ISSUE BRIEF

A System for Health, Not a Health Care System

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Clinical care makes a modest contribution to well-being, but adequate access to high-quality care is a necessary, if insufficient, condition for health. This issue of the *North Carolina Medical Journal* focuses on the Healthy North Carolina 2030 clinical indicators, the impact of health disparities, and the COVID-19 pandemic.

Introduction

Healthy North Carolina 2030 (Healthy NC 2030) is a decennial process of identifying the most important issues to the health of North Carolinians and setting ambitious but achievable goals for improving well-being. Healthy NC 2030 represents the collective work of more than 300 experts and interested parties and hundreds of hours of meetings [1]. As somebody who had the privilege of attending nearly every one of those hours of meetings, I believe Healthy NC 2030 represents the best work of the best hearts and minds of many people.

Then, the world changed. If we were to embark on this ambitious project now, it would be hard to ignore the global SARS-CoV-2 pandemic of the past two years. But that is not the only pandemic of the past two years—there are at least two others. The tragic murder of George Floyd forced Americans to confront the ongoing pandemic of systemic racism in a way that we have not done in half a century. The third pandemic we have yet to confront is the pandemic of income inequality, which has worsened over the last two years.

The leaders convening Healthy NC 2030 (Dr. Ronny Bell, Mr. Jack Cecil, Dr. Laura Gerald, and Dr. Elizabeth Cuervo Tilson) were prescient in considering the implications of systemic racism and income inequality on health. By using a structure that required most selected indicators to be in the categories of health behaviors, social and economic factors, and the physical environment, Healthy NC 2030 forces us to look at the profound impact that systems outside of health care have on health. Indicators such as short-term suspension rate and incarceration rate were chosen not only for their impact on health but for their stark racial inequity. For the first time in this decennial process, all Healthy NC 2030 data is disaggregated by race and ethnicity, where available. This allows us to track progress not only for the overall indicator, but with special attention to inequity. In tracking progress toward Healthy NC 2020, we discovered that overall infant mortality improved, but that inequity worsened [2]. The Task Force on Healthy North Carolina 2030 made it explicit that this was not acceptable. Success would not simply be measured by meeting overall goals, but by shrinking disparities. In addition to racial and ethnic disparity, Healthy NC 2030 has an explicit focus on income inequality, choosing indicators such as individuals below 200% of the federal poverty level, unemployment rate, and inadequate housing. When possible, indicators are also disaggregated by income level, (< 200%, 200%–399%, and > 400% of the federal poverty level) to understand the differential impacts on health by income over the next decade.

This issue of the *NCMJ* is not about income inequality or systemic racism. Or is it? The four selected clinical indicators in Healthy NC 2030—uninsured rate, access to primary care, early prenatal care, and suicide rate—all relate to access to care, are profoundly affected by income, and demonstrate important inequities. This issue of the *NCMJ* delves into these four indicators and starts to unpack their importance for health. Authors help to draw a roadmap for achieving goals in 2030. Some authors take on issues we could not have predicted in January of 2020 when setting these goals, such as the way the pandemic changed primary care or inequity in vaccine distribution.

Even though this issue does not focus explicitly on income inequality or systemic racism, you will see these concepts raised throughout these pages. The health care system alone cannot dismantle racism or income inequality throughout society. However, in this, the richest nation on earth that spends $4.1 trillion per year (19.7% of our gross domestic product) on health care [3], addressing barriers to access needs to be among our top priorities. Though many factors play into the ill effects of systemic racism on health, and the health care system can't address them all alone, we must do better at owning our own implicit bias and creating policies and systems for change to address gaps in health equity.

Health Insurance

The United States is the only wealthy nation without universal access to health care for all people. At least 121

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countries in the world and all of the other countries in the Organization of Economic Cooperation and Development (OECD) offer near-universal access to health care [4–6]. Some countries use a single-payer system, but others use a private or employer-based market supplemented by publicly financed health insurance. Among wealthy nations, the United States ranks last overall in access, equity, efficiency, and health care outcomes [7]. Reasonable people can and do disagree on the best route to universal coverage, but there is little debate that increased access to care across the world is associated with decreased cost and improved outcomes. Our current patchwork system of care results in many holes for the uninsured and underinsured. Investments in federally qualified health centers (FQHCs) have improved access to primary care in many communities over the past two decades [8], but many remain without such access. Even when patients have access to high-quality, affordable primary care, chronic disease or life-threatening illness or injury can lead to loss of life, loss of employment, and economic devastation when specialty care, surgery, or hospitalization is required [9]. In some communities, nonprofit hospitals partially fill that void, and federal and state programs may reimburse for care for specific conditions such as HIV, tuberculosis, and breast cancer [9–11]. However, people with many conditions fall through the cracks or get care that results in devastating financial consequences.

Across the United States, we have seen great strides in improving access to care, mostly by way of expanding Medicaid in the 39 states (including Washington, DC) that have chosen to do so, with important improvements in prevention, primary care, chronic disease diagnosis and management, as well as significant improvements in physical health and financial well-being [10, 11].

The Healthy NC 2030 task force selected as a health indicator the percent of North Carolinians without health insurance. This stood at 13% in 2017 for people under 65 and the goal was set at 8% by 2030 [1]. The single policy that would lead to achieving this goal is the expansion of Medicaid or a similar North Carolina program leveraging federal incentives to offer low-cost insurance to people with incomes less than 138% of the federal poverty level. The article by Smith and colleagues in this issue of the *NCMJ* highlights the changes in insurance coverage over the past several years, focusing on the impact of the Affordable Care Act and the COVID-19 pandemic as well as the health and economic benefits of Medicaid expansion [12]. Importantly, this article covers a shift in the political climate around Medicaid expansion and the new federal incentives for states that might choose to increase health insurance but did not adopt this option early. The federal incentive for North Carolina would be $1.7 billion [12].

The interview with Senator Joyce Krawiec in this issue details the important potential role of the health access committee on which she and a bipartisan group of colleagues serve in increasing access to insurance for North Carolinians, as well as the role of a changing health policy landscape that might facilitate those changes [13]. Senator Krawiec points to an ongoing concern of exacerbating provider shortages by expanding Medicaid. Research on provider shortages in expansion states is mixed, but mostly indicates that shortages are no worse in expansion states. One study did find a small increase in wait times in expansion states, but an even larger increase in the ability to secure needed medical follow-up [14]. Another study showed increased access to primary care, preventive care, and chronic disease care, with decreased use of the emergency room in Medicaid expansion states [15]. A third study shows that expansion states are able to increase primary care appointment supply to keep up with increased demand [16]. Though we cannot totally rule out the possibility of more demand for some services, studies to date of Medicaid expansion indicate more of a slight shift in demand for lower-cost services to prevent illness and manage chronic conditions.

Access to Primary Care

Insurance, while important, is not sufficient to improve access to health care for all. The Healthy NC 2030 task force chose as a representative indicator for access to primary care the ratio of primary care clinicians to population, with a goal that all counties have at least one primary care clinician for every 1500 people who live in the county, a goal currently not met in 39 counties [1]. Numerous barriers to health care have been well described and include cost, distance/transportation, language and cultural barriers, hours of access, child care, and ease of access. A large household survey in the United States found that 18% of US adults have affordability barriers to care and 21% have non-financial barriers to care [17]. Further, among those with financial barriers, two-thirds report non-financial barriers to care [17]. Financial barriers included factors such as worry about the cost and service not covered by health insurance; non-financial barriers included operating hours, distance, transportation, being able to get through to a provider on the phone, and getting a timely appointment [17]. In a recent survey of 11 countries, the United States has the highest rate of multiple reported barriers (38%) while the Netherlands has the lowest (6%) [18]. Access to care can be particularly challenging for people with behavioral health conditions, disabilities, and limited English proficiency [19, 20]. The community health worker and client interview featured in this issue of the *NCMJ* highlights the barriers created by language, culture, and distance [21]. This is the first time the *NCMJ* has published an interview conducted through an interpreter and the first time an article has been published in English and Spanish in over a century of continuous publication.

Many strategies and policies have been deployed to address these barriers to care in North Carolina and around the country. For example, loan repayment programs have been a mainstay to encourage health care providers to prac-

tice in rural communities. These incentives clearly work to get providers into rural communities, but they have been less effective at retaining them [22]. In decades of investment and study, North Carolina has slightly increased provider supply in rural communities, but the disparity between rural and urban provider supply has increased [23]. Pathway programs aim to expose young people to health care careers and eventually recruit them into health professions. These programs have increasingly focused on young people from rural and historically marginalized communities to increase the diversity of our health care workforce [24]. Community-based residency programs like those described by Whitman invest health care resources in communities that need them most and have a demonstrated track record of success in training physicians and other health care providers to stay and work in rural communities [23].

The creation of graduate medical education programs (also known as residencies) in communities where people live and work is a critical approach supported by research and recommended by a recent report from the National Academies of Science, Engineering, and Medicine [25]. Over the past 50 years, North Carolina has gone from having graduate medical education in three communities to having it in 26 communities. The article by Whitman in this issue of the *NCMJ* highlights the need and context for rural residencies [26]. These can be three-year programs, such as the program in Boone, or what are known as 1+2 programs (one year at a large academic medical center and two years in a rural community), such as the ECU program that starts in Greenville and ends in Beulaville or Ahoskie. A similar program has been run out of the UNC Department of Family Medicine since 2011 with years two and three in Prospect Hill and Siler City at FQHCs. The UNC rural track programs have graduated 19 residents. Fourteen are working in medically underserved areas, including rural communities and FQHCs (Caroline Roberts, UNC Department of Family Medicine. Personal communication, February 28, 2022).

It is important to note that not all primary care clinicians are physicians. Physicians make up the majority of primary care clinicians in North Carolina (61%), but in areas of higher need, advanced practice providers make up a larger portion of the primary care workforce compared to areas of lower need, as demonstrated in a Data & Trends article in this issue of the *NCMJ* [27]. This article underscores the necessity of considering the entire team of health care professionals needed in rural communities as we develop policies and programs to support recruiting, training, and retaining the workforce required for all communities in North Carolina.

The state's largest health care workforce is nursing, with nearly 120,000 registered nurses (RNs) and licensed practical nurses (LPNs). This workforce is known to face a future shortage, one that has been highlighted and perhaps worsened by the pandemic. Most nurses work in hospitals, and hospitals face the largest future shortage of nurses. The article by McCartha and coauthors in this issue of the *NCMJ* shows us a new tool developed to predict and model future nursing workforce shortages in North Carolina by degree (RN versus LPN), region, and practice setting [28]. Nurses, and a subset of nurses with advanced training, are integral to the ambulatory and primary care workforce. Nurses are also critical as we consider the effects of an aging population on staffing nursing homes and home health agencies.

Prenatal Care

Sharp disparities exist between Black women and infants compared to their white counterparts. The Healthy NC 2030 task force recognized the stark disparities in infant and maternal mortality and chose to address the related problem of access to prenatal care. The current rate of first trimester prenatal care is 68% (61% among Black women and 75% among white women); the Healthy NC 2030 task force set a goal of 80% of women receiving first-trimester prenatal care by 2030 [1]. Women who present late to prenatal care are more likely to have adverse birth outcomes. This Healthy NC 2030 indicator aligns with North Carolina's Medicaid managed care quality strategy [29]. By working with practices, North Carolina Area Health Education Center practice coaches will develop optimal workflows, data dashboards by race and ethnicity to improve transparency and accountability, and enhanced communication tools to improve rates of first-trimester prenatal care and decrease inequity in access to early prenatal care (Weathington C, director of practice support, NC AHEC. Personal communication, January 6, 2022).

It will take more than closing the gap in first-trimester care to address the inequities in maternal and infant mortality. Improving social support, access to specialty care, and insurance before and between pregnancies can be important steps toward improving the health of mothers and infants. Group prenatal care is a cost-effective and empowering model of delivering prenatal care and increasing social support. It has been associated with decreased rates of depression at six months (but not 12 months) postpartum, but not preterm birth or low birth weight [30]. Another strategy for social support, health education, and care navigation has recently expanded in North Carolina: community-based doulas for Black women in Asheville and Chapel Hill [31, 32]. Doulas, or continuous labor support, have been shown to result in higher rates of vaginal deliveries, shorter labors, less use of pain medicine, fewer epidurals, fewer operative deliveries, and improved response to birth in the first few minutes of life (also known as APGAR score) [33]. Increased access to community-based doulas, by extending support and navigation during and after pregnancy, may be an important strategy for decreasing rates of maternal and neonatal morbidity and mortality [34]. But to truly impact the large disparities in infant and maternal mortality will require addressing systemic racism and income inequality [35]. Sadly, the COVID-19 pandemic has seen increased rates of maternal mortality across all racial and

ethnic groups, but especially in Black-versus-white maternal mortality disparity [36]. Health insurance before pregnancy, by allowing providers to identify and address chronic conditions, will play an important role in reducing these inequities, as demonstrated in states that have chosen to expand Medicaid [37, 38]. North Carolina's choice to extend Medicaid for Pregnant Women to one year postpartum will give patients more time to address chronic conditions, mental illness, complications of pregnancy, and long-term family planning [13, 39].

Suicide Rate

Reduction in suicide rates (from current of 13.8/100,000 to target of 11.1/100,000) was selected as a goal of the Healthy NC 2030 task force in part because of the alarming increase in rates over the past decade, especially among young people [1]. The task force report drew attention to populations at elevated risk, including LGBTQ populations and veterans, and common themes in the report and the related commentaries in this issue of the *NCMJ* include increased access to services and decreased access to lethal means. The commentary by Brown focuses on prevention, treatment, and community partnerships [40]. The sidebar by Graves focuses on strategies for building resilient communities [41]. The commentary by Simmons focuses on transgender people, one of the populations at highest risk for suicide [42]. This commentary addresses access to gender-affirming care, mental health services, and services to impact unmet social needs (food, housing, employment) as critical to improving the alarming rates of suicidal ideation and suicide in this population. In addition, Simmons addresses the stigma that transgender people encounter and the effects on mental health [42]. Integrated behavioral health care, psychiatric consultation clinics, and collaborative behavioral care management are important vehicles for expanding access and multiplying the workforce to reach more people in need of behavioral health services [43–45].

COVID-19

When members of the Healthy NC 2030 task force were meeting in 2019, they could not have imagined a global pandemic upending society for more than two years and leading to millions of deaths worldwide, including nearly a million deaths in the United States [46]. The first case of COVID-19 had not yet made it to the United States when the report was published in January 2020. Not only did the pandemic upend all our lives in countless ways, but it laid bare the stark health inequities that predated the pandemic. Black, Hispanic, and Asian people have had higher rates of infection, hospitalization, and death compared to white people [47]. The pandemic also exacerbated preexisting social inequities, leading to more unemployment, unstable housing, inadequate food, and lack of child care. The commentary by Wong and colleagues in this issue of the *NCMJ* highlights the efforts of the North Carolina Department of Health and Human Services (NCDHHS), local partners, and trusted messengers to address early vaccine disparity among historically marginalized populations [48]. NCDHHS also supported and deployed a robust network of community health workers to connect people with services attending to 1.6 million unmet social needs [48].

The commentary by Morrison and colleagues shows us the frailty of our rural safety net. Our state's incredible FQHCs have met the call to serve our communities by pivoting to telehealth, taking great personal risk to care for patients, deploying testing centers, starting monoclonal antibody clinics, and leading critical vaccine efforts in some of the least-resourced parts of our state while partnering with historically marginalized communities [49]. But the work of our FQHCs represents just the tip of the iceberg. The health care system and its people have worked under enormous strains over the past two years, and in some ways will be changed forever—sometimes for the better and sometimes for the worse. The pandemic expedited the retirement of many health care professionals and led others to seek new work in other industries [50]. Addressing these new shortages will be an ongoing challenge. Some changes have been for the better: most health care providers changed to a mostly telehealth format for delivering care early in the pandemic, then reverted to in-person care, and now the system is trying to balance the needs of patients to deploy the right service at the right time and in the right place [51].

Health Equity

Members of the Healthy NC 2030 task force did not choose an indicator and goal around health equity; instead, they gave all indicators and goals an equity focus. Reducing health inequities will require a comprehensive approach to well-being and a broad focus on social and economic factors, health behaviors, the physical environment, and clinical care. The health system alone will not eliminate health inequity, nor should we tolerate any longer a health system that widens health inequity. The commentary by Cykert in this issue of the *NCMJ* focuses on the things a health system can do to address those inequities [52]. Methods such as engagement with affected communities, real-time transparency, accountability, and enhanced communication have demonstrated success in improving care outcomes and reducing inequity. Even if health care were applied equally across populations, we could not begin to reduce health inequity. Addressing the historic and contemporary impact of systemic racism will require targeted interventions for historically marginalized communities, such as the clinical interventions described by Cykert [52] and outreach, engagement, and intervention around vaccine efforts as described by Wong and coauthors [48].

Health outcomes are worse for nearly every indicator among historically marginalized populations, especially Black people. Start with scanning the pages of the Healthy NC 2030 report—infant mortality, life expectancy, early

prenatal care, lack of insurance, HIV diagnosis, and sugar-sweetened beverage consumption (not to mention the stark disparities in social and economic factors) [1]. But the list is much longer: end-stage renal disease [53], amputation [54], and stage at cancer diagnosis [55], to name a few. A recent systematic review found implicit bias in health care in 35 of 42 studies [56]. Further, studies that explored the relationship of implicit bias to quality of care found that higher levels of bias were associated with lower levels of care [35]. Cykert points to a study showing that physicians acknowledge racial bias in other health care settings, but are much less likely to acknowledge bias in their own health system, and almost never acknowledge bias affecting the care they themselves deliver [57]. Research has repeatedly demonstrated large equity gaps in cardiac procedures, cancer treatment, and renal transplantation [58]. Critical to addressing health inequity in our health care system is a willingness to unpack our own implicit bias.

Summary

The Healthy NC 2030 task force selected four clinical indicators—uninsured rate, primary care clinician to population ratio, suicide rate, and early prenatal care—from a long list of candidate indicators. These indicators were chosen to represent a broad range of access and quality issues North Carolinians face in achieving better health. The task force understood that clinical care made up a small portion of overall health, and that to achieve a vision for better health would take concentrated effort, policy, and funding to target not only these clinical indicators, but also the social and economic factors [59] and environmental factors [60] addressed in previous issues of the *NCMJ*, as well as health behaviors, which will be addressed in a future issue.

At its essence, the four clinical indicators could be summed up as: ensure access for all and work to decrease health inequity. Sixty percent of all nations provide for near-universal access to health care. The United States does not. And states that have so far chosen not to expand Medicaid (like North Carolina) have higher rates of uninsured—and poorer health—than the rest of the county. The health system alone cannot eliminate health inequity, but we must strive to create a system that implements policies and practices to address the deep impacts of systemic racism and income inequality that lead to the tragic health disparities we see today. NCMJ

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