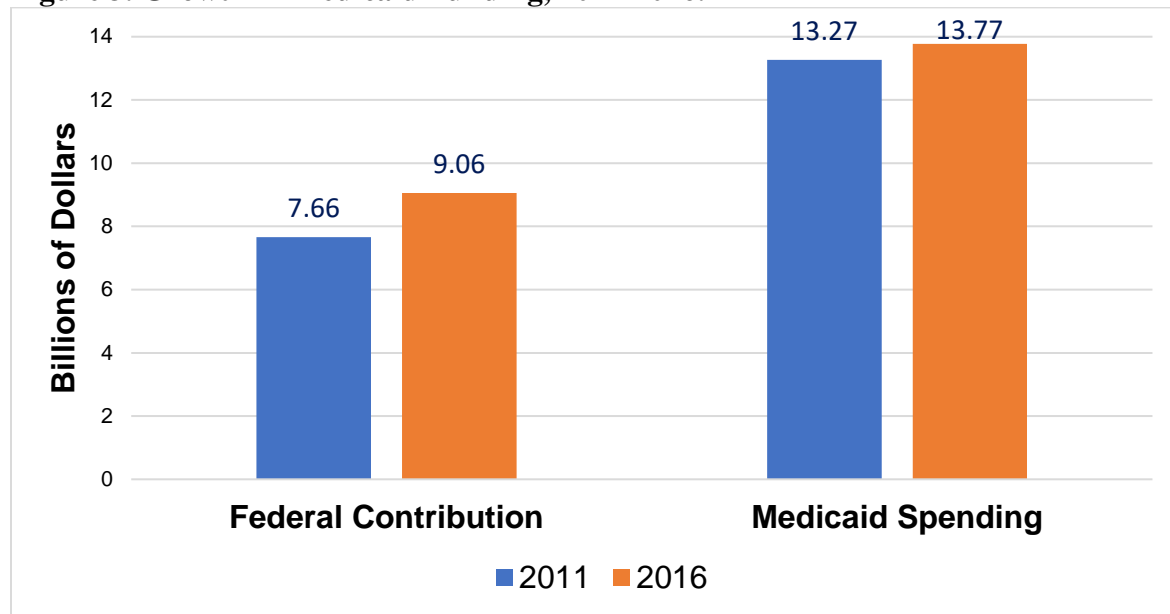
Total spending on NC's Medicaid program increased to \$13.77 billion in 2016 due to increases in enrollment and the rising cost of healthcare. Consequently, this spending growth was supported by a \$1.4 billion dollar increase in federal funding for NC Medicaid (see **Figure 3**).

However, while the program's gross expenditures have swelled over recent years, the rate of growth has slowed significantly over time, with an 11.4% decline in annual growth since 1990. Indeed, much of NC Medicaid's progress with regards to cost reduction has occurred over the past few years. Despite adding more than a quarter million new beneficiaries from 2011-2016, the state managed to reduce per-enrollee spending for each eligibility group (see **Figure 4**).

However, this progress would be punished rather than rewarded under the AHCA's per capita cap approach, which determines federal allocations on the amount of money spent per enrollee in the base year (2016). Had NC not implemented cost-saving measures, the state would

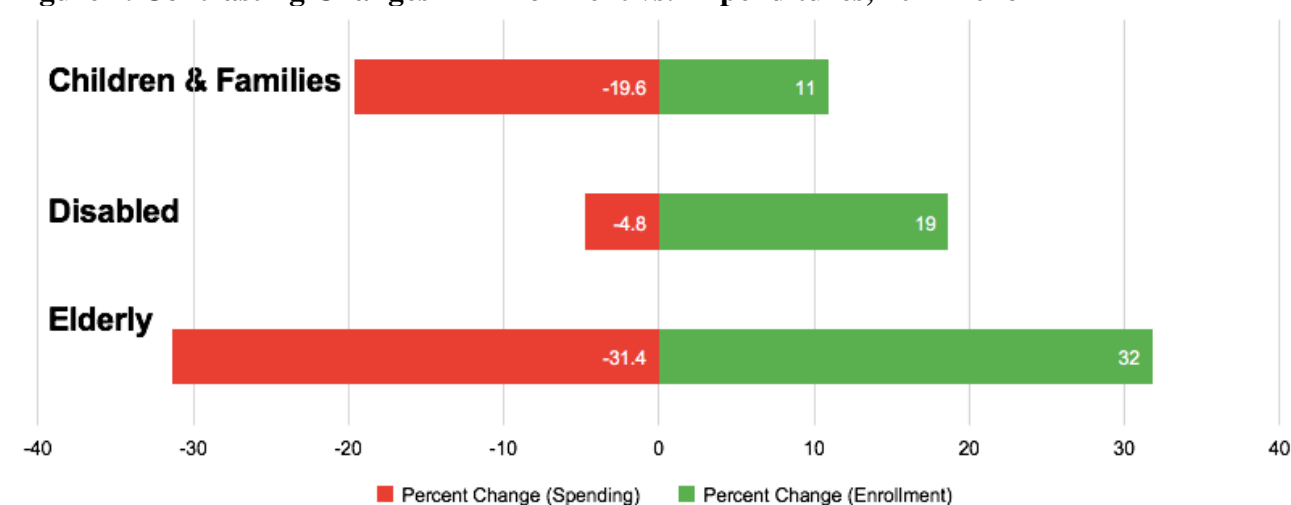
receive significantly more funding under the AHCA. Instead, the amount that would be allocated appears to be based on a base year of 2016 that is insufficient to meet state needs.

**Figure 3. Growth in Medicaid Funding, 2011-2016.**



Source: Figure generated by authors using data from the [NC Medicaid Annual Report Tables](#) for [2011](#) and [2016](#).<sup>16,60</sup>

**Figure 4. Contrasting Changes in Enrollment vs. Expenditures, 2011-2016**



Source: Figure generated by authors using data from the [NC Medicaid Annual Report Tables](#) for [2011](#) and [2016](#).<sup>16,60</sup>

Furthermore, per capita caps would limit the NC Medicaid's ability to be responsive to unforeseen events and changing program needs. Medicaid is a countercyclical program, which means that when there is an economic downturn, more people enroll in the program. Between 2007 and 2010, for example, Medicaid enrollment increased by 14% nationally in large part due to the recession.<sup>61</sup> If North Carolina experienced a recession in the coming years, the spending growth under per capita caps would not pace with rising enrollment and need for services. Other potential threats include natural disasters, leaving people without jobs or homes and in need of healthcare services. Similarly, public health threats (such as the 2009 swine flu) may

significantly raise per-beneficiary costs. In all cases, the state would be locked into a per capita rate that is unlikely to grow with the actual pace of spending needed for beneficiaries.

Collectively, these changes point to a bleak new reality—after experiencing a 7% increase in the FMAP and an 85% surge in Medicaid expenditures over the past twenty years, NC Medicaid would now have to redesign its program considerably to serve more patients with less federal funding.

### ***Evaluating Potential Value Choices and Tradeoffs for NC Medicaid***

In the face of per capita caps, NC lawmakers face a choice—shore up the loss of federal funding by increasing state financing for the Medicaid program, or make strategic cuts to accommodate the loss of government dollars. Policymakers seeking to implement targeted reductions in Medicaid spending can choose to focus on the three contributors to expenditures: utilization/covered services, payments to providers and hospitals, and eligibility.

#### ***Reductions in Utilization May Negatively Affect Health Outcomes***

States can try to reduce utilization by charging copays or fees for certain expensive services, such as those provided in the emergency room or in inpatient hospitals. For example, some states have charged out-of-pocket fees to beneficiaries for emergency department trips that are deemed unnecessary. However, some physicians raise concerns that copays for emergency department can lead beneficiaries to think twice about seeking emergency care when they may truly need it.<sup>62</sup> Moreover, evidence from nine states over five years suggests that that copays and other restrictions on “unnecessary” emergency department visits may not actually reduce utilization of healthcare.<sup>63</sup>

States can also use care coordination to encourage Medicaid beneficiaries to receive care in the most appropriate, lowest cost setting. Care coordination often entails making primary care appointments for patients, providing reminders about appointments, assisting with transportation to and from the appointment, and sharing information with primary care providers when the patient goes to the emergency department.<sup>62</sup> As North Carolina considers moving toward a managed care model, it is imperative to build upon the success of CCNC’s partnerships between providers, patients, and community organizations. Care coordination as done in CCNC’s model can reduce per-enrollee cost.

#### ***Reducing Provider Payments May Negatively Impact Physician Participation***

Reducing provider payments will certainly require a shift from the state’s current fee-for-service (FFS) system towards more value-based payments. Although NC’s Section 1115 waiver application contains language that appears to move in that direction, details to date about the mechanism of reform have been vague. Implementing programs such as bundled payments and negotiating long-term shared savings contracts with MCOs could help reduce costs. However, those measures only change the frequency of provider reimbursement. Instead, the state could instead choose to directly reduce physician pay. However, such a move could be both politically unpopular and impractical, given that providers already have little financial incentive to deliver care to Medicaid patients due to the lower rate of reimbursement compared to privately insured patients. NC stands out in comparison to most states due to its high rate of provider participation (76.4% compared to 69% nationwide), with particular success in enhanced primary care (90%).<sup>50,64</sup> Reducing reimbursement could be perceived as a sign of bad faith by the

provider community, which has historically reacted negatively to changes in Medicaid payment policies. In fact, more than 65,000 providers nationwide exited Medicaid programs in 2017 alone in response to an ACA provision requiring physicians to revalidate their Medicaid reimbursement status.<sup>65</sup> Notably, 10,000 of those physicians who deactivated their Medicaid status were from NC, hinting at the fragile atmosphere in the state.

Conversely, Medicaid could follow the lead of Medicare demonstrations that have successfully implement models of value-based payments, and reduce costs by tying provider payments to performance. However, it would be important to run pilots with the Medicaid provider population before implementing this into law to understand the unique differences between providers who serve Medicaid vs. Medicare beneficiaries.

The impact in NC could be magnified by cuts in reimbursement, with numerous studies establishing a link between low reimbursement and low provider participation.<sup>66</sup> Indeed, researchers have even found delays in Medicaid reimbursement to be a sufficient catalyst for provider exits. Even if NC decides to forgo a reduction in physician payments, maintaining the status quo will not be sustainable in the long-term for the state, which has longstanding holes in the safety net (e.g., the dearth of physicians in rural areas, the regional variability in care quality).

NC should pursue the value-based payment (VBP) programs proposed in the state's Section 1115 waiver as a mechanism for reducing the state's healthcare costs while rewarding providers for delivering higher quality care with better outcomes. NC could look to successful pilot programs in other state Medicaid programs, such as Oregon's coordinated care organizations, where providers share in the revenue accrued through system-wide savings. There, the state successfully reduced Medicaid spending growth by 2% and inpatient expenditures by 14.8% while awarding providers \$128 million performance and quality-based bonuses.<sup>67</sup>

### *Hospital Payment Reform Requires Changes Across Care Spectrum*

The state could instead choose to focus on hospital payment reform, but such a move could negatively impact rural and safety net hospitals, which already face resource constraints when delivering care to Medicaid beneficiaries. Furthermore, a reduction in expenditures for inpatient and outpatient services would require greater investment in primary care and preventative services. However, the state's current apparatus for primary care case management—CCNC—is scheduled to be phased out through a Section 1115 waiver in favor of a managed care program. Thus, new managed care organizations, both commercial plans and provider-led entities, must build upon CCNC's primary care infrastructure and increase outreach efforts for rural and vulnerable populations. As NC is considering Medicaid expansion with HB 662, it should still work to replicate the results of those expansion states that successfully reduced the incidence of uncompensated care (i.e., the costs of which are incurred by hospitals) by expanding access to health services. Investment in upstream services like primary and preventative care can alleviate the consumption and consequences of downstream services (e.g., ED use, hospitalization), which contribute to a greater proportion of health costs.

### *Restricting Eligibility May Create Financial Uncertainty and Contribute to Poor Health Outcomes*

As a last resort, the state could instead choose to cut Medicaid spending by restricting eligibility. In terms of pure numbers, NC could easily reduce its eligible population by erecting

barriers to childhood coverage. The AHCA provides an example of how Medicaid eligibility for children was rolled back from including children ages 6-18 from 138% FPL to the pre-ACA standard of 100% FPL. However, children are relatively inexpensive to cover, and the per enrollee cost of children ages 6-18 is far lower than other beneficiaries such as individuals with disabilities (\$2,355 versus \$15,060).<sup>58</sup> Moreover, a quarter of NC's children lie between 100-200% FPL (approximately 450,000), and would have to apply for consideration under CHIP if they lack private insurance.<sup>68</sup> The process of re-application could have the negative effect of discouraging some families from seeking insurance coverage.

NC could also choose to restrict the enrollment of adults, and work to shift that population from the state insurance program to the private exchanges, as done in a state like Arkansas. However, Medicaid itself was designed to provide care to indigent populations, who often cannot afford cost sharing in private plans. In North Carolina, which has not expanded Medicaid to include childless adults, restricting eligibility for adults would mean reducing coverage for either pregnant women or parents with children insured through Medicaid. Excluding the latter population in particular only delays the financial risk, as denying individuals access to primary and preventative care could increase the incidence of catastrophic out-of-pocket health payments and acute care use.

If simply reducing the absolute number of beneficiaries appears practically or politically untenable, the state could instead indirectly decrease enrollment by attaching qualifiers to eligibility, such as work requirements or cost sharing. Such mechanisms would certainly reduce the pool of eligible individuals. For example, the addition of monthly premiums caused enrollment to drop in Washington by 36% and in Oregon by 50%.<sup>69</sup> The latter case is particularly notable, as two-thirds of the newly-uninsured individuals failed to regain coverage.<sup>70</sup> The trend was observed under Medicaid expansion waivers, with cost sharing measures in Indiana reducing enrollment by a third, compared to the higher levels of participation in traditional programs in Kentucky and Arkansas.<sup>71</sup>

However, cost-saving measures come at price, as implementing work requirements and premiums increases the administrative burden on state Medicaid programs. For example, the administrative costs for Arkansas' Medicaid program were twice as high after the state imposed monthly premiums on low-income adults (\$12 versus \$6 million in annual expenditures). In Arizona, the revenue from premiums and copays was so marginal that the state actually lost \$10 million due to the elevated administrated burden.<sup>72</sup>

If the levers for reducing enrollment of adult beneficiaries are ineffective, then the last two patient groups that the state can consider limiting eligibility for are the elderly and individuals with disabilities, which account for the majority of Medicaid expenditures. However, the loss of coverage would have a significant clinical and financial impact on elderly patients. Such individuals are uniquely vulnerable, as they are typically beyond working age and lack the financial means to afford private insurance. Likewise, restricting access to care would have drastic consequences for people with disabilities, leaving such individuals without an affordable option to access health services necessary for survival.

The challenges posed by the block grant proposals offer powerful lessons about the value of government programs and the importance of safety net institutions. The various components that comprise the Medicaid program are interrelated—decisions about one factor (e.g., funding) spillover to choices about another (e.g., covered benefits). Hard choices lie ahead for state, and must be made with an awareness of the human cost of policy changes to NC Medicaid.

## Section 4: Financing and Program Options for Medicaid

### *Executive Summary*

States must meet various requirements to receive federal matching funds for Medicaid. However, states may tailor programs to meet state needs by altering (1) eligibility, (2) benefits, (3) premiums and cost sharing, and (4) delivery systems and provider payments. We detail minimum federal standards and state-level opportunities to adapt, with a focus on NC's current Medicaid program. Since the passage of the Affordable Care Act, NC has not expanded Medicaid coverage to the same extent as most states. We compare optional benefits across states and find that most flexibility exists in long-term care services—with most states, including NC, choosing to reimburse home healthcare. With payment mechanisms, we find that NC reimburses physicians at higher rates than the national average, likely incentivizing provider participation.

We discuss three major models of Medicaid delivery systems: fee-for-service, Medicaid managed care (MMC), and primary care case management (PCCM). With NC choosing to shift from PCCM to MMC, we evaluate evidence on the effectiveness of MMC. We find that evidence is mixed on the ability of MMCs to improve access to care, partially due to MMC's efforts to increase primary care while cutting back on hospital care. Despite capitated payments, states with MMC also have considerable variation in savings realized from MMC. Little evidence suggests savings to the federal government, though individual states have had some success. The impact of MMC implementation is heavily contingent on extant state payment and delivery infrastructure, and state-by-state examinations serve as valuable lessons.

We focus on Kentucky, whose statewide MMC design parallels NC's suggested plans, and Alabama, whose use of Regional Care Organizations is like NC's proposed Provider-Led Entities. In Kentucky, a four-month transition to MMC burdened Medicaid staff overseeing MCOs and created financial strain for the three participating MCOs, leading one plan to exit the market. In Alabama, the implementation of RCOs has been challenging; local entities are disinclined to enter the market, leaving only large, out-of-state commercial insurers. MMC implementation challenges in Alabama and Kentucky are informative for NC, which must consider appropriate implementation timelines, financial difficulties of the transition, stakeholder input, and adequate oversight procedures.

To successfully transition to MMC, NC must also reflect on the successful elements of the PCCM model with Community Care of North Carolina (CCNC). Organized into regional networks, CCNC emphasizes local flexibility and allows providers to take ownership of initiatives. CCNC collects data to better manage chronic conditions and predict which patients will benefit most from targeted interventions. The 2015 state audit found the program reduced spending by 9% and reduced inpatient admissions by 25%, suggesting overall improved health.

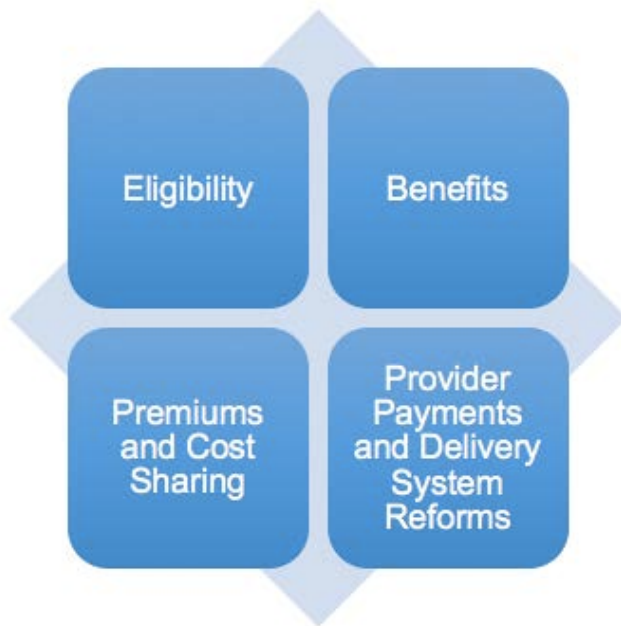
Finally, we profile the efforts of Indiana, Michigan, and Iowa in using Section 1115 waivers to implement consumer-driven financial incentives, such as monthly premiums and cost sharing, disenrollment and lockout policies, and healthy behavior incentives. We explore the use of premiums and copays for “non-emergency” use of the ER. In Indiana, we find that a small proportion of Medicaid beneficiaries were locked out of program because of failure to pay premiums, but many beneficiaries are confused about the policy. Evidence on healthy behavior incentives shows that states have had low participation in wellness exams, largely owing to lack of awareness about the incentives. State case studies suggest that NC would benefit from a simple, streamlined Medicaid design to reduce patient confusion and lower administrative costs.

## Section 4: Financing and Program Options for Medicaid

### 4a. Non-Waiver Options for Medicaid Flexibility

Despite federal requirements for receiving matching Medicaid funds, states have numerous options for varying their Medicaid program to achieve improved access, quality, and cost control. The goal of this section is to provide an overview of the four areas of flexibility over which states may seek to change their program in order to achieve specific aims. These four areas are (1) eligibility, (2) benefits, (3) premiums and cost sharing, and (4) delivery system and provider payment. States wishing to alter their program beyond these four options or alter the federal minimum standards within these four options may also apply for Section 1115 waivers through the Department of Health and Human Services. Given the broad variability of these waivers and their results, we have devoted Section 4d to the Section 1115 process. The remainder of this section details the minimum federal standards alongside the state-level options within each area of flexibility, giving special consideration for North Carolina's current plan architecture in each area.

**Figure 1. Four Non-Waiver Areas for Medicaid Flexibility.**



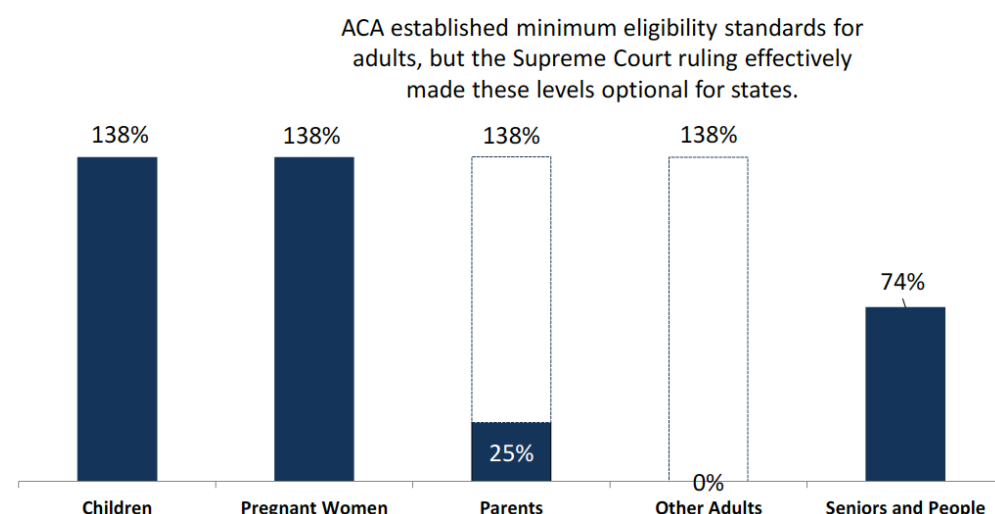
#### *(1) Eligibility*

States must meet minimum standards for eligibility as set by the federal government, as shown in **Figure 1**. Prior to the implementation of the Affordable Care Act (ACA), states were required to cover children less than six years old as well as pregnant women with family incomes less than 133% of the federal poverty line (FPL). The ACA mandated coverage of children up to 18 years of age and increased the maximum income level to 138% FPL. For seniors and individuals with disabilities receiving Supplemental Security Income (SSI) benefits, states must offer coverage for individuals earning up to 74% FPL as well as Medicare Savings programs for



Medicare beneficiaries earning below 135% FPL in order to help pay Medicare cost sharing requirements (premiums, deductibles, etc.). The ACA did not affect coverage for seniors or individuals with disabilities receiving SSI. Lastly, prior to the ACA there was no federal requirement to cover childless low-income adults. Though the ACA initially mandated coverage for these individuals up to 138% of the FPL, the Supreme Court ruled that this must be an option for states, not a requirement.

**Figure 1. Minimum Eligibility Standards by Group.**



Source: [Kaiser Family Foundation](#).<sup>73</sup>

Given these requirements, states may expand eligibility beyond the federally established minimums for children, pregnant women, seniors, individuals with disabilities, and now childless adults, receiving matching federal funds to do so. As of this year, all states had chosen to expand eligibility for children, with most setting upper thresholds for family incomes at 200% FPL or higher.<sup>73</sup> In North Carolina, eligibility for children varies by age: children age 0-5 are eligible up to 215% FPL, while children age 6-18 are eligible 138% FPL.<sup>74</sup> With regard to expanding eligibility for seniors and individuals with disabilities, North Carolina goes beyond SSI income limits and provides coverage to aged/blind/disabled individuals 75-100% FPL.<sup>75</sup> Forty-nine states have chosen to cover pregnant women at levels above the federal requirement of 138% FPL, and 32 states have added eligibility for childless adults up to 138% FPL.<sup>76</sup> North Carolina provides coverage of pregnant women up to 201% FPL, but does not provide any Medicaid coverage to childless adults.<sup>74</sup> In states not expanding coverage to childless adults, parents may receive Medicaid coverage but eligibility requirements are stringent. North Carolina's eligibility level is 44% FPL for parents in a family of three, which aligns with the median in the 19 non-expansion states.<sup>73</sup>

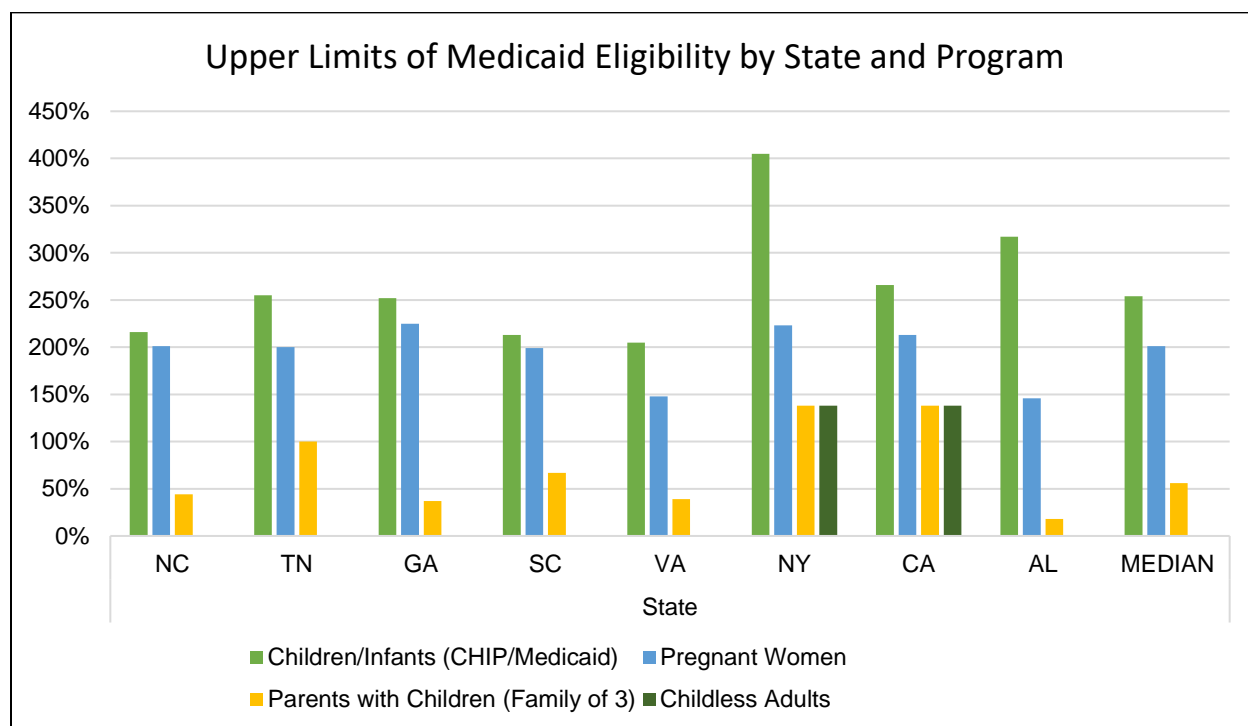
Finally, states have the ability to receive federal funds for expansive coverage of individuals with needs for long-term care up to 300% of SSI. States may specify individual asset limits required to qualify for these services. As of 2015, 44 states offered such coverage for individuals requiring nursing facility care or long-term care in the community.<sup>73</sup> State flexibility for long-term care also exists in the form of a Section 1915(i) option, which enables funding for home and community care for individuals at risk for institutionalization. As of 2015, 17 states—

not including North Carolina—have opted for this type of plan, primarily targeting those with mental health needs or intellectual disabilities.<sup>77</sup>

**Figure 2 and Figure 3. Comparison of Medicaid eligibility limits by state and program.**

The table and accompanying graph below illustrate the upper limits of Medicaid eligibility by state and program. The table shows the maximum percent of FPL eligible for four different Medicaid programs across eight different states: North Carolina, Tennessee, Georgia, South Carolina, Virginia, New York, California, and Alabama. Median upper limits are computed for each program as well. No median is computed for the childless adults category, as this is effectively a binary measure that indicates whether or not a state accepted the ACA’s Medicaid expansion.

States		NC	TN	GA	SC	VA	NY	CA	AL	Median
Program	Children/Infants (Medicaid/CHIP)	216%	255%	252%	213%	205%	405%	266%	317%	254%
	Pregnant Women	201%	200%	225%	199%	148%	223%	213%	146%	201%
	Parents with Children (family of 3)	44%	100%	37%	67%	39%	138%	138%	18%	56%
	Childless adults	0%	0%	0%	0%	0%	138%	138%	0%	-



Source: Figures created by authors, using data from [Kaiser Family Foundation](#).<sup>74</sup>

## (2) Benefits

Federal requirements dictate that specific benefits must be covered by the Medicaid plan in order to receive federal funds. Specific services involve those necessary for children, pregnant women, and individuals with disabilities. The federal government does not dictate the quantity or scope of these minimum benefits, allowing for states to define sufficient coverage in each of these areas. A full list of minimum benefits can be found in **Figure 4**.

**Figure 4. Federally Mandated Minimum Benefits and Optional Benefits.**

Mandatory Benefits	Optional Benefits
<ul style="list-style-type: none"> <li>• Inpatient hospital services</li> <li>• Outpatient hospital services</li> <li>• EPSDT: Early and Periodic Screening, Diagnostic, and Treatment Services</li> <li>• Nursing Facility Services</li> <li>• Home health services</li> <li>• Physician services</li> <li>• Rural health clinic services</li> <li>• Federally qualified health center services</li> <li>• Laboratory and X-ray services</li> <li>• Family planning services</li> <li>• Nurse Midwife services</li> <li>• Certified Pediatric and Family Nurse Practitioner services</li> <li>• Freestanding Birth Center services (when licensed or otherwise recognized by the state)</li> <li>• Transportation to medical care</li> <li>• Tobacco cessation counseling for pregnant women</li> </ul>	<ul style="list-style-type: none"> <li>• Prescription Drugs</li> <li>• Clinic services</li> <li>• Physical therapy</li> <li>• Occupational therapy</li> <li>• Speech, hearing and language disorder services</li> <li>• Respiratory care services</li> <li>• Other diagnostic, screening, preventive and rehabilitative services</li> <li>• Podiatry services</li> <li>• Optometry services</li> <li>• Dental Services</li> <li>• Dentures</li> <li>• Prosthetics</li> <li>• Eyeglasses</li> <li>• Chiropractic services</li> <li>• Other practitioner services</li> <li>• Private duty nursing services</li> <li>• Personal Care</li> <li>• Hospice</li> <li>• Case management</li> <li>• Services for Individuals Age 65 or Older in an Institution for Mental Disease (IMD)</li> <li>• Services in an intermediate care facility for Individuals with Intellectual Disability</li> <li>• State Plan Home and Community Based Services- 1915(i)</li> <li>• Self-Directed Personal Assistance Services- 1915(j)</li> <li>• Community First Choice Option- 1915(k)</li> <li>• TB Related Services</li> <li>• Inpatient psychiatric services for individuals under age 21</li> <li>• Other services approved by the Secretary</li> <li>• Health Homes for Enrollees with Chronic Conditions – Section 1945</li> </ul>

Source: Figure created by authors, using data from [Medicaid.gov](https://www.Medicaid.gov).<sup>5</sup>

In 2010, the ACA added to this list of required benefits by mandating that states cover smoking cessation services for pregnant women and freestanding birth center services. States are also required to provide long-term care benefits in nursing facilities or home health services for individuals who qualify, as a result of the *Olmstead v. L.C.* decision by the Supreme Court in 1999.

As mentioned above, states possess some latitude within the federal requirements to determine the scope of benefits, and may offer a multitude of additional optional benefits and subsequently receive matching federal funds. Benefit flexibility provides states the freedom to most effectively meet the varying needs of its diverse population of beneficiaries. State plans offering fewer additional benefits are typically viewed as more restrictive, while states offering more benefits have been referred to as “Cadillac” Medicaid plans.<sup>78</sup> A list of optional benefits among NC and comparable states is found in **Figure 5**.

**Figure 5. Optional Benefits in NC and Comparable States.**

Optional Services	NC	TN	GA	SC	VA	NY	CA	AL
Prescription Drugs	✓	✓	✓	✓	✓	✓	✓	✓
Clinic Services	✓	✓	✓	✓	✓	✓	✓	✓
Physical and Occupational therapy		✓				✓	✓	
Speech, hearing and language disorder services		✓			✓	✓	✓	
Respiratory therapy and/or care services	✓	✓		✓		✓	✓	✓
Other diagnostic, screening, preventive & rehabilitative services	✓	✓	✓	✓	✓	✓	✓	
Podiatry services	✓	✓	✓		✓		✓	
Optometry services	✓	✓	✓	✓	✓	✓	✓	✓
Dental Services	✓		✓		✓	✓	✓	
Dentures	✓					✓	✓	
Prosthetics	✓	✓	✓	✓	✓	✓	✓	✓
Eyeglasses		✓	✓	✓		✓	✓	✓
Chiropractic services	✓			✓			✓	
Private duty nursing services	✓	✓				✓		
Personal Care	✓					✓	✓	
Hospice	✓	✓	✓	✓			✓	✓
Targeted case management	✓	✓	✓	✓	✓	✓	✓	✓
Services for Individuals 65+, Institution for Mental Disease (IMD)	✓	✓		✓	✓	✓	✓	✓
Services in intermediate care facility for Individuals with Intellectual Disability	✓	✓	✓	✓	✓	✓	✓	✓
State Plan Home and Community Based Services- 1915(i)						✓		
Community First Choice Option- 1915(k)						✓	✓	
Inpatient Psychiatric Services for Under Age 21	✓	✓	✓	✓	✓	✓	✓	✓
Health Homes for Enrollees with Chronic Conditions – Section 1945	✓	✓	✓	✓	✓	✓	✓	✓

Note: The data reflects services offered to adult beneficiaries as of October 1, 2012 on a fee for service basis. Data regarding respiratory therapy and/or care services was found from various state Medicaid guidelines.

Source: Figure created by authors using data from [Kaiser Family Foundation](#).<sup>79</sup>

Most variability in optional benefits focuses on long-term care services. As of 2016, 21 states had opted to add home health programs under the ACA's promise of 90% coverage in the first two years for home health benefits to those with chronic conditions, including North Carolina.<sup>80</sup> In total, the option of home and community-based services for long term care has resulted in a shift away from institutionalized spending for over half of Medicaid long-term services and supports (LTSS) spending.

States can also use Medicaid funds to pay premiums for eligible individuals enrolling in private insurance. Enrollment in these programs has been relatively low, likely due to the relative lack of employer-sponsored insurance options available for individuals who qualify for Medicaid and lack of a stable individual market for those who cannot access employer-sponsored insurance. However, since the passage of the ACA made the individual market more accessible, a number of states have considered using Medicaid dollars to purchase private insurance.<sup>81</sup> The model for this financing strategy, Arkansas, has used premium assistance programs to enable to the purchase of marketplace coverage for childless adults under the ACA expansion, while Ohio and Tennessee have expressed interest in doing the same.<sup>82,83</sup>

### *(3) Premiums & Cost sharing*

Federal requirements prevent cost sharing measures for certain Medicaid-eligible populations and set limits on such measures for other qualified individuals. In particular, regardless of eligibility, states are prohibited from charging premiums for individuals earning less than 150% of FPL. Certain services such as pregnancy-related care, emergency care, and child preventive health measures are also off limits for cost sharing regulation by states. **Figure 6** describes cost sharing by income.

**Figure 6. Medicaid Cost sharing Amounts by Income.**

	<100% FPL	100%-150% FPL	>150% FPL
<b>Outpatient Services</b>	\$4	10% of state cost	20% of state cost
<b>Non-Emergency Use of ER</b>	\$8	\$8	No limit (subject to overall 5% of household income limit)
<b>Prescription Drugs</b>			
Preferred	\$4	\$4	\$4
Non-Preferred	\$8	\$8	20% of state cost
<b>Inpatient Services</b>	\$75 per stay	10% of state cost	20% of state cost

Source: Figure created by authors, using data from [Kaiser Family Foundation](#).<sup>84</sup>

States may choose to enact some cost sharing mechanisms (i.e., premiums, copays, etc.) on Medicaid patient populations both to reduce state budgetary burden and to influence patient behaviors. Most cost sharing measures are focused on enrolled individuals with family incomes greater than 150% FPL and involve premiums, copays, and/or penalties (such as disenrollment upon failure to participate in the cost sharing measures)<sup>85</sup>.

Many states engage in cost sharing within the Children's Health Insurance Program (CHIP) due to relatively higher incomes and more relaxed rules, but only seven states have some form of cost sharing programs for Medicaid-eligible children.<sup>85</sup> North Carolina does not require cost sharing for children in Medicaid.<sup>86</sup> For adults, 39 states engage in cost sharing for eligible parents and 23 states for childless adults.<sup>85</sup> In North Carolina, there is cost sharing for selected

services for eligible parents (at all family income levels) and children (with family incomes greater than 150% FPL).<sup>85</sup> Six states—Michigan, Indiana, Arkansas, Iowa, Montana, and Arizona—have engaged in Section 1115 waivers for cost sharing with individuals traditionally protected from cost sharing mechanisms, such as individuals with incomes 100-138% FPL.<sup>87</sup> See details in the Section 1115 portion of this report.

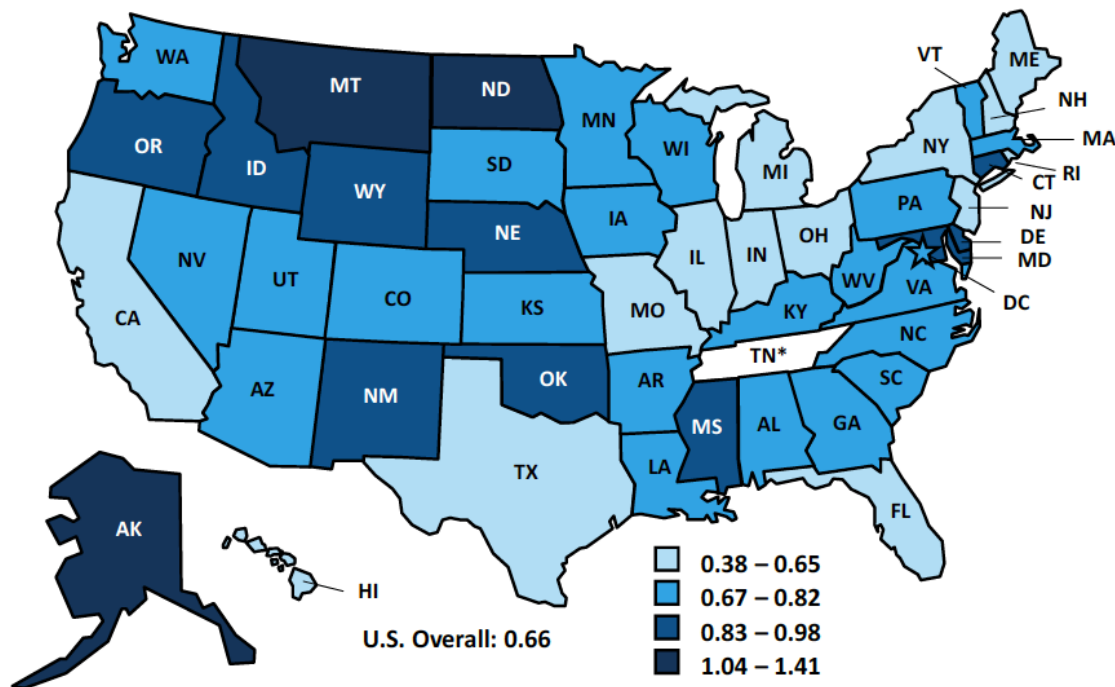
#### *(4) Payments & Delivery Structure*

To control costs, many states have experimented with payment and delivery infrastructure to provide care to Medicaid beneficiaries. In doing so, however, they are expected to comply with certain reporting and measurement standards. States are required to publish payment methodologies for institutional services, and these methodologies vary widely according to the provider in question. Federally qualified health centers (FQHCs) are compensated by a defined prospective payment system, under which providers are reimbursed a fixed amount that varies according to the type of service.<sup>88</sup> Pharmaceutical costs must be managed via rebate agreements established between the federal government and drug manufacturers. Finally, federal and state governments allocate disproportionate share hospital (DSH) payments to health systems serving large proportions of Medicaid patients. The difference in delivery underscores the flexibility of payment, and the opportunity for states to test new payments. While there are no federal guidelines for Medicaid delivery systems, managed care programs do have to have meet certain standards for patient choice and protection.<sup>73</sup>

Given this level of flexibility, states have designed payment systems that vary significantly. Some states reimburse funds to hospitals based on costs, diagnosis-related groups, or more capitated type models, while other states allocate payments to providers at varying fee-for-service levels (called fee schedules). The national average for Medicaid fee-for-service provider reimbursement as compared to Medicare fee-for-service provider reimbursement is 0.66:1 (see **Figure 7** on the next page). North Carolina actually pays Medicaid providers better than the national average, at 0.79:1 for all services and 0.80:1 for primary care (see **Figure 8** on the next page).



**Figure 7. Medicaid-to-Medicare Fee Index.**



Source: Figure created by authors using data from [Kaiser Family Foundation](#).<sup>89</sup>

**Figure 8. NC Medicaid-to-Medicare Fee Index by Service Type.**

Location	All Services	Primary Care	Obstetric Care	Other Services
<b>United States</b>	0.66	0.59	0.76	0.74
<b>North Carolina</b>	0.79	0.80	0.68	0.89

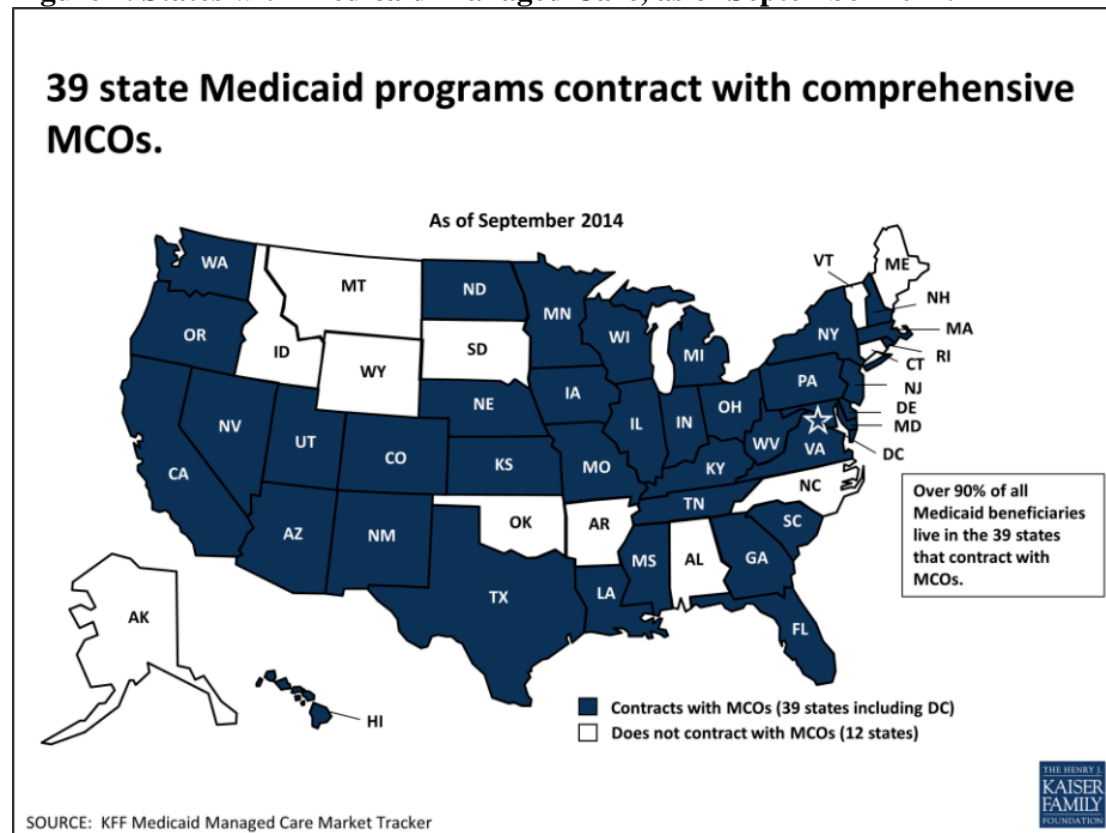
Source: Figure created by authors using data from [Kaiser Family Foundation](#).<sup>89</sup>

In terms of delivery systems, three major models exist: fee-for-service, primary care case management (PCCM), or capitated managed care. Due to the complexity of managed care options, discussion of flexibility and evidence for improving costs, quality, and access are addressed separately in the next section.

## 4b. Medicaid Managed Care

Medicaid managed care (MMC) was first introduced into California Medicaid in the 1970s, and has since grown steadily in state Medicaid programs across the country. By 2014, almost 90% of Medicaid beneficiaries across the country lived in states where the Medicaid program contracted with a managed care organization (MCO).<sup>90</sup> Currently, Medicaid programs in 39 states across the country employ managed care to provide services to their Medicaid beneficiaries, working with about 265 MCOs nationwide (see **Figure 1**).<sup>90</sup>

**Figure 1. States with Medicaid Managed Care, as of September 2014.**



Source: [Kaiser Family Foundation](#).

Advocates of managed care have argued since its inception that such a system would improve beneficiaries' access to care. At the same time, managed care was intended to drive down costs for states as capitated payment arrangements made budgets more predictable.<sup>91</sup> These initiatives are not without their critics, however. Opponents of Medicaid managed care have long argued that the program's payments to providers are insufficient, while many have expressed concerns that managed care leaves patients with chronic illness and high costs more vulnerable. Thus, it is appropriate to review the evidence on MMC, particularly with respect to its effect on access, outcomes, and cost. This review draws on literature from economic and medical journals in order to summarize the evidence to date on these critical components of Medicaid managed care.



## *Background*

Medicaid managed care differs from traditional FFS Medicaid in a few ways. First, while FFS Medicaid reimburses providers on a per service basis, Medicaid managed care programs typically involve a state Medicaid program making a capitated payment to a MCO, a set per enrollee payment to the MCO. In return the MCO helps to provide comprehensive primary and acute care, while sometimes offering additional services (e.g., long-term services and supports).<sup>90</sup> Importantly, this means that MCOs bear the financial risk of covering new individuals.

Managed care programs were introduced in an effort to reign in state Medicaid costs, largely by increasing primary care utilization and reducing the number of visits to emergency departments (EDs) and hospitals. Making fixed payments to MCOs would make state Medicaid budgets more predictable, as the increase in primary care utilization would make costly inpatient and outpatient care—especially specialist procedures—less necessary. With capitated payments and risk-shifting to providers, however, came criticism. Because of Medicaid's already low fee rate relative to private insurers and Medicare, opponents of MMC worried that still-lower capitated payments and increased financial risk for providers would limit physician participation and, consequently, patient access. Further, capitation incentivizes under-provision of care, leading some to voice concerns that even when MMC patients saw physicians, they would receive worse care. All of these concerns—about access, cost, and patient outcomes—have been at the forefront of the debate about MMC since the beginning.

States have a few means by which they can implement managed care into their Medicaid programs. States have the option of making a state plan option a managed care plan, in which the state makes an agreement with the Federal government over how they will administer a Medicaid plan; this requires approval from the Centers for Medicare and Medicaid Services (CMS). Similarly, with the approval of CMS, states can contract with MCOs to set up voluntary managed care systems within their Medicaid programs. States may also use waivers—under Sections 1915(b), 1915(c), and 1115 of the Social Security Act—to amend their Medicaid programs and introduce managed care.<sup>92</sup>

After the introduction of managed care in California in the 1970s, the state-by-state rollout of managed care was an incremental project. Federal regulations on different healthcare delivery systems—especially rules that non-federally certified health maintenance organizations (HMOs) could not receive Medicaid funds—made take-up of and experimentation with managed care a difficult process. However, after the Reagan administration repealed those regulations in the early 1980s, states began to experiment with managed care as an alternative to traditional fee-for-service (FFS) Medicaid. In New York, officials began experimenting with the idea of prepaid health plans, while in 1982 Arizona transitioned its entire Medicaid program in managed care, a project that served as a model for TennCare in Tennessee and other programs that followed.<sup>91</sup>

As states began experimenting with new managed care schemes in Medicaid, the number of enrollees in the program, and consequently program costs, were rising rapidly. Exacerbating these increases was an ongoing economic recession in the late 1980s, an unsurprising development given that Medicaid is a countercyclical program. Thus, though early enrollment in Medicaid managed care was low, states facing budget shortfalls throughout the 1990s embraced managed care as a means for reducing costs and providing care to low-income individuals. Consequently, Medicaid enrollment in managed care plans soared, from 12% in 1992 to nearly 58% in 2002.<sup>91,93</sup>

### *Impact of Medicaid Managed Care on Access*

Evidence on the impact of MMC on access is mixed. Some of this is a feature of managed care itself, which targets expanded primary care utilization while attempting to reduce costs by limiting ED use, for example.<sup>91</sup> However, some of these mixed access results are less by design.

A number of studies indicate that managed care hinders access to care, particularly among minority communities. For example, Currie and Fahr (2005) found that increased managed care penetration was associated with lower Medicaid coverage rates among black children and a greater probability that black children with chronic conditions would go without doctor's visits.<sup>94</sup> Further, Greene et al. (2005) determined that increased MMC penetration was not significantly associated with increases in physician participation, and instead found small, insignificant decreases in participation.<sup>95</sup> These two findings justify some critics' concerns about MMC and access to care to the extent that lower coverage and participation rates—coupled with a higher probability of foregoing doctors' visits—are consistent with concerns that providers lack the financial incentives to participate in the program.

These access concerns may be particularly true for individuals with disabilities. Burns (2009) determined that individuals with disabilities who are mandatorily enrolled in MCOs are more likely to wait more than thirty minutes to see a provider and more likely to report difficulty seeing a specialist.<sup>96</sup> Such a finding is consistent with critics concerns that expensive and high-risk populations are especially vulnerable under managed care, due to limited access to needed specialists, either because of cost containment mechanisms or limited networks.

Still, some authors find that managed care schemes in Medicaid have improved access to care. Sisk et al. (1996), for example, performed a cross-sectional survey of Medicaid beneficiaries in New York and found that those in managed care plans had greater odds of having a usual source of care, experienced shorter wait times, and were more likely to see the same clinician.<sup>97</sup> Similarly, Howell et al. (2004) determined that pregnant women in counties with mandatory managed care enrollment had more prenatal care visits than those not in such counties.<sup>98</sup> These mixed findings suggest that the success of managed care is highly contingent on the implementing state in question. In states that already had high baseline reimbursement rates for providers, changes to managed care may not dramatically reduce the number of participating physicians. However, for states with low reimbursement rates, a shift to cost containment via managed care and lower reimbursements may drive physicians out of the market.

### *Impact of Medicaid Managed Care on Cost*

As is the case with literature on access, evidence on cost savings in MMC is also mixed. By and large, savings vary from state to state, and are typically derived from either less use of hospital care or lower reimbursement rates than traditional fee-for-service (FFS) Medicaid.<sup>99</sup> Nonetheless, while some states have seen savings from MMC, there is little evidence that uses national data and finds overall cost savings from the program.<sup>91</sup>

The dearth of national savings is unsurprising, given that the majority of individuals in MMC are among the least costly individuals that Medicaid covers: children and able-bodied adults.<sup>100</sup> Elderly and disabled beneficiaries are typically not included in MMC plans. To see dramatic savings from children and able-bodied adults—populations that already use little inpatient and outpatient care—would be a surprising result. However, in states that do see

savings, those savings are generally contingent on the state's preexisting FFS Medicaid reimbursement rates. In states with high reimbursement rates to begin with, savings tend to be greater because the baseline reimbursement spending was higher than states with low rates.<sup>91</sup>

A number of studies of costs find no savings associated with the introduction of MMC. In one recent study, Duggan and Hayward (2013) found that moving Medicaid beneficiaries from FFS Medicaid to MMC did not reduce spending on average.<sup>101</sup> Similar work from Herring and Adams (2011) determined that the integration of managed care did not reduce national health expenditures.<sup>102</sup> Further work from Duggan (2004) indicated that changes from FFS to managed care in California were associated with increased government spending, perhaps due to poor risk adjustment or payments to participating HMOs.<sup>103</sup> Although Kirby et al. (2003) did find that Medicaid HMO enrollees spent significantly less than Medicaid non-HMO enrollees in 1997, the literature on national savings is generally consistent.<sup>104</sup>

Still, some states have had some success in reducing spending. After the introduction of managed care in mental health services in Massachusetts, for example, expenditures fell 22% below their expected levels under a non-managed care scheme.<sup>105</sup> Similarly, Momany et al. (2006) found savings of nearly \$66 million from the implementation of a primary care case management (PCCM) program in Iowa's Medicaid program.<sup>106</sup> The findings on state-level cost savings support the notion that savings in MMC are attributable to lower reimbursement rates, not care management strategies.<sup>91</sup> In states where reimbursements were high, there was some success at reducing costs. However, evidence of national savings is virtually nonexistent, suggesting that the relatively wide spread of managed care and its associated management techniques did not see results on a national level, but rather ones attributable to state-level characteristics (e.g., FFS Medicaid reimbursement rates).

### *Impact of Medicaid Managed Care on Health Outcomes*

There is little evidence on the quality of care that MMC beneficiaries receive for a few reasons. First, health outcomes are heavily socially determined, which complicates the ability of researchers to isolate managed care as a cause for any change. Further, measuring quality is a perpetually difficult task.<sup>91</sup> There are, however, a few studies of outcomes in MMC, primarily for pregnant women. These findings produce mixed results, which may be attributable to differential access to the specialist care that is essential in pregnancy and birth.

A number of studies have found that managed care beneficiaries do not fare better in terms of health outcomes. Aizer et al. (2007), for example, found that pregnant women enrolled in MMC gave birth to more babies with increased neonatal death, low birthweight, and prematurity in conjunction with experiencing worse prenatal care.<sup>107</sup> Similarly, Conover et al. (2001) found that the introduction of TennCare—Tennessee's MMC program—caused reductions in several obstetrical procedures and prenatal care utilization, with increases in birth abnormalities but no effect on infant mortality.<sup>108</sup> Further, though MMC programs are sometimes more costly than FFS programs, there is not always a return on investment. Duggan (2004) determined that despite higher expenditures in MMC, infants had no better health outcomes than those in FFS.<sup>103</sup> These findings on birth outcomes are consistent with concerns that MMC may limit access to specialty care. Specifically, access to prenatal and neonatal care may be limited for individuals in MMC relative to FFS Medicaid, which may explain why birth outcomes are worse in these studies.

Nonetheless, some studies have found improvements in quality of care. Howell et al. (2004), for example, found no improvements in low birthweight babies nor infant mortality, but

did find reductions in women who smoked during the second pregnancy for those who lived in counties with mandatory HMO enrollment policies.<sup>98</sup> This finding, too, is consistent with expectation for managed care. While limited access to specialists may result in substandard prenatal and neonatal care that can affect birth outcomes, increased primary care utilization could be a significant contributor to reduced smoking rates. In other words, while a primary care physician may be able to help cut back on smoking, that same physician may be ill-equipped to offer specialist-level advice on prenatal and neonatal care, leading to worse birth outcomes.

It is also useful to consider quality improvements in terms of cost-effectiveness. If patient outcomes are constant but costs are reduced, then it suggests greater value of care for the dollar spent. Indeed, Levinson and Ullman found that spending reductions in Wisconsin's MMC program, there were not worse birth outcomes as a results.<sup>109</sup> Work on this front is limited, however.

## *Case Studies of Managed Care Implementation*

Given that North Carolina is committed to proceeding with transitioning from a PCCM model to Medicaid managed care, we profiled two states to learn about opportunities and challenges with implementation. We profiled Kentucky's use of a 1915(b) waiver, a two-year renewable waiver for mandatory enrollment in managed care on a statewide basis, because of its relevance to North Carolina's proposal to expand Medicaid managed care statewide.<sup>110</sup> We also profiled Alabama's use of "regional care organizations," which are similar to North Carolina's proposed hybrid model of "provider-led entities" and "commercial plans."

### *Kentucky Case Study: Rapid Implementation Led to Insurer Exit*

In 2011, Kentucky submitted a 1915(b) waiver to expand managed care to regions of the state that were previously served by a primary care case management (PCCM) program. This case study is highly relevant to North Carolina, which is attempting to use the Section 1115 waiver to similarly replace the CCNC PCCM model with statewide managed care.

Kentucky implemented three statewide MCOs (Wellcare, Coventry, and Kentucky Spirit) in a span of four months (July to November 2011). Initially, the transition generated significant administrative issues for providers. Physicians faced administrative burdens as they worked with the new plans, from navigating coding and billing requirements, to handling financial burdens from late payments, to communication difficulties with the MCOs. After an adjustment period, providers and hospitals ultimately adapted to the new coding and billing procedures.

During the first year of implementation, all three managed care plans experienced financial losses. Coventry attributed losses to enrolling sicker, costlier beneficiaries. Kentucky Spirit attributed losses to receiving a lower payment rate from the state that was not adjusted for risk, and being unable to pay providers above the prevailing fee-for-service rate. Since Kentucky Spirit could not compete with other plans that were establishing broader provider networks, many enrollees (especially those who were sicker and heavier utilizers of care) disenrolled from Kentucky Spirit and into Coventry or Wellcare. Ultimately, Kentucky Spirit exited the market, and its enrollees were auto-assigned into the two remaining plans. To address this problem, the state implemented risk-adjusted capitation rates in April of 2012.

In the second year of operations, the financial outlook improved for Coventry and Wellcare. However, the initial financial losses could be attributed to Kentucky's decision to implement managed care for all Medicaid enrollees, including enrollees with disabilities, in all areas of the state at the same time. Typically, states have implemented managed care in a more incremental approach, piloting certain groups before others. With Kentucky's rapid, all-in-one implementation, managed care plans only had four months to establish local offices, train staff, contract with local providers, upload automated data on new Medicaid members and providers into their systems, develop policies and procedures for beneficiaries and providers, and market to potential Medicaid managed care enrollees. In this short timeframe, managed care plans struggled to establish contracts with major hospitals. For example, Coventry and Kentucky Spirit failed to contract with ARH, a prominent not-for-profit health system, which operates 10 hospitals, physician practices, and retail pharmacies.

Finally, the rapid transition to managed care left little time for state Medicaid staff to be trained in proper oversight practices for managed care plans. Prior to the 2011 implementation, staff at the state Medicaid agency had little experience in overseeing insurance companies and analyzing reports from plans, and yet the state was charged with monitoring plans to make sure

they meet terms of contracts and determine quality of care provided. An Urban Institute report found that the state agency failed to include certain patient protections in managed care contracts as a result of the rushed timeline.<sup>111</sup>

**Relevance to NC:** In summary, Kentucky’s rushed rollout of managed care in 2011 illustrates the importance of having a reasonable timeline for implementation. The four-month transition to managed care may have exacerbated MCOs’ initial financial losses and spurred the exit of one of three MCOs. Moreover, the short transition period elevates the administrative burden for the state, which may suffer from resource shortages, training deficits, and capacity gaps that create hurdles in the oversight processes for plans. Easing in a new system would afford MCOs time to establish relationships with beneficiaries and providers, offer space for providers to adjust to new MCO requirements, and build-in opportunities for the staff to understand new monitoring responsibilities. Although MCOs had a stronger financial position in subsequent years, the exit of a plan led to a significant disruption for beneficiaries, providers, and other plans. This case highlights the need for NC DHHS to convene providers, patients, and payers for common dialogue and to invest in a multi-year implementation time crafted based on input from key stakeholders in the transition process.

#### *Alabama Case Study: A Dearth of Regional Care Organizations*

Alabama’s recent Section 1115 waiver, approved in 2016 carries striking similarities to North Carolina. The state did not include provisions for Medicaid expansion, and instead sought to reduce health expenditures (which, like in North Carolina, accrue on a fee-for-service basis and account for nearly a third of state spending) by shifting to a system of managed care.<sup>112</sup> The state legislature passed legislation in 2013 to implement “Regional Care Organizations” (RCOs), a version of accountable care organizations that would deliver community-oriented care in each of Alabama’s five regions.<sup>113</sup> Similar to the PLEs created by North Carolina’s Section 1115 waiver application, RCOs are intended to be provider-owned and provider-led, with the state aiming to contract on a capitated PMPM basis and advocating for models to implement value-based payments and incentives for providers. So far, the state has approved 11 local providers to participate, with at least two providers in each region.<sup>113</sup>

However, Alabama has experienced significant difficulties with implementing RCOs following CMS’s approval of the state’s waiver. RCOs have been criticized for being dominated by out-of-state commercial companies rather than local, provider-owned entities. This is a similar trend developing in North Carolina, where national health plans such as Centene have stated they will compete for the new managed care contracts.<sup>114,115</sup> In April 2017, Alabama announced it will further delayed its transition to implement RCOs from an initial date of April 2016 to October 2017.<sup>113</sup>

Additionally, many providers and private sector players appear skeptical about the cost-effectiveness of managed care. Academic health science centers (e.g., the University of Alabama-Birmingham, the University of South Alabama), whose teaching hospitals are often mainstays for community outreach and safety net care, have withdrawn their bids for RCO contracts.<sup>37,38</sup> Commercial ventures are also struggling, with Centene recently abandoning its plan to operate an RCO in each of the five regions in Alabama (it had been the only competitor in three of the districts).<sup>116</sup>

**Relevance to NC:** As the state continues to negotiate with providers and payers, Alabama’s experiences provide valuable lessons about the difference between theory and practice when it comes to implementing Medicaid reforms. Alabama’s experience has critical lessons for North Carolina, as it underscores the importance of taking appropriate time to think through implementation of RCOs (in NC’s case, PLEs), rather than rushing into it. Moreover, this case illustrates the need for a state to establish substantial incentives to ensure managed care organizations stay in the state.

### ***Recommendations for NC:***

Based on the lessons learned from Kentucky’s and Alabama’s implementation of managed care, we offer the following recommendations to NC as it moves forward with managed care:

#### **Set Reasonable Implementation Timeline to Allow Stakeholders to Adjust**

North Carolina’s policymakers must account for the time it takes to implement new procedures for both beneficiaries and providers, especially if they are considering a hybrid model of competing MCOs and ACOs in the state. In the case of Kentucky, state policymakers severely underestimated how much time it would take providers and hospitals to adjust to administrative burdens resulting from new coding and billing requirements. Had Kentucky transitioned to managed care with a staggered approach (one region at a time) instead of all at once, then policymakers could have caught the losses of MCOs head-on and switched to risk-adjusted capitation rates proactively rather than after one group exited the market. In addition, managed care plans need extended time to establish local offices, upload new data on Medicaid enrollees and market to them, train staff, and contract with local providers. Because of the limited time to negotiate contracts, managed care plans in Kentucky failed to contract with major health systems, which exacerbated their financial losses in the first year of implementation.

Similarly, in Alabama, the transition to regional care organizations (RCOs), a type of ACO, was rushed, leaving local provider-led entities without the resources to compete against out-of-state companies. Without allotting time for appropriate negotiations, academic health centers abandoned their RCO contracts, leading other commercial ventures like Centene to also withdraw from Alabama.

North Carolina should set an appropriate implementation timeline to allow for MCOs to negotiate contracts. This would allow both providers and MCOs to eventually benefit without suffering from initial financial losses or inefficient billing and coding. Finally, NC should consider a staggered plan to roll out managed care in a few regions rather than across the entire state.

#### **Develop Organizational Capacity for Oversight of Managed Care Organizations**

As North Carolina shifts from Medicaid paying providers on behalf of beneficiaries to having managed care organizations as an intermediary, it is critical for the state to have oversight of MCO operations to ensure quality of care and timely payment for providers. Given that staff at the NC Division of Health Benefits (DHB) likely do not have a background in MCO

oversight, it is critical they receive appropriate training in this area.<sup>117</sup> In order for DHB to verify quality of care, DHB should require that providers and MCOs track utilization, even if they are not paid by fee-for-service. Having this data will allow DHB to conduct analyses to ensure certain Medicaid beneficiaries' access to care is not being reduced as a result of being in an MCO. Moreover, DHB should also ensure MCOs have equal use of "sign-up" gifts when they are advertising to beneficiaries across and within markets, to prevent cherry-picking of healthy patients.

Though oversight of MMC is complicated, some states have adapted to a new structure with great success. In Ohio, for example, nearly all of the state's Medicaid beneficiaries now receive their care through an MCO. To bring managed care to scale, Ohio established agency-wide management of MCOs that allowed the state to execute oversight using employees from a myriad of different Medicaid-related offices.<sup>117</sup> In North Carolina, the consolidation of Medicaid-related services in DHB will prove to be an asset, and the state should ensure that it does not too heavily silo employees who oversee traditional FFS from those who oversee MCOs; integrating the two groups for oversight was an important component of Ohio's success.<sup>117</sup>

Pennsylvania has lessons to offer in managed care oversight as well. There, the Bureau of Managed Care Operations uses several subcommittees to monitor various aspects of managed care. One division handles monitoring and compliance, while another oversees quality of care and special needs coordination, for example. The specialization of these subcommittees, which can work together successfully, allows for a more fluid and comprehensive model of oversight.<sup>118</sup> The bureau also reaches out to consumers and advocates for input on the program through targeted communication and forums, helping state officials understanding first-hand how individuals experience the program on the ground.<sup>119</sup> These strategies—coordinated, specialized oversight combined with consumer outreach—should be employed if North Carolina moves to MMC, a transition of considerable scale that will require the sort of fluid oversight and feedback that Pennsylvania's model provides.

### **Account for the Inevitability of Early Financial Losses for Managed Care Organizations**

Indiana's and Kentucky's experiences with Medicaid managed care suggest that North Carolina's proposed transition from a FFS PCCM system to MCOs may not yield positive financial returns for MCOs during the first few years. In particular, these states experienced costs that outpaced purported savings largely due to an expansion of a sicker beneficiary population and a corresponding increase in utilization of healthcare. Although the proposed NC Section 1115 waiver does not expand Medicaid, if the NCGA does expand Medicaid to close the coverage gap, it is possible that shifting to a system of managed care would result in adverse selection (particularly in rural areas, where there may be pent-up demand for healthcare).<sup>120</sup>

As such, it is worth noting that the transition to managed care in of itself may not hold down costs. The case studies of Indiana and Kentucky (which contracted with MCOs) and of Arkansas (which privatized a PCCM system similar to NC's through CCNC) both illustrate the challenges of curbing healthcare spending—namely, the number of eligible individuals, the type of services offered, and the volume of care delivered.

It is important for North Carolina to learn from both Alabama and Kentucky, whose rapid implementations may have been the cause of managed care organizations pulling out of the market. The NC Division of Health Benefits should consider long-term contracts with MCOs so they do not pull out of the state early in the implementation.



## **Foster Competition Among MCOs and Ensure Sufficient Plan Choices for Patients**

Policymakers must recognize the distinction between consolidation and integration. Medicaid managed care often exists in uncompetitive marketplaces which fail to drive down costs and lack incentives for quality improvement.<sup>121</sup> This trend appears to be replicating in recent transitions away from FFS towards managed care, such as the mergers of provider groups and commercial plans in North Carolina (e.g., the Carolina Complete Health Network). Local organizations appear unable to compete, such as the University of Alabama-Birmingham, which pulled out of the RCO program in Alabama citing the high-risk of short-term contracts.

State Medicaid programs should instead focus on negotiating long-term shared savings contracts with provider groups that build in room to adapt to short-term losses during the transition away from FFS. Additionally, it is imperative that states ensure that multiple options exist for patients to receive care to prevent gaps in health service access (particularly in rural areas). A focus on physician leadership rather than corporate plans during negotiations may ground care delivery in local communities and secure greater buy-in from providers and patients alike. Ensuring competition will likely require setting actuarially sound rates to MCOs; however, it is possible that rates that are sound in the long-term may still have poor financial outcomes in the short-term. As a result, it is critical for states to risk adjust so that plans with sicker enrollees are not penalized financially.

## **Reduce Administrative Burden & Ensure Appropriate Pay for Providers**

States should instead articulate a clear plan for financial incentives at the *organizational* level that can curb costs and alleviate the tension between payment and delivery in current FFS structures. For example, Alabama's RCO waiver advocates for establishing minimum rates for provider reimbursement to increase capacity for Medicaid patients and for extending value-based payments to hospitals by converting per diem costs to diagnosis-related groups.

North Carolina can also consider streamlining payment to reduce transaction costs to providers. Evidence suggests that delays in physician reimbursement in Medicaid more broadly are associated with reductions in physician participation.<sup>122</sup> To help to streamline payments and avoid delays, North Carolina should employ a few strategies that help to reduce administrative burden. First, ensuring that billing staff have sufficient resources is essential to streamlining payments and making the administration of managed care plans less cumbersome.<sup>123</sup> Without adequate resources and education, staff tasked with processing claims and billing codes can quickly fall behind, resulting in considerable delays to providers and potentially discouraging participation.

Further, setting standards for care authorization and delivery with input from stakeholders is essential to a smooth transition. In New Hampshire, implementation of Medicaid managed care faced early challenges because of strict prior authorization requirements, and physicians expressed frustration over the administrative burden of getting repeated prior approval for services treating chronic conditions or relatively unchanging circumstances (e.g., prescribing birth control).<sup>124</sup> To further streamline payments, NC DHHS should convene forums and meeting with stakeholder groups both before and during the implementation of MMC in order to establish prior authorization rules that comply with plan expectations while still minimizing administrative burden for providers.

## **Leverage Auto-Assignment to Lower Costs and Increase Beneficiary Participation**

Kentucky's use of auto-enrollment into managed care plans suggests it may be a useful tool to increase care in appropriate clinical settings, and subsequently lower costs to the state. NC DHHS should consider leveraging state databases from other government programs, which would lower administrative costs associated with outreach and potentially increase beneficiary participation. Beneficiary participation is essential to the success of managed care designs, largely because payments are made on a capitated basis that brings financial risk. With more individuals enrolled in a plan, the financial risk of expensive procedures is spread across a wider population, creating stability for MCOs and a more sustainable path forward to ensure access to plans.<sup>125</sup> Because of this, North Carolina should consider auto-assignment if enrollment in MMCs is initially low. In doing so, NC DHHS should use California's MMC auto-assignment strategy as a model and auto-assign eligible individuals to plans that are well-resourced and have high quality indicators, once such measures are available.<sup>125</sup>

Although plan switching among those who are automatically enrolled is often a concern, evidence suggests that disenrollment from auto-assigned plans is not as great a problem as it is often made out to be. One study of four different states—Iowa, Minnesota, Rhode Island, Utah—found that disenrollment was less than 10% in each state, and that most disenrollment was due to plan changes, not enrollee dissatisfaction with an automatically assigned plan.<sup>126</sup> The more serious challenge with auto-assignment is the considerable administrative challenge of enrolling large groups of eligible individuals into care plans. However, high rates of auto-assignment are generally indicative of inadequate outreach and education, and North Carolina should commit to educating eligible individuals and participating providers about MMC. Doing so will help ensure that auto-assignment becomes a last resort for a small unenrolled population, not a substitute for outreach that defaults large groups into care plans and brings with it considerable administrative strain.<sup>125</sup> Further, the adoption of auto-assignment raises questions about how individuals will be assigned to new plans. On this question, a number of states provide different model for how NC DHHS may proceed: New York evaluates plan quality and price, while rewarding some safety-net hospitals; Washington state auto-assigns individuals to the lowest-cost plan; and in Alabama and Michigan individuals are assigned based on their proximity to providers in the plan.<sup>127</sup>

## 4c. Primary Care Case Management (PCCM) Models

### *Overview of Primary Care Case Management*

In order to effectively transition to managed care, North Carolina must not only learn from the experiences of other states but understand the strengths and limitations of other models such as primary care case management. NC has used a PCCM model called Community Care of North Carolina (CCNC) since 1991. The program allowed for regional adaptability, and successfully reduced costs and improved health outcomes for Medicaid beneficiaries. North Carolina policymakers should consider building upon CCNC's successful practices when transitioning to managed care.

Primary care case management is a model of Medicaid managed care that was developed in the 1980s to increase access to care and reduce inappropriate spending.<sup>128</sup> PCCM usually involves state Medicaid programs creating arrangements with providers to offer primary care services to Medicaid beneficiaries and monitor them over time. Providers also coordinate testing and manage specialty referrals; specific provider responsibilities and required services are decided by the state. For each patient assigned, primary care providers are typically paid a small case management fee on a per-member per-month (PMPM) basis, in addition to traditional fee-for-service (FFS) payments.<sup>129</sup> Unlike with traditional managed care organizations, FFS payments and PMPM payments to PCCMs are not capitated, so the state ultimately bears financial risk.<sup>129</sup>

Among the fifteen states that currently use PCCM programs, there is significant variation in model design. At least five states have more than 75% of their Medicaid recipients enrolled in PCCMs, while five have enrolled 25-75% of beneficiaries.<sup>130</sup> Six states operate both PCCMs and MCOs; typically, states with larger urban populations rely on MCOs while states with more rural populations enroll more beneficiaries in PCCMs.<sup>130,131</sup> The structures of the programs vary with the capacities of each state, as some depend on care management organizations, while others rely on office-based primary care providers.<sup>131</sup>

In addition, some states use “enhanced” PCCM models that may include patient education, performance incentives, and network management (strategies to improve efficiency and quality of care).<sup>128,129</sup> Enhanced PCCM models function almost like a medical home, with mechanisms to provide targeted interventions for high-cost and high-risk enrollees. While these programs endeavor to reduce expenses and improves health outcomes, the effort required by providers can be resource-intensive. Since PCCM programs cannot directly control high-cost expenditures such as hospitalizations, research and evidence should be used to make programs as efficient as possible. This section attempts to provide an overview of PCCMs and their effectiveness in terms of costs and outcomes. Analysis will focus on Community Care of North Carolina (formerly known as Carolina ACCESS), which is North Carolina's current PCCM model.

### *Structure of PCCM Models*

North Carolina launched a traditional PCCM program with CCNC in 1991 and evolved to an enhanced PCCM model in 1998. As of 2014, CCNC served approximately 1.4 million of the state's nearly 2 million Medicaid enrollees.<sup>132</sup> Enrollment status in CCNC varies according to Medicaid program aid category (see **Figure 1**).<sup>133</sup> Not all Medicaid beneficiaries are required or eligible to enroll in the program. CCNC relies on 14 local networks across the state to provide

care management and coordination to beneficiaries. Each network uses separate full-time program directors, clinical coordinators, case managers, and pharmacists. Some networks may have additional staff to assist with data analytics and network initiatives.

Through these regional networks, CCNC emphasizes local autonomy. Steering committees are managed by local physicians, hospital representatives, and health and/or social services department employees.<sup>134</sup> CCNC enshrines the philosophy that less bureaucracy and outside intervention will allow local doctors to take greater ownership of network initiatives and programs.<sup>135</sup> Still, the statewide structure allows the networks to collaborate; initiatives that are successful in one network can be implemented across the state.

Provider participation in NC is stronger than most Southern states, with 76.4% of physicians accepting Medicaid.<sup>50</sup> NC providers receive both care management fees of \$2.50-5.00 PMPM as well as traditional FFS payments from the state Medicaid program.<sup>131</sup> In NC, the Medicaid reimbursement rate from primary care is relatively high—at 80% of Medicare rates—compared to the US average of 59% for primary care in 2014.<sup>89</sup> NC Medicaid's provider-friendly payment structure likely incentivizes physicians to participate in CCNC networks and increases beneficiaries' access to care. This aligns with cross-state studies that find provider participation rates to be positively associated with reimbursement rates.<sup>50,122</sup>

**Figure 1. Beneficiary Enrollment in CCNC as of October 2012.**

<b>Mandatory</b>	<b>Optional</b>	<b>Ineligible</b>
<ul style="list-style-type: none"> <li>• AAF/Work First: Cash Assistance with Medicaid</li> <li>• MIC (N) and MIC (1): Infants and Children</li> <li>• MAF: Families</li> <li>• MAABD: Aged, Blind Disabled (Without Medicare)</li> <li>• SAD: Special Assistance for the Disabled (Without Medicare)</li> <li>• SAA: Special Assistance for the Aged (Without Medicare)</li> <li>• MIC-J and MIC-K enrolled in Health Choice</li> <li>• Native Americans</li> </ul>	<ul style="list-style-type: none"> <li>• MPW: Pregnant Women</li> <li>• HSF-State Foster Home Fund</li> <li>• IAS-Medicaid with IV-E Adoption Subsidy and Foster Care</li> <li>• End Stage Renal Disease Patients</li> <li>• SSI beneficiaries under age 19</li> <li>• Native Americans (members of a Federally Recognized Tribe)</li> <li>• MAABD: Aged, Blind</li> <li>• SAD: Special Assistance for the Disabled (With Medicare)</li> <li>• SAA: Special Assistance for the Aged (With Medicare)</li> <li>• Benefit Diversion Cases</li> </ul>	<ul style="list-style-type: none"> <li>• MQB and RRF/MRF</li> <li>• Beneficiaries in “Deductible” status</li> <li>• CAP Cases with a monthly deductible</li> <li>• Aliens eligible for Emergency Medicaid only</li> <li>• Nursing Facility residents (does not include ICF-MR)</li> <li>• MAF-D: Family Planning Waiver</li> <li>• MIC-L: Health Choice Re-Enrollment Buy In</li> <li>• MAF-W: Breast and Cervical Cancer Medicaid</li> </ul>

Source: Figure created by authors using [information from Community Care NC](#)<sup>133</sup>.

## Impact of PCCMs on Cost

A 2015 state audit, based on data from July 1, 2003 through December 31, 2012, found that CCNC reduced spending for non-elderly, non-dual Medicaid beneficiaries by 9% (approximately \$312 per beneficiary per year in 2009 inflation-adjusted dollars).<sup>22</sup> The audit's estimated savings include the administrative fees of \$3.00-5.00 PMPM to CCNC and \$2.50-5.00 PMPM to providers.<sup>22</sup> Even when factoring in administrative expenses, CCNC saved money between 2003 and 2012.<sup>22</sup> While spending was reduced in all categories, CCNC saw significant reductions on pharmacy services (10.7% decrease) and ambulatory services (6.2% decrease).<sup>22</sup> Peer-reviewed studies and actuarial analyses have also found CCNC to be cost-effective with this population.<sup>18,136</sup>

A California-based consulting firm found that CCNC realized state savings of almost a billion dollars in health expenditures between 2007 and 2010.<sup>136</sup> Specifically, they found that CCNC had lower PMPM costs for three categories: 1) aged, blind, and disabled individuals in Medicaid only, 2) children age 20 and under, and 3) adults. CCNC had higher PMPM costs (1.8% higher) in one category—aged, blind, and disabled dual eligibles.<sup>136</sup> See **Figure 2** for more details.

**Figure 2. CCNC and Non-CCNC PMPM Costs, FY2010.**

North Carolina Division of Medical Assistance Comparison of CCNC and Non-CCNC PMPM Costs Method 1 Summary Results Risk-Adjusted Medical and Management PMPM Costs in FY2010						
Eligibility Category	CCNC Average Members per Month	Non-CCNC Average Members per Month	Total Average Members per Month	CCNC PMPM Costs	Non-CCNC PMPM Costs	CCNC as a Percentage of Non-CCNC PMPM Costs
ABD Medicaid Only	103,844	56,786	160,629	\$1,247.82	\$1,289.95	96.7%
ABD Dual Eligibles	51,240	130,631	181,871	\$567.04	\$556.76	101.8%
Children age 20 and under (excluding ABD)	633,967	122,168	756,136	\$185.15	\$218.09	84.9%
Adults (excluding ABD)	103,357	51,300	154,657	\$441.05	\$518.61	85.0%

(1) Duals are not adjusted for changes in health status differences because risk scores were not provided by TREO. Given that Medicare is the primary payer for the dual eligibles, the Medicaid claims system does not have complete claims history for dual eligible members, with which to calculate risk scores.

Source: [Community Care of North Carolina](#).<sup>136</sup>

## Assessment and Outcomes

Collecting data from hospitals and Medicaid claims, CCNC uses its Informatics Center to calculate “Impactability Scores” to predict which patients are most likely to benefit from specific interventions.<sup>137</sup> The idea is that CCNC can use Impactability Scores to identify which type of Medicaid beneficiary will benefit the most (e.g., have most improved health outcomes) from a specific intervention, such as diabetes management. Through better management of chronic conditions in less expensive settings of care, beneficiaries can avoid unnecessary hospital expenditures. CCNC argues that their targeted approach with “Impactability Scores” is more effective than calculating risk scores that focus only on who is likely to have an event (not benefit from intervention), because many of the costs incurred by high-risk patients are unlikely to go away with only care management.<sup>137</sup> CCNC implements disease-specific interventions, which currently focus on asthma, behavioral health, pharmacy, and diabetes among other conditions.<sup>138</sup>

Analysis suggests that these targeted interventions are effective. The University of North Carolina's evaluation of asthma and diabetes patients in CCNC found enrollees to have reductions in emergency room visits and inpatient hospital admissions.<sup>139</sup> Diabetes patients also had improved blood pressure readings and A1C scores.<sup>139</sup> A peer-reviewed study of CCNC's transitional care program for Medicaid recipients with complex, chronic conditions also found risk-adjusted readmission rates among Medicaid beneficiaries to be 20% lower for those who received transitional care support from CCNC.<sup>140</sup> The 2015 audit also notes improvements in health outcomes with CCNC, estimating a 25% reduction in inpatient admissions, which it suggests to be evidence of overall improvement in the health of enrolled Medicaid beneficiaries.<sup>22</sup>

### *Conclusion*

In summary, CCNC has a track record of reducing costs and improving health outcomes for North Carolina's Medicaid beneficiaries. As North Carolina considers implementing Medicaid managed care statewide, it is critical to leverage CCNC's evidence-based care and regional flexibility, as demonstrated by the success of local networks across the state. Future efforts could build upon CCNC's networks to emphasize mental health interventions and long-term care management (one of NC Medicaid's largest expenditures). Finally, NC Medicaid could consider incentivizing physicians through pay for performance (P4P) incentives if certain goals or measures are met.

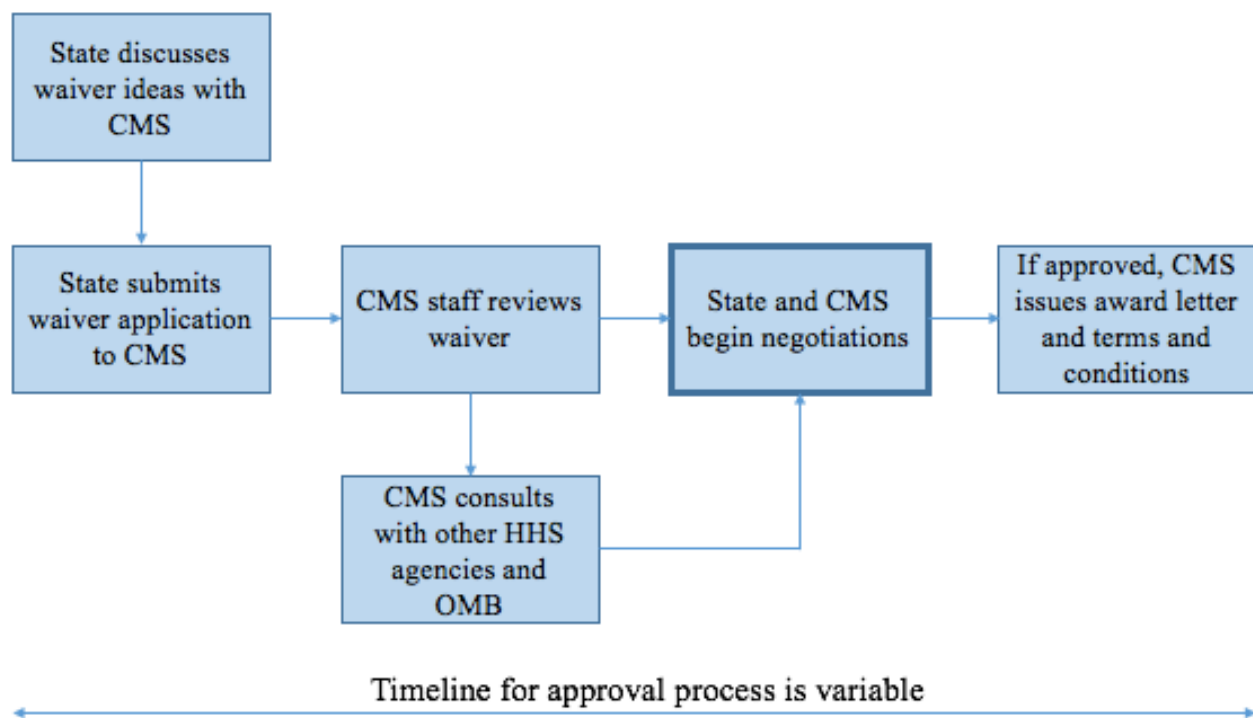
#### 4d. Using Section 1115 Waivers to Implement Consumer-Driven Financial Incentives

##### *Background on Section 1115 Waivers*

States can use Section 1115 waivers to apply federal Medicaid funds beyond the program's current scope, so long as the Secretary of Health and Human Services (HHS) deems the proposed course of action to still meet the care delivery objectives of the Medicaid program.<sup>141</sup> As of March 2017, there are currently 43 approved and active Section 1115 waivers in 30 states and DC.<sup>142</sup>

Generally, Section 1115 waivers provide states with the flexibility to test and implement new coverage approaches. These waivers can either be comprehensive or narrow in scope.<sup>143</sup> States have typically submitted comprehensive waivers to make broad changes to Medicaid eligibility, benefits, cost sharing, and provider payments. Narrow waivers tend to focus on providing specific services to all Medicaid beneficiaries (e.g., family planning), or providing Medicaid coverage to specific populations (e.g., people with HIV).

**Figure 1. Section 1115 Waiver Approval Process.**



Source: Figure created by authors, using information from [Kaiser Family Foundation](#).<sup>143</sup>

The Section 1115 waiver approval process (see **Figure 1**) typically begins with states discussing waiver ideas with Centers for Medicare and Medicaid Services (CMS) or submitting concept papers. Afterwards, states submit a formal application to CMS, which usually conducts reviews in collaboration with other HHS agencies and the Office of Management and Budget (OMB).

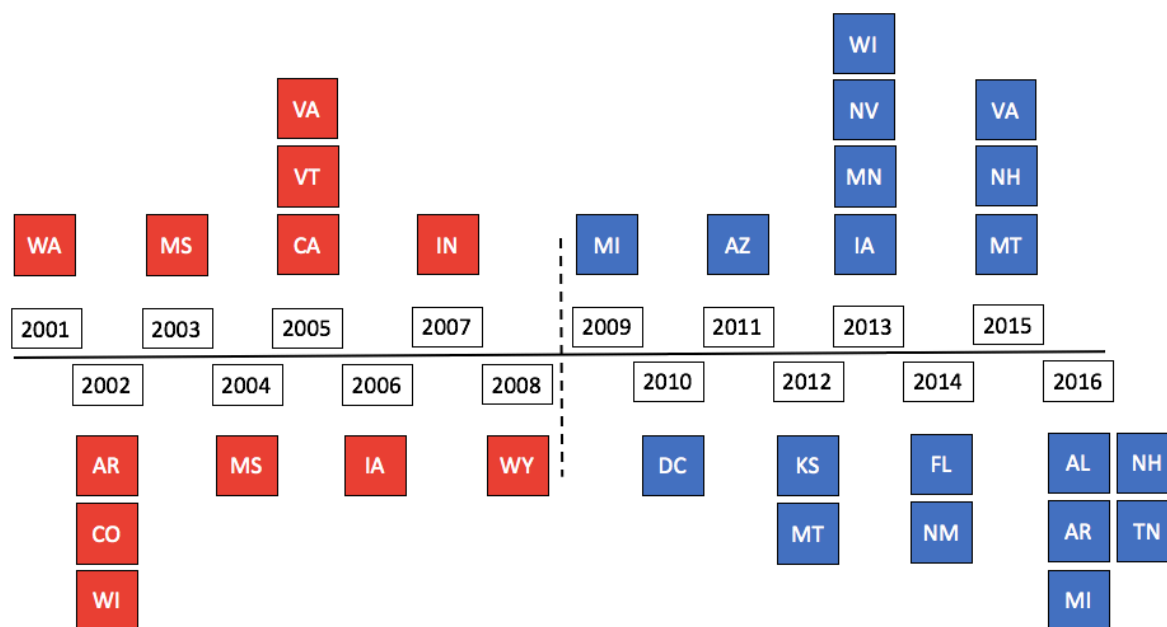
CMS and the state then enter negotiations, which is a key phase of the approval process. A critical negotiating point is the budget neutrality cap, as the application's approval is contingent upon ensuring the waiver's adjusted federal spending does not exceed the projected federal spending without a waiver over the five-year waiver period.<sup>141</sup> Any additional costs above the negotiated budget neutrality cap then become the responsibility of the state.<sup>143</sup> Although budget neutrality is not required by statute, it has been a longstanding requirement by CMS.<sup>143</sup>

Once CMS approves a waiver, it issues an award letter to states stipulating the waived regulations, terms and conditions, and the budget neutrality agreement. Although waivers are usually approved for an initial five-year period, programs can be extended for up to three year periods.<sup>141</sup> Renewals can be indefinite, with some waivers continuously receiving extensions since the 1990s.

### *Historical View of Section 1115 Waivers*

Section 1115 waivers have been used since the inception of Medicaid in 1965. Waivers typically had a small scope until the 1990s, when many states began to use them to implement broader managed care systems than were allowed under federal law at the time.<sup>143</sup> The George W. Bush administration encouraged states to submit flexible waivers that reduced benefits and shifted costs to beneficiaries under the Health Insurance Flexibility and Accountability Act.<sup>143</sup> Many states used the “premium assistance” model, which allowed the state to use Medicaid funds to subsidize the purchase of private insurance. **Figure 2** shows states that implemented approved waivers during the Bush and Obama administrations.

**Figure 2. Section 1115 Waivers approved under the Bush and Obama administrations.**



Source: Figure created by authors using information from [Medicaid.gov](https://www.Medicaid.gov).<sup>142</sup>

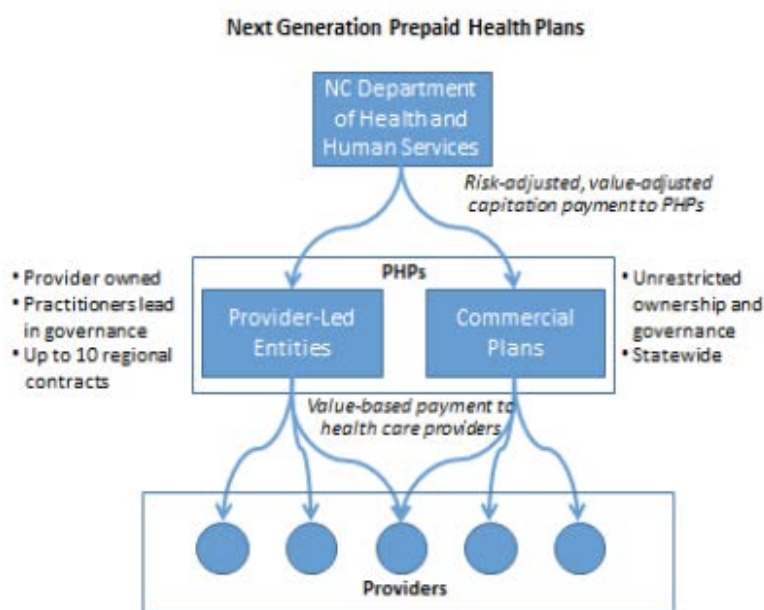


The Affordable Care Act (ACA) fundamentally changed the need for states to use Section 1115 waivers, as states could now voluntarily expand Medicaid eligibility for childless adults up to 138% of federal poverty level (FPL). During the Obama administration, Section 1115 waivers were largely used to expand Medicaid in tandem with various other delivery reforms, such as cost sharing for individuals who were previously exempted due to low income levels.

### *Proposed NC Section 1115 Waiver*

In June 2016, NC Governor Pat McCrory submitted a Section 1115 waiver to CMS that proposed to shift financial risk from the state to prepaid health plans (PHPs), a form of Medicaid managed care organizations (MCOs).<sup>64</sup> A primary justification for the proposed reform was to provide budget predictability for the state through capitated payments. Under this model, NC Department of Health and Human Services (DHHS) would move from the current fee-for-service primary care case management (PCCM) system to risk-adjusted contracts with PHPs. The proposed PHPs would be led by either one of three statewide MCOs (a “Commercial Plan”, or CP) or one of twelve regional providers (a “Provider Led Entity”, or PLE), as shown in **Figure 3**. Contracts would be capitated, with the state paying PHPs on a per member per month (PMPM) basis. MCOs would likely develop new financial instruments (e.g., bundled payments, shared savings contracts) to incentivize providers to deliver care based on value rather than volume.

**Figure 3. Medicaid Delivery Model as proposed in NC Section 1115 Waiver.**



Source: North Carolina Medicaid and NC Health Choice Draft Section 1115 Waiver Application. [NC Department of Health and Human Services](#), 2016.<sup>64</sup>

The waiver submitted in June 2016 faces many political uncertainties. The waiver submitted in June 2016 is likely to change, as Current Secretary of DHHS, Dr. Mandy Cohen, issued a request for public comments on April 25, 2017 to consider whether modifications are needed to the current Section 1115 waiver.<sup>144</sup> The request for comments emphasized physical and behavioral health service delivery, supporting provider transformation, care management and

population health, addressing social determinants of health, improving quality of care, paying for value, and increasing access to care and treating substance use disorder.

Additionally, it is uncertain whether the waiver will be approved by CMS, how successful Secretary Cohen and NC DHHS will be in negotiating a favorable budget neutrality cap, whether the legislature decides to expand Medicaid, and whether federal policy options to block grant Medicaid will pass.

In April 2017, House Republicans in the NC General Assembly filed House Bill (HB) 662, known as “Carolina Cares,” to provide healthcare coverage for up to 350,000 uninsured North Carolinians.<sup>145</sup> According to Rep. Donny Lambeth, the bill’s lead sponsor, the bill aims to empower consumers to take personal responsibility for their healthcare choices, costs, and outcomes.<sup>146</sup> Individuals would be eligible for Carolina Cares if their incomes are less than 133% FPL, ages 19-64, not receiving Medicare Part A or B, and currently working or seeking employment. Under this model, participants would be required to make certain commitments, which focus on preventive care and emphasize wellness. If an individual chooses to join Carolina Cares, he or she would be required to participate in routine physicals, screenings, and dental care. Legislators envision a system in which participants who fail to keep up with premiums lose coverage.

### *General State Trends in Section 1115 Waivers*

Current state-level innovations in Medicaid policy focus on redistributing financial risk by the state to other entities—whether it is primarily to consumers, private insurers, or both providers and insurers. States have tested this principle in recent Section 1115 waivers by subsidizing private insurance using Medicaid expansion funds to expand coverage up to 138% FPL, implementing value-based payments for providers, charging premiums or cost sharing above federal limits, and using healthy behavior incentives to reduce premiums.<sup>147</sup>

To put NC’s pending Section 1115 waiver into a broader national context, we profiled the Medicaid reform efforts of three states with approved waivers—Indiana, Michigan, and Iowa—to understand their experiences implementing premiums, cost sharing, and healthy behavior incentives. The proportion of Indiana, Iowa, and Michigan’s population that receives Medicaid benefits (17-19%) is comparable to NC. With regards to demographics, Michigan is most similar to NC in terms of having a large minority population (40% in MI and 54% in NC) and smaller rural population (18% in MI and 23% in NC). From a design standpoint, Iowa’s hybrid managed care organization (MCO) and accountable care organization (ACO) delivery system is the closest to NC’s proposed redesign in its Section 1115 waiver. Indiana’s waiver expanded Medicaid and implemented consumer-driven reforms is particularly instructive for NC, which modeled HB 662 after the “Healthy Indiana Plan” (HIP 2.0). Detailed case studies for individual states are in Appendix 3.

### *Overview of Medicaid Plan Options: Indiana, Michigan, and Iowa*

Indiana’s Section 1115 waiver included two coverage options for Medicaid expansion enrollees. Beneficiaries could choose to enroll in HIP Plus, which has comprehensive benefits (including dental and vision) or HIP Basic, which has minimum benefits (no dental or vision). Individuals whose incomes are 101-138% FPL can only enroll in HIP Plus, while individuals whose incomes are at or below 100% can choose to enroll in HIP Plus or HIP Basic. The Indiana Medicaid agency states that receiving healthcare is more expensive in HIP Basic; it estimates

members would pay between \$4 and \$75 in copays in HIP Basic and between \$1 and \$100 in premiums for HIP Plus.<sup>148</sup>

Michigan's Medicaid expansion also included two coverage options. Beneficiaries whose incomes are at or below 100% FPL are enrolled in Healthy Michigan Plan, with the condition that patients complete a healthy behavior (e.g., exercising regularly) within one year of enrollment. Beneficiaries whose incomes fall between 101-133% FPL can choose between Healthy Michigan Plan coverage and a Marketplace Option, in which they can purchase a qualified health plan on the ACA exchange.

Iowa currently has one plan option, Iowa Wellness Plan, for all Medicaid expansion enrollees with incomes ranging from 0-138% FPL. Beneficiaries may enroll into one of four MCOs across the state.<sup>149</sup> Iowa initially had a second coverage option similar to Michigan's Marketplace Option, but terminated the plan in September 2015.

### *Premiums and Cost Sharing*

Indiana, Michigan, and Iowa all have tiered premium levels for individuals at different income levels. All three states have some form of premiums and copays for certain Medicaid expansion enrollees, but details vary for each state (see **Figure 4** below). NC's HB 662 proposes charging Carolina Cares participants monthly premiums set at two percent of household income.<sup>145</sup> Individuals would be exempt from paying premiums if their household incomes are below 50% FPL, they have medical or financial hardship, they are members of a federally recognized tribe, and/or they are veterans in transition but actively seeking employment. Carolina Cares participants would be required to pay copays comparable to those applied under the NC Medicaid program.

Indiana and Michigan are similar to NC's HB 662 with regard to requirements for premiums, in that premiums are limited to two percent of household income and premiums accrue into a health savings account. However, unlike HB 662, neither Indiana nor Michigan requires individuals with incomes below 100% FPL to pay monthly premiums. In Indiana, individuals with incomes below 100% FPL have the option to pay premiums and enroll in HIP Plus, which is a more comprehensive insurance plan.<sup>148</sup> Conversely, Iowa is similar to NC's HB 662 in that individuals with income levels above 50% FPL are required to pay monthly premiums, but Indiana charges flat rates of \$5/month for individuals with incomes 51-100% FPL, and \$10/month for individuals with incomes 101-138% FPL.

In Indiana, 90% of members have consistently paid monthly premiums to HIP Plus. However, nearly 60% of those individuals pay premiums of \$1 per month because they have incomes less than 5% FPL (earning approximately \$603 per year).<sup>150</sup> In the first year, 8% of individuals who made at least one HIP Plus premium payment failed to make subsequent payments and dropped down to HIP Basic.<sup>151</sup> Michigan tells a different story, as only 20% of members paid their cost sharing portions.<sup>152</sup>

In all three states, copays are limited to five percent of family income.<sup>148</sup> Indiana requires individuals in HIP Basic (0-100% FPL) to pay copays for doctor, hospital, and prescriptions, in lieu of premium contributions. In Michigan, all beneficiaries are responsible for copays on a quarterly basis, rather than at the time of service.<sup>153</sup> In Iowa, beneficiaries are not required to pay copays in the first year of enrollment, except for non-emergency use of the ER.<sup>154</sup>

Proponents of premiums and cost sharing measures argue they help make Medicaid more like a private plan and instill more personal responsibility in healthcare utilization. However, Medicaid's beneficiaries are predominantly low-income and may face other socioeconomic

challenges (e.g., homelessness) that could render even minimal cost sharing as barriers to long-term insurance coverage.<sup>155</sup> For example, nearly 30% of those paying HIP Plus premiums reported receiving help with premiums as opposed to paying independently, with many relying on family members for help.<sup>155</sup>

**Figure 4. Comparison of Premiums and Cost sharing in Indiana, Michigan, and Iowa.**

Element of Section 1115	Indiana	Michigan	Iowa
<b>Waiver Dates</b>	Feb. 2015-Jan. 2018	Apr. 2014-Dec. 2018	Jan. 2014-Dec. 2016
<b>Medicaid expansion</b>	Yes – up to 138%	Yes – up to 138%	Yes – up to 138%
<b>Coverage options</b>	<b>HIP Basic:</b> traditional Medicaid available to expansion adults 0-100% FPL <b>HIP Plus:</b> traditional Medicaid available to expansion adults 0-138% FPL	<b>Healthy Michigan Plan:</b> traditional Medicaid available to expansion adults 0-138% FPL (if they meet healthy behavior requirement) <b>Marketplace Option:</b> Medicaid subsidizes premiums for expansion adults 101-138% FPL for Qualified Health Plan	<b>Iowa Wellness Plan:</b> traditional Medicaid available to expansion adults 0-138% FPL
<b>Premiums</b>	<b>0-100% FPL:</b> no premiums, unless in HIP Plus (limited to 2% of family income) <b>101-138% FPL:</b> premiums limited to 2% of family income	<b>0-100% FPL:</b> no premiums <b>101-138% FPL:</b> premiums limited to 2% of family income	<b>0-50% FPL:</b> no premiums <b>51-100% FPL:</b> \$5/month <b>101-138% FPL:</b> \$10/month
<b>Cost-sharing</b>	<b>HIP Plus:</b> no copays <b>HIP Basic:</b> copays limited to 5% of family income	All expansion adults pay copays, limited to 5% of family income	No cost-sharing in the first year of enrollment
<b>Copays for non-emergency use of emergency room</b>	Yes – \$8 copay for first visit, \$25 copay for subsequent visits	No	Yes – \$8 copay per visit
<b>Exclusions to cost-sharing</b>	Native Americans, pregnant women	Medically frail individuals	Native Americans, medically frail individuals, individuals with income below 50% FPL
<b>Health savings account</b>	Yes	Yes	No

Source: Figure created by authors, using information from [Indiana](#), [Michigan](#), and [Iowa](#).<sup>148,156,157</sup>

The effectiveness of cost sharing measures can depend on the type of service to which copays are attached. Indiana and Iowa require higher copays for non-emergency use of the emergency room (ER).<sup>158</sup> In 2015, CMS approved a 1916(f) waiver for Indiana to charge copays of \$8 for a beneficiary's first ER visit that is deemed a non-emergency, and \$25 for every subsequent non-emergency ER visit.<sup>159</sup> However, Indiana can waive the copay if the enrollee contacts his or her health plan's 24-hour nurse hotline prior to going to the ER.<sup>160</sup> Iowa is allowed to charge \$8 copay for non-emergency use of the ER to all waiver enrollees, but limits copays to five percent of total family income.<sup>157,161</sup> Proponents of this measure contend that copays for the ER will encourage beneficiaries to seek care at lower-cost locations. Critics of this policy argue that most people visit the emergency room for episodes that are truly emergencies, with only 10% of ER visits paid by Medicaid in 2008 for non-emergency conditions. Moreover, a study of eight states from 2001-2010 suggests collecting copays for non-urgent ER visits does not change ER or outpatient medical use by Medicaid beneficiaries.<sup>162</sup>

An initial evaluation of Indiana's HIP found that roughly 24-25% of ER visits for both HIP Plus and HIP Basic beneficiaries were non-emergent, a figure much higher than the previously cited 10% from 2008.<sup>151</sup> However, such a difference could be attributed to methodology used in the Indiana evaluation, which based "emergency" on the beneficiary's discharge diagnosis rather than the beneficiary's presenting complaint, potentially inflating the number of non-emergent cases that are known after the fact.

Outside evidence on cost sharing in Medicaid from the past two decades suggest that it may have negative impacts on Medicaid beneficiaries. People are forced to make a choice between having health insurance and paying for other basic necessities, such as rent, food, and childcare. A 2005 Oregon longitudinal study on the impact of cost sharing found a 44% decline in beneficiaries who continued coverage six months after implementation of the cost sharing policy.<sup>163</sup> Moreover, cost sharing can be a blunt instrument that reduces use "unnecessary care", but may also reduce use of appropriate care. A literature review of Medicaid cost sharing finds that it is associated with forgoing or delaying needed healthcare, which can worsen health outcomes, especially for those with chronic conditions.<sup>164</sup>

#### *Revenue Generation from Cost sharing vs. Administrative Costs*

Revenue generation from beneficiaries cost sharing measures is modest, at best—but may lead to high administrative costs for the state to track and collect owed payments. Michigan collected \$737,000 in monthly premiums from November 2014 to April 2015 from individuals whose incomes are 101-138% FPL and \$500,000 from July to September 2015.<sup>152,165</sup> However, Michigan is spending nearly \$20M annually to administer the entire Healthy Michigan program.<sup>166</sup> Iowa, which was the first state to impose cost sharing below poverty line (\$5/month for individuals with incomes 50-100% FPL), collected \$142,000 in premiums from 15,000 beneficiaries as of June 2015.<sup>1,167</sup> In FY2015, it collected \$384,000 in individual account contributions from beneficiaries. Notably, Iowa is spending \$12M per year to administer an individual account feature that includes monthly contributions for all enrollees with incomes above 50% FPL.<sup>1</sup> In June 2015, Arkansas decided not to collect premiums from individuals below the poverty line, largely because of high administrative costs.

#### **Relevance to NC:**

Further research is needed to understand whether monthly premiums as a percentage of income (like Indiana and Michigan) or as a flat rate (like Iowa) are more manageable for Medicaid beneficiaries with low incomes. On the surface, Iowa's flat rate may be more manageable; an individual with income at 100% FPL (making roughly \$1,000 a month) would only pay \$5 in monthly premiums compared to \$20 in Indiana or Michigan (2% of family income). Additionally, it is unclear how much of an administrative burden states face in having to track beneficiaries' incomes for the purpose of calculating and collecting premiums and copays.

While Indiana and Iowa have yet to release its evaluation on the impact of ER copays, evidence from the 2000's suggests that the copays are not effective in altering location of care, and may actually discourage people from seeking needed care. Thus, we recommend NC avoid policies that would charge higher copays for non-emergency ER use for Medicaid beneficiaries.

## Disenrollment/Lockout Policies

Indiana was the first state Medicaid program to introduce a “lockout policy,” in which individuals can be unenrolled from Medicaid and locked out from re-enrolling for a period of six months upon failing to pay premiums within 60 days. This policy applies only to individuals who are enrolled in HIP Plus and have incomes above the poverty line (101-138% FPL). An evaluation of HIP found that six percent (n=2,677) of HIP Plus enrollees with incomes above 100% FPL were unenrolled for not making a premium payment.<sup>151</sup> Most beneficiaries are aware of the lockout policy: nearly 80% of individuals with incomes below 100% and 97% of individuals with incomes above 100% stated they were aware that a failure to pay premiums could result in disenrollment.

While the majority of beneficiaries (90%) successfully made their payments, 16% stated they *always* worried about making a premium payment; 29% worried *usually* or *sometimes*.<sup>151</sup> Similarly, about 48% of Iowan Medicaid beneficiaries surveyed in 2015 reported they would worry *somewhat* or *a lot* if they had to pay a monthly premium of \$5 or \$10 for their new plan.<sup>168</sup> Moreover, surveys and interviews with Indiana Medicaid beneficiaries suggest that there may be confusion with the payment process and lockout policy. Many beneficiaries (30%) attributed their failure to pay premiums to confusion regarding the payment process. Finally, Kaiser Family Foundation’s focus groups with Indiana beneficiaries revealed that individuals from all income levels thought the lockout policy applied to them, revealing further misunderstanding about the policy.<sup>155</sup>

**Figure 5. Comparison of Disenrollment and Lockout Policies in Indiana, Michigan, and Iowa.**

Element of Section 1115	Indiana	Michigan	Iowa
<b>Coverage options</b>	<p><b>HIP Basic:</b> traditional Medicaid available to expansion adults 0-100% FPL</p> <p><b>HIP Plus:</b> traditional Medicaid available to expansion adults 0-138% FPL</p>	<p><b>Healthy Michigan Plan:</b> traditional Medicaid available to expansion adults 0-138% FPL (if they meet healthy behavior requirement)</p> <p><b>Marketplace Option:</b> Medicaid subsidizes premiums for expansion adults 101-138% FPL for Qualified Health Plan</p>	<p><b>Iowa Wellness Plan:</b> traditional Medicaid available to expansion adults 0-138% FPL</p>
<b>Disenrollment/Lockout policy</b>	Individuals 101-138% FPL who fail to pay premiums for 60 days are disenrolled and locked out for 6 months	Individuals cannot be disenrolled or locked out, but past due premiums or copays can be collected from state income tax refunds or lottery winnings	Individuals with incomes 101-138% FPL can be disenrolled upon non-payment after 90 days, but may re-enroll at any time. Unpaid premiums are collectable state debt.
<b>Exclusions to disenrollment/lockout policy</b>	Native Americans, medically frail, pregnant women, living in domestic violence shelter, living state-declared disaster area, Transitional Medical Assistance participants, individuals who obtain a waiver due to a qualifying event	N/A	Individuals 50-100% FPL who do not pay premiums cannot be disenrolled



Source: Figure created by authors, using information from [Indiana](#), [Michigan](#), and [Iowa](#).<sup>148,156,157</sup>

In August 2016, CMS denied Indiana’s request to lock people (above and below the poverty line) out of Medicaid coverage for failing to complete the renewal process.<sup>169</sup> Proponents of the policy state said that it would encourage beneficiaries to maintain healthcare coverage and avoid coverage gaps. A CMS analysis projected that this expanded lockout policy would have caused approximately 18,850 people to lose coverage every year, which is significantly higher than the 2,677 individuals with incomes above poverty line who were disenrolled.<sup>169</sup> CMS argued that beneficiaries often face difficulties with renewal processes due to language barriers, disabling conditions, or other social conditions such as homelessness.

Iowa has a policy that allows disenrollment of individuals whose incomes are above poverty line (101-138% FPL) and who fail to pay premiums in 90 days, but there is no “lockout policy,” as individuals can re-enroll at any time. Compared to Indiana and Iowa, Michigan has the most lenient policy with regard to non-payment of premiums or cost sharing. In Michigan, individuals are not allowed to be disenrolled or locked out, but past due payments can be recouped from state income tax refunds or lottery winnings.<sup>156</sup>

NC’s HB 662 proposes a version of a disenrollment or lockout policy, modeled largely upon the disenrollment/lockout policy in Healthy Indiana Plan 2.0. In HB 662, failure of a program participant to make a premium contribution within 60 days of its due date would result in the termination of the program participant from Carolina Cares. The participant would be disenrolled from the program, but could reenroll if he or she meets the eligibility requirements and pays the amount in previously unpaid premiums owed by the individual.<sup>145</sup>

**Relevance to NC:** Although the percentage of individuals who were disenrolled from Indiana’s Medicaid program was small (6%), the proportion of the population concerned about the possibility of missed premium payments was quite high (nearly 50%). Further research is needed to understand whether disenrollment/lockout policies reduce access to health services and if prolonged gaps (up to six months in the Indiana policy) in care delivery lead to negative health outcomes (e.g., for patients with chronic conditions requiring long-term care). NC should closely review the impact of Indiana’s lockout policy on long-term health outcomes. Moreover, Indiana beneficiaries’ confusion with the complex HIP coverage model suggests that North Carolina could benefit from a simpler, more streamlined plan like Iowa’s. Additionally, a more straightforward design would likely be less expensive for North Carolina to administer and evaluate.<sup>1</sup>

### *Healthy Behavior Incentives*

Healthy behavior incentives are typically offered to enrollees when they complete a health-related task, participate in a healthy behavior, achieve a health standard, or make progress on a health goal.<sup>170</sup> Incentives can typically be structured as rewards (such as gift cards or reduced premiums) or penalties (such as fees).

Although states have traditionally implemented healthy behavior incentives programs through Medicaid managed care or grant funding, Indiana, Iowa, and Michigan each used a Section 1115 waiver to implement such a policy. The three states profiled here use a “reward” model, with **Figure 6** illustrating the experience of three states with regard to types of healthy behaviors being targeted, types of incentive used, outcomes with completion of incentives, and beneficiaries’ knowledge of incentives.

**Figure 6. Comparison of Healthy Behavior Incentives in Indiana, Michigan, and Iowa.**

Elements of Healthy Behavior Incentives	Indiana	Michigan	Iowa
<b>Targeted consumer healthy behavior</b>	<ul style="list-style-type: none"> <li>Preventive services</li> </ul>	<ul style="list-style-type: none"> <li>Health risk assessment</li> <li>Healthy behaviors</li> </ul>	<ul style="list-style-type: none"> <li>Wellness exam</li> <li>Health risk assessment</li> <li>Healthy behaviors</li> <li>Periodic dental exams</li> </ul>
<b>Type of healthy behavior incentive</b>	<ul style="list-style-type: none"> <li>HIP Plus: Double rollover amount</li> <li>HIP Basic: Discounted HIP Plus premium by 50% for following year</li> </ul>	<ul style="list-style-type: none"> <li>Premiums reduced by 50% for completing HRA</li> <li>Co-pays reduced by 50% for paying 2% income in co-pays</li> <li>Gift cards (\$50 for completing HRA for &lt;100% FPL)</li> </ul>	<ul style="list-style-type: none"> <li>Premiums waived</li> <li>Cost-sharing reduced</li> <li>Dental benefits</li> </ul>
<b>Completion of healthy behavior incentives</b>	<ul style="list-style-type: none"> <li>64% of HIP Plus received preventive services</li> <li>45% of all members received preventive services</li> <li>75% of those enrolled for 12 months received preventive services</li> </ul>	<ul style="list-style-type: none"> <li>15% completed health risk assessment</li> <li>14.5% agreed to address at least one healthy behavior</li> </ul>	<ul style="list-style-type: none"> <li>26% completed wellness exam</li> <li>25% completed health risk assessment</li> <li>15% completed both</li> </ul>
<b>Beneficiary knowledge of healthy behavior incentives</b>	<ul style="list-style-type: none"> <li>50% unaware that they could receive preventive services for free</li> <li>65% of HIP Basic unaware of discounted premium incentive</li> <li>48% of HIP Plus unaware of double rollover incentive</li> </ul>	<ul style="list-style-type: none"> <li>60% unaware that completing HRA could reduce premiums</li> </ul>	<ul style="list-style-type: none"> <li>70-75% unaware of incentive program requirements</li> <li>90% unaware that completing wellness exam could waive premiums</li> </ul>

Source: Figure created by authors, using information from [Indiana](#), [Michigan](#), [Iowa](#)<sup>151,152,171</sup>

Indiana Medicaid beneficiaries can receive incentives if they obtain preventive services, such as annual physicals, colonoscopies, flu shots, pap smears, mammograms, etc.<sup>172</sup> For HIP Plus members, unused amounts in the POWER account will rollover to the next 12-month period, and for HIP Basic members, they can access a 50% discounted premium. In Indiana, only 25% of members (n=105,361) who enrolled in the first year stayed enrolled for twelve months.<sup>151</sup> Out of these members, more than 75% received qualifying preventive care services. However, analyses of this population reveal significant gaps in communication about the incentives. About half of individuals were not aware that preventive services were free to them.<sup>151</sup> Additionally, 65% of HIP Basic enrollees were unaware that using preventive services would allow them to receive discounted HIP Plus premiums in the following year. Nearly half (48%) of HIP Plus enrollees were unaware of the healthy behavior incentive that would double their rollover amount in the following year. Notably, individuals were more likely to obtain preventive services if they were in HIP Plus (42% more likely than HIP Basic); this may be because individuals in HIP Plus are on average sicker and benefit from preventive services. Indeed, a significant number of medically frail beneficiaries engaged in preventative care (82% more likely than overall population).

In Michigan, new enrollees have one year to complete the healthy behavior requirements. If they complete these requirements, they are eligible for cost sharing reductions.<sup>153</sup> Individuals



with incomes below 100% FPL are also eligible to receive gift cards of \$50. An early evaluation found that about 15% of all expansion beneficiaries (n=84,383) who were enrolled in a health plan for at least six months completed the health risk assessment with their primary care provider, with a similar proportion (14.5%) agreeing to address at least one healthy behavior.<sup>152</sup> However, a survey by University of Michigan found that about 60% of beneficiaries were unaware that completing an HRA could reduce their premiums.<sup>173</sup> Finally, nearly 40% of surveyed beneficiaries agreed that healthy behavior financial incentives have led them to work on improving certain health behaviors.

In Iowa, enrollees can waive yearly premiums by completing health risk assessments or wellness exams.<sup>161</sup> About a quarter of beneficiaries completed a wellness exam or health risk assessment in the initial phase.<sup>171</sup> Individuals who are older, white, female, have multiple health conditions, and enrolled in Medicaid longer were more likely to complete at least one healthy behavior. The small proportion of enrollees who completed wellness exams and health risk assessments agreed that these activities would improve health. The evaluation report suggests that both providers' and beneficiaries' general lack of awareness and understanding about the healthy behavior incentives program have limited the program's ability to achieve significant participation.

As of December 2015, 15 states managed healthy behavior incentive programs for specific groups of Medicaid beneficiaries.<sup>170</sup> The broader evidence on healthy behavior incentive programs in both public and private insurance models is mixed. Studies suggest that providing incentives immediately after completion of a health behavior or activity are more effective than delayed provision. Some studies indicate that incentives may increase one-time behaviors (such as getting a flu shot) or short-term behaviors, but incentives may not be sufficient to help participants sustain long-term behavior change. For example, the effect of financial incentives on weight loss may generate positive effects that fade after 12 or 18 months.<sup>174</sup> Conversely, a 2014 meta-analysis did not find robust evidence that financial incentives are more effective for short-term than long-term behaviors.<sup>175</sup>

While NC's HB 662 does not include explicit provisions for healthy behavior incentives, the bill states that DHHS will "establish preventive care and wellness activities" including routine physicals, screenings, and weight management programs, as medically appropriate for the individual participant.<sup>145</sup>

**Relevance to NC:** Lessons from Indiana, Michigan, and Iowa suggest that these programs have had moderate to low participation rate in healthy behaviors (ranging from 15-45% participation) and may struggle with long-term retention (75% turnover in Indiana). This may stem from beneficiaries' lack of awareness about healthy behavior incentives programs, which ultimately reduces the effectiveness of such incentives. For North Carolina, these cases suggest that the success of a healthy behavior incentives program hinges on outreach and education regarding healthy behaviors and subsequent incentives. The Iowa case suggests NC could benefit from targeting those groups that are less likely to complete these healthy behaviors, such as men, younger members, non-whites, and those who were enrolled in Medicaid for a short period of time. Finally, healthy behavior incentives that use rewards are more likely to improve engagement and improve health outcomes than those using penalties. Healthy behavior incentives may be appealing for short-term behaviors, such as getting preventive services, but may not address long-term health change.

### ***Recommendations for NC:***

From our analysis of Section 1115 waivers in Indiana, Michigan, and Iowa, we offer the following lessons for North Carolina:

#### **Minimize Complexity of Medicaid Programs to Reduce Administrative Cost**

Our case studies reveal that states are designing increasingly complex Medicaid programs with multiple benefit levels, individual health savings accounts, income-based premiums and cost sharing, and penalties for non-payment for some beneficiaries—all of which must be tracked and monitored by the state. Not only is this system likely to be confusing for beneficiaries to navigate, but it may also be costly for the state to administer and manage. This complexity may require the state to contract out to costly third-party consultants or vendors to conduct analysis and manage operations of various Medicaid elements.

Early evidence suggests that revenue collection is modest at best, and may be costly to administer. Michigan collected approximately \$543,600 from premiums and copays in three months (July to September 2015)—which would be roughly \$2.1 million—but is spending \$20 million annually on administrative costs associated with the Healthy Michigan program.<sup>152</sup> Arkansas, which had charged premiums of \$5 to \$10/month like Iowa, ultimately canceled cost sharing in June 2015 because the administrative costs exceeded collections from premiums.<sup>167</sup>

North Carolina Medicaid can be more efficient if there is low administrative burden for the state. Further research is needed to understand whether the complexity in states like Indiana is truly getting a return on the state's dollars. Thus, we recommend North Carolina adopt a simpler, streamlined program design with one plan for all expansion enrollees and limits premiums and cost sharing. North Carolina should review outcomes in Iowa, which charges flat rate premiums, to understand whether this model is more financially manageable for beneficiaries.

#### **Invest in Outreach and Education Needed for Incentives to Have an Impact**

Healthy behavior incentives seem to have promise in encouraging completion of preventive services, but are stymied from lack of beneficiary awareness. Michigan and Iowa experienced low beneficiary participation (less than 25%) in completing healthy behavior incentives such as wellness exams and health risk assessments. Both Michigan and Iowa had high proportions of beneficiaries who were not aware about incentives, which may be an underlying reason that beneficiaries fail to complete healthy incentives. These cases suggest the importance of educating beneficiaries on the purpose and policies associated with the healthy behavior incentives program. States should leverage primary care providers in promotion to increase beneficiary awareness, by connecting results from wellness exams and HRAs to ongoing care conversations. As North Carolina considers encouraging healthy behaviors for its proposed expansion population, it will be important to ensure providers are bought-in to the initiative.

If North Carolina is going to implement healthy behavior incentives, it should also consider using them strategically. Research suggests that healthy behavior incentives are more effective for short-term or one-time behaviors, such as receiving preventive services. Given that healthy behavior incentives can be costly for the state to track, North Carolina should consider implementing incentives for process measures that are easier to measure.

### **Combine Incentives for Consumers with those for MCOs and Providers**

All of the Section 1115 elements discussed in this section—premiums, cost sharing, and healthy behavior incentives—target the consumer. However, it is important to realize that “healthy behaviors” do not operate in a vacuum. If poor Medicaid beneficiaries do not have access to healthy foods, safe roads or gyms to exercise, or consistent incomes to adhere to medication regimens, then healthy behavior incentives will fall flat. A holistic approach requires addressing social determinants of health in order to move the needle on reducing healthcare costs. As such, it is critical for the state to also incentivize providers and MCOs to consider long-term health outcomes. The state must create partnerships with providers and payers that incentivize long-term health improvement for this population so that costs will decrease.

The limited success of incentives to date suggests that the challenge with healthy behavior programs stems not from a lack of demand, but rather an inability to consume. The market failure for preventive care for Medicaid beneficiaries can be attributed to a lack of access. Low participation is unsurprising given that indigence can create material barriers to healthy behaviors (e.g., consumption of nutritional foods, engagement in exercise). NC should take a step back and address the social determinants of health, which erect these obstacles to wellness in the first place.

## Section 5: Delivery Reform

### *Executive Summary*

Truly comprehensive healthcare reform proposals cannot overlook the “healthcare” at stake. This section addresses healthcare delivery reforms to improve Medicaid in North Carolina. Three distinct areas are analyzed: reducing costs for super-utilizers, reforming the dual eligible delivery system, and using innovative solutions to address provider shortages.

Given that a small percentage of patients account for the majority of healthcare costs, “hotspotting” provides an opportunity to help North Carolina improve health at lower cost. Rooted in law enforcement’s data-driven identification of high-crime locations, hotspotting is a method to target healthcare “super-utilizers,” patients who consume high levels of avoidable healthcare, for enhanced care management. Most famously pioneered in Camden, NJ by Dr. Jeffrey Brenner, hotspotting employs multidisciplinary teams to address both patients’ medical needs and underlying social problems that exacerbate poor health. Similar models have since been implemented across the country to great success. Virginia Coordinated Care has seen 49% reductions in cost and 44% reduction in hospitalizations as a result of hotspotting. In particular, hotspotting holds considerable potential to reduce expenditures among Medicaid dual-eligible individuals and improve health outcomes in rural populations.

The Medicare and Medicaid dually eligible (duals or dual eligibles) population represents a key group to target reform efforts, using hotspotting and other approaches. Duals are a particularly expensive population to cover, as they are often the poorest and sickest beneficiaries from both programs. In NC, duals represent 17% of the Medicaid population but require over 30% of state Medicaid spending. National healthcare reform led to the development financial alignment incentives and D-SNPs (Special Needs Plans) to address problems presented by the dual eligible population. NC has undertaken efforts to reform care delivery and payment for the dual eligibles. We profile six state approaches to dual eligible reform to develop NC-specific recommendations, which are to (1) use cost saving strategies by aligning financial incentives, (2) address enrollment problems, and (3) integrate care to improve quality and outcomes.

Another promising innovation in delivery reform is telemedicine, the remote delivery of healthcare using telecommunication services. Telemedicine provides a low-cost solution to rising healthcare prices, provider shortages in rural counties, and limited access to specialists. NC currently follows a hub-and-spoke telemedicine model, with provider hubs offering services to patient originating spoke sites. Currently, NC Medicaid telemedicine reimbursement is limited to live video interactions with originating site location requirements. By expanding telemedicine coverage to include services like remote patient monitoring and relaxing originating site requirements, NC can reduce costs and increasing access to care for Medicaid beneficiaries. Finally, Graduate Medical Education (GME) is a term used to describe postgraduate residency training within a specialty of medicine. GME training is currently provided through ten centers throughout NC. Despite the massive increase in the NC population over the past 25 years, there has been no meaningful increase in Medicare GME funding due to the Medicare cap instituted by Congress in 1997, which has forced hospitals to turn to Medicaid or self-fund for additional residency positions. The current method of GME funding does not take advantage of the available data and technology to address the needs of NC patients. By incorporating hotspotting and telemedicine professionals into the NC physician workforce, NC can begin training at the clinical training level to reduce costs and improve health outcomes.

## Section 5: Delivery Reform

### 5a. Hotspotting Approach

#### *Super-utilizers and Medicaid Costs*

A disproportionate share of healthcare spending in the U.S. is used to provide care to a very small group of patients: one percent of the population accounts for 22% of total healthcare expenditures annually.<sup>7</sup> This distribution is even more pronounced within Medicaid, wherein 1% of beneficiaries account for 25%, and 5% account for 54% of total Medicaid expenditures.<sup>176</sup> In 2014, this small group of high-cost beneficiaries was responsible for only 3.7% of all Medicaid emergency department (ED) visits, but more than 19% of ED expenditures.<sup>177</sup> In addition, they visited the ED five times as frequently as other Medicaid patients.<sup>177</sup>

These high-complexity, high-cost people are known as super-utilizers: patients who accumulate large numbers of avoidable ED visits and hospital admissions due to multiple complex physical, behavioral, and social issues that are often unaddressed.<sup>178</sup>

Nationally, of the top 1% of super-utilizers covered by Medicaid, 83% have at least three chronic conditions and over 60% have five or more chronic conditions.<sup>179</sup> Super-utilizers tend to be *chronically* high cost; nearly 60% of Medicaid beneficiaries who were among the most expensive 10% in one year typically remained among the top 10% in subsequent years.<sup>180</sup>

#### *Context for North Carolina Medicaid*

In North Carolina, Medicaid beneficiaries with disabilities make up less than one fifth of enrollees, but account for almost half of Medicaid expenditures (see **Figure 1**).<sup>181</sup> The elderly constitute one-tenth of enrollees, but account for 17% of NC Medicaid spending (see **Figure 1**).<sup>181</sup> While these dual-eligible beneficiaries—those qualifying for both Medicare and Medicaid benefits—commonly qualify as super-utilizers, there are several other groups that typically make up the highest spenders. For hospital stays covered by Medicaid, on average super-utilizers are older, male, have multiple chronic conditions, and have very common acute conditions such as blood poisoning, pneumonia, urinary tract infections, and mood disorders.<sup>182</sup>

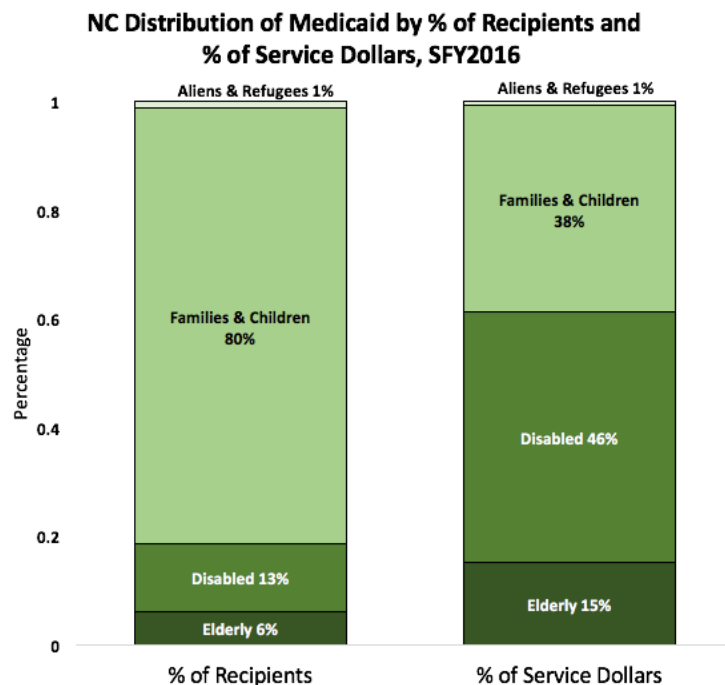
Growing evidence indicates that while most super-utilizers are not receiving coordinated care, preventive care, or care in the most appropriate settings, the roots of super-utilization are much less *medical* than they are *social*.<sup>178,183</sup> This ‘medicalization of social problems’ results in healthcare tools being used—repeatedly and unsuccessfully—to address social determinants of health such as housing instability, food insecurity, education levels, barriers to access, and lack of coordination of services that have been directly correlated with poor health outcomes.<sup>180,184,185</sup>

#### *Origins of Hotspotting*

‘Hotspotting’ is a term borrowed from law enforcement, originally used to describe the process of using statistical methods to map neighborhoods and identify the areas of highest crime, or hotspots.

Facing rising crime rates and significant budget pressures in the 1990s, the New York City police department reorganized its police officer shift assignments based on hotspotting data, placing extra law enforcement resources in the hotspots, or places of highest crime activity. This move is credited with a 60% reduction in crime in New York City.<sup>186</sup>

**Figure 1. NC Medicaid Enrollment vs. Spending by Enrollment Group, SFY2016.<sup>181</sup>**



Source: [NC Medicaid and NC Health Choice](#), Annual Report for State Fiscal Year 2016.<sup>16</sup>

Upon learning of the remarkable success of this data-based reallocation of resources as an invited citizen member of a Camden, NJ police reform commission, Dr. Jeffrey Brenner, a local family physician wondered whether the same techniques could be applied to healthcare. ‘Medical hotspotting’ is a technique used to identify and target super-utilizers. Using billing records from the three area hospitals, Dr. Brenner created block-by-block maps of Camden, highlighting those areas where people with highest medical expenditures (including repeated hospitalizations, ED usage, and ambulance pick-ups) resided. He reasoned that super-utilization—chronically high medical expenditures on a small percentage of patients—resulted from a failure of timely and effective healthcare. If he could identify these patients, he could better understand and address their needs, improving their health outcomes and stemming the financial hemorrhage of Camden safety-net healthcare.

### *The ‘Medicalization of Social Problems’*

Dr. Brenner convened a group of local physicians and social workers and, using his neighborhood maps and billing information, sought out super-utilizers. He quickly learned that super-utilizers weren’t slipping through the cracks of the system, instead, they were receiving *too much of the wrong kind* of care. Along with colleagues from nursing and social work, Dr. Brenner began the work of locating and learning about individual super-utilizers. These patients shared a need for support addressing the social problems that were exacerbating their medical problems, such as applications for social services, referrals to addiction treatment, medication reconciliation to catch over-prescription and drug interactions. These issues were largely attributable to a lack of coordination of medical records and communication between providers and institutions.

Recognizing the need for a new way for hospitals, providers, and community residents to collaborate, Dr. Brenner founded the Camden Coalition of Healthcare Providers in 2003, where he has since served as Executive Director.<sup>187</sup> Dr. Brenner and his team have since reduced hospital visits by 40% and reduced aggregate monthly hospital bills from \$1.2 million to \$500,000 among the first set of super-utilizers with whom they worked.<sup>188</sup> Dr. Brenner's innovative use of data to identify high-need, high-cost patients in a fragmented system and improve their care was profiled in the 2011 New Yorker article "The Hot-spotters" by writer and surgeon Dr. Atul Gawande and on PBS Frontline.<sup>189,190</sup> In 2013 he was honored with the MacArthur "Genius" Fellowship for his work, and in 2014 he was elected to the Institute of Medicine.<sup>191</sup> In addition to his role at the Coalition, Dr. Brenner is the medical director of the Urban Health Institute at Cooper Health System, and serves as a clinical instructor for Cooper Medical School at Rowan University and an adjunct assistant professor for The Dartmouth Institute.<sup>187</sup>

### *Hotspotting in the Health Insurance Marketplace*

In January of 2017, United Healthcare and the Camden Coalition announced a \$15 million strategic partnership to develop, test, and scale United Healthcare's new *myConnections* community-based services model for patients with complex health, behavioral and social needs.<sup>192</sup> The partnership is designed to combine Camden's hotspotting expertise with United Healthcare's resources and broad national influence to develop the first comprehensive, scalable, and sustainable hotspotting solution that integrates medical, behavioral and social services to serve the country's most vulnerable and complex populations. Dr. Brenner joined United Healthcare as senior vice president, Integrated Health and Human Services, to lead *myConnections*, which will operate as a formal business division within United Healthcare Community & State.<sup>192</sup> Today, *myConnections* programming is being developed in Arizona, Michigan, and New York through flexible-format *myCommunity* Connect centers and targeted data-enabled outreach.<sup>192</sup> *myConnections* consists of four core service lines created to address social and economic factors: employment; housing; transportation; and financial stability. These services lines are designed to close gaps in care and improve both the access to and delivery of government and community resources.<sup>193</sup> This on-the-ground presence in communities has enabled the creation of strategic partnerships with a broad spectrum of service providers—from faith-based and charity organizations to public sector entities—and has helped identify areas of critical need at local levels.<sup>192,193</sup>

Since the Camden Coalition's inception in 2003, hotspotting has become a well-developed technique with many freely available resources online, such as the *Ten Steps to Hotspotting*, to aid hotspotters in beginning new programs (**Figure 2**).<sup>12</sup> Medical hotspotting has not only met enormous success in New Jersey, but is now being replicated in over 66 different locations nationwide in a variety of environments, at institutional, regional, and state levels. While these medical hotspotting programs often look very different from location to location, all of them operate on the fundamental hotspotting philosophies developed by Dr. Brenner in Camden: use data to hone in on individuals and geographic areas of high health or safety concern and intervene with intensive multidisciplinary care coordination services (see **Figure 3 and 4**).<sup>178,194,195</sup>

**Figure 2. Ten Steps to Hotspotting.**<sup>196</sup>

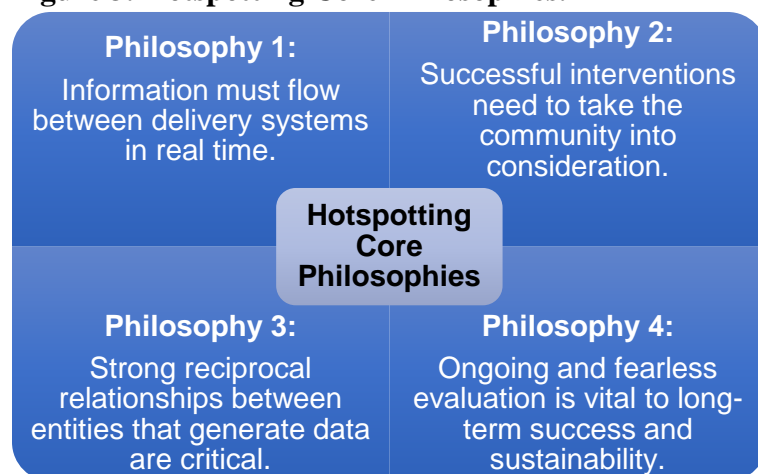
<b>Step 1</b>	With help from your legal department, prepare a media and medical record release form that will allow you to interview the patient and review their old billing and medical records.
<b>Step 2</b>	Approach a social worker, hospitalist, attending, discharge planner, nurse, or other care team member and ask that person to contact you when someone who has been in the hospital three or more times over the past six to nine months is admitted again.
<b>Step 3</b>	Meet the patient at his or her bedside and begin to learn this person's story. Introduce yourself and explain that you are trying to learn more about the challenges patients face getting healthcare. Explain that you would like to get to know him or her, talk with the person during the hospital stay, continue to meet after discharge, and view his or her hospital records. If the patient agrees, ask him or her to sign the release form.
<b>Step 4</b>	Coordinate with the discharge planner so you know when the patient will be discharged as well as when any follow-up appointments with a primary care physician and/or specialist are scheduled. Seek permission from the patient to meet him or her at follow-up appointments.
<b>Step 5</b>	Go to the patient's residence on the day he or she is released if the patient agrees. Find out who this patient is, his/her likes and interests, where he or she grew up, as well as learning about his or her recent experiences seeking healthcare. The goal is not to get a medical history but rather to better understand the patient's personal circumstances, which will provide insights into this person's struggles with getting care in an outpatient setting.
<b>Step 6</b>	Go with the patient to any follow-up medical appointments as an observer and find out what healthcare looks like from the patient perspective. If the patient is eligible to apply for any social services, go with him or her so you can see firsthand what that process is like.
<b>Step 7</b>	Obtain a copy of the patient's billing record from the hospital and put together a summary that shows how many times the patient has been admitted to the hospital or emergency room in the past year and the total charges for the patient.
<b>Step 8</b>	Prepare a case report of the interview and medical history that sheds light on your understanding of why the patient has had to be hospitalized so many times and share it with your colleagues. Identify potential interventions that might improve the patient's ability to access needed care and services outside the hospital or emergency room.
<b>Step 9</b>	Assemble a multidisciplinary team of physicians, nurses, social workers, quality improvement experts, and other health professionals for a case conference. Discuss the case, refine interventions and explore how representative this patient is of other patients with similar needs. What do these patients have in common? Where does our health system fail them? What costs are incurred because of preventable care for these populations?
<b>Step 10</b>	Meet with the hospital CEO, medical school dean and/or faculty member to discuss the clinical, educational and financial implications of this one patient's story. If the patient is willing, bring him or her with you. What conclusions do



	you draw from this case, and what recommendations do you have for improvements?
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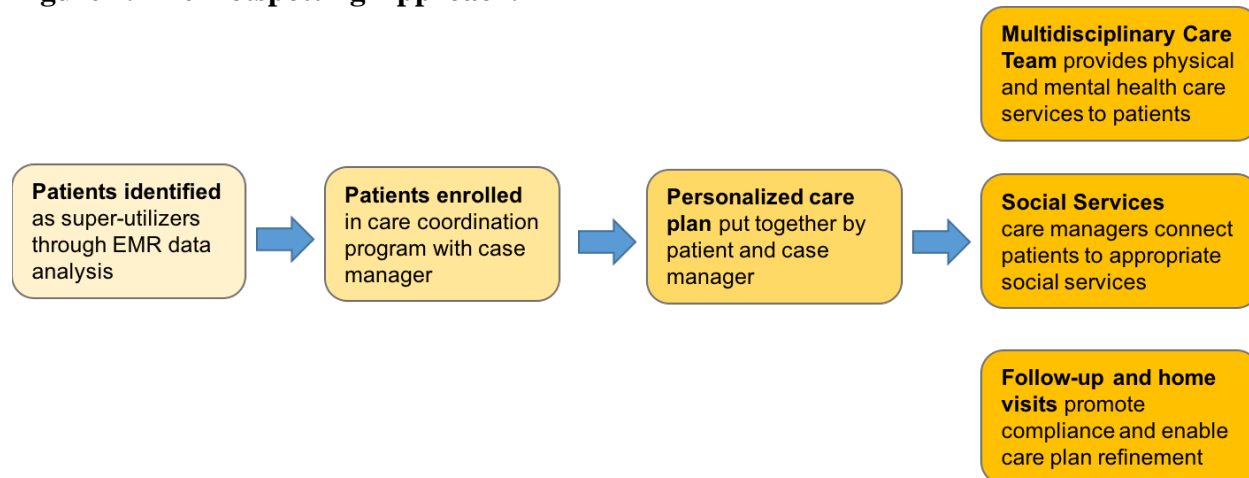
Source: Figure created by authors using information from [American Association of Medical Colleges. \(2017\). Ten Steps to Hot Spotting: Creating the Next Generation of Hot Spotters.](#)<sup>196</sup>

**Figure 3. Hotspotting Core Philosophies.**<sup>195</sup>



Source: Figure created by authors using information from Truchil A, [Hotspotting: The Driver Behind the Camden Coalition's Innovations, 2014.](#)<sup>195</sup>

**Figure 4. The Hotspotting Approach.**



Source: Figure created by authors.

## *Hotspotting Medicaid Success Stories*

### I. Hennepin Health and the Coordinated Care Clinic

Hennepin Health is an accountable care organization that serves 12,000 Medicaid beneficiaries ages 21-64 with incomes up to 75% of the federal poverty level in Minnesota.<sup>197</sup> Its patient population exemplifies how social and behavioral contexts impact health\*: 32% are in unstable housing, 42% have mental health needs, and 45 percent have substance abuse disorders.<sup>198</sup> Hennepin's 5% most expensive patients account for 64% of costs.<sup>198</sup>

Utilizing the county-wide medical records system, Hennepin Health identifies and refers its highest Medicaid utilizers to Hennepin County Medical Center's Coordinated Care Clinic for comprehensive multidisciplinary care and care management. The ambulatory intensive care unit provides its ~500 patients primary care, substance abuse treatment, mental health counseling, medication management, and assistance with social needs. Designed specifically for the hospital's highest service users, the clinic is funded primarily by Medicaid reimbursements, although not all of its services are reimbursable. The Coordinated Care Clinic witnessed a 38% reduction in ED visits and 25% reduction in inpatient admissions in its first 30 months of operation as well as a 23% reduction in total medical care charges.<sup>198</sup>

Hennepin is a helpful case comparison, as North Carolina and Minnesota have similar rural/urban population distribution. In 2015, 22.0 and 22.5% of their respective populations lived in rural areas.<sup>36</sup>

\*The clinic identified 8 factors that lead to the need for complex care coordination: chronic pain, impaired cognition, active chemical dependency, medical non-adherence, disruptive mental health problems, unstable housing, medical complexity, and lack of community or family support.<sup>198</sup>

### II. Virginia Coordinated Care (VCC) Complex Care Clinic

The Virginia Coordinated Care for the Uninsured Program (VCC) provides health services coordination to over 30,000 uninsured individuals. It is funded by the Virginia Commonwealth University Health System's Indigent Care funds from the federal and state governments. In 2010, 24% of VCC's patient population accounted for 77% of total costs, leading VCC to launch the Complex Care Clinic in 2011 to enhance management for patients with highest cost and utilization.<sup>199</sup> The clinic's interdisciplinary team, which includes physicians, nurse practitioners, social workers, clinical psychology fellows, and registered nurse (RN) case managers, coordinates care for patients with multiple chronic conditions. In its first year, the program saw a 49% reduction in cost, 44% reduction in inpatient hospitalizations, and 38% fall in ED utilization.<sup>199</sup> By 2013, the clinic had enrolled over 500 patients.<sup>200</sup>

VCC also introduced the Transforming Complex Care (TCC) initiative that introduced community health workers to extend care management into patient communities and homes. VCC analysis demonstrated that the underlying reasons for readmissions are often social determinants of health and that home visits help identify the types of assistance and community resources needed to improve a patient's health.<sup>199</sup>

North Carolina and Virginia have similar population distributions by age, sex, and race.<sup>55</sup> In 2015, 71 and 70% of their populations were white, and 22 and 20% were black, respectively.<sup>55</sup>

### III. NC Priority Patients Program

Community Care of North Carolina (CCNC) has experimented with its own super-utilizer program, the Priority Patients Program. Serving 5% of CCNC's 1.3 million patients, the program includes care management, home visits, and coordination with providers and social services. Participants averaged a 6% reduction in total cost compared to the expected.<sup>198</sup> See Section 4c on Primary Care Case Management for more details on CCNC's model.

### IV. Duke Hotspotting Initiative

Duke Hotspotting Initiative (DHSI) integrates ongoing hotspotting efforts at Duke within the medical school curriculum. Based on training from the Camden Coalition, DHSI is an optional community health practice course involving a six-month commitment for teams of medical students to coordinate the care of a single, high-utilizing patient. Student teams work with the Duke Outpatient Clinic (DOC), a primary care facility, and strive to improve patients' health while reducing health-system costs. The team of two students, working closely with the care coordinator at the DOC, develop realistic, attainable goals that enable patients to take a more proactive approach to managing their own healthcare.<sup>201</sup>

DHSI has begun collecting objective chart-review data on the health outcomes of patients involved in the program. Even before the end of the 6-month commitment, however, anecdotal evidence points to improvements in scheduled appointment attendance, better adherence to medication regimens, and increased commitment to recommended health behavior changes (e.g., smoking cessation, activity recommendations). Medical student hotspotters from both the 2015-2016 and 2016-2017 cohorts reported that, by far, the most important component in improving super-utilizer outcomes in NC is relationship-based care coordination. Establishing trust allowed DHSI hotspotters to better coordinate and tailor care for NC's most vulnerable and costly patients.<sup>202</sup>

#### *Hotspotting Lessons*

Data-driven with real-time information on utilization and effectiveness, hotspotting techniques have demonstrated success with improving health and reducing cost. Across the nation, initiatives such as Hennepin's Coordinated Care Clinic and VCC's Complex Care Clinic provide evidence that multidisciplinary coordinated care is both effective and needed for managing high-utilization patients. As the sources of super-utilization are often social and non-medical in nature, increased collaboration with and access to social services plays an essential role in improving health.

Successful hotspotting initiatives share several commonalities. They rely on robust and timely medical record systems for patient identification and evaluation. Multidisciplinary teams collaborate and often work in close proximity. Effective care coordinators build rapport and relationships with their patients *and* the social services available in patients' local communities. While hotspotting does not purport to assign social problems to the medical system, it does demonstrate the value of communication and collaboration between entities and the benefits of care coordinators that understand specific patients and their unique needs.

## *Hotspotting Benefits for North Carolina*

Enhanced care management of healthcare super-utilizers through hotspotting furthers North Carolina's Quadruple Aim. Proven to reduce cost and utilization, hotspotting personalizes care and engages an interdisciplinary team of providers. As North Carolina shifts towards a person-centered model of care, hotspotting presents a unique opportunity to apply those principles to the state's most expensive and vulnerable patients.

North Carolina's Section 1115 waiver application emphasizes the need to address social determinants of health. Care managers in hotspotting programs do just that—they investigate the social factors harming patient health, tailor personalized care plans, and connect patients with appropriate social services. Given the promise of hotspotting as a tool for advancing the quadruple aim, North Carolina has the opportunity to be a leader in large-scale implementation of effective care and cost management of healthcare super-utilizers.

In the following sections, we will explore the opportunities to employ hotspotting techniques to some of NC Medicaid's most vulnerable and costly participants.

**Dual-eligible populations** represent over 60% of Medicaid spending in NC, and many members of this group are super-utilizers. Ensuring that their care is more targeted and effective by connecting them to appropriate social services and coordinating care for their complex health needs could result in significant cost savings by eliminating payment redundancies, reducing wasted human and material resources, and improving health outcomes for patients and their families.

**Rural populations** in NC have worse health, overall, than urban populations. By using hotspotting data analysis to identify the areas and populations of greatest need, Medicaid services can be tailored to deliver maximum impact with minimal investment.

In fostering collaboration and communication across entities and services, hotspotting can relieve some of the pressure on NC's healthcare providers to address social problems.

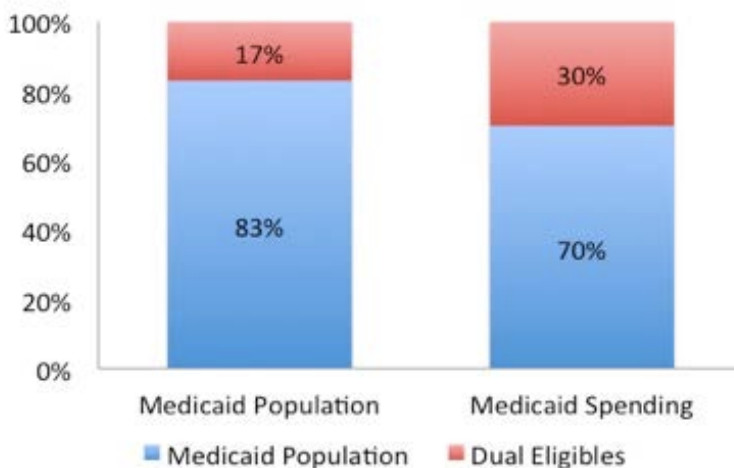
**Graduate medical education** and use of **physician extenders** are areas where hotspotting approaches can support lower costs and higher quality of care.

## 5b. Dual Eligibles: A Targeted Approach to Reforming Delivery and Payment for a High-Cost, High-Needs Population

### *Overview of Dual Eligibles*

To reduce Medicaid costs and increase quality of care, the Medicare and Medicaid dually eligible (duals) population represents a group to target reform efforts. Duals are a particularly expensive population to cover, often the poorest and sickest beneficiaries from both programs. The dual eligible population makes up a relatively small proportion of Medicaid beneficiaries, but requires a large proportion of Medicaid spending. In North Carolina, dually eligible beneficiaries represent 17% of the Medicaid population but require over 30% of the Medicaid spending for the state (see **Figure 1**).<sup>203</sup>

**Figure 1. Dual Eligibles as Percentage of NC Medicaid Population and Budget.**



Source: Figure created by authors, generated using data from [North Carolina Dual Eligible Advisory Committee Report, 2017](#).<sup>204</sup>

Dual eligibles are individuals who are beneficiaries of two public healthcare programs: Medicare and Medicaid. Duals are Medicare eligible either because they are over the age of 65 or are under 65 and have a qualifying disability.<sup>205</sup> These individuals are eligible for Medicaid based on financial and need-based criteria developed by each state.

There are two types of dual eligibles: full-duals and partial-duals. Full-dual eligibles receive full Medicaid benefits, including long-term care, behavioral health, and transportation services. Partial-duals, on the other hand, receive premium and cost sharing support from Medicaid for their Medicare premiums. In North Carolina, there are four groups categorically eligible as full-duals: (1) SSI beneficiaries; (2) individuals with incomes below 100% of the federal poverty level and assets of \$2,000 or less; (3) disabled individuals who receive no SSI with assets exceeding \$2,000 but who cannot afford their medical costs; (4) individuals with unearned income below 200% of FPL who may have some additional cost sharing requirements.<sup>204</sup>

Complex financing and skewed incentives further complicate health care access and costs for the dual eligibles. Theoretically, Medicare and Medicaid should operate in a complementary

manner to account for the full range of needs for this population, but the programs have a financial interest in shifting costs onto the other program, resulting in fragmented care and confusion for the patients.<sup>206</sup> While Medicare primarily covers acute care needs, Medicaid covers long-term care. Because of these separate streams, an investment in one program will likely result in cost-savings for the other program, discouraging implementation. For example, if a state invests money in Medicaid by increasing coordination of long-term care services, the likely result will reduce hospitalization, a cost reduction that will benefit Medicare not Medicaid.

National health care reform provided an opportunity to consider how best to align the incentives of Medicare and Medicaid to offer high quality care at a lower cost. Attempts have been made at both the federal and state levels to address the complex set of problems presented by the dual eligible population. At the federal level, two primary models were advanced: financial alignment incentives and D-SNPs.

Under the financial alignment incentives model, the Centers for Medicare & Medicaid Services (CMS) is testing models with States to better align the financing of these two programs and integrate primary, acute, behavioral health and long-term services and supports for their Medicare-Medicaid enrollees. As of March 2017, ten states have adopted the Capitated Model, 2 have adopted the Managed Fee-for-service model, and one state has chosen an alternative, administrative model. In the studies states that participated in FAI, considerable savings are anticipated, as shown in **Figure 2** below. This program was initiated in July 2011, but most of the demonstrations will conclude at the end of 2017.<sup>207</sup> In 2011, North Carolina proposed to join the FAI by building on CCNC with a managed FFS integrated care model for duals, but eventually withdrew the proposal.<sup>207</sup>

**Figure 2: Anticipated Savings Percentages from Financial Alignment Demonstrations.**

State	Year 1	Year 2	Year 3
<b>Texas</b>	a. 1.25* b. 2.75*	3.75	5.5
<b>Virginia</b>	1	2	4**
<b>South Carolina</b>	1	2	4

\*Demonstration Year 1a in Texas refers to March to December 2015, while demonstration Year 1b in Texas refers to 2016.

\*\*If at least a third of plans have losses exceeding 3% of revenues in Year 1, then Year 3 savings will be 3%.

Source: Figure created by authors, generated using data from [Kaiser Family Foundation](#), 2015.<sup>208</sup>

The Medicare Modernization Act (2003) enabled insurance companies to create Special Needs Plans (D-SNP) that provide targeted care for certain subsets of individuals. D-SNPs began operating in 2006. Under ACA, beginning in 2013, D-SNPs must contract with State Medicaid and include minimum MIPPA requirements. Enrollment has steadily grown and D-SNPs now cover 1.9 million people nationwide in 38 states, DC and Puerto Rico (Feb 2017). States may make

capitated payments for D-SNPs for Medicaid services such as LTSS, acute care services (vision, dental, hearing, transportation). The enrollment in D-SNPs varies greatly by state, as shown in **Figure 3** below.

**Figure 3: D-SNP Plans and Enrollment Across States.**

State	Number of plans offered	D-SNP Enrollment, Oct. 2015
Florida	45	224,637
South Carolina	3	23,622
North Carolina	6	18,733
Virginia	2	1,618
Tennessee	6	79, 561
Texas	21	130, 210
Minnesota	9	36,591

Source: Figure created by authors, generated using data from [Kaiser Family Foundation, 2015](#).

North Carolina has also made considerable effort to study and evaluate the dual eligible program in the state as well as craft tangible policy solutions that comport to the culture and care delivery system in North Carolina.

#### *North Carolina Dual Eligible Advisory Committee Reform Efforts*

On January 31, 2017 the North Carolina State Legislature Dual Eligibles Advisory Committee (DEAC) alongside NC DHHS submitted a report regarding strategies to cover dual eligible beneficiaries via capitated prepaid health plan (PHP) contracts.<sup>209</sup> The DEAC has studied several approaches via integrating capitated Medicaid contracts with special-purpose Medicare Advantage plans to reduce overlap between the programs. Based on state analysis and other states' experiences with similar plans, NC DHHS recommended a program with two companion approaches:

- 1. Voluntary enrollment capitated contracting** - aligning capitated Medicaid benefits with duals-focused Medicare Advantage Plan under the same company
- 2. Mandatory enrollment capitated contracting for Medicaid benefits only** - alongside the voluntary program, this program would ensure that all duals become at least enrolled in capitated Medicaid plans

In order to cover the population, the committee looked at several plan options. These options included using, Financial Alignment (via capitation), Dual Eligible Special Needs Plans, and Programs of All-Inclusive Care for the Elderly (PACE). In addition to these programmatic structural options, North Carolina is also considering options for adding long-term care services into integrated programs. Each option is summarized below and will provide background when comparing what North Carolina is considering against what other states have done.

### *Financial Alignment Options*

In 2011, CMS announced the Financial Alignment Initiative with demonstrations to test capitated models of Medicare-Medicaid delivery. Although the Medicare Medicaid Coordination Office (MMCO) is not adding additional capitated demonstrations, North Carolina can still learn from these models. Additionally, it is likely that North Carolina could submit an 1115 waiver that proposes a model similar to FAI, as discussed below in the Virginia section. In the capitated model, the state, CMS, and a health plan enter a three-way contract where the Medicare-Medicaid Plan (MMP) provides coverage for Medicare and Medicaid services in return for dual-stream payment.<sup>210</sup> This three-way agreement benefits the state by addressing the monetary and programming issues that arise from providing Medicare and Medicaid coverage separately to the same beneficiary.<sup>210</sup> MMPs provide all Medicare Part A, B, and D and Medicaid services in return for a capitated payment that blends Medicare and Medicaid funds. This should provide a money saving opportunity for states. North Carolina could choose in its capitated plan options to cover all services (including behavioral health, LTSS, Medicaid drugs, and Medicare) or only some (such as leaving out behavioral health).

Capitation has its pros and cons. First, MMCO is not considering adding more states to the capitated models of the Financial Alignment Initiative. Still, states can learn from this model and better integrate care. For example, Virginia has now established its capitated payment system through an 1115 waiver. The strength of capitation is that it truly blends Medicare and Medicaid funding, which better aligns program incentives.<sup>210</sup> Integration is also possible in administrative processes as well as in data sharing. A weakness of capitation lies in that the MMPs may not reimburse providers in a way that incentivizes coordination of care.<sup>210</sup>

### *Dual Eligible Special Needs Plans*

Dual Eligible Special Needs Plan (D-SNP) options include fully integrated dual eligible SNPs (FIDE-SNPs) or other models of D-SNPs that vary in level of integration between Medicare and Medicaid. D-SNPs could be used to align a managed Medicaid plan (such as MLTSS) with Medicare by requiring the Medicaid plans to offer companion D-SNPs.<sup>210</sup> MIPPA requires that all D-SNP contracts include minimum requirements, but states can go beyond these requirements to better integrate Medicaid and Medicare. North Carolina could fully integrate Medicaid and Medicare benefits, along with supplemental benefits so that dual beneficiaries have just one provider set and one benefits package.<sup>210</sup> There are three main types of D-SNPs considered by the state.

The first type is a D-SNP with Medicare Cost-Share/Medicaid Wraparound Services. In this model, states could contract with D-SNPs to provide Medicare premiums and cost sharing that Medicaid is required (or chooses) to pay for dual eligibles. States can also contract with the D-SNPs to provide Medicaid services that are not covered by Medicare (such as vision, dental, hearing, care coordination, etc.)<sup>210</sup> The second model is D-SNPs that provide Medicaid Acute and Long-term support services. States contract with D-SNPs for Medicare and Medicaid benefits including Medicaid long-term supports and services and/or Medicaid behavioral health services.<sup>210</sup> Finally, the third model is a fully integrated dual eligible special needs plans (FIDE-SNPs). This is a special D-SNP designation from CMS. States can require D-SNPs to request designation from CMS as a FIDE-SNP. FIDE-SNPs are a special type of D-SNP, given additional flexibility by CMS used to achieve a high degree of integration of Medicare and Medicaid services.<sup>210</sup>



FIDE-SNPs provide dual eligible beneficiaries access to Medicare and Medicaid benefits under a single MCO, coordinate the delivery of Medicare and Medicaid services (using aligned care management and specialty care network methods for high-risk beneficiaries), and coordinate enrollment, member materials, communications, grievance and appeals, and quality improvement. States with FIDE-SNPs include Massachusetts, New Jersey, and Wisconsin.<sup>210</sup> Several pros and cons should be considered for D-SNP options. D-SNPs allow the state to set the level of integration between Medicaid and Medicare, and for streamlined administration for enrollment, quality measurement, etc. Additionally, states have more cost predictability with D-SNPs.<sup>210</sup> However, with the exception of FIDE-SNPs, Medicare and Medicaid funds are not truly blended under D-SNPs and consumers will not experience a completely integrated system for enrollment and provider networks. These plans also may not be available in the most rural regions.<sup>210</sup> D-SNPs are required by MIPPA to contract with Medicaid agencies in the state, but state Medicaid agencies do not have to contract with D-SNPs. As such, they can select only those that fit their needs.<sup>210</sup>

### *Programs of All-Inclusive Care for the Elderly (PACE)*

North Carolina currently operates a Programs of All-Inclusive Care for the Elderly (PACE) in the state. PACE integrates care for older adults who need nursing home level of care. Provider organizations receive capitated funding from both Medicare and Medicaid and are responsible for all of their participants' healthcare needs, including medical and behavioral healthcare, acute care, LTSS, and prescription medications.<sup>209</sup> PACE regulations integrate Medicare and Medicaid administrative processes. While PACE remains a good option for covering some full duals in the state, because of its limited scope, additional plans are needed.<sup>209</sup>

### *Adding Long-term Care Services*

North Carolina is considering adding supplemental benefits for full dually eligible beneficiaries because they recognize that these benefits can save money not only by improving patient health, but also by incentivizing beneficiary enrollment in the integrated program (which increases cost effectiveness). Such additional benefits include adult dental, caregiver respite, home meal delivery, behavioral health services, and others.<sup>209</sup>

Several states have programs in place to cover dual eligible beneficiaries. These programs allow for comparison of methods to integrate Medicaid and Medicare, as has been suggested by the DEAC and NC DHHS. The following section presents an overview of the dual eligible reform efforts of six different states: Virginia, South Carolina, Florida, Tennessee, Texas, and Minnesota. Their efforts help inform the possible policy strategies as well as the potential impact of adopting such a policy in North Carolina.

Comparing other state reform and programs to cover Medicare-Medicaid dual beneficiaries provides an opportunity to consider reform strategies that may be successful in North Carolina. **Figure 4** provides an overview of the study states and some key data points.

In the state study section below, we profile six states: Virginia, South Carolina, Florida, Tennessee, Texas, and Minnesota. Virginia was one state selected for a CMS Dual Eligible Demonstration in 2014 and is considered one of the more successful demonstrations. Virginia's Commonwealth Coordinated Care (CCC) uses capitated funding from both Medicaid and Medicare to provide Medicaid-Medicare Plans (MMPs) for beneficiaries. The program will be extended via an 1115 waiver to fully transition to a statewide managed care program that

includes Long-term services and support (LTSS) and behavioral health. South Carolina has implemented a capitated Financial Alignment Initiative demonstration called Healthy Connections Prime. The program emphasizes providing well-rounded care and includes many services that facilitate community-based care (such as home repairs, delivered meals, and caregiver support). Notably, Healthy Connections Prime includes palliative care benefits for those with serious illnesses who may not meet hospice criteria. Florida uses its Medicaid Statewide Managed Care Program to cover duals by offering a Managed Medicaid Assistance specialty plan to target full duals or Medicare patients with chronic conditions. In 2013, Florida transited Medicaid beneficiaries using LTSS to managed care in its Long-term Care Program, with the objective of reducing the number of patients in long-term care facilities. Florida's emphasis on reforming long-term care has led to 5% savings after three months.

**Figure 4: Study State Comparison of Dual Eligible models.**

	Description	Attractive feature	Financial Alignment Demonstration	Enrollment
<b>Virginia</b>	Integrated care for Medicaid-Medicare enrollees through capitated financial alignment model	1115 waiver for state –wide managed care for long-term and behavioral services	Yes - Capitated	31,069
<b>South Carolina</b>	Integrated community-based managed care under capitated financial alignment demonstration	Palliative care benefits and 6-month continuity of care provision	Yes - Capitated	8694
<b>Florida</b>	Mandatory state-wide managed long-term program and services to supplement separate Medicaid and Medicare benefits	Mandatory long-term care plan improves quality of life for beneficiaries	No	94,803
<b>Tennessee</b>	Mandatory statewide managed care for all Medicaid recipients and complementary LTSS managed care program to integrate Medicare and Medicaid	Aligned Medicaid and Medicare plans to improve enrollment	No	137,976
<b>Texas</b>	Capitated financial alignment program focused on long-term care alignment of Medicare and Medicaid	Automatic enrollment into the program	Yes - Capitated	43,680 (168,000 eligible)
<b>Minnesota</b>	Administrative dual demonstration to align Medicare and Medicaid processes and program administration .	Emphasized administration, alignment so duals have one plan for all needs	Yes - Alternative Model	41,827 (56,879 eligible)

Source: Figure created by authors, based on information in “state analysis” below.

Tennessee was not a demonstration state, but covers duals through its TennCare Medicaid program which enrolls all Medicaid recipients into managed care. Additionally, Tennessee has implemented TennCare CHOICES to cover LTSS via managed care. Importantly, MCOs offering LTSS in the TennCare CHOICES program must offer a companion D-SNP which integrates administration and care coordination between Medicare and Medicaid. Texas' demonstration is called STAR+PLUS and is an optional program for full-dual eligible beneficiaries that integrates Medicare and Medicaid. Texas and CMS pay managed care plans a set fee for a patient's Medicaid and Medicare services, and physicians receive payment and coordinate care through one entity. Minnesota's demonstration is a special reform effort, focused on improving the administration alignment between Medicare and Medicaid. The state integrates

beneficiary services for elderly duals enrolled in the Minnesota Senior Health Options (MSHO) program through Fully Integrated Dual Eligible SNPs (FIDE-SNPs) which deliver Medicare and Medicaid benefits as one plan, under aligned capitated financing.

Given federal recommendations for reform as well as successes in other states, we have developed three potential areas for dual eligible reform in North Carolina: aligning financial incentives to save costs, addressing enrollment problems, and program operations and benefits to improve quality and outcomes. Since duals place a disproportionate burden on state Medicaid budgets, aligning financial incentives between Medicaid and Medicare to reduce costs should be a primary focus. Because long-term care is often one of the largest costs to Medicaid programs, North Carolina could learn from Florida's focus on integrating long-term care, which resulted in 5% overall savings in the first three months. North Carolina should consider employing some form of passive enrollment and strong patient outreach to increase awareness among duals about the available programs and enrollment dates. These tactics have proven to increase participation in reform programs. Integrating care between Medicare and Medicaid can improve quality and outcomes. Many states have had successes in requiring contractors in Medicaid programs to offer companion D-SNPs for Medicare services. This delivery system integrates care between Medicare and Medicaid under one health plan and would better align incentives and reduce inefficiencies to improve quality and outcomes.

Lastly, we propose a unique recommendation for North Carolina: "hotspotting" for dual eligibles. Rather than geographic hotspotting (i.e., identifying a region with the highest need for care), this would involve using readily available data to identify demographic subsets, such as elderly dually eligible recipients who would benefit from managed care). Hotspotting is different from the programmatic frameworks set up by the federal government and other states and its use could establish North Carolina as a leader in care delivery for duals. Overall, MCOs can provide care for the dual eligible population with significant cost savings. To further improve care, MCOs can utilize hotspotting to target "super-utilizers" within the dual eligible population to better allocate support and resources for preventive care.

### *State Analysis*

#### **I. Virginia: Integrated Care for Medicaid-Medicare Enrollees through Capitated Financial Alignment model**

Commonwealth Coordinated Care (CCC)<sup>211</sup> began as a part of the wider CMS Dual Eligible Demonstration in February 2014. Virginia adapted a capitated financial alignment model within the Financial Alignment Initiative, where Medicaid and Medicare will both contribute to the total capitation payment consistent with baseline spending contributions. The program operates only in specific regions of the Commonwealth, limited to those who are entitled to benefits under Medicare (Part A, or Part B and D) and receive full Medicaid benefits. It is available in 104 localities of 5 regions: Central Virginia, Tidewater Northern Virginia, Roanoke, and Western/Charlottesville.

Patients select an MMP (Medicaid-Medicare Plan) of the 6 that are offered statewide as well as a participating PCP themselves. Each participant is assigned a case manager, with whom they call for all medical services. They may opt out whenever they wish. Continuity of care provisions are set at 6 months that allow care from out-of-network providers.

As of November 2015 there were 67,327 Virginians eligible for Commonwealth Coordinated Care, or CCC, and 29,429 participated. By September 2016, 31,069 were enrolled.

The main reasons why more than 40% of eligible patients chose to opt out in 2015 include reluctance to switch doctors and satisfaction with current coverage; it has been suggested that some providers discouraged their patients from joining to avoid more supervision.

As CCC comes to an end, Virginia received approval for its 1115 waiver in December 2016 to fully transition to a statewide managed care program (“CCC Plus”) that provides statewide managed long-term support and services, and behavioral health in addition to what was provided in CCC. It is planned to launch on August 1<sup>st</sup> of 2017. CCC Plus is anticipated to cover 214,000 individuals. Participation is required for those eligible. However, all full-dual eligible beneficiaries can choose to enroll into another Medicare D-SNP. MLTSS contractors will need to be certified for Dual Special Needs Plan, controlled by the CMS. *See D-SNP section for more detail.*

In addition to managed care programs, Virginia received funding in 2013 and 2014 from CMS “to support demonstration ombudsman programs and one-on-one counseling services in states participating in the Medicare-Medicaid Financial Alignment Initiative.”<sup>212</sup> The additional funding is used to provide person-centered assistance and individualized counseling programs such as SHIPs and ADRC, for outreach and education. Virginia was awarded \$793,462 altogether in August 2013 (\$236,340) and December 2014 (\$557,122).

## Evaluation

RTI International evaluated Virginia’s Commonwealth Coordinated Care as a part of the first aggregate report on existing Financial Alignment Initiatives across States.<sup>213</sup> Virginia’s Department of Medical Assistance Services places emphasis on program evaluation and communication, dedicating noteworthy effort in collaboration with George Mason University to continuously monitor the effectiveness of CCC.<sup>214</sup> It has published five short case studies on how the CCC has positively impacted the dual population, and conducted a survey of 667 beneficiaries.<sup>215</sup> Most respondents enrolled in CCC receive additional dental and vision services, and 91% of the respondents found the enrolment process to be at least somewhat easy to understand. Most reported no significant change in primary, specialty and personal care, and more reported improvements than worsening in care—except where 15% reported a worsening of mental health services. CMS also measured consumer experience through the Consumer Assessment of Healthcare Providers and Systems survey, which corroborated satisfaction of those enrolled in CCC.<sup>216</sup>

## Strengths

Virginia was relatively successful in enrolling those eligible into CCC: by the end of the 2<sup>nd</sup> quarter, 29% of those eligible were enrolled, compared to 16% in Ohio and 13% in Washington, achieving one of the highest enrolment rates across demonstrations. Passive enrolment was crucial, since 8% of enrollees were voluntary opt-ins, compared to 92% that were passively enrolled. Surprisingly, MMPs, despite being competitors, showed a high level of cooperation: three MMPs created common guidelines for providers, designed similar forms and together met with patients or providers to discuss the differences between the plans.

Stakeholder engagement is particularly strong in Virginia, where information forums and weekly activities are held with beneficiary focus groups as well as the MMPs. CCC publishes several self-reported success stories, including the following:

*“In one example, a care coordinator was able to identify gaps in primary care, arrange transportation to a local provider, divert the member from otherwise using the emergency room, and address long-standing issues of pain. In other instances, care coordinators conducting in-home visits have identified unmet needs, addressed caregiver burden, arranged access to food delivery that would accommodate a diabetic diet, helped to resolve unmanaged pain, and facilitated the approval of increased hours of personal care.”<sup>213</sup>*

Overall, there is high satisfaction with care coordination: over 50% of respondents have met with their care coordinators, and most individuals were extremely satisfied (67%) or somewhat satisfied (28%) with them.<sup>217</sup>

### Weaknesses

Despite being one of the more successful demonstrations, Virginia still did not manage to enroll more than half of the eligible population. CCC+ participation will be required, not voluntary. MMPs struggled with the influx of many new enrollees at once and educating those enrolled about their new plans. Specifically, the state and MMPs made significant efforts to locate eligible beneficiaries. Although the CCC has one of the longest continuity of care provisions, allowing for a 6-month transition period, some providers such as nursing facilities did not use the provisions and denied services, as they were concerned that they would not receive appropriate payment rates. Exit rates remain at 5% of the enrolled population each month.<sup>218</sup> Of those leaving the program, 26% of enrollees opted out voluntarily, 19% left because they lost their Medicaid eligibility, and 4% lost CCC-specific eligibility.

It was reported across states that the roles of care coordinators seem to overlap/confuse with those of existing case managers. “In Virginia, stakeholders reported that the role of the care managers and LTSS providers seemed to be blurred. LTSS providers in that State were concerned that the care managers might be eliminating their jobs.” Transportation is an area of weakness in coverage, as 39% of respondents reported that their needs were only sometimes or never met. 86% planned to continue staying in their health plan, while 10% were not sure.

## **II. South Carolina: Integrated Community-based Managed Care under Capitated Financial Alignment Demonstration**

Healthy Connections Prime is a capitated Financial Alignment demonstration operating between July 2014 and Dec 2017.<sup>219</sup> Enrolment began mid-2016. Patients with Healthy Connections Medicaid (full coverage), and Medicare (entitled to Part A, enrolled in B & D), living in community-based settings at the time of enrolment are eligible for Healthy Connections Prime. The program addresses psychosocial needs through community referrals, integrated care team and care coordinators, as well as home and community-based services (e.g., home-delivered meals, support for caregivers, minor home repairs or modifications). The goal is to reduce emergency visits by providing more home and community-based services, and to delay the time spent in nursing homes. Care is coordinated by CICOs (e.g., Molina, First Choice)—VIP care plus, Absolute Total Care. Each patient is given one card that verifies eligibility/coverage; there is no sequential billing (submit claim to one entity, payment comes from one entity), and one point of contact from Medicare/Medicaid. Patients have no copays for covered prescription drugs, doctor visits, and hospital stays. New members can keep their existing providers for 6 months while MPPs

contact out-of-network providers about joining the network. Plans can also offer payments to out-of-network providers at the current Medicaid/Medicare rates for single case agreements if providers do not choose to join.

In April 2016, passive enrollment began for those who were not previously enrolled in Medicaid/Medicare: they received a notification 60 days and 30 days before effective start date on which MMP they've been assigned to. Certain counties are excluded from auto-enrollment and others opted out of Healthy Connections Prime altogether. This program is fully voluntary, and patients can opt out whenever they wish. The earliest effective opt-in enrolment date was February 2015. South Carolina, like Virginia, is also receiving CMS funding for ombudsman programs and outreach.<sup>220,221</sup> As of February 2017, 8,694 are actively enrolled in the program; 47/29/24 split between the three MMPs, and 81% passively enrolled (as opposed to opt-ins at 19%). 18% enrolled with HCBS waivers.

### Evaluation

CMS contracted with RTI International to monitor the implementations of demonstrations under the Financial Alignment Initiative.<sup>216</sup> At the moment, no state-specific annual reports have been published for Florida, Virginia or South Carolina. CMS and South Carolina anticipated savings applied to Medicare and Medicaid Contributions to Baseline Capitation rate to be 1% in year 1; 2% in year 2; 4% in year 3.<sup>208</sup> Savings data since Healthy Connections Prime implementation has yet to be released, although plans exist for monitoring and evaluation.

### Strengths

Healthy Connections Prime emphasizes providing well-rounded care, covering services such as home repairs, delivered meals and caregiver support, which facilitate community-based care. Like Virginia, there is a 6-month continuity of care provision, as well as out-of-network contracts on a case-by-case basis. Healthy Connections Prime also includes a palliative care benefit for enrollee with serious illness who may not meet hospice criteria, that distinguishes it from other all other Financial Alignment Demonstrations. As of June 2016, 100% of enrollees are aged 65 or above, and 83% of members have an assessment completed within the first 90 days of enrollment.<sup>212</sup>

### Weaknesses

Enrollment in Healthy Connections Prime is low. In 2015, there were 53,600 eligible to enroll in Healthy Connections prime, but enrollment fluctuates around 8,500 (16%). In both South Carolina and Virginia, those who opt out of the demonstration can choose to remain in the FFS delivery system for both their Medicaid and Medicare benefits, as opposed to five other states who chose to enforce enrolment in Medicaid managed care when opting out, so most duals still utilize the FFS system. Unlike Florida's LTC and Virginia's CCC+, Healthy Connections Prime excludes long-term care services in nursing facilities and hospice, which are often very costly. South Carolina (as well as Virginia) does not require managed care plans to contract with other entities to provide behavioral, community-based and social services.

### **III. Florida:** *Mandatory statewide managed long-term support and services to supplement separate Medicaid and Medicare benefits*

Medicaid in Florida exists as the Statewide Managed Care Program that requires Medicaid recipients to enroll in a managed care health plan—either through the Managed Medicaid Assistance (MMA) plans or the Long Term Care (LTC) program. There is an MMA specialty plan (Freedom Health Chronic Conditions/Duals Specialty Plan) targeting full duals or Medicare patients with chronic conditions such as diabetes, COPD, CHF or CVD. The Agency for Healthcare Administration will identify patients that meet these criteria from Medicare data and inform them of the enrolment process. This is available in 9 out of 11 regions of Florida. Patients can also choose to remain in a non-specialty MMA plan.

Meanwhile, it received approval from CMS in February 2013 for a three-year combined Section 1915(b)/(c) waiver to begin the transition of Medicaid beneficiaries using long-term services and supports (LTSS) to managed care.<sup>222</sup> The Florida Long-Term Care Managed Care program (LTC) requires mandatory managed care enrollment for most Medicaid beneficiaries ages 65 and older and ages 18 to 64 with physical disabilities. This does not cover physician consults, medication or other healthcare related services, only the cost of long-term care. Medicare services and benefits are not changed. Eligibility for LTC is restricted.<sup>223</sup> For those who want to receive LTC Coverage and do not live in a nursing or other assisted living facility, they will need to be screened and placed on a waitlist. In March 2017, 94,803 individuals are enrolled in LTC, of which 87,899 are duals recipients.<sup>224</sup>

#### Evaluation

Florida State University prepared an independent assessment of the Statewide LTC program for years 2013–2014, published in January 2016.<sup>225</sup> However, this report only effectively covers three months of full statewide implementation, after an initial eight month roll-out period.<sup>226</sup> The report emphasizes that “the vast majority of LTC program enrollees are dually eligible for Medicare and Medicaid.” The program objective is to have less than 35% of long-term care enrollees in nursing facilities and promote transition to home/community-based services. The LTC has had some success: the number of enrollees in a community location has increased from 39,324 to 42,863 and that of enrollees in an institutional location has fallen from 43,948 to 42,400, July 2014 and July 2015. Overall, while it would be ideal to find more recent data to accurately assess the impact of LTC, the recorded outcomes so far are promising.

#### Strengths

There has been a ‘modest’ increase in quality of care in the first three months: “almost 75% of respondents to a LTC enrollee satisfaction survey felt that their quality of life had improved” since enrolling in their LTC plan. A later “Quality and Performance Snapshot” specified that 83.4% of the respondents thought that it is usually/always easy to contact their case manager. 59.5% reported that their overall health had improved since enrolling in their LTC plan, and 90% of their services were usually/always on time.<sup>227</sup> Although findings from three months must be interpreted carefully, the LTC program achieved a 5% savings (accomplishing the target savings) in that period, and cost-neutrality for previous HCBS waivers. Furthermore, all plans offered dental services, over-the-counter coverage and support services for transition to the community. The Participant Direction Option gave home-/community-based enrollees the

option to choose their providers and services. Meanwhile, because of substantial outreach efforts (through ombudsmen), access to care did not change significantly during the transition to LTC.

### Weaknesses

Firstly, most of the available data was collected only after 3 months of implementation and should be considered with care. The eight-month rollout period of the LTC program was noted to be “a period when Medicaid claims were the highest on average”, attributed to the “state of flux” that occurred due to the “case mix between HCBS waiver and NF/hospice enrollees” (case mix is the approach of grouping, or in this case regrouping, statistically related patients for the purpose of coverage and claims). Overall, the program was concluded to be **cost** neutral during the rollout period, and cost-effective for the first three months of implementation.

#### **IV. Tennessee: *Mandatory statewide managed care for all Medicaid recipients and complementary LTSS managed care program to integrate Medicare and Medicaid for duals***

### TennCare

TennCare is Tennessee’s Medicaid program, approved via a Section 1115 waiver, which enrolls all of the state’s Medicaid recipients in managed care programs (TennCare MCOs). These MCOs provide all services including primary and acute care, behavioral health, and long-term services and supports (LTSS). Along with all other Medicaid beneficiaries, dual eligible beneficiaries receive benefits through TennCare.<sup>228</sup> In 2011, Tennessee was selected by CMS as a demonstration state to develop a creative integrated model for dual eligible care delivery and payment. This program was to be called TennCare PLUS, designed to coordinate care and save money via a capitated approach, however the state withdrew from the demonstration in 2012. Currently, duals remain covered by TennCare. For partial duals, TennCare covers Medicare Part A and B premiums as well as the deductibles and coinsurance for all Medicare services.<sup>229</sup> For full eligible beneficiaries, based on one’s category of eligibility, TennCare covers Medicare Part A and B premiums, Medicare deductibles and coinsurance, and all medically necessary TennCare services not covered by Medicare.<sup>229</sup> MCOs are required to submit reports to the Bureau of TennCare to show performance on many deliverables including CHOICES care coordination and dual eligible coordination.

### TennCare CHOICES

Tennessee uses the TennCare CHOICES program (since 2010) to cover LTSS for older adults and those with disabilities via managed care.<sup>230</sup> This is a change from its previous fee for service payment. TennCare CHOICES contracts with two national plans (AmeriGroup Community Care and UnitedHealthcare Community Plan) and one local plan (Volunteer State Health Plan). TennCare CHOICES was developed to integrate care for dual eligible individuals.

CHOICES operates on three distinct population groups, determined based on care needs: people of any age receiving nursing home care (group 1), adults 21+ with a disability and seniors who are nursing facility eligible but are living at home (group 2), and adults 21+ with disability and seniors not nursing facility eligible but need some home services (group 3).



Medicaid MCOs that offer LTSS in the TennCare CHOICES program are required by the state to offer a companion D-SNP.<sup>230</sup> Tennessee requires that D-SNP contractors notify Medicaid MCOs of any inpatient admissions and coordinate with the Medicaid MCO for discharge and LTSS services in cost-effective, integrated, and appropriate ways. D-SNPs must also follow up with enrollees and Medicaid MCOs to provide “person-centered plans of care,” coordinate nursing facility services, and training staff on coordinating benefits for dual eligibles.

### Strengths

In 2010, the Center for Health Care Strategies identified CHOICES as one of five Medicaid long-term care programs that has expertise in addressing long-term care with managed care.<sup>231</sup> Its program received an award under CMS’ State Innovation Model for developing a healthcare payment and delivery reform system.<sup>231</sup> Additionally, Tennessee’s D-SNPs are not currently required to have a companion MLTSS plan, although Medicaid MCOs (which also provide MLTSS) must have a companion D-SNP.<sup>232</sup> This improves enrollment in plans from a single company so that delivery for Medicaid and Medicare come from one source.

### Weaknesses

Tennessee’s model does not fully integrate Medicaid and Medicare as its demonstration plan would have done. Instead, its D-SNPs do not have to have a companion Medicaid LTSS plan. Having D-SNPs that are required to have companion Medicaid LTSS plans increase integration and improve delivery.<sup>232</sup>

## **V. *Texas: Capitated financial alignment program focused on long-term care alignment of Medicare and Medicaid***

### Dual Eligible Delivery System

Texas’ STAR+PLUS program is a Medicare-Medicaid integrated program that is optional for full-dual eligible beneficiaries. Medicaid beneficiaries are also enrolled in a mandatory companion MLTSS program. In 2014, CMS announced a partnership with Texas to test new models for coordinating care between Medicare and Medicaid via a capitated model.<sup>233</sup> Texas and CMS pay managed care plans a set fee for a patient’s Medicaid and Medicare services and physicians receive payment/coordinate care through one entity. These plans are called STAR+PLUS Medicare-Medicaid Plans (MMP). MMPs cover Medicare benefits in addition to the Medicaid benefits currently covered through STAR+PLUS. Texas operates 21 D-SNPs, and requires that the MLTSS plans have companion D-SNP contracts in the same service area.

The state’s contract with the D-SNPs, the contractors must make “reasonable efforts” towards coordination of care and benefits provided by D-SNP and the STAR+PLUS MLTSS contracts. This is necessary since D-SNPs in Texas serve beneficiaries who are enrolled in STAR+PLUS MLTSS plans operated by other companies.

## Strengths

Texas automatically enrolls its dual beneficiaries into the program and requires that beneficiaries opt out of the demonstration. However, it has gotten permission from CMS to require that beneficiaries enroll in Medicaid managed care even if opting out of the demonstration for Medicare benefits.<sup>208</sup> Texas' MOU includes an anticipated program savings percentages of 1.25% in year 1a (March to December 2015), 2.75% in year 1.b (2016), 3.75% in year 2, and 5.5% in year 3.<sup>208</sup> In order to better improve enrollment, Texas has taken steps to work with plans and beneficiaries to collect common questions and issues so that questions and confusion may be mitigated. Texas found that beneficiaries are concerned with their ability to keep their doctor and "connect with the health plan."<sup>234</sup> Texas has continued to work with health plans to refine their methods in improving communication to confused beneficiaries.

## Weaknesses

Texas' demonstration is targeted dual beneficiaries who qualify for Supplemental Security Income (SSI) benefits or certain Medicaid home and community-based waiver services.<sup>208</sup> This fact is important to keep in mind when comparing the program to North Carolina, where a different population of duals will be covered. As with many demonstration states, confusion among beneficiaries remains a problem due to the confusion surrounding whether one can keep his or her doctor and how the health plan will change their lives.<sup>234</sup>

### **I. Minnesota: *Administrative dual demonstration to align Medicare and Medicaid processes and administration***

## Dual Eligible Delivery System

In 2010, the Minnesota Department of Human Services developed and implemented a special duals demonstration. Minnesota became one of the states to implement an accountable care organization (ACO) model in its Medicaid program, which is called Medical Assistance. As of 2017, 21 providers deliver care to over 465,000 people enrolled in Medical Assistance.<sup>235</sup>

Minnesota's dual eligible beneficiaries 65 and older are offered a voluntary integrated D-SNP and Medicaid MLTSS product through Minnesota Senior Health Options (MSHO).<sup>232</sup> To cover LTSS, the program is paired with two mandatory programs called Minnesota Senior Care (MSC) and Minnesota Senior Care Plus (MSC+).<sup>236</sup> MSC and MSC+ are available in different parts of the state. MSC+ includes LTSS in its contract, but MSC plans offer LTSS via fee-for-service.<sup>236</sup>

The Minnesota Department of Human Services along with the Centers for Medicare and Medicaid Services (CMS) signed a Memorandum of Understanding (MOU) establishing a "Demonstration to Align Administrative Functions for Improvements in Medicare-Medicaid Beneficiary Experience." This Dual Demonstration began in September 2013, and CMS has extended it until December 31, 2018. The demonstration exists within the MSHO program and is designed with aims to better integrate the services of Medicare-Medicaid beneficiaries.

The Minnesota Dual Demonstration integrates dual beneficiary services through payment reform and new provider payment models. Additionally, it is designed to align oversight and improve administrative efficiencies of MSHO plans by both the state and CMS. Senior dual

eligibles may opt for the MSHO program, which has plans that are all Fully Integrated Dual Eligible SNPs (FIDE-SNPs). These FIDE-SNPs deliver both the Medicaid and Medicare benefits as one plan, using aligned capitated financing. All materials are integrated, there is one enrollment form and one insurance card, and all members are assigned an individual care coordinator.

For dual eligibles under the age of 65, Minnesota offers a similar volunteer program that aligns Medicaid and Medicare called Special Needs BasicCare (SNBC). SBNC either coordinates Medicare benefits delivered via FFS or Medicare Advantage Plans, or coordinates services through their own linked D-SNPs.

### Strengths

CMS published a longitudinal study on Minnesota's Managed Care.<sup>237</sup> It found that seniors enrolled in the integrated MSHO program had improved outcomes. Patients were less likely to have a hospital stay, were less likely to have an outpatient ER visit, and were more likely to have visited a primary care physician in the past year. Beneficiaries, once enrolled, were likely to remain in the program (instead of opting out again). The study concluded that the integrated approach to Medicaid and Medicare improved patient outcomes over a fragmented approach. Minnesota's use of FIDE-SNPs is considered to be one of its standout features. By using FIDE-SNPs alongside its Medicaid LTSS care, Minnesota has committed to using the most highly integrated model between the two programs.<sup>232</sup> Minnesota included in the initial stages of the demonstration, the Demonstration Management Team. The purpose of this team was to join federal and state employees in contracting the program so that it would remain as integrated as possible, while ensuring access and quality. CMS has said that this type of team is important and a very successful way to manage Medicare-Medicaid delivery issues.<sup>236</sup>

### Weaknesses

Potential drawbacks to comparisons to Minnesota's management of dual beneficiaries include that the focus of the state's program was to integrate administration between the two programs, not the financing of the programs.<sup>208</sup> North Carolina has an opportunity to improve the integration of the programs in order to save on administration duplicities as well as to save money. Additionally, the Minnesota demonstration targets the elderly dual population, so it is limited in its application to the entire dual population of North Carolina.<sup>208</sup> Finally, Minnesota's program was limited in funding for outreach towards enrolling dually-eligible patients.<sup>208</sup> This kind of outreach is important for the efficacy of a new approach to dual beneficiaries, since their enrollment is more complicated.

### ***Recommendations for North Carolina's Dual Eligible Population***

Based on a detailed analysis of each study state's approach to dual eligibles, as well as an understanding of the specific reforms that are needed in North Carolina, based on DEAC, we have organized our recommendations into three categories: Cost saving strategies that can be achieved by aligning financial incentives; addressing enrollment problems; increasing quality of care by integrating delivery; approaching duals as super-utilizers under the hotspotting model.

Each state's program and success is likely affected by many other factors, such as the dual eligible population in each state. As such, **Figure 5** below helps compare North Carolina to other states studied.

**Figure 5: State Comparison Data.**

	<b>Total Residents</b>	<b>Monthly Medicaid/Chip Enrollment</b>	<b>Number of Dual Eligibles</b>	<b>Dual's Share of Medicaid Spending</b>
<b>North Carolina</b>	9,902,000	2,025,016	335,100	31%
<b>Virginia</b>	8,217,200	977,452	191,700	34%
<b>South Carolina</b>	4,794,700	996,551	160,200	34%
<b>Florida</b>	2,008,5300	4,337,514	675,500	39%
<b>Tennessee</b>	6,616,500	1,636,906	279,100	31%
<b>Texas</b>	27,434,400	4,773,593	642,900	27%
<b>Minnesota</b>	5,463,000	1,026,547	149,300	40%

Source: Figure generated by authors, data from [Kaiser Family Foundation](#).<sup>238</sup>

### **Reduce Costs by Aligning Financial Incentives**

Given the burden that dual eligibles place on state Medicaid budgets, cost reduction strategies should be a primary focus for states considering dual eligible reform. While further research is needed to confirm whether states have achieved comprehensive savings, financial alignment models anticipate between 4 to 5% cost savings in a span of three years. Washington realized more than 6% cost savings between July 2013 and December 2014.<sup>239</sup> Virginia has kept savings at 1% for CY 2014, 2015 and 2016, and adjusted CY 2017 savings to 2%.<sup>240</sup> Of the services provided for the dual population, long-term care is often one of the greatest sources of cost. By focusing on long-term care, Florida realized a 5% overall savings in the first three months of a mandatory LTC dual eligible program. This is a significant cost-saving strategy. North Carolina has indicated its awareness of cost savings by focusing on long-term care. As such, they should prioritize this in their reform efforts, and consider emulating the Florida program.

### **Address Enrollment Problems**

Individuals who are eligible to for dual enrollment in Medicaid and Medicare often have low awareness about which programs they are eligible for, and about when to enroll in the state program.

All studied states have adopted some form of passive enrollment for their dual eligible population. At present, North Carolina does not employ a passive enrollment approach. Based on the experiences of the studied states, we recommend passive enrollment to help improve continuity of coverage for dual eligible beneficiaries in North Carolina, which in turn, affects the continuity of care they receive. Florida and Virginia (CCC Plus) have gone as far as to make enrollment mandatory for those eligible.

Narratives from enrolled patients reveal that patients often lack full understanding of the changes and benefits resulting from the new programs. Several states have ombudsman programs which reach out to beneficiaries personally to raise awareness and encourage enrolment. Virginia in particular had strong stakeholder engagement through focus groups and weekly activities that increased enrolment. Outreach to providers, hospitals and facilities is necessary to clarify provisions and payment changes. We recommend North Carolina incentivize and encourage provider involvement, as they can often influence enrolment decisions. Medicare-Medicaid Plans (MMPs) have been willing to collaborate in both provider and patient outreach efforts.

### **Integrate Program Operations and Benefits to Improve Quality and Outcomes**

Facilitated enrollment processes can also impact the integration of care delivery. Some states have seen this overlap and have used enrollment as a way to integrate care for their dual eligible population. Minnesota has adopted this approach, and has resulted in continuous care for their elderly dual population. Minnesota has aligned the administration within its capitated financial system so that Medicaid MCOs also qualify as Medicare Advantage D-SNPs. This approach would help North Carolina beneficiaries who may otherwise receive benefits through two different plans. Minnesota's delivery of LTSS for elderly duals exists as one plan, with required care coordination, and because of this, has achieved an increase in administrative integration between Medicare and Medicaid. Texas, Tennessee, and Virginia similarly require contractors in Medicaid MLTSS programs to offer companion D-SNPs to cover Medicare services for their dually eligible beneficiaries. This has integrated care delivery between Medicare and Medicaid under one health plan.

Other states have specific provisions that assure continuity of care. For example, Virginia and South Carolina have a six-month continuity of care provision to specifically prevent dual eligible patient churning. South Carolina in particular allows out-of-network provider contracts for patients whose providers refuse to join MMP networks. Targeted services should address the transition from long-term care to community-based care.

In order to save costs, many states exclude certain categories of benefits. There are some categories of coverage, however, that we recommend including in the benefit structure. Including categories like palliative care, long-term care, and behavioral health can help reduce long-term costs that arise from inpatient hospitalizations or institutional care. In the past, North Carolina has considered excluding behavioral health services from the dual eligible benefit package, but we strongly recommend against this. As the DEAC has noted in its report, adding additional benefits like meal delivery, adult dental, and behavioral health services can not only increase enrollment in integrated Medicaid-Medicare programs, but also save money for the state and improve patient health.<sup>209</sup>

## **Unique Recommendation for North Carolina: Hotspotting for Dual Eligibles**

Although each state discussed above has individualized their dual delivery program to fit the specific population's needs, each state program operates within programmatic frameworks that are used by many other states. While there are many pros to adopting a similar model, North Carolina has the opportunity to be a leader in care delivery for duals by considering a strategy that would apply the hotspotting logic to the dual eligible population.

Comprising only 17% of North Carolina's Medicaid enrollees, dual patients used 31% of the total Medicaid spending in 2011, despite Medicaid being the payer of last resort. While the CCNC's identification of "priority patients" (most of whom are dually eligible) successfully improved health outcomes and reduced costs for super-utilizers, it fails to address the systemic payment misalignments between Medicare and Medicaid. As a Medicaid program, it also does not explicitly address integrated care for duals. Similarly, D-SNPs (a Medicare Advantage Special Needs Plan) focus mainly on Medicare coverage and cover only slightly more than 6% of the overall dually eligible population. Thus, our research suggests that there is significant cost-reducing potential in covering the dual eligible population via capitated managed care in North Carolina. As shown in capitated Financial Alignment Demonstrations, MCOs can streamline the currently complicated payment system for duals while improving care management for individual patients. Comprehensive and readily available data on duals from both Medicaid and Medicare can also be used to identify high-cost patients through approaches similar to those of the CCNC. Hotspotting approaches can be used to target super-utilizers within the duals and allocate support and resources specifically for preventive care in geographic regions (or zip codes) of highest health and safety concern.

Looking at expenditure within the dually eligible population in 2011, 65% of spending goes towards long-term care, 22% towards acute care and 12% towards Medicare premiums, leaving only 1% of the overall spending for prescribed drugs. The transition from nursing facilities to community care is thus crucial to cutting costs, for which existing programs such as Florida's LTC program and Virginia's upcoming CCC+ serve as effective examples. PACE (Programs of All-inclusive Care for the Elderly) in North Carolina has shown promising results as a model for managing integrated long-term care, but currently has a very limited impact with an enrollment of only around 1,900 individuals of the 36,722 in nursing facilities statewide. While seemingly costlier, covering home repair services, better transportation, home-delivered meals and caregiver support like South Carolina's Healthy Connections Prime could greatly facilitate the facility-to-community transition and ultimately reduce spending. As the NC DHHS dual eligible report notes, PACE is to be independent of the Medicaid reform process, so it is worth considering reintroducing more comprehensive managed long-term care, either under existing D-SNPs, a broader dual-specific MCO or a statewide mandatory LTC program preferably with passive enrolment and strong outreach.

## 5c. Telemedicine in North Carolina

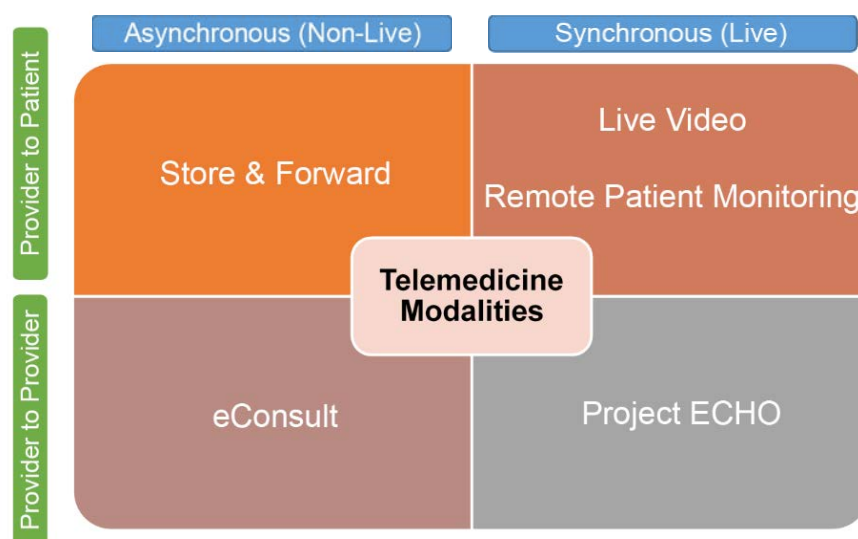
### *Introduction to Telemedicine*

Telemedicine, the remote delivery of healthcare using telecommunication services, is a burgeoning force in the U.S. healthcare system. According to the American Telemedicine Association, there were 1 million virtual visits in 2015 and are projected to more than double through 2016.<sup>240</sup> With more advancements in technology, telemedicine programs have rapidly expanded across states through Medicaid and private insurance delivery systems.

Telemedicine can be classified into four major modalities that differ in the medium of communication and the parties who are communicating. The four major modalities of telemedicine are: live video, remote patient monitoring, store & forward, and eConsult. A fifth form of telemedicine, Project ECHO, has also recently begun to take shape and expand across more states.

Telemedicine can either be synchronous (communication occurs in real time) or asynchronous (communication occurs at different time points), and it can connect providers with other providers or with patients (see **Figure 1**). Live video is synchronous, interactive telemedicine between providers and patients, often through the use of video conferencing. Remote patient monitoring is the use of mobile medical devices that collect and transmit patient data directly to a provider in a different location. This form of tele-monitoring allows providers to track the blood sugar levels, blood pressure, and other vital signs of patients with chronic illnesses. It is more commonly considered an asynchronous platform, but it can be used synchronously through platforms like the teleICU. Store and forward refers to the asynchronous electronic communication of health history such as records or scans to a provider. eConsults are asynchronous electronic message exchanges of patient information between a primary care physician and a specialist. Like eConsults, Project ECHO also provides communication between primary care providers and specialists, but through real time video conferencing.

**Figure 1. Telemedicine Delivery Platforms, FY2017.**



Source: Figure created by authors; generated using information from the [CCHPCA's State Telehealth Laws and Medicaid Program Policies report](#), 2016.<sup>241</sup>

## *Current U.S. Telemedicine Policy*

Telemedicine is covered and reimbursed through Medicare in all 50 states and D.C. with several requirements. Medicare reimbursement is limited to live video encounters between providers and patients in rural areas. To qualify for payment, patients must physically complete the call from within a certified clinic or facility (known as the originating site), which has significantly limited its adoption for Medicare. From 2004-2013, utilization among rural Medicare beneficiaries has grown at an annual average rate of 28%, with mental health composing 79% of total visits.<sup>242</sup> Despite this growth rate, overall utilization rates remain low.

Unlike Medicare, Medicaid coverage for telemedicine services varies by state. Forty-eight states and D.C. currently reimburse telemedicine under Medicaid.<sup>241</sup> States have the flexibility to determine critical details of coverage such as the type of telemedicine, type of provider, reimbursement rates, and location of services. As of August 2016, 48 state Medicaid plans reimburse live video communication, with only 19 states reimbursing for remote patient monitoring, 12 for store & forward services, and four for eConsults.<sup>241</sup> Email, phone, fax, and other non-live communications are generally not acceptable to be reimbursed by Medicaid.

Private payer coverage for telemedicine is subject to even further variation. Twenty-nine states have parity laws in place that require insurers to reimburse telemedicine providers for the same amount as in-person medical treatment.

Despite certain expansions in state coverage and loosening of restrictions, national utilization rates for telemedicine under both Medicare and Medicaid are low. A 2009 study by the Centers for Medicare & Medicaid Services (CMS) suggests provider adoption of telemedicine has been limited despite federal grants to encourage use, increases in Medicare payment rates, expansions in services, and reductions in provider requirements.<sup>243</sup> A similar study using 2008-2009 Medicaid claims data for 28 states and DC found that the actual utilization of telemedicine in Medicaid programs was low as well.<sup>244</sup> The study found high state-level variation in number of claims, which provides evidence that reimbursement alone is insufficient to encourage broad utilization.

## *Innovative State Telemedicine Approaches*

### I. Live Video

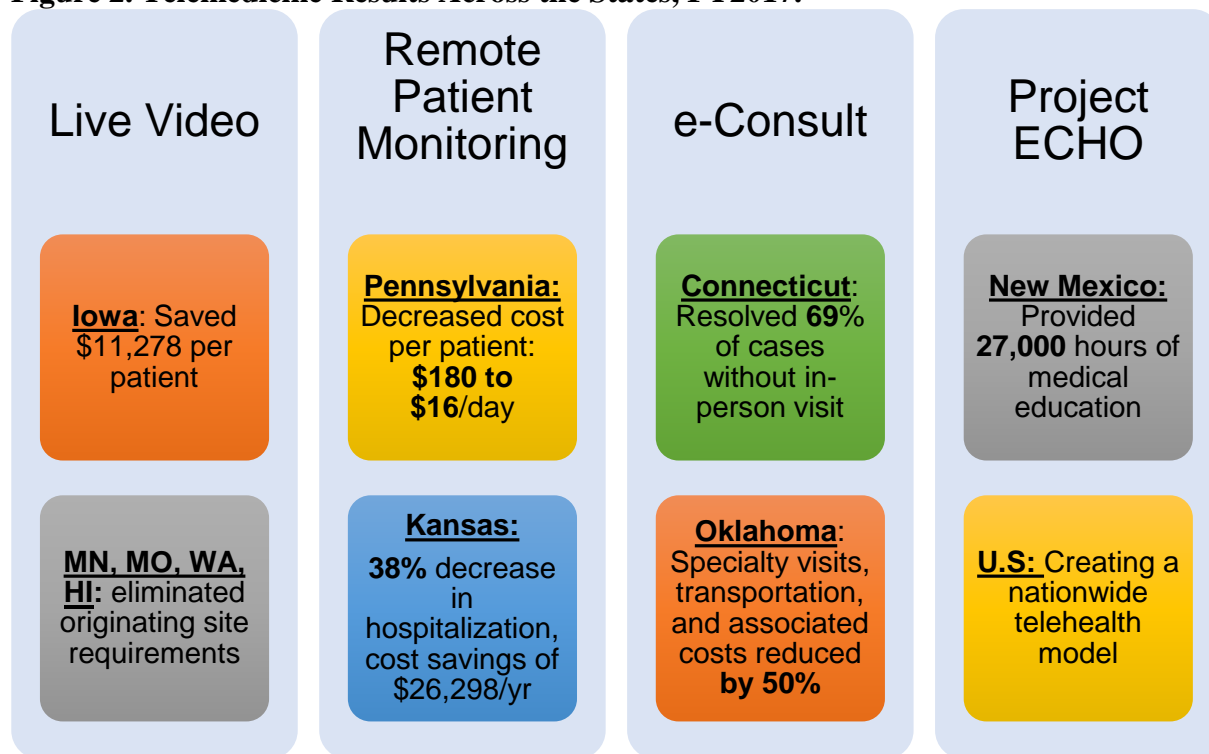
Many states have expanded telemedicine under their Medicaid programs with innovative approaches to healthcare delivery. Telemedicine has been especially effective in managing patients with chronic disease, which accounts for 86% of U.S. healthcare spending largely due to hospitalizations and emergency department visits.<sup>241</sup> The Iowa Chronic Care Consortium (ICCC) has developed a Telehome Care Model that provides an ideal point of delivery—in patients' homes.<sup>245</sup> The ICCC designed a heart failure program for the Medicaid population using daily contact and care management by phone. Initially, 266 Medicaid heart failure patients had annual healthcare costs of \$24,000 each. In a matched cohort study design, the study cohort with telemedicine had net savings of \$3 million Medicaid dollars, or \$11,278 saved per patient, due to avoided hospitalizations (See **Figure 2**). The matched cohort that did not receive telemedicine had increased costs of \$2 million dollars in the same period. The ICCC also developed a Medicaid Diabetes Telehomecare Project that has seen a 54% reduction in inpatient visits, 13% reduction in outpatient visits, and a 6% reduction in office visits in the study cohort compared to



the match cohort. Patients in the diabetes program had on average 20% lower costs than the match cohort with no telemedicine.

Since 2016, Minnesota, Missouri, Washington, and Hawaii have provided reimbursement for live video visits originating at patient homes or schools, expanding beyond the traditional originating site requirements for telemedicine services.<sup>246</sup> Other states, like Colorado and Arizona, have also removed rural originating site requirements for telemedicine reimbursement. Due to the recent nature of these changes, outcome and utilization data has not yet been released.

**Figure 2. Telemedicine Results Across the States, FY2017.**



Source: Figure created by authors; generated using data from state reports (see below).

## II. Remote Patient Monitoring

By expanding coverage to include remote patient monitoring, several states have seen benefits in patient outcomes and state budgets. Pennsylvania provides coverage for in-home telemonitoring through their Department of Aging Services.<sup>247</sup> Using a Medicaid Section 1915(c) waiver for adults 60 years and older, the Pennsylvania Medicaid program reimburses home technology such as remote vital sign monitoring and dispensing medication for chronic conditions. This has enabled state Medicaid savings by allowing patients to stay at home and avoid moving to expensive nursing care facilities, which are often a key driver of Medicaid costs. In Pennsylvania's Keystone Hospice's six-month telehealth pilot program with 12 elderly patients, none of the participants had to enter long term care in a nursing facility. The participants all had multiple diagnoses, chronic illnesses, and did not take medications regularly at the time of enrollment. By the end of the treatment period, the average medication compliance rate rose to 98.2%. Although this is a small sample size, by using low-cost remote patient monitoring, total expenditures per patient were approximately \$16 per day, in comparison to nursing home care at \$180 a day.

Kansas used federal funding from the Money Follows the Person (MFP) program to create the Kansas Frail Elderly waiver program, targeting adults 65+ diagnosed with chronic illness.<sup>248</sup> A 2010 study tracking the outcomes, costs, and utilization of in-remote patient monitoring services through the waiver program found positive results among 61 patients. Over three years, in-home telemonitoring helped patients in the program avoid emergency room visits, inpatient hospitalizations, nursing facility placements, and other healthcare costs. From the 38% decrease in hospitalization rates, the study projected cost savings per patient per year at \$26,298—significantly more than the \$816 cost per patient for telemonitoring equipment.<sup>248,249</sup>

New York has also demonstrated the benefits of telemedicine, store and forward technology, and remote patient monitoring for its Medicaid population. In the Visiting Nurse Association's pilot study, 53 patients of an average age of 72 had telehealth units installed in their homes and their vital signs monitored for one year.<sup>248</sup> Participants had chronic conditions with a history of frequent hospitalizations and emergency room visits. As a result of installing telehealth units, there was a 55% drop in the number of hospitalizations (178 to 80), 29% drop in emergency department visits (137 to 97), and a total 42% drop in medical costs (\$3 million to \$1.7 million).

In 2015, South Carolina Medicaid began reimbursing remote patient monitoring through a CMS Section 1915(c) waiver for patients with diabetes, hypertension, pulmonary disease, or chronic heart failure.<sup>248</sup> Outcome data is pending.

### Project ECHO

New Mexico's Project ECHO (Extension for Community Healthcare Outcomes) has also leveraged technology to provide care and monitor outcomes in underserved areas, specifically in rural clinics with a shortage of specialists.<sup>245</sup> ECHO manages many high-need, high-cost Medicaid enrollees in telemedicine clinics with outpatient critical care physician teams. Specialists and experts advise primary care providers on interactive video networks to co-manage complex patients. The program is primarily designed for treating common conditions in the community, especially mental disorders and chronic diseases, which would benefit greatly from specialist knowledge and input. Initially targeted towards treating Hepatitis C, studies have demonstrated that rural providers' assessment and care of Hepatitis C patients improved after participating in ECHO conference clinics. Treatment was as safe and effective, with high cure rates, in rural clinician offices as in specialty clinics at the University of New Mexico. Project ECHO has since expanded beyond treating hepatitis C to include more diseases, providing 27,000 total hours of medical education to rural clinicians in New Mexico.

On November 29, 2016 the U.S. Senate passed the Expanding Capacity for Health Outcomes (ECHO) Act which allows the Department of Health and Human Services to create a nationwide telehealth model based on Project ECHO.<sup>250</sup> With federal legislation supporting the project now in place, ProjectECHO can be integrated and implemented in more state telemedicine programs to help manage chronic disease.

### III. eConsult

Similar to Project ECHO in offering provider to provider communication, eConsult is another emerging telemedicine modality that several states are adopting. By utilizing asynchronous electronic message exchange between primary care physicians and specialists, eConsult seeks to broaden access to specialty care to all state residents.<sup>250</sup> Connecticut has

developed a robust eConsult pilot program for dermatology, cardiology, pain management, orthopedics, and endocrinology to connect member primary care physicians and specialist networks. The program partners with specialists in and out of state. Because of the eConsult pilot program, providers have resolved 69% of cases without an in-person visit, improving access for CT patients who can benefit from such visits.

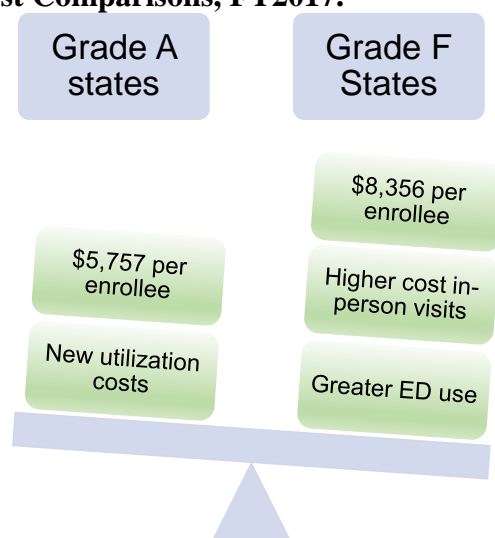
In Oklahoma, SoonerCare's e-consultation reimbursement policy resulted in a reduction of professional fees for patients of \$62.37 per member per month. Specialty visits and transportation rides involved were reduced by 50%, lowering associated costs as well.

The biggest barrier to widespread adoption of an eConsult platform is the lack of a definitive reimbursement structure for eConsults in state Medicaid programs. Apart from statewide policy, current efforts are funded internally by risk-sharing entities like Accountable Care Organizations (ACO) and Comprehensive Primary Care Plus (CPC+) or through defined grants. States that clarify this reimbursement uncertainty can realize reduced costs and improved access, especially for their rural communities.

### *Cost Comparison*

In 2016, the American Telemedicine Association conducted a report grading all states and D.C. on their telemedicine programs across a scale considering coverage and reimbursement policies based on health plan parity and Medicaid conditions of payment.<sup>251</sup> The ATA ranked states on indicators ranging from scope of service, provider and patient eligibility, technology type, and arbitrary conditions of payment. States receiving an A grade spend on average \$5,757 dollars per Medicaid enrollee, while states receiving an F grade spend on average \$8,356 per enrollee (See **Figure 3**).<sup>252</sup> States with parity laws for Medicaid spent an average of \$5,954 per enrollee, in comparison to \$6,374 per enrollee in states without parity laws. Overall, states with better Medicaid telemedicine programs have lower costs through per-enrollee expenditures. As seen above in states like Pennsylvania and Iowa, lower cost virtual visits and reduced emergency department use are two key factors in decreased expenditures.

**Figure 3. State Cost Comparisons, FY2017.**



Source: Figure created by authors; generated using data from ATA's [State Telemedicine Gaps Analysis report](#), 2016.<sup>251</sup>

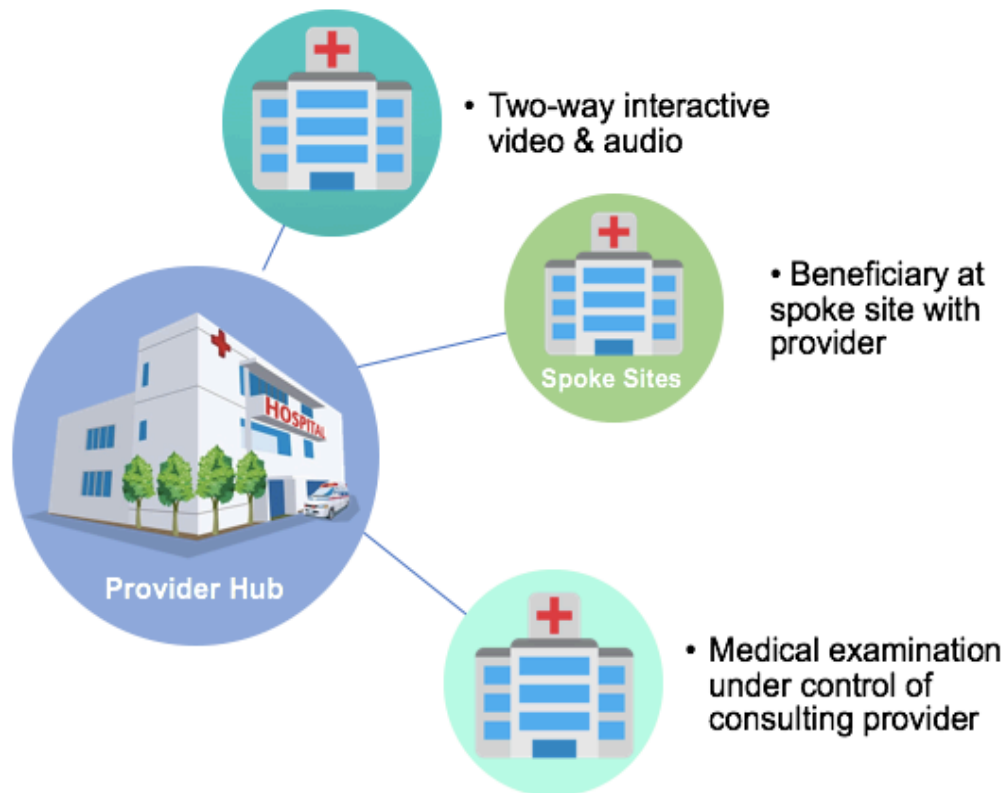
Although telemedicine has great demonstrated great potential to decrease per-patient expenditures, a *Health Affairs* study highlighted the importance of establishing appropriate market incentives for these services. In a study across 300,000 acute respiratory illness patients from 2011-2013, direct-to-consumer live video telehealth actually increased overall healthcare spending through greater demand and new utilization.<sup>253</sup> New utilization, which represented 88% of visits in the study, outweighed the savings from in-person visit substitutions. Per episode basis direct-to-consumer telehealth visits remain about 50% of the cost of a physician office visit and less than 5% that of an ED visit, so limiting the quantity of services is the key lever to decrease health spending. This suggests that value-based insurance coverage is could be the appropriate policy lever to convert telehealth from a complement for in-office visits to a substitute.

### *Current NC Policy Environment*

North Carolina Medicaid currently reimburses telemedicine and telepsychiatry services at the same rate as face-to-face interactions, with pending legislation to induce parity for private payers as well under the Telehealth Fairness Act (HB 283). Medicaid coverage follows three major requirements: two-way, interactive audio and video; presence of the patient at the originating site with a provider; and medical examination under control of the consulting provider.<sup>254</sup> Service delivery follows a hub-and-spoke model: the beneficiaries are located at originating “spoke” sites and they communicate with a distant “hub” site where the provider furnishes the telemedicine or telepsychiatric service (See **Figure 4**). As of 2013, there is no longer a specific mile radius limit or in-state provider requirement. State law instead specifies that both service sites must be Medicaid-enrolled provider facilities and that the hub site of service must be a “sufficient distance from the originating site to provide service(s).” However, going to mandated originating sites, or “spoke” sites, are still barriers to care for certain rural populations. The costs associated with transportation and maintenance of facilities increase the burden of telemedicine on critical patient populations. At-home telemedicine usage through secure cell phones or personal computer platforms can maximize patient reach, especially for targeted populations. On the plus side, North Carolina currently allows physician-patient relationships to be established via telehealth technologies.<sup>254</sup> This stipulation has important implications because once this relationship is established, physicians can online prescribe without having an in-person physical examination.

In the 2016 ATA report, the American Telemedicine Association gave North Carolina a C grade. NC DHHS defines telemedicine as the “use of two-way real-time interactive audio and video between places of lesser and greater medical capability or expertise...”<sup>254</sup> Based on this definition, NC Medicaid does not reimburse for store and forward, remote patient monitoring, eConsult. North Carolina also has no telemedicine parity law, which would require private insurers to reimburse telemedicine providers the same rate as in-person providers. In April 2015, House representatives Lambeth, Insko, Martin, and Adcock introduced a telehealth parity bill (HB 723), but it failed to pass in committee.<sup>251</sup> Current legislative efforts include a pending bill, titled the Telehealth Fairness Act (HB 283). The same representatives filed the bill in the House on March 8<sup>th</sup>, 2017 to require every health benefit plan to cover telemedicine services with parity reimbursement for private payers.<sup>255</sup>

**Figure 4. NC Telemedicine Delivery Model & Reimbursement Requirements, FY2017.**



Source: Figure created by authors, using information from [the NC Division of Medical Assistance's Clinical Coverage Policy 1H of Telemedicine and Telepsychiatry](#), 2015.<sup>254</sup>

### *Existing NC Telemedicine Programs*

#### **I. Live Video**

The Carolinas Healthcare System's Virtual Visit program uses live video directly between medical professionals and patients.<sup>256</sup> North Carolina residents can access providers at any given time without an appointment, and providers are able to online prescribe. Patients are most commonly treated for acute conditions like cold or flu like symptoms, allergies, pink eye, skin issues, and urinary tract infections.

Most recently, North Carolina's Department of Health and Human Services launched a statewide telepsychiatry program (NC-STeP) under NC Session Law 2013-360 in 2014.<sup>257</sup> This broad network seeks to ensure timely, evidence-based psychiatric treatment for every patient that enters any emergency department of a hospital in North Carolina with an acute behavioral health crisis. The statewide program is based on a hub-and-spoke model with several hospitals connected to a provider hub where providers render their services. Due to NC-STeP, North Carolina now has 30 live telepsychiatry sites, 29 hospitals in the process of spoke-site development, and 7 provider hubs as of June 30<sup>th</sup>, 2016. The provider hubs are located in urban counties and telepsychiatry sites are spread out across both urban and rural counties. The initiative has experienced a 23.7% involuntary commitment overturn rate, which means fewer

overall hospitalizations. As a result of implementing this innovative program, North Carolina's psychiatric facilities have achieved an estimated cumulative cost savings of \$3,350,000.<sup>257</sup>

## II. Remote Patient Monitoring

Despite restricted Medicaid coverage of telemedicine and telepsychiatry, there are several promising state programs dedicated to expanding telemedicine. In 2006, the Roanoke Chowan Community Health Center established a Patient Provider Telehealth Network (PPTN) in northeastern North Carolina.<sup>258</sup> This pilot program provides remote patient monitoring for patients with cardiovascular disease, hypertension, and pulmonary disease in 28, primarily rural, counties. Among participants, the health center saved roughly \$3.4 million in costs per year and saw decreased hospital and emergency department visits. However, as remote patient monitoring is not reimbursed by Medicaid, the health center must seek funding through federal and private grants.

Home tele-health providers like FirstHealth Home Care are also active on local levels. FirstHealth offers comprehensive chronic disease management with remote patient monitoring.<sup>259</sup> As a nonprofit Medicare certified organization, FirstHealth also monitors high-risk heart failure patients that are Medicaid participants as well as local PACE (Program of All-Inclusive Care for the Elderly) high risk patients. For Medicaid managed care participants, there has been a 40% reduction in hospitalization rates. FirstHealth has since expanded complex care management to include patients with diabetes, heart failure, and chronic obstructive pulmonary disease.

### Project ECHO

Using live video and audio consultation with image sharing technology, the Wake Forest Baptist Telestroke Network is another innovative telemedicine strategy.<sup>258</sup> The network specifically targets North Carolinians in rural counties along the "Stroke Belt." The program provides patients in remote locations and community hospitals access to stroke specialists, especially those visiting the emergency department. Like New Mexico's Project ECHO, the Wake Forest Telestroke Program provides a network of consultations for community based practitioners in areas with a shortage of specialists.

The Carolina Hepatitis Academic Mentorship Program (CHAMP) follows a similar model of primary provider training to link Hepatitis C specialists to primary care physicians in rural locations through telemedicine networks.<sup>260</sup> Established in January 2017, the collaborative program between the North Carolina Division of Public Health, Duke University Medical Center and the University of North Carolina School of Medicine centers around teleconferencing consultations and seeks to create strong referral networks in local communities. Due to the recent implementation of the program, no outcome data has been reported yet.

## ***Recommendations for NC***

Given the potential to reach thousands of Medicaid beneficiaries and create large cost savings, telemedicine programs with expanded coverage and services could benefit North Carolina's healthcare system. Telemedicine provides a low-cost solution to rising prices, provider shortages in rural counties, and limited access to specialists. North Carolina can explore and pursue several options to maximize the use of telemedicine to reach its state populations.

### **Remove Originating Site Requirements**

The originating site requirements and lack of reimbursement clarity remain the two largest barriers to telemedicine adoption. Removal of the originating site requirement can increase provider access for Medicaid patients, especially those in rural areas. This would allow a conservative but innovative lever to improve access. Some states, like Colorado and Arizona, have recently removed rural originating site requirements, allowing patients in non-rural areas to use telemedicine as well. Further research on this policy change is warranted, as states have only recently removed the originating site requirement for telemedicine reimbursement and thus data on outcomes remains scarce.

### **Utilize Value-Based Payment**

In the fee-for-service environment, specialists and PCPs lack economic reimbursement for the provision of eConsult services. Providing a fixed payment for specialists for these services could encourage participation and formation of eConsult networks, both within existing health systems and in formal or informal partnerships with independent physicians.

BluePath Health Inc projected that \$30 per consult with PCPs paid monthly stipends could encourage participation to create functioning networks, increasing access to specialty care while reducing waiting times and missed visits.<sup>250</sup>

In order for telehealth to remain a low-cost substitute for in-person office visits, healthcare payers should adopt value-based payment models for telehealth services rather than parity laws to increase cost-effective utilization. Requiring payment for telehealth equal to in-office visits fails to account for the difference in fixed costs between the two delivery models. Although there is not sufficient data given the recent implementation of parity laws across the U.S., consumers would likely bear unnecessary cost increases due to this mandated payment as private payers pass the increased costs to consumers.

### **Pursue Waivers to Allow Medicaid Flexibility**

Waivers can be used to test new or alternative healthcare delivery and payment models. By capitalizing on the flexibilities offered by waivers, North Carolina can expand telemedicine programs to include remote patient monitoring and home telehealth. Many states have already used a variety of federal waivers to reimburse home telehealth.<sup>261</sup>

- *Section 1115 Federal Waivers*
  - States are given program flexibility to create their own financing and delivery models for Medicaid and CHIP.

- Illinois has used their Section 1115 waiver to fund telehealth capacity expansion as a key element to their workforce strategy initiatives. The waiver outlines conducting a statewide assessment of telemedicine needs, developing telemedicine infrastructure, and training providers in use of telemedicine.<sup>262</sup>
- North Carolina's Department of Health and Human Services submitted a Section 1115 Waiver in March 1<sup>st</sup>, 2016 that is currently pending under CMS review.<sup>64</sup> As a key to one of their demonstration initiatives, the state looked to incentivize the use of telemedicine programs to improve access, outcomes, and efficiency of care.
- *Section 1915(c) Home & Community-Based Service Waivers*
  - Under the Social Security Act, both these waivers allow states to provide a larger range of services to the elderly and people with disabilities.
  - Pennsylvania has used a Section 1915(c) waiver to provide comprehensive coverage in its Telecare program. The waiver allows the state to cover home telehealth, activity/sensor monitoring, medication dispensing, and personal emergency response systems (PERS).<sup>247</sup>
  - South Carolina is also using Section 1915(c) to cover home telehealth and remote patient monitoring reimbursement.<sup>248</sup>
  - *Section 1945 Health Home*: this option allows states to create comprehensive care coordination for Medicaid individuals with chronic conditions, potentially covering services like remote patient monitoring.

### **Utilize Federal Demonstration Programs to Expand Reimbursements**

Federal demonstration programs represent opportunities to receive flexible federal dollars. The Money Follows the Person (MFP) program allocates federal funding for transitioning Medicaid patients from institutions back into the community. MFP supports the existing state Medicaid program in providing home and community based services that are often lower cost than traditional nursing homes. Thus, MFP dollars can be used for telemedicine services that ease patient transitions into the community.

Kansas's Frail Elderly Waiver program has used MFP to reimburse telemedicine services like remote patient monitoring. Through this program, they have achieved successful outcomes with a reduction in hospitalization and costs.<sup>258</sup>

North Carolina was granted a MFP project that has been extended through 2020. Policymakers can consider leveraging MFP to reimburse expanded telemedicine benefits, such as remote patient monitoring.



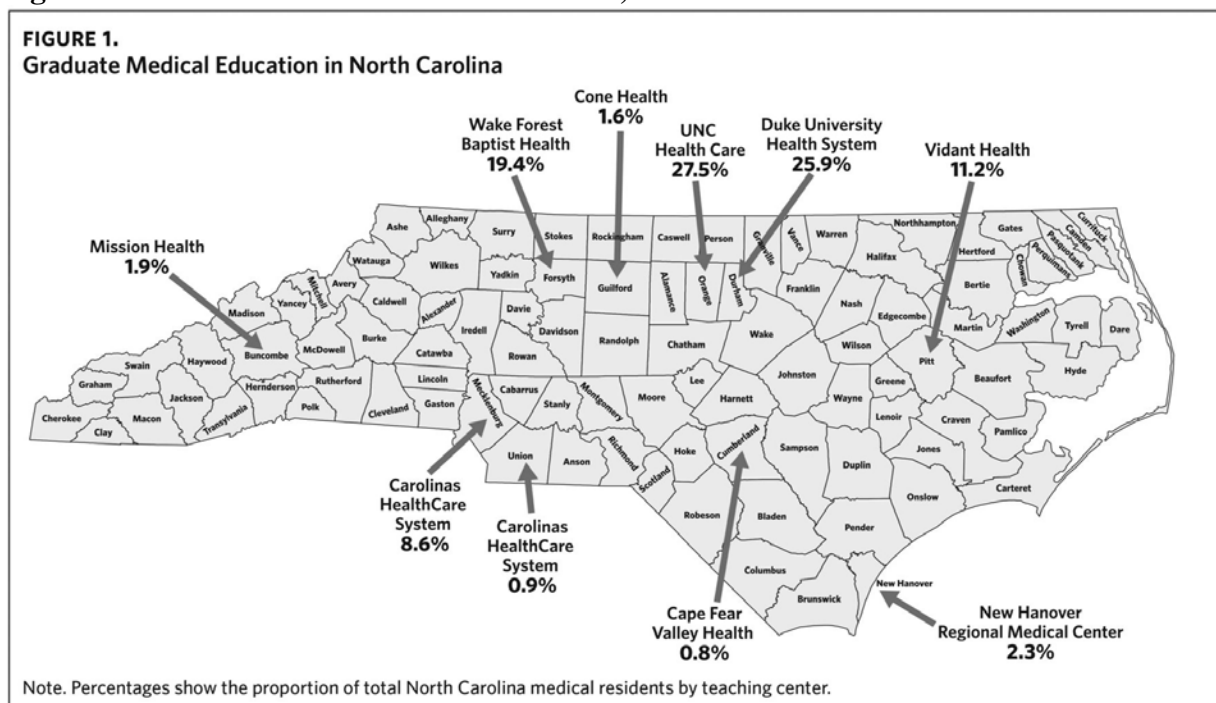
## 5d. Graduate Medical Education

### *What is Graduate Medical Education?*

Graduate medical education (GME) is the phase of education following the completion of medical school, which aims to impart clinical knowledge and skills on the future U.S. physician workforce. GME can be an umbrella term for postgraduate residency training within a specialty of medicine (such as pediatrics, obstetrics and gynecology, or surgery) or post-residency fellowship that subspecializes within a medical specialty (cardiology within internal medicine, pulmonology within pediatrics, etc.). GME is governed by the Accreditation Council for Graduate Medical Education, a nonprofit accrediting body that establishes program requirements within specialties across the U.S.

For 2016-2017, there were more than 130,000 residents and fellows within accredited GME programs across the country.<sup>263</sup> In North Carolina, there are more than 3,000 residents and fellows training at ten institutions across the state.<sup>264</sup> Medical trainees who complete both their undergraduate medical education and residency within the state of North Carolina are more likely to practice in the state,<sup>265</sup> indicating the importance of properly allocating funds in our state's GME program. Redesigning and investing in GME is a critical strategy to ensure a stable physician workforce to serve North Carolina's citizens.

**Figure 1. Graduate Medical Education in NC, 2016.**



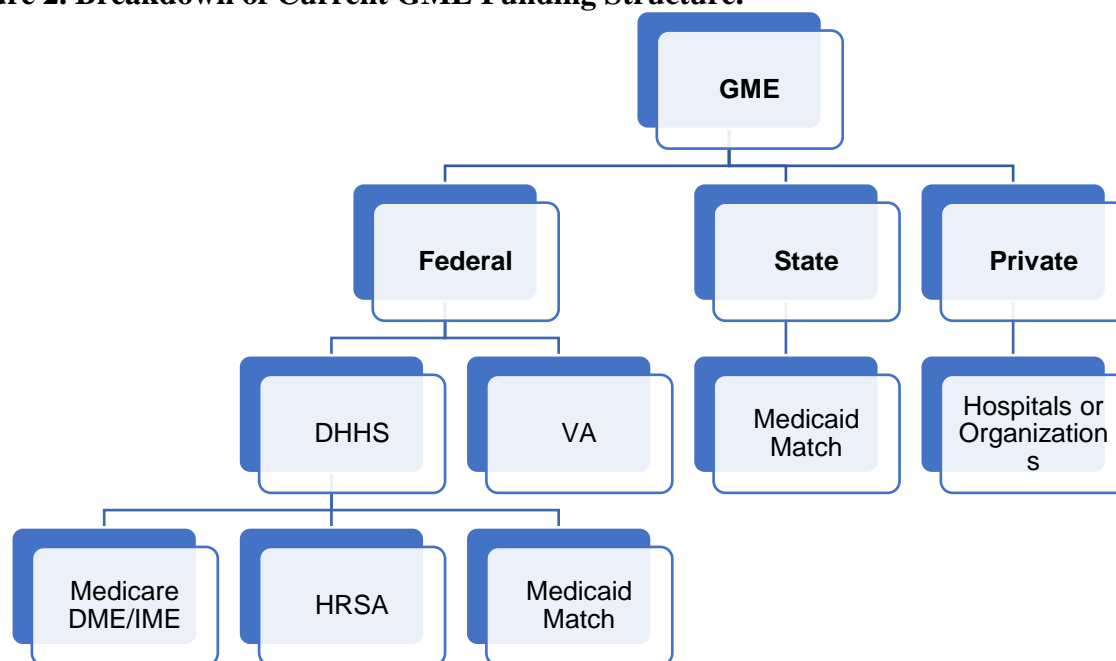
Source: Newton, W, [Improving the Return on Investment of Graduate Medical Education in North Carolina](#)<sup>264</sup>

### *Graduate Medical Education Funding*

GME, like the broader healthcare system, is funded by a mix of federal, state, and private payers (see **Figure 2**). The Medicare program, through the Centers for Medicaid and Medicaid Services (CMS), is responsible for contributing a share of the costs of educating residents.

Medicare provides two forms of payment to hospitals: direct graduate medical education (DGME) payments to cover costs directly related to educating residents, and indirect medical education (IME) payments to account for the higher costs of patients treated at teaching hospitals that often arises from needing highly specialized care.<sup>266</sup> In 2012, federal DHHS payers contributed the lion's share of funding to support residency training, at \$15.2 billion. Most of this public funding came from the Medicare and Medicaid programs, which provided more than 90% of all federal funding for GME.<sup>266</sup> Medicaid programs are not required to provide GME funding support, but many states elect to do so to receive matching federal funds. In 2012, 42 states and the District of Columbia, including North Carolina, provided Medicaid funds for GME.<sup>267</sup>

**Figure 2. Breakdown of Current GME Funding Structure.**



Source: Figure generated by authors using data from [AAMC](#).<sup>267</sup>

The cost to train a single resident physician in North Carolina is about \$143,000 per year.<sup>268</sup> With 3,000 residents at \$143,000 per year, we estimate the cost to fund all residents would be around \$429M per year. Unfortunately, current funding levels are well below this amount. In 2012, North Carolina received roughly \$300 million in Medicare GME funds, with additional funds from the Veterans Administration (VA) system.<sup>264</sup> North Carolina received nearly \$197 million in Medicare IME funding, and over \$85 thousand in Medicare DME funding.<sup>269</sup> Medicaid pays nearly \$116 million, which is the 5th highest Medicaid GME payout in the nation.<sup>267</sup> Even though NC is getting the 5<sup>th</sup> highest Medicaid amount of GME funding, the Medicaid funds cover roughly a quarter of resident training expenditures.

Despite the massive increase in NC population over the past 25 years, there has been no significant increase in Medicare GME funding due to the Medicare cap instituted by Congress in 1997. The Medicare cap placed limits on the amount of federal DME and IME funding that can be provided to states. This cap is especially problematic to North Carolina because the state receives the majority of its GME funding from Medicare. The Medicare cap has forced hospitals to turn to Medicaid or self-fund for additional residency positions. In turn, this created the economic incentive to add training slots for training pathways with greater revenue generation,

such as specialist positions. Within a five year period of this cap, specialty training programs in North Carolina outgrew primary care their primary care counterparts by a factor of nearly 5 to 1.<sup>264</sup> Between 2004 and 2013, growth in subspecialty GME positions increased by 40%, compared with a 13% increase in pipeline specialty programs (leading to initial board certification).<sup>270</sup> North Carolina's population grew from roughly 9.5 million to 10 million from 2010 to 2015, and by 2025, the population is expected to reach approximately 11.1 million.<sup>271</sup> If no changes are made, doctors entering the workforce will be asked to do more with less in handling the medical needs of 21st century patients in North Carolina.

### *GME Policy Opportunities*

In the current political climate, federal GME changes are unlikely to occur within the foreseeable future. For this reason, targeting state funding arms is the best way to address the current GME structure and impact physician training in North Carolina.

North Carolina currently retains only 42% of its medical residents (compared to the national average of 47%), and the current GME system lacks the necessary transparency to inform more strategic resource allocation. This lack of transparency stems from the fact that no one entity is responsible for collecting data around GME outcomes. NC Area Health Education Center (NC AHEC) has proposed serving in this role, but other possible stakeholders include the North Carolina Medical Society, NC Department of Health and Human Services, the NC Institute of Medicine, or the American Medical Association.<sup>264</sup>

The General Assembly or the Department of Health and Human Services can designate the most suitable institution to maintain this database, as well as create incentives and/or penalties for GME programs around reporting compliance. This carrot or stick approach must be significant enough to encourage participation; although many states have acknowledged the need for this type of database, none have created the appropriate incentives to drive this change. One possibility could be across-the-board percentage cuts from Medicaid GME payments, with creation of a bonus pool for both data collection and hitting performance goals. Although this could be a groundbreaking policy adjustment, North Carolina is uniquely positioned to execute this effort through its current institutions, as well as national leaders in workforce data within the Cecil G. Sheps Center at the University of North Carolina at Chapel Hill.

This centralized GME database should collect data to inform state-level allocation of Medicaid payments. First, there should be data on matching into needed specialties for rural areas, including primary care, general surgery and psychiatry. Data should also be collected on physician's decision to practice in North Carolina and their acceptance of new Medicare and Medicaid patients. These three data points create feedback metrics that can guide workforce adjustments; GME stipends can be assigned to specific residencies in support of community-based primary care practices with a stronger track record of meeting state needs.<sup>264</sup> Shifting Medicaid funding toward primary care-specific residency programs can reward strategies that improve NC primary care provider retention and better provider allocation between urban and rural care across the state.

Once a database has been created to capture GME outcomes, additional policy changes must be enacted to meet the needs of patients in North Carolina. Spero et al. recommend the creation of a GME advisory entity that facilitate conversation around the coordination of GME.<sup>272</sup> While medical schools often fall under a state board (as the University of North Carolina and East Carolina University do under the University of North Carolina Board of Governors), teaching hospitals lead GME decision making independent of a uniting state entity.

This GME advisory entity could act as a policy making body, but would likely best be served in North Carolina as an educational body for the General Assembly and Secretary of the Department of Health and Human Services. Georgia has two statute-created entities, the GME Regents Evaluation and Assessment Team (GREAT) and the Georgia Board for Physician Workforce (GBPW), to monitor as potential examples for a NC entity. GREAT provides seed funding for a statewide expansion of medical school and GME positions, while GBPW coordinates workforce studies and provides some state-appropriated funding dollars to specific residency programs.<sup>272</sup>

A final opportunity for North Carolina is to expand Medicaid GME payment beyond physician training. Medicare GME payments are limited to physicians, dentists, and podiatrists, but states have flexibility to use Medicaid funds for other clinicians. Twelve states, including Virginia and South Carolina, support the training of other health professionals, including advanced practice nurses, physician assistants, emergency medical technicians, pharmacists, or laboratory personnel.<sup>266</sup> These positions should be held to similar tracking and accountability standards as above in order to receive Medicaid funding. If the cut+bonus model is adopted, these training programs can compete with traditional GME institutions for receipt of these funds.

Our current method of GME does not leverage available data and technology to address the needs of North Carolina patients. Thus, by incorporating new training methods, the state could achieve better results in terms of both cost and clinical health outcomes. This proposal examines training approaches to prepare a medical workforce to deliver care through telemedicine.

### *Current Telemedicine Training Approaches*

Coordinated telemedicine training remains limited across the country. However, as states and payers continue to adopt reimbursement policy, medical trainees should gain experience interacting with patients via telemedicine technologies. These formal training experiences should focus on comparing and contrasting this delivery model to traditional brick-and-mortar visits, identifying appropriate medical conditions to treat virtually, potential barriers to virtual care delivery, and risk management strategies.

#### I. North Dakota School of Medicine and Health Sciences

The University of North Dakota School of Medicine and Health Sciences is working with the AMA to enhance medical education through telemedicine technologies that meet the healthcare needs of rural communities.<sup>273</sup> This plan incorporates telemedicine into the medical school curriculum by using robots and into their GME training through their psychiatry residency. Although the medical school curriculum is currently being developed, the current residency plan is structured as follows:<sup>274</sup>

- Add 1 residency slot a year
- Emphasize rural with two rural rotations in rural settings
- Provide services to rural patients
- Link the resident to rural primary care physician, consultation, and referral
- Structure the 4-year program with the following gradations of telemedicine:
  - 1<sup>st</sup> year residency—all inpatient
  - 2<sup>nd</sup> year—some of year dedicated to telemedicine training
  - 3<sup>rd</sup> year—one third of training is dedicated to telemedicine training

- 4<sup>th</sup> year—one half of training dedicated to telemedicine
- Incorporate new faculty position to work with tele-psychology
- Ensure all residents receive some telemedicine exposure

## II. George Washington University Department of Emergency Medicine

The emergency medicine telemedicine fellowship is a program organized through the Department of Emergency Medicine at the George Washington University Medical Faculty Associates with the purpose of developing future leaders in telemedicine. The two-year program equips fellows with basic technical knowledge of telehealth (telemedicine, remote health monitoring, and mobile health), clinical competence in telemedicine delivery, and leadership skills to establish new programs. The program provides opportunity for collaboration among emergency medicine faculty and faculty in other medical and surgical disciplines, as well as engineering and business.

The curriculum is divided into experiential, academic and clinical components. During the experiential phase, each fellow contributes to ongoing projects dealing with telehealth. The fellow is expected to implement a telemedicine project or contribute to an existing project. During the academic phase, the fellow will be exposed to the broad scope of telemedicine delivery. During the clinical phase, the fellow will serve as a full-time employee and work as a faculty member at a hospital where they assist in training of GW medical students.<sup>275</sup>

At the end of the program each fellow should part with:

- The ability to develop and operate a telemedicine program
- A working knowledge of telemedicine technical requirements (hardware, software, IT requirements, program development)
- Skills to conduct remote consultation via phone and real-time video technologies

## III. Thomas Jefferson University Telehealth Leadership Fellowship

Similar to the program offered at George Washington, Thomas Jefferson University (TJU) offers a telehealth fellowship to residents. Fellows participate in a one-year program, where they are educated about the business and medicine of Telehealth. By working with management teams across TJU as well as alongside private sector partners, fellows will lead Telehealth programs. The program incorporates team based learning, hands on application, and simulation training. The program is comprised of four components: leadership skills development, entrepreneurship, academics, and clinical experience.

In the leadership skills development component, fellows learn how to implement emotionally intelligent theories of leadership and management and have regular meeting with mentors and professional coaches. During the entrepreneurship phase, fellows explore telehealth finance and marketing and work in TJU and private sector administrative departments. Before moving onto the clinical phase, the fellow participates in a Telehealth Boot Camp to develop the necessary research and knowledge to work in the field. Finally, fellows work for approximately 16 hours a week as a telehealth provider where they gain access to the most practices in the industry.<sup>276</sup>

#### IV. South Carolina Department of Mental Health Telepsychiatry Program

In 2007, the South Carolina Department of Mental Health (DMH) and the South Carolina Hospital Association (SCHA) developed a statewide telepsychiatry network for all hospitals operating emergency departments (EDs).<sup>277</sup> The objective of the program is to make psychiatric consultation available in all state EDs twenty-four hours a day. The consultations have increased the quality and timeliness of triage, assessment and initial treatment of patients, reduced the number of individuals and length of stay in EDs, and allowed hospitals to direct critical personnel and financial resources to other needs. This program has created massive financial savings for hospitals and better health outcomes for patients. This program has been successful in achieving its goals:

- Increase the number of patients receiving comprehensive assessment utilizing telemedicine technology.
  - From 2010 to 2015, the average number of behavioral health patients receiving telepsychiatric consultations increased from 8.7 to 14.7 per day.
- Ensure focused documentation is generated for each telemedicine consultation.
  - Through the use of a comprehensive statewide electronic medical record (EMR) system, assessments and hospital notes can be referenced for treatment, discharge planning and billing purposes.
- Maximize the number of patients seen through a seamless joint consultation process.
  - Pre-telepsychiatry service delivery relied on a mental health professional (MHP) traveling to the local ED. Currently, ED physician can deliver care including: medications, discharge planning and follow-up can decrease the recovery time of patients.
- Secure better quantitative information on the diagnosis of MH, substance abuse, and co-occurring disorders.
  - At the end of May 2015: Primary diagnoses: 29% mood disorder, 28% psychosis and 13% drug related. Additional diagnoses (e.g., secondary, tertiary), 43% were drug related (reflecting a significant co-occurring trend not seen to this degree in the outpatient mental health system), 13% anxiety and 11% impulse control.
- Reduce the average length of stay (LOS) in the ED.
  - LOS in situations where telepsychiatry was either not available or requested, the behavioral health patient could experience a stay of two to three days before being assessed by a MHP. For the month of May 2015, that wait time had decreased to 8.5 hours on average.
- Increase the number of professional staff in local hospitals receiving training via the DMH training presentations.
  - The Palmetto State Provider's Network (PSPN) has developed subscription-based access to a statewide network and hospitals all across South Carolina. At the end of May 2015, 16 of 21 participating hospitals were connected to the PSPN network.
- Increase the number of psychiatrists and psychiatric residents trained to use the telemedicine system and provide opportunity for a larger pool of psychiatrists for consultation.
  - Recruiting for telepsychiatrists in South Carolina via the training of psychiatric

residents was implemented February 1, 2013.

- Reduce the cost of mental healthcare by decreasing the utilization of sheriff deputies, probate judges, and designated examiners.
  - the timely administration of medications and effective referrals of the behavioral health patients has reduced the frequency of using deputies, judges, and examiners

#### V. Innovative Approaches at Stanford and Harvard Medical Schools

Researchers from Stanford and Harvard Medical Schools developed a telemedicine curriculum to move the United States healthcare system into the future. Telemedicine training can be incorporated into both the pre-clinical and clinical phases of medical school. In the preclinical years, students attend clinical skills sessions, and one of these “Doctoring” sessions each quarter could be modified such that students must interact with patients electronically rather than in person. The clinical reasoning lectures that take place before these sessions would highlight the disparities between electronic and traditional encounters.

Many specialties studied by medical students, such as radiology, dermatology, and primary care, already use telemedicine. Students rotating in these specialties should be required to complete 10 to 20 hours on “digital call,” during which they would participate in electronic encounters with faculty supervision, learn about remote monitoring tools, and develop the background necessary to be an effective provider in the future. Schools may also consider the idea of a “digital health rotation,” in which students would spend two to four weeks learning how new tools can be applied in practice across fields.<sup>278</sup>

#### VI. Technology in Medical Education at UNC School of Medicine

The Technology in Medical Education (TiME) program at UNC School of Medicine working to equip medical students with the tools necessary provide the best quality patient care through the use of technology.<sup>274</sup>

Beginning in February 2017, each medical student entering their clinical training phase will receive an iPad to use during each clinical rotation. Not only do these iPads help in the clinical training process by supplying exam review materials, electronic textbooks, and instructional videos, but the iPads also include bedside communication aids, point-of-care resources, and drug references.<sup>279</sup> Dr. Richard Hobbs, who is spearheading this new program, believes that the iPad program is crucial in training the next generation of medical professionals. Rather than training with out-of-date technology, this program provides a means of using technology to improve doctor-patient interaction rather than seeing it as a barrier.<sup>280</sup> For example, using iPads, students are able to hand the patient the tablet to educate them about their condition.

This investment from UNC’s medical school could provide some of the infrastructure necessary to develop skills in a telemedicine setting. The platform on which to learn could be obtained a few ways. By supporting telemedicine payment reform discussed in Section 5a, health systems would have greater incentive to create or adopt telemedicine platforms, which would trickle down to its trainees. The General Assembly or Department of Health and Human Services could also provide competitive funding to one or more medical schools in the state to establish a training pathway for its students and residents within the health center.

Telemedicine training pathways in the United States remain in their infancy, but academic health centers are realizing the important role they play in designing innovative curriculum. Both GME and telemedicine innovations can be leveraged to target current gaps in the physician workforce in North Carolina. Both changes would help North Carolina lead from the front while providing cost-effective delivery reforms to improve care and access for all its citizens.



## **Section 6: Summary of Recommendations for North Carolina**

In this section, we summarize our recommendations for the state of North Carolina from Sections 3, 4, and 5:

### **SECTION 3: PROPOSED RESPONSES TO FEDERAL REFORMS TO MEDICAID**

- If Medicaid is converted to a per capita cap funding model, NC should:
  - Advocate for rates to be set to pre-expansion levels to avoid incurring financial penalties due to North Carolina’s proactive cost reduction measures during 2011-2016. pg. 30
  - Reform provider payments using the value-based payment programs outlined in the state’s Section 1115 waiver instead of implementing uniform cuts to provider reimbursements. pg. 33

### **SECTION 4: FINANCING AND PROGRAM OPTIONS FOR MEDICAID**

#### **4B. MEDICAID MANAGED CARE (MMC)**

- When implementing MMC, NC should: pg. 51
  - Set a reasonable implementation timeline to allow stakeholders to adjust.
  - Develop organizational capacity for oversight of managed care organizations.
  - Account for the inevitability of early financial losses for managed care organizations.
  - Foster competition among managed care organizations (MCOs) and ensure sufficient plan choices for patients.
  - Reduce administrative burden & ensure appropriate pay for providers.
  - Leverage auto-assignment to lower costs and increase beneficiary participation.

#### **4C. PRIMARY CARE CASE MANAGEMENT (PCCM) MODELS**

- As NC moves forward with managed care implementation, NC should: pg. 59
  - Build upon CCNC’s evidence-based care and regional flexibility.
  - Continue emphasis on targeted interventions and strengthen mental health and long-term care management programs.

#### **4D. USING SECTION 1115 WAIVERS TO IMPLEMENT CONSUMER-DRIVEN FINANCIAL INCENTIVES**

- In redesigning Medicaid to incorporate financial incentives, NC should: pg. 70
  - Minimize the complexity of Medicaid programs to reduce administrative cost and improve patient adherence.
  - Invest in outreach and education needed for healthy behavior incentives to have an impact.
  - Combine incentives for consumers with those for MCOs and providers.

### **SECTION 5: DELIVERY REFORM**

#### **5A. HOTSPOTTING APPROACH**

- To meet the care needs of “super-utilizers,” NC should: pg. 81
  - Promote value-based payments to providers.
  - Allow Medicaid funds to be used for non-traditional services, such as social service navigators and other ancillary support services.
  - Use enhanced federal funding (90%) available for Medicaid Management Information System and Health Information Exchange development.
  - Facilitate provider-led initiatives by convening stakeholders and crowdsourcing provider expertise.

## **5B. DUAL ELIGIBLES: A TARGETED APPROACH TO REFORMING DELIVERY AND PAYMENT FOR A HIGH-COST, HIGH-NEEDS POPULATION**

- To increase efficiency in caring for vulnerable dual eligible patients, NC should: pg. 98
  - Align financial incentives between Medicare and Medicaid programs through Centers for Medicare and Medicaid Services (CMS) alignment models.
  - Streamline passive enrollment.
  - Integrate programming across Medicare and Medicaid.
    - Require contractors in long-term services and supports (LTSS) programs to offer Dual-Eligible Special Needs Plans (D-SNPs).
    - Include palliative care, long-term care, and behavioral health within the required dual-eligible benefits under D-SNPs.
  - Incorporate hotspotting to target transitions from long-term care facility to community.

## **5C. TELEMEDICINE IN NORTH CAROLINA**

- To address provider shortages in the state, NC should: pg. 109
  - Remove originating site requirements.
  - Utilize value-based payment to support telemedicine expansion through live video, remote patient monitoring, and eConsults.
  - Pursue telemedicine pilots through Section 1115 or 1915(c) waivers or other federal demonstration projects.

## **5D. GRADUATE MEDICAL EDUCATION (GME)**

- To train future providers in North Carolina, NC should: pg. 113
  - Create greater NC Medicaid GME transparency through centralized outcomes database and formation of GME Advisory Committee.
  - Fund innovative training methods, such as telemedicine and hotspotting.
  - Expand Medicaid GME beyond MD training to physician extenders.

## Appendix 1: Federally Mandated Minimum Benefits and Optional Benefits.

Mandatory Benefits	Optional Benefits
<ul style="list-style-type: none"> <li>• Inpatient hospital services</li> <li>• Outpatient hospital services</li> <li>• EPSDT: Early and Periodic Screening, Diagnostic, and Treatment Services</li> <li>• Nursing Facility Services</li> <li>• Home health services</li> <li>• Physician services</li> <li>• Rural health clinic services</li> <li>• Federally qualified health center services</li> <li>• Laboratory and X-ray services</li> <li>• Family planning services</li> <li>• Nurse Midwife services</li> <li>• Certified Pediatric and Family Nurse Practitioner services</li> <li>• Freestanding Birth Center services (when licensed or otherwise recognized by the state)</li> <li>• Transportation to medical care</li> <li>• Tobacco cessation counseling for pregnant women</li> </ul>	<ul style="list-style-type: none"> <li>• Prescription Drugs</li> <li>• Clinic services</li> <li>• Physical therapy</li> <li>• Occupational therapy</li> <li>• Speech, hearing and language disorder services</li> <li>• Respiratory care services</li> <li>• Other diagnostic, screening, preventive and rehabilitative services</li> <li>• Podiatry services</li> <li>• Optometry services</li> <li>• Dental Services</li> <li>• Dentures</li> <li>• Prosthetics</li> <li>• Eyeglasses</li> <li>• Chiropractic services</li> <li>• Other practitioner services</li> <li>• Private duty nursing services</li> <li>• Personal Care</li> <li>• Hospice</li> <li>• Case management</li> <li>• Services for Individuals Age 65 or Older in an Institution for Mental Disease (IMD)</li> <li>• Services in an intermediate care facility for Individuals with Intellectual Disability</li> <li>• State Plan Home and Community Based Services- 1915(i)</li> <li>• Self-Directed Personal Assistance Services- 1915(j)</li> <li>• Community First Choice Option- 1915(k)</li> <li>• TB Related Services</li> <li>• Inpatient psychiatric services for individuals under age 21</li> <li>• Other services approved by the Secretary</li> <li>• Health Homes for Enrollees with Chronic Conditions – Section 1945</li> </ul>

Source: Figure created by authors, using data from [Medicaid.gov](https://www.Medicaid.gov).<sup>5</sup>

## Appendix 2: Current North Carolina Medicaid Programs

### Children and Families

Group	Benefits	Basic Eligibility Requirements	Whose Income and Resources Count	Monthly Income Limit (Updated 4/16)		Notes and Special Provisions
Medicaid for Families with Dependent Children (MAF)	Full Medicaid coverage	Parents/Caretaker relatives must be living with and caring for a child to whom they are related who is under age 19. Children must be under age 21	MAGI Methodology <sup>1</sup>	1 - \$434 2 - \$559 3 - \$667 4 - \$744 5 - \$824		If income exceeds the limit families may be eligible for MAF if they meet a deductible <sup>2</sup>
Medicaid for Pregnant Women (MPW)	Coverage is limited to treatment for conditions that affect pregnancy	A self-attestation of pregnancy and due date can be accepted as proof unless the county has information that contradicts the assertion	MAGI Methodology <sup>1</sup>	196% of Poverty Level 1 - \$1,941 2 - \$2,617 3 - \$3,293 4 - \$3,969 5 - \$4,646		When determining the family size for the pregnant woman the unborn child is included.
Medicaid for Infants and Children (MIC)	Full Medicaid Coverage	Must be under age 18	MAGI Methodology <sup>1</sup>	Children < Age 6 210% of Poverty Level 1 - \$2,079 2 - \$2,804 3 - \$3,528 4 - \$4,253 5 - \$4,977	Children > Age 6 133% of Poverty Level 1 - \$1,317 2 - \$1,776 3 - \$2,235 4 - \$2,694 5 - \$3,153	
Title IV-E Children IAS	Full Medicaid Coverage	Be a Title IV-E adoptive or foster child	Medicaid eligibility is automatic. There is no income or resource determination for these children.			
State Foster Care Children (HSF)	Full Medicaid Coverage	If not eligible for HSF, then evaluate for other children’s programs.				

Note: **Early and Periodic Screening, Diagnosis and Treatment (EPSDT)** is a federal law requiring all medically necessary healthcare services to be provided to Medicaid-eligible children. Regardless of NC Medicaid coverage, these services must be provided for children under the age of 21 if they are listed at 1905(a) of the Social Security Act and all EPSDT criteria are met. **Health Check** requires coverage for screening, diagnosis, and treatment for conditions discovered during screening.

## Health Choice

Group	Benefits	Basic Eligibility Requirements	Whose Income and Resources Count	Monthly Income Limit (Updated 4/16)	Notes and Special Provisions
NC Health Choice (NCHC)	Medicaid-equivalent coverage with four exceptions: no long-term care, no EPSDT, no non-emergency medical transportation, and restricted dental	Be age 6 through 18, ineligible for Medicaid, Medicare or other federal government - sponsored health insurance, be uninsured, a NC resident	MAGI Methodology <sup>1</sup>	211% of Poverty Level 1 - \$2,089 2 - \$2,817 3 - \$3,545 4 - \$4,273 5 - \$5,001	Beneficiaries with household income over 159% of poverty level must pay enrollment fee  1 - \$1,575.01 2 - \$2,123.01 3 - \$2,672.01 4 - \$3,220.01 5 - \$3,769.01

## Aged, Blind or Disabled

Group	Benefits	Basic Eligibility Requirements	Whose Income and Resources Count	Monthly Income Limit (Updated 4/16)	Resource Limit (Updated 4/16)	Notes and Special Provisions
Medicaid for the Aged, Blind, and Disabled (MAA, MAB, and MAD)	Full Medicaid Coverage	Must be either: -Older than age 65 -Blind by Social Security Standards -Disabled by Social Security Standards	Spouse's income and resources if living together. Parents' income and resources if under age 18 and living with parents. <sup>3</sup>	100% of Poverty Level 1 - \$990 2 - \$1,1335	SSI Limits 1 - \$2,000 2 - \$3,000	If income exceeds the limit families may be eligible for MAF if they meet a deductible <sup>2</sup>
Health Care for Working Disabled (HCWD) MAD	Full Medicaid Coverage	For Basic Coverage, beneficiaries do not have to meet Social Security SGA requirements. For Medically Improved coverage, beneficiaries are not required to meet the Social		150% of Poverty Level 1 - \$1,485 2 - \$2,003	Min. CSRP limit \$23,844	

		Security medical requirements.				
Qualified Medicare Beneficiaries (MQB-Q)	Payment of Medicare premiums and deductibles and co-insurance charges for Medicare covered services	Entitled to Medicare Parts A&B		100% of Poverty Level 1 - \$990 2 - \$1,1335	1 - \$7,280 2 - \$10,930	Part of Medicare Aid Program
Specified Low Income Medicare Beneficiaries (MQB-B)	Payment of Medicare Part B Premiums	Entitled to free Medicare Part A		120% of Poverty Level 1 - \$1,188 2 - \$1,602	1 - \$7,280 2 - \$10,930	Part of Medicare Aid Program
Qualifying Individual (MQB-E)	Payment of Medicare Part B Premiums	Entitled to free Medicare Part A	Spouse's income and resources if living together. Parents' income and resources if under age 18 and living with parents. <sup>3</sup>	135% of Poverty Level 1 - \$1,337 2 - \$1,803	1 - \$7,280 2 - \$10,930	Part of Medicare Aid Program. Total number of eligible individuals is limited to available funds
Working Disabled MWD	Payment of Medicare Part A Premiums	Lost entitlement to free Medicare A due to earnings but still has disabling impairment		200% of Poverty Level 1 - \$1,980 2 - \$2,670	2X SSI Limits 1 - \$4,000 2 - \$6,000	Part of Medicare Aid Program

If a Medicaid application is submitted, full Medicaid coverage will also be given in S-ABD and SSI cases:

- Beneficiaries receiving Supplementary Security Income (SSI) –Federal cash assistance program for the aged, blind, and disabled, are automatically eligible. No Separate application or Medicaid determination is required.
- Beneficiaries receiving State/County Special Assistance (SA)-program for aged and disabled individuals who are primarily in adult care facilities are eligible.
- Beneficiaries receiving Special Assistance In-Home- the individual must be determined categorically needy.

## Other Medicaid Programs

Group	Benefits	Basic Eligibility Requirements	Whose Income and Resources Count	Monthly Income Limit (Updated 4/16)	Notes and Special Provisions
Expanded Foster Care (HSF, IAS)	Full Medicaid Coverage	-Currently age 18-20 –been a Title IV-E or State foster child on 18 <sup>th</sup> birthday	There is no income determination	None	
Medicaid for Former Foster Care (MFC)	Full Medicaid Coverage	-Currently age 18-25 -In NC foster care and enrolled in NC Medicaid before age 18	There is no income determination.	None	
Breast & Cervical Cancer Medicaid (MAF-W)	Full Medicaid Coverage	Must be a woman aged 18-64 who has been screened and enrolled in the NC Breast and Cervical Cancer Control Program and is otherwise ineligible for Medicaid.	There is no income determination.	None	To be eligible under the Breast and Cervical cancer Medicaid program, the woman cannot have any type of medical insurance including Medicare.
Family Planning (MAF-D)	-Family planning exams and services. -Screening & treatment for STIs -Screenings for HIV -Sterilization	NO AGE LIMIT	MAGI Methodology <sup>1</sup>	195% of Poverty Level  1 - \$1,931 2 - \$2,604 3 - \$3,276 4 - \$3,949 5 - \$4,622	If a beneficiary's income increases to more than 195%, he/she will be ineligible for family planning coverage.

1. Modified Adjusted Gross Income (MAGI) Methodology was introduced with the Affordable Care Act to evaluate income and determine eligibility for aid. It is defined under Section 36B of the Internal Revenue Code (IRC).
2. If income exceeds income limit, individuals or families may be able to be eligible for Medicaid if they meet a deductible. The deductible is determined by subtracting the Medically Needy Income Limit (MNIL) from the countable monthly income to determine the monthly excess income. Medicaid deductibles are generally determined for 6 months, so the monthly excess income is multiplied by 6 to determine the 6-month deductible. Once medical bills for which they are responsible totaling the amount of the deductible are incurred, they are authorized for the rest of the 6-mo. Period. Medicaid cannot pay for any of the bills applied to the deductible.
  - a. MNIL: 1 - \$242, 2 - \$317, 3 - \$367, 4 - \$400, 5 - \$433
  - b. All deductible cases have a resource limit: \$3,000 for families and \$2,000 (1) and \$3,000 (2) for aged, blind, and disabled.
3. When considering whose income and resources count there is:
  - a. Protection of income for spouse at home: When an individual is in a nursing facility and has a spouse living at home, a portion of the income of the spouse in the facility may be protected to bring the income of the spouse to home up to a level specified by federal law. Currently, that among is \$2,003/month and

can be as much as \$2,981 depending upon at-home spouse's cost for housing. The amount protected for the at-home spouse is not counted in determining the eligibility of the spouse in the nursing facility.

- b. Protection of resources for spouses at home: Additionally, the countable resources of the couple are combined a portion is protected for the spouse at home. That portion is ½ the total value of the countable resources, but currently not less than \$23,844 or more than \$119,220. The amount protected for the at-home spouse is not countable in determining the eligibility of the spouse in the facility.
- c. Transfer of resources: When a person gives away resources and does not receive compensation with a value at least equal to that of the resources given away, he or she may be penalized. Medicaid will not pay for care in a nursing facility or care provided under the Community Alternative Program (CAP) or other in-home health services & supplies for some time depending on the value of the transferred resource.

## NC Sponsored Programs and Services for Medicaid Patients

Group	Benefits	Basic Eligibility Requirements	Notes and Special Provisions
Be Smart Family Planning Program	Family planning, birth control, HIV testing and limited STD screening and treatment	NC residents who are not pregnant, incarcerated, or using Medicaid	Abortions, condoms, contraceptive suppositories, fertility treatments, ER visits, and pregnancy healthcare are among other services not covered by this program. This program is available to all NC residents at or below 195% of Poverty Level.
Care Coordination for Children (CC4C)	Care management, home visiting services, health assessments, referrals and parenting information via social workers and nurses	Children less than 5 years old who are on Medicaid and: -Are at risk for or have been diagnosed with a developmental delay or disability -Are at-risk for or have been diagnosed with a long-term illness -Are at risk for or have social emotional disorder(s)	
Community Alternatives Program for Children (CAP/C)	Provides home- and community-based services to children at risk for institutionalization in a nursing home	Children less than 20 years of age who meets both the Medicaid eligibility criteria and the CAP/C eligibility criteria: -Live in a private residence and can be safely cared for -Require the same level of care as a child in a nursing home or hospital -Have family willing to participate in the care and care planning	Families are required to use one of the following additional services, at least once every 90 days: -In-home nurse or nurse aide care -Home modifications and vehicle modifications -Palliative care -Caregiver training and education Additional services include: -Respite care -Reusable diapers and disposable liners



Community Alternatives Program for Disabled Adults (CAP/DA)	Provides home- and community-based services to disabled adults at risk of institutionalization	No household member, relative, caregiver, landlord, community, agency, volunteer agency or third party payer is able or willing to meet all medical, psychosocial and functional needs of the beneficiary.	There is also a consumer-directed option called CAP/Choice. This is for disabled adults who want to remain at their homes and have increased control over services and supports.
Community Care of North Carolina (CCNC)	Primary care case management healthcare plan (aid category determines if beneficiary is mandatory, optional, or exempted)	CCNC is mandatory for most Medicaid beneficiaries. Enrollment is optional for those under the age of 21 years and identified as having special needs (receiving SSI, in foster care or receiving adoption assistance, or who self-identify as having special needs).	Current or potential enrollees who are in the mandatory program aid category can request an exemption from participation for medical reasons. Beneficiaries can request exemption request forms from the county.
Early Intervention Services	Service Coordination, physical, occupational and speech-language therapies, family support, special instruction, assistive technology, and other services	Supports Medicaid-eligible special needs children, birth to three years old, and their families.	
HIV Case Management	Includes assessment, care planning, resource development, coordination, monitoring, reassessment and discharge	Medicaid patients diagnosed with HIV.	
Case Management Services for Adults and Children At-Risk of Abuse, Neglect or Exploitation	Developing service plans, locating and contacting providers, and monitoring services to make sure care is of quality	Medicaid patients who are: -impaired adults with insufficient caregiver availability -children of impaired or adolescent parents -children who have a severe medical or mental condition -adults or children who are being abused, neglected, or exploited where a need for protection has been substantiated	

Health Insurance Premium Payment Program (HIPP)	Pays insurance premiums for individuals at risk of losing or unable to use private health insurance due to high-risk illness	Must be eligible for Medicaid and have private health insurance through an employer	DMA will consider paying the premium for a family coverage policy if it is cost-effective and the only way the recipient can be covered.
Maternal Support Services (Baby Love Program)	Childbirth education, health and behavior intervention, and medical home visits	Medicaid-eligible pregnant women during and after pregnancy (up to 60 days post-partum)	
Money Follows the Person (MFP)	Assists those living in inpatient facilities to move into their own homes and communities with support	Must meet all requirements for enrollment in Community Alternatives Program for Disabled Adults or Program for All-Inclusive Care	DMA was awarded its MFP grant from CMS in May 2007 and began supporting individuals to transition in 2009. Under the Affordable Care Act, MFP was extended through 2020.
Program for All Inclusive Care (PACE)	Provides comprehensive services and integrates Medicare and Medicaid financing.	<ul style="list-style-type: none"> <li>-Be 55 years of age or older</li> <li>-Need the level of care required under Medicaid for coverage of nursing facility services</li> <li>-Reside in the PACE organization's service area</li> <li>-Can live in a community setting when enrolled</li> <li>-Meet program-specific eligibility conditions imposed under the respective PACE agreement</li> </ul>	

Source: Figure created by authors, using data from [NC DHHS](#).<sup>281</sup>

## Appendix 3: State Section 1115 Waiver Case Studies

### *Indiana Case Study: Cost Sharing Leads to Confusion*

In 2007, Indiana submitted a Section 1115 waiver to Centers for Medicare and Medicaid Services (CMS) for the “Healthy Indiana Plan” (known as HIP 1.0). The waiver aimed to expand coverage for low-income individuals while shifting to a more consumer-driven model of Medicaid. To achieve this goal, HIP 1.0 participants were enrolled in high deductible health plans (HDHPs) that were paired with Personal Wellness and Responsibility (POWER) health savings accounts (HSAs) valued at \$2,500. The HSAs were funded by a combination of state deposits and enrollee premiums.<sup>282</sup> The POWER account covers the first \$2,500 of medical expenses, and then the HDHP covers additional healthcare costs. At the same time, Indiana negotiated comprehensive risk-based contracts with two managed care organizations (MCOs), Anthem and MDWise, to pay for beneficiaries’ care on capitated basis.

During its first year, HIP 1.0 had approximately 40,000 voluntary enrollees. Participating individuals were sicker and utilized a greater number of health services compared to the average Medicaid beneficiary. This adverse selection of patients with chronic diseases can be attributed to an unmet need for care by newly eligible high-risk Medicaid beneficiaries. As a result, per member per month (PMPM) costs rose, and both MCOs finished the year with net losses.<sup>283</sup> The balance of the risk pool ultimately appeared to stabilize in subsequent years as the number of “healthier” enrollees gradually increased by 13,000 beneficiaries from 2008-2012. Indiana’s experience with HIP 1.0 suggests that Medicaid expansion will likely result in sicker and more costly patients joining the pool, which may cause MCOs to operate losses in initial years.

After the Affordable Care Act (ACA) allowed states to expand Medicaid coverage for childless adults, Indiana chose to forego traditional Medicaid expansion and continue to cover the expansion population (primarily childless adults) through revisions to the HIP program in 2015.<sup>284</sup> The program’s second iteration (known as HIP 2.0) includes two types of coverage: HIP Plus and HIP Basic. Enrollees whose incomes are below 100% of the federal poverty level (FPL) have the choice of paying monthly premiums and enrolling in HIP Plus, or not paying premiums and enrolling in HIP Basic, which has narrower coverage and charges copays for most services. Enrollees with incomes are between 100 and 138% FPL must pay premiums and enroll in HIP Plus. Premiums are set at 2% of annual family income: for a family of four at 100% FPL (making \$24,600 annually), monthly premiums would be \$41.00.<sup>148</sup>

HIP 2.0 became the first model in the country to introduce a “lockout” policy for Medicaid beneficiaries. If enrollees below 100% FPL fail to pay their monthly premiums to their POWER accounts, they are demoted to HIP Basic. The penalty is more severe for enrollees with incomes ranging from 100-138% FPL; if they miss a POWER payment for 60 days, they are disenrolled from HIP Plus and locked out of Medicaid coverage for six months.

Evaluations of HIP 2.0 have drawn mixed reviews, with many researchers contesting the validity of the results to date. For example, the state reports that 92% of enrollees have successfully made POWER payments. However, Indiana’s claims are misleading as the statistic does not include one-third of HIP 2.0 enrollees who are considered “conditionally enrolled” (meaning they have joined the program, but have not made a POWER payment). While it can be assumed that individuals who fail to make a POWER payment do not have healthcare coverage, the state still

includes that 30% of the population in their enrollment statistics, thus inflating the overall size of the HIP program.

Moreover, the mandated monthly payments appear to create confusion and may serve as a financial deterrent to accessing healthcare for Medicaid beneficiaries.<sup>151</sup> Only 19% of all HIP Plus members actually checked their POWER account on a monthly basis.<sup>285</sup> Declines in care utilization might not be the result of “smart shopping” for health services, but simply a consumer failure to navigate the complexities of HSAs and insurance, on top of the health and socioeconomic stress experienced by the eligible population. In fact, 84% of individuals who were dropped down to the HIP Basic plan cited confusion with the process as a whole, as they now face new hurdles accessing care, such as copays and limitations for prescription drugs.<sup>286</sup> The increase in health service utilization (e.g., primary, preventative, and specialty care) and prescription drug adherence by individuals enrolled in HIP Plus compared to HIP Basic may simply be an indicator of the sliding scale of insurance quality created by HIP. Thus, state savings appear to have a human cost, as HIP Basic enrollees reduce their reliance on primary care and experienced a corresponding increase in ED usage for both emergency and non-emergency situations.<sup>72</sup>

Recent survey results from Michigan’s evaluation of the Healthy Michigan Plan (HMP) also suggests that beneficiaries are unaware of the cost sharing requirements associated with their plan. For example, nearly half (48%) of respondents did not know whether contributions were charged monthly regardless of healthcare use.<sup>173</sup> More than half (52%) did not know if they could be disenrolled from HMP for not paying their bill.

#### *Michigan Case Study: Healthy Behavior Incentives*

As part of its Section 1115 Waiver, Michigan instituted a healthy behavior incentive program that provides beneficiaries significant financial incentives to complete a Health Risk Assessment (HRA). As part of completing a HRA, beneficiaries answer questions about their current health status and are encouraged to visit a primary care provider (PCP). Upon completion of the HRA, a beneficiary’s contributions to monthly premiums can be cut in half.<sup>287</sup> Currently, beneficiaries are required to fill out a HRA after enrolling in Medicaid and once annually after that.<sup>287</sup> Beneficiaries can further reduce their premium contributions by participating in certain health behaviors, such as losing weight, quitting smoking, and getting a flu shot. Furthermore, all Medicaid managed care plans offer financial incentives that reward healthy behaviors, but beneficiaries are only eligible for these incentives after they complete the HRA with their PCP and agree to address pertinent health behaviors.

Initial studies of the healthy behavior incentives in the Healthy Michigan Plan suggest that the program has had marginal success to date. A state evaluation found that only 15% of the roughly 570,000 beneficiaries who have been enrolled in a plan for at least six months have completed the HRA. Conversely, the University of Michigan Institute for Healthcare Policy and Innovation released a preliminary evaluation in September 2016 that surveyed 2,059 out of 4,050 Healthy Michigan Plan beneficiaries about the current state of their health, health utilization, access to care, out-of-pocket costs, and understanding of their coverage.<sup>173</sup> Of the beneficiaries surveyed, more than half (53%) of beneficiaries reported completing the HRA, with PCP encouragement being the most common reason that people completed the HRA (46%). Of those who completed the HRA, 81% reported choosing to work on a healthy behavior, with

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<sup>1</sup> Findings from the full sample of 4,050 Medicaid beneficiaries will be available in 2017.

nutrition/diet (59%) and exercise (54%) being the most common behaviors. Nearly 40% agree that healthy behavior financial incentives have led them to work on improving certain health behaviors that they would not have done otherwise<sup>173</sup>. However, more than half (60%) did not know they could get a reduction in their monthly premiums if they completed a Health Risk Assessment.

The survey found that nearly half (47.5%) of beneficiaries reported that their health had improved since enrolling, with 32.8% reporting daily exercise and 51.7% reporting that a PCP had talked to them about exercise, diet, and nutrition since enrolling.<sup>173</sup> About 63% reported that they stopped smoking, while 89% are working with their PCP or health plan to reduce or quit smoking to receive a healthy behavior reward.<sup>173</sup>

Thus, initial evaluation and survey findings suggest that Michigan has had low take-up rates of the health risk assessment (15%), perhaps because many beneficiaries are not aware of the incentives tied to completing the HRA. Of the small proportion of individuals who completed the HRA, the engagement with PCP engagement and coaching on health behaviors may help Medicaid beneficiaries commit to long-term behavior change, especially in nutrition and exercise. However, the incentives to do so will have little effect unless beneficiaries are aware of the financial benefits of completing HRAs.

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