

# Looking Back But Leaning Forward

## New Opportunities and Challenges for North Carolina's Rural Communities

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Rural North Carolina is as diverse as it is beautiful. Each community, county, and region presents a unique set of challenges and opportunities in maintaining and improving the health of its people. Forty-five years ago, Jim Bernstein and other leaders in the state understood that in order to provide access to care and equalize the chances rural North Carolinians have to thrive, a focused approach was necessary. And so it began: through the efforts of these leaders, the first Office of Rural Health was born in North Carolina. There is much to celebrate this year and there is much work ahead. Rural North Carolina is celebrated because of the engagement of rural citizens in their communities and their grit and resourcefulness in tough times and good times. This volume of the *North Carolina Medical Journal (NCMJ)* is dedicated to those leaders, rural providers, and their communities as they strive to make the best of whatever situation they find themselves in. This is also an opportunity for each of us to consider and learn from the past and bring our best thinking to the future.

Community and state leaders have expressed concerns about the dwindling supply of rural physicians in North Carolina for at least 50 years. Then as now, aging “country doctors” found themselves unable to recruit physicians to replace them. The story of Dr. Ernest Furgurson’s Sunday afternoon appearance at (then) East Carolina College President Leo Jenkins’s home in the spring of 1964 is legendary in the East. Dr Furgurson, a general practitioner in Plymouth, North Carolina, is said to have rather forcefully expressed his belief that the college had a responsibility to do something about the problem [1]. State leaders were also concerned, sufficiently so that the Republican Governor James Holshouser and the Democrat Lieutenant Governor Jim Hunt joined together in 1973 to convince the General Assembly to establish the North Carolina Office of Rural Health. By 1981, the East Carolina University (now Brody) School of Medicine had graduated its first 4-year class and the North Carolina Area Health Education Centers (NC AHEC) Program was well established across the state. All three were expected to improve access to care in rural and underserved areas, and all can be credited with significant success.

The Office of Rural Health set the precedent for community engagement in rural North Carolina and continues to operate within that model. The latter is often referred to as “the Jim Bernstein way” among those engaged in this work. One of the authors (Tom Irons) often was privileged to travel with Jim, his senior staff members, and partners such as Harvey Estes from the Community Practitioner Program, Gene Mayer from NC AHEC, and their successors. They traveled to evening meetings at hospitals, physician offices, and community meeting places across Eastern North Carolina to work on strategies for retaining and strengthening local community health services. This true partnership strategy, with everyone having a “stake in the game” and the community expected to share the lead role, requires patience, persistence, resilience, and a large measure of humility.

Rural physician and advanced practitioner supply remains a serious challenge, as any rural hospital administrator, community health center director, or rural practitioner will attest. In the first of the invited commentaries that follow, Mark Holmes of the Cecil G. Sheps Center for Health Services Research presents clear evidence for this [2]. He points out that in North Carolina the number of physicians needed to be trained to produce one rural primary care doctor is 31. Clearly there is a great deal more work to be done. Herb Garrison of the Brody School of Medicine at East Carolina University and co-authors in this issue discuss important factors in recruitment and retention and make the case for more research on the outcomes of past and current programs, such as the Campbell School of Osteopathic Medicine the and the Mountain Area Health Education Center (MAHEC) Rural Track Residency Program [3].

It is also clear that improving access to primary care only addresses one of the factors that impact population health status. Besides medical conditions, economic, educational, social, and behavioral-emotional factors each play a major role in defining health. Health care providers are only recently recognizing these broader influences and are

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understandably frustrated with their inability to effectively address them in the practice setting. Sir Michael Marmot, chair of the World Health Organization Commission on Social Determinants of Health, reflected recently:

“Even in medical school, I had rather ill-formed ideas about society and health. I did think it was pretty clear how people’s social environment affected their illness. I used to say we are putting Band-Aids on people and sending them back. You patch them up and they are back three months later. I thought, there has to be a better way than this [4].”

In the January 2015 issue of the NCMJ, several commentaries described programs and interventions aimed at addressing the social determinants of health, including behavioral health-primary care integration [5], early childhood education [6], community economic capacity building [7], and sustainable localized food systems [8]. Interest in such programs has grown rapidly concurrent with the movement toward a capitated and outcomes-driven payment system. Accordingly, the emphasis on social determinants continues in this issue of the NCMJ. We also include an update on the priorities set forth by the NCIOM Task Force on Rural Health in the North Carolina Rural Health Action Plan [9].

Since 2015, awareness and concern regarding rural health and economic issues has increased among numerous stakeholders, including the Centers for Disease Control and Prevention (CDC). In 2017, CDC released the MMWR Rural Health Series. One of the significant findings reported in MMWR Surveillance Summary 66 [10] was that residents of nonmetropolitan areas have significant *potentially excess mortality* from the five leading causes of death. The summary details excess mortality state by state. It also includes additional years of data and options for selecting different age ranges and benchmarks for additional analysis [10]. In December 2017, a meeting was held at the CDC to discuss the report and its implications. Along with CDC, the Federal Office of Rural Health Policy, and other states, the North Carolina Department of Health and Human Services (DHHS) was invited to explore possible solutions and future opportunities for collaborations. The information from Figure 1 was developed specifically for North Carolina. In our state, excessive deaths in rural communities result from heart disease, cancer, unintentional injury, chronic lower respiratory diseases, and stroke [11].

In our rural communities, it is clear the way forward will require our providers and communities to think together and create new and different partnerships.

In 2014, the North Carolina Institute of Medicine, funded by the Kate B. Reynolds Charitable Trust, released the state’s rural health plan. Many of the concerns addressed in the January 2015 NCMJ issue, as well as the 2014 Rural Health Action Plan, are addressed in the state’s Medicaid waiver. North Carolina’s 1115 Medicaid waiver changes the way providers are reimbursed from a fee-for-service model to managed care and provides opportunity to create supports for

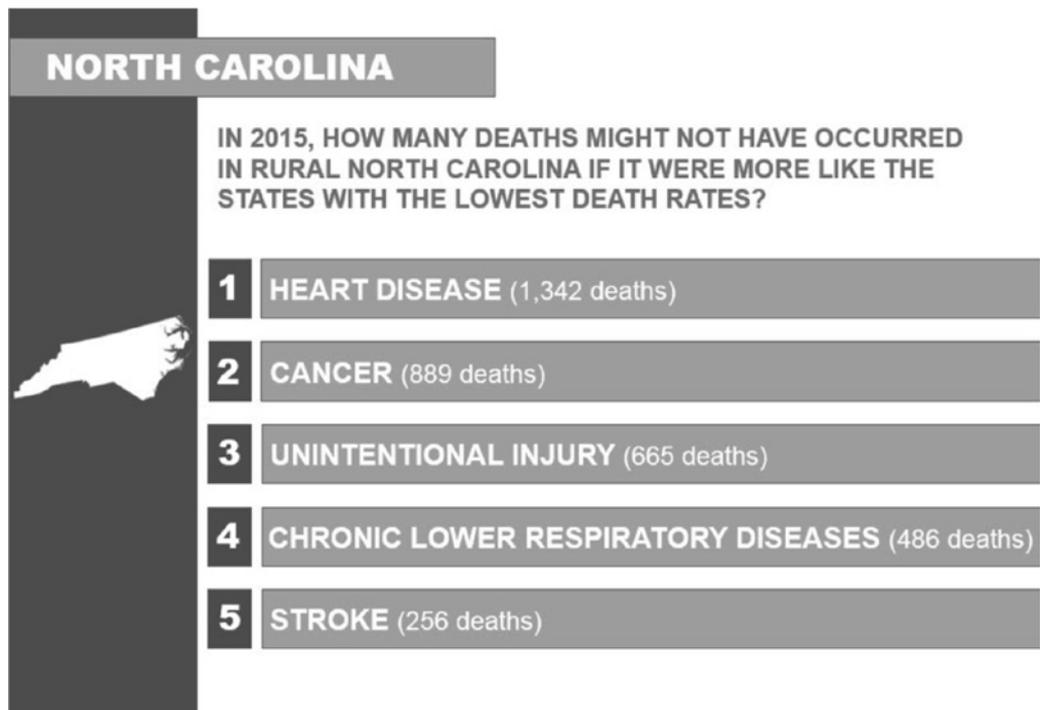
food, housing, transportation, and adverse childhood experiences (ACEs) [12]. Clearly, many of these issues are still with us. Obtaining behavioral health services is challenging due to provider availability, stigma, and access for rural communities. North Carolina’s efforts to integrate behavioral health services in primary care settings with a “whole-person” approach will expand access to care and help reduce stigma often faced in rural communities by those seeking care. Still, we have an enormous opportunity to “think outside the box” as we consider farmers, fishermen, and loggers. The livelihood of these North Carolinians depends upon highly stressful work that carries with it major risks for illness and injury. Robin Tutor Marcom and her colleagues at the North Carolina Agromedicine Institute address this in their commentary, Behavioral Health Issues of NC Farmers: What Can’t Be Fixed with Tape and Twine [13]. As Tutor Marcom suggests, the health of our farmers and their families is seriously threatened by the economic challenges they face.

Patrick Woodie, president and CEO of the North Carolina Rural Center addresses the health of our rural communities as an economic issue [14]. In 2016, the North Carolina Rural Center launched its first-ever advocacy agenda with the release of Rural Counts: 10 Strategies for Rural North Carolina’s Future [15]. The report offers a way forward for a stronger rural economy in the context of a rapidly changing state. The report “is the direct result of the many in-depth and productive conversations we had across the state with the people who call our rural places home.” Recommendation 2 addresses the stabilization and transformation of rural health including: facilitating the rural transition to accountable care communities; strengthening local, state, and federal efforts to reduce opioid and methamphetamine drug addiction; stabilizing rural health care revenue; supporting the establishment of the North Carolina Rural Health Leadership Alliance as the new state chapter of the National Rural Health Association; and closing the coverage gap [15].

Woodie goes on to describe the impact of the lack of health insurance coverage for many of our rural citizens and the need to facilitate economic and health access equity by ensuring that each and every community has sufficient broadband access [14]. Randy Randolph and Holmes of the Sheps Center provide an excellent in-depth analysis of the economic and demographic factors related to the rural-urban uninsured gap in this issue’s “Running the Numbers” feature [16]. While the majority of segments of the rural population are more often uninsured than their urban counterparts, there are segments for which the reverse is true. One group—non-citizens—stands out as by far the most uninsured in the state. As compared to urban non-citizens, about half of whom are uninsured, more than two-thirds of rural non-citizens are uninsured [16].

Rural issues are a priority for the North Carolina General Assembly. Representative David Lewis and former Senator David Curtis co-chaired the Committee on Access to Healthcare in Rural North Carolina during the 2018 legisla-

**FIGURE 1.**  
Excessive Deaths in Rural North Carolina Communities



Source. Matthews KA, Croft JB, Liu Y, et al. Health-related behaviors by urban-rural county classification—United States, 2013. *MMWR Surveill Summ.* 2017;66(5):1-5.

tive session. As they write in a sidebar article, the Committee identified access to rural providers and broadband as major contributors to the health of our rural citizens [17]. As a step toward tackling these issues, the General Assembly recently passed legislation launching a new \$10 million broadband grant program, the Growing Rural Economies with Access to Technology (GREAT) Program. Session Law 2018-88, House Bill 998 directs DHHS to prepare reports addressing Graduate Medical Education funding, identifying rural hospitals that wish to be designated as rural teaching hospitals by the Centers for Medicaid and Medicare Services, and providing an update on the North Carolina State Loan Repayment Program [18].

Rural hospitals face enormous challenges in North Carolina and across the nation. As Dana Weston, president and CEO of UNC Rockingham Health Care, notes in her sidebar article: it is imperative that our rural citizens are not required to travel unreasonable distances to obtain care due to rural hospital closures [19]. UNC Rockingham—formerly known as Morehead Memorial Hospital—almost became part of that statistic. Luckily the Board of Morehead Memorial and the community in Eden, North Carolina, took a bold step that saved their hospital. Rural hospitals' health and their fate reside in the numbers and analytics that declare a hospital solvent. "In a rural community, these people aren't faceless. They sit beside you in the church pew and chat with you in the grocery aisles," Weston writes

[19]. In many communities, the hospital is the community. Few understand rural hospital challenges better than Jeff Spade, featured in this issue's Tar Heel Footprints in Health Care column [20]. During his tenure at the North Carolina Healthcare Association (formerly the North Carolina Hospital Association), Spade helped establish the Center for Rural Health and facilitated North Carolina's participation in the national Critical Access Hospital Program in 1998, supporting the conversion or designation of small rural hospitals and introducing enhanced reimbursement [20].

Holmes, of the Sheps Center, suggests a practical approach to locating physicians in rural communities in his commentary, when he writes: "We can increase supply in rural areas by putting health care professional training closer to where we want professionals to ultimately practice ... gaining relevant experience in rural areas, the physician is more likely to practice in similar communities ... closer to the training site [2]." The current distribution of Graduate Medical Education funds among participating institutions is an issue receiving state and national attention, and stakeholders expect a deliberation on the topic in the upcoming long session and beyond. The Office of Rural Health is examining the North Carolina State Loan Repayment Program role in the way the program operates to determine if the office can adjust the program to increase retention using the same "upstream" strategy suggested by Holmes with state incentives.

North Carolina's transformation to Medicaid Managed Care will increase the use of telehealth to bolster and sustain access to care in rural communities. According to the state's Medicaid waiver, "increasing access to telemedicine services has the potential to meaningfully improve the health of North Carolinians and lower costs, particularly in rural and underserved areas. The initiative seeks to target these services on improving chronic disease management and prevention and facilitating primary care and behavioral health integration. As such, the state aims to leverage its existing clinical coverage policies and enhance access for providers and beneficiaries to services delivered via telemedicine to enrollees [12]." Broadband is an essential piece of infrastructure for high-quality and reliable telehealth services. The Broadband Infrastructure Office at the North Carolina Department of Information Technology (NCDIT) is working in partnership with DHHS to address this need as well as cultivate broadband and expand its use in rural communities to improve economic vitality. Amy Huffman of NCDIT writes, "To enhance access to health care in North Carolina, it will be necessary to form additional strategic partnerships, programs, and policies while simultaneously dedicating more resources to closing the digital divide [21]."

The North Carolina Rural Health Action Plan includes a recommendation to "Increase support for quality child care and education (birth through age 8) and parenting supports to improve school readiness [22]." In their commentary, Sarah Langer Hall of the Institute for Emerging Issues at North Carolina State University and Kimberly McCombs-Thornton of the North Carolina Partnership for Children make the point that "young children thrive when they have healthy relationships with parents ... and parents thrive when they live in communities that can provide economic opportunities and supportive services to help them care for their families [23]." They further outline a variety of findings comparing children in rural and non-rural North Carolina. Their work further validates the need to focus on the entire community, not just the health care sector. As NC DHHS Secretary Mandy Cohen affirmed in April: "Ultimately, we envision a North Carolina that optimizes health and well-being for all by effectively stewarding our collective resources to unite our communities and health care systems. After all, no matter what our respective goals — to mitigate the opioid crisis, to ensure our children are healthy, safe, and ready to learn, to increase employment or to drive economic growth — it all begins with healthy people. To have a healthy and productive state, we need to focus on all components of what drives health [24]." Governor Roy Cooper recently named an Early Childhood Advisory Council to focus on early childhood development and directed DHHS to create and lead a State Action Plan to Improve Early Childhood Outcomes. Our rural communities and stakeholders will have another opportunity to "raise our voices" during this process.

NCIOM president and CEO Adam J. Zolotor and associ-

ate director Berkeley Yorkery write in the Rural Health Action Plan update: "Health begins in families and communities, in the places where we live, learn, work, and play. Rural communities are often supportive communities with strong social networks and connections [9]." If we expect providers and other stakeholders, critical to the overall health of our rural communities (eg, health, education, safety, and economic vitality), to stay and make a home for their families in these communities, we have to talk about "rural" in a way that suggests it's a place people want to "live, learn, work, and play." The media attention to the "plight" of our rural friends and neighbors has heightened the awareness of "rural," providing an opening for critical thinking and conversation about issues in these parts of North Carolina and the nation. However, this should be balanced with not only what is wrong, but what is right ... and working!

North Carolina has long recognized the need to ensure that our children and their families play critical roles in building a strong workforce and economy. Hall and McCombs-Thornton describe inspiring examples of local communities working together to improve outcomes for young children and their families [23]. The Appalachian Regional Commission recently published the third installment of its Creating a Culture of Health Series in Appalachia (ARC), titled Exploring Bright Spots in Appalachian Regional Health: Case Studies [25]. Madison County, North Carolina, is recognized as one of the 10 Bright Spots, which are counties/communities where health is better than expected, and which the ARC believes can suggest practical lessons for other communities [26]. Kim Schwartz and Catherine Parker of the Roanoke Chowan Community Health Center in Ahoskie make an elegant observation regarding the healthy eating and lifestyle changes needed to obtain good health. They write: "We have personal choices, but when the choice feels out of reach for most of our neighbors, we know that there are things that we as a community must address before we can expect our families to make changes. And we believe that this is how we will change healthy eating and active living in our community: by embracing what makes us great, the love our people share for one another, that time-tested tradition of taking care of each other [27]."

## Leaning into the Future

Adam Linker and his colleagues at the Kate B. Reynolds Charitable Trust and other philanthropic organizations across North Carolina have turned their focus to place-based funding, investing in communities, counties, and regions to make sustained impact. As Linker writes, "People who live in the community best understand the full palette of problems that they face and the solutions that are most likely to work. And as we hear from residents we must be particularly attentive to marginalized voices, the people who suffer disproportionately poor health outcomes. These folks have the keenest insights into the systemic barriers that hold poverty in place [28]." Jim Bernstein understood this 45 years ago

and it still holds true. The most impactful outcomes involve communities and the people living in them.

Understanding where we are and where we're going requires good information and data resources to connect and track our efforts. A few useful resources are listed below:

- The NC DHHS State Center for Health Statistics has created an interactive map with a series of overlays showing social determinants of health indicators in North Carolina, including the economic, social, neighborhood, housing, and transportation status of residents across the state. It is available through the State Center for Health Statistics website: [www.schs.state.nc.us/data/hsa](http://www.schs.state.nc.us/data/hsa). The map is part of the department's effort to look beyond what is typically thought of as "health care" and invest more strategically in health. Economic conditions are described using several metrics, including median household income, percent of people living below poverty, and percent of people who are uninsured. Housing and transportation conditions are described by metrics such as percent of households spending more than 30% of income on housing, percent of people living in an overcrowded household, and percent of households without a vehicle. Social and neighborhood conditions are described by metrics that include education level, percent of households with low access to healthy foods, and areas identified as food deserts. A cumulative index is calculated from the metrics to provide an overall measure of social determinants of health indicators. This information is useful as a tool to guide resource development and cross-cutting collaborations to improve the disparities in rural communities, counties, and regions.
- The Foundation for Health Leadership and Innovation will host the North Carolina Resource Platform—a new statewide tool to make it easier for providers, insurers, and community based organizations to connect people with the community resources they need to be healthy. The website states: "The NC Resource Platform will be open at no cost to all North Carolinians, systems, payers, and providers. It will be a robust, integrated resource database, website, call center, and care coordination platform for clinicians, social workers, care coordinators, families, and others to connect people to the community resources they need [29]."
- The ARC Bright Spots Report identifies some common elements amongst identified communities/counties that all of us can carry into our work in rural areas across the state [25]. In Madison County, for example, the report identifies a strong focus on primary care, cross-sector collaborations, and promoting health as a shared value. A commitment to outreach brings programs to residents where they live. Community leaders are engaged in health initiatives and local health care providers are committed to public health. An active faith community, civic organizations, and volunteers make access to food,

transportation, and shelter a priority. And a community coalition is working to decrease substance use and combating misuse of prescription medicines [26]. For our rural Appalachian communities, ARC also introduced a new interactive health data mapping tool to more closely examine health-related issues and to enable communities to create a variety of useful reports to assist them in their analysis: <https://healthinappalachia.org/> [30].

We must create cross-cutting partnerships that "weave" unlikely partners together across health, education, economic development, and other stakeholders. Together we must engage in conversation and constructive dialogue across our self-imposed silos in support of, and along with, our rural neighbors and friends. It must be deliberate, meaningful, and intentional. While newly available resources will greatly strengthen the abilities of communities and their state-level partners to improve the health of North Carolina's rural residents, the most important resource of all is the people themselves. Those of us who would engage with them must put our feet on the ground and get to know them. If they are to trust us to become their partners, we must demonstrate through our actions that we genuinely care about them—perhaps even that we love them. **NCMJ**

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