To move the dial and drive the factors that impact 70% of health outcomes, we need a health and social services system that has the capacity and flexibility to address social determinants, and we need to better engage individuals in taking ownership of the factors they can control. The foundational elements that will then have the greatest impact on improving North Carolina's population health—when integrated—are Medicaid policy and metrics, social determinants, whole-person-centered models of care, and workforce development.

As guest editor for this issue of the North Carolina Medical Journal, I have an advantage that the other authors didn’t have when they first submitted their manuscripts: I know the outcome of the presidential election.

At the time of this writing, it’s Thanksgiving weekend, and by now, the health care industry and its respected service providers are brimming with potential scenarios and implications for Medicaid expansion states and non-expansion states alike. As a result of the national election, what appears likely is that states will have more freedom and flexibility in managing their Medicaid programs in the future. And that states will bear more financial responsibility when doing so.

As a state that submitted its Medicaid reform waiver only recently (and has not yet begun formal discussions with the Centers for Medicare & Medicaid Services [CMS]), North Carolina sits in a unique position to “take it all in” as we hone in on a North Carolina solution. Because exact policy details are currently unclear, states are looking to reference documents [1-3] sponsored by House Speaker Paul Ryan and by Representative Tom Price, the nominee for Secretary of the US Department of Health & Human Services. Projections of Congressional activity are that repeal of the Patient Protection and Affordable Care Act (ACA) could occur through budget resolution by February and potential Medicaid and ACA reform legislation could be brought to the House and Senate floor by October, with final enactment of legislation by December [4].

So the timing of this issue couldn’t be better! The purpose of this issue is to engage in a conversation. Like all good conversations, somebody begins by laying out a premise that invites others in. And through dialogue and mutual respect, the parties build a shared consciousness around the topic at hand.

Admittedly, there wasn’t a lot of shared consciousness leading up to the presidential election. But, if we handle our state’s conversation in a different way—by moving away from questions which are positional (ie, Medicaid expansion—yes/no) and instead directing the discussion toward a common problem we are trying to solve—then we have a chance of coming together.

So, here’s a simple, initial premise that I’m putting forward: If we focus on the common problem of how best to improve population health in our state—and, temporarily, assume that the money to fund it comes out of our own wallets—we’ll come up with the most societally, clinically, and financially sustainable solution for North Carolina.

By doing so, we would have to tackle important questions: How do we define population health? How much is poor health costing us today, both societally and financially? What is the benefit of improving health, both societally and financially? What is the role and responsibility of the individual and what is the role and responsibility of the state in improving health? What policy goals and tools do we have to address health? How much confidence do we have in our likely success? How will we measure our progress along the way? How much of an investment can we and should we make in improving health, relative to other common state-wide objectives? And how can we make investments (in, say, health and education) in such a way as to optimally build upon each other?

Certainly, no one reading this journal needs a primer. So, let’s take a look at the big picture solely for the purpose of defining the problem we are seeking to address.

As a state, we rank 10th in gross domestic product [5] but 32nd in health [6]. We shine in immunizations for children [6]. We are downright poor in infant mortality and low birth weight [6].

It must be an issue with how much our state spends on health, right? Not so fast. North Carolina’s Department of...
Health and Human Services (DHHS) budget of $20 billion accounts for 47% of the state government's total expenditures. The Department of Education's budget of $17 billion is next at 40%.

Are we serving the right people with the right menu of services and being guided by the right metrics? Certainly not. We wouldn't be trying to reform Medicaid if we were content with the current state. Here's our starting point: Our Medicaid budget is $14 billion per year. Our spending per enrollee each year is within several hundred dollars of the US average. Approximately 20% of all North Carolinians receive Medicaid services, and 56% of all children born in our state are born to mothers receiving Medicaid. In total, 60% of our Medicaid beneficiaries are children under the age of 20 years. The remaining 40% of Medicaid beneficiaries are individuals who live with disabilities, those who are blind, and adults (whether aged or younger) who live in or near poverty. Clearly, Medicaid is an important commitment by our taxpayers to serve their fellow citizens in need and, in particular, to serve children who live in or near poverty.

So, is access to clinical care the issue? Mixed picture. According to our most recent access monitoring report submitted to CMS, North Carolina's child beneficiaries were able to obtain care and access to health care appointments when needed approximately 90% of the time. Access to behavioral health services (mental health and substance use) is far more limited. Half of our counties are considered mental health professional shortage areas. We know we have rural health equity issues, with workforce development being the most obvious gap. We have 31 counties in our state without a practicing obstetrician/gynecologist and 24 counties without a practicing general surgeon. And we have 14 counties with severe and persistent shortages of primary care physicians, the building block of care [7].

With regards to the uninsured population, many counties rely on a patchwork of free clinics, federally qualified health centers, rural health centers, and rural health clinics for primary care. And with regards to acute care, North Carolina hospitals provide over $1 billion per year in unreimbursed care to uninsured individuals.

What else is missing from our discussion so far? A lot. It is increasingly accepted that social determinants drive (roughly) 70% of health outcomes and clinical care drives 20% of health outcomes. (Genetics are the remaining portion.) What are the implications of this? For individuals who live in or near poverty, having an insurance card only does so much, especially in underserved and rural areas. If we do not mitigate social determinants, further develop the workforce, and boost economic development, it's like pushing on the end of a rope.

How do we translate social determinants into something tangible? Healthy food and education are a good place to start.

According to the Institute for Health Metrics and Evaluation, diet is the leading factor of early mortality and disability. (Even more important than smoking, which is the second leading risk factor.) Given the importance of food, it's humbling to take in our current status as a state. North Carolina was among the top 15 states with the worst food hardship rates in 2015 [8], with 1 in 5 North Carolinians identified as food insecure [9]. The connection between food, obesity, and early mortality is even clearer at the county level. Halifax and Edgecombe counties have the highest food insecurity rates, the highest obesity rates, and among the highest infant mortality rates and lowest life expectancy rates in the entire state.

Regarding education, outcomes measured virtually every way (health, employment, incarceration rates) are significantly better for individuals with a high school diploma or some post-secondary education than for individuals without a high school diploma. The good news... Our state continues to make gains and our high school graduation rate is 86%. The bad news.... It's 2016, and approximately 14% of our high school-aged children will not graduate from high school. Functionally, they are committing economic suicide. And the resulting consequences of sustained lack of physical, social, and economic access are significant social determinants of health.

This would indicate that the most effective tools that individuals and our state have to improve population health include education, healthy food choices, smoking prevention/cessation, substance prevention/recovery, and increased physical activity—whether for stress management, social engagement, or exercise.

Are these population health tools enough? Not if we don't consider the person at the center of these activities and the provider community that serves as our vital partner in transformation efforts.

As evidenced throughout our Medicaid waiver, we are driving toward integrating physical health, behavioral health, and support services through whole-person-centered care delivery. This is a significant change. What gives us confidence is our rich tradition of supporting practices, communities, and regional organizations (eg, Community Care of North Carolina [CCNC], the Office of Rural Health, and the Area Health Education Centers). For example, our state has a history of innovation in cooperative, coordinated care through the medical home model. Our local management entity/managed care organization system is statutorily focused on serving the behavioral health and intellectual/developmental disability needs of individuals and is now beginning to partner in whole-person pilots. And we can look to several health systems in North Carolina, having previously distinguished themselves on a national level (quality, outcomes, accountable care organizations), that are turning their full sights to addressing social determinants of health (food, care/case management, health care access) in underserved communities.

So, what will accelerate the formation of synapses of transformation? Information, vehicles for exchanging infor-
mation, and incentives to act on information. Information will be largely composed of provider and public health data. The vehicles for exchanging (and learning from) information will include a statewide public utility for data exchange, population health analytic services, and the North Carolina Health Transformation Center. And incentives to act on information will be driven by clinical metrics and system level performance measures, to ensure that we have defined our population health goals (ahead of time) and that incentives are aligned.

Earlier, I began by saying that, as with all good conversations, somebody begins a conversation by laying out a premise that invites others in.

So here is my summary premise: To “move the dial,” to drive the factors that impact 70% of health outcomes, we need a health and social services system that has the capacity and flexibility to address social determinants, and we need to better engage individuals in taking ownership for the factors they can control. The foundational elements that will then have the greatest impact on improving North Carolina’s population health—when integrated—are Medicaid policy and metrics, social determinants, whole-person-centered models of care, and workforce development (see Figure 1).

**FIGURE 1. Moving the Dial of Population Health**

What’s in This Issue?

Ronald Gaskins [10] highlights North Carolina’s spirit of Medicaid innovation by describing the impact of CCNC, the Community Pharmacy Enhanced Services Network, the pregnancy medical home model, and the Fostering Health North Carolina program.

John Eller [11] reviews the breadth of individuals that receive Medicaid services and advocates for maintaining focus on the long-term impact on our most vulnerable populations.

Dave Richard [12] describes North Carolina’s current model for managing services for people who live with mental illness, substance use, and/or disabilities. He then presents 2 post-reform options (comprehensive or special needs) and the need to plan for and to carefully choose a future direction.

Dee Jones and coauthors [13] provide a detailed review of the state’s Medicaid reform waiver, the transformational components included in it, the benefits to individuals and to the system, and DHHS’ continuing commitment to collaborate with providers and consumers alike.

Scott St. Clair and Christoph Diasio [14] describe the current strengths of North Carolina’s Medicaid system for children and their families, as well as the broadly held concerns that pediatricians have regarding the state’s proposed plan for reform—including administrative burden and decreased access.

Ciara Zachery [15] emphasizes the importance of prioritizing the needs of the consumer as we transition between Medicaid models, and she raises concerns regarding continuity of care, quality of care, and consumer protections with the state’s envisioned approach.

Doug Smith [16] provides patient examples that illustrate the important role that Medicaid and community health centers play in the lives of low-income families.

Donald Taylor [17] argues for Medicaid expansion and describes why expanding coverage would serve as a catalyst for our ambitious reforms and would set the state on a path to a higher-value health system.

Robert Seligson [18] describes the North Carolina Medical Society’s long, historical commitment to improving access to care and the basic tenets the medical society believes are necessary for a successful and sustainable Medicaid program in our state—including expansion.

Christopher Conover [19] argues against Medicaid expansion and describes why expanding coverage would hurt the very population it is intended to serve and would reduce total employment in the economy overall.

Warren Newton [20] describes the principles and the engagement process that DHHS will use in developing clinical metrics to drive North Carolina’s attainment of the quadruple aim.

Colleen Bridger and coauthors [21] advocate for public health departments and their growing role in the collaborative continuum required to improve population health, and they call for fully funding their existing infrastructure as part of reform.

Trey Sutten and Robbie Borchik [22] provide a historical analysis of North Carolina Medicaid enrollment and spending, identify the key drivers of growth, and explain the actions that have kept growth in spending below growth in enrollment.

William Hussey [23] describes how Medicaid reim-
burses school systems for dollars already spent on special education students, and he discusses how expansion of services for non-special education students would broaden schools’ ability to meet the health and mental health needs of all students, thereby increasing student engagement and outcomes.

Ultimately, these articles highlight our greatest strengths as a state: we’re innovators and we’re connectors. Building on our common desire to help people in need—and to encourage those who have the ability to help themselves—North Carolina reform offers an exciting opportunity to improve our people’s health.

Read and enjoy! NCMJ

Rick Brajer former secretary, North Carolina Department of Health and Human Services, Raleigh, North Carolina.

Acknowledgments

Potential conflicts of interest. R.B. has no relevant conflicts of interest.

References

1. A Better Way: Our Vision for a Confident America. https://abetterway.speaker.gov/_assets/pdf/ABetterWayHealthCarePolicyPaper.pdf. Published June 22, 2016. Accessed January 4, 2017.
2. US Congress (2015–2016). H.R. 3762: Restoring Americans’ Healthcare Freedom Reconciliation Act of 2015. Congress.gov website. https://www.congress.gov/bill/114th-congress/house-bill/3762. Accessed January 4, 2017.
3. US Congress (2015–2016). H. Con. Res. 27: Establishing the budget for the United States Government for fiscal year 2016 and setting forth appropriate budgetary levels for fiscal years 2017 through 2025. Congress.gov website. https://www.congress.gov/bill/114th-congress/house-concurrent-resolution/27. Accessed January 4, 2017.
4. National Governors Association (NGA). Health Policy Updates for 2017. NGA Center for Best Practices Governors Healthcare Leadership Teleconference; December 2, 2016.
5. Bureau of Economic Analysis, US Department of Commerce. Regional economic accounts. Bureau of Economic Analysis website. www.bea.gov/iTable/drlddown.cfm?reqid=70&stepnum=11&Area=Total&Gdp=GDP&StatsGdp=GDP&StatGdp=GDP&GdpKey=GDP&StatsKey=GDP&StatKey=GDP&YearGdp=2015Q2&YearKey=2015Q2&YearGdpBegin=1&YearGdpEnd=1&UnitOfMeasure=GDP&Levels=1&RankGdp=1&Drill=1&nRange=5. Updated December 7, 2016. Accessed January 4, 2017.
6. United Health Foundation. America’s Health Rankings 2016 Annual Report. Minnetonka, MN: United Health Foundation; 2016. http://assets.americashealthrankings.org/app/uploads/ahr16-complete.pdf. Accessed January 4, 2017.
7. Fraher EP, Spero JC. The state of the physician workforce in North Carolina: overall physician supply will likely be sufficient but is mal-distributed by specialty and geography. Chapel Hill, NC: UNC Cecil G. Sheps Center for Health Services Research; 2015. http://www.shepscenter.unc.edu/wp-content/uploads/2015/08/MedicalEducationBrief-ShepsCenter-August2015.pdf. Accessed January 4, 2017.
8. Food Research & Action Center. FRAC’s National, State, and Local Index of Food Hardship. Washington, DC: Food Research & Action Center; 2016. http://frac.org/wp-content/uploads/food-hardship-2016-1.pdf. Accessed January 4, 2017.
9. Duke Sanford, Duke Center for International Development (DCID). Fellow’s research presented at food summit. Duke Sanford/DCID website. http://dcid.sanford.duke.edu/articles/midp-fellows-research-presented-food-policy-summit. Published September 26, 2016. Accessed January 4, 2017.
10. Gaskins RE. Innovating Medicaid: the North Carolina experience. N C Med J. 2017;78(1):20-24 (in this issue).
11. Eller JK IV. Health care data and trends: will Medicaid reform help? N C Med J. 2017;78(1):25-29 (in this issue).
12. Richard D. What is next for behavioral health in managed care? N C Med J. 2017;78(1):30-32 (in this issue).
13. Jones D, Lerche JK, Schoenberger JA. North Carolina Medicaid reform: seizing opportunities and addressing challenges. N C Med J. 2017;78(1):33-37 (in this issue).
14. St. Clair S, Diasio C. Why pediatricians have concerns about a Medicaid plan with 15 provider-led entities. N C Med J. 2017;78(1):34-35 (in this issue).
15. Zachary C. Lost in transition: consumers’ concerns about navigating North Carolina’s new Medicaid system. N C Med J. 2017;78(1):38-42 (in this issue).
16. Smith D. Medicaid works for families and works for states. N C Med J. 2017;78(1):39 (in this issue).
17. Taylor DH. The case for Medicaid expansion in North Carolina. N C Med J. 2017;78(1):43-47 (in this issue).
18. Seligson RW. Physician perspective on Medicaid expansion. N C Med J. 2017;78(1):45-46 (in this issue).
19. Conover CJ. The case against Medicaid expansion in North Carolina. N C Med J. 2017;78(1):48-50 (in this issue).
20. Newton WP. Driving improvement in health and health care: a strategy for setting metrics for Medicaid outcomes. N C Med J. 2017;78(1):51-54 (in this issue).
21. Bridger CM, Smith SE, Saunders ST. Saving lives and saving money: the role of North Carolina health departments in Medicaid managed care. N C Med J. 2017;78(1):55-57 (in this issue).
22. Sutton T, Borchik R. An overview of North Carolina Medicaid and Health Choice. N C Med J. 2017;78(1):58-62 (in this issue).
23. Hussey WJ. Expanding Medicaid services to children in North Carolina. N C Med J. 2017;78(1):63-64 (in this issue).