

# PRIMARY CARE: A Key Lever to Advance Health Equity

## ABSTRACT

### Introduction

This report examines the relationship between health equity and primary care. It identifies concrete, practice- and policy-level actions that primary care stakeholders can pursue to reduce inequities and take steps toward achieving health equity.

### Background

In the U.S., life expectancy, a marker of overall health, has remained relatively flat at about 79 years for the general population between 2010 and 2018. Unfortunately, lower life expectancies persist for people of color, indigenous people, rural communities, and individuals facing socioeconomic challenges. The COVID-19 pandemic had a disproportionate impact on these same populations, further exacerbating these longstanding inequities in health and life expectancy.

Healthcare leaders and policymakers increasingly acknowledge health inequities and the importance of focusing on their root causes: systemic racism and discrimination, social and economic drivers, health behaviors, and built environments. For populations experiencing health inequities, high-quality primary care can offer a usual source of care and provide access to needed services like chronic disease management, vaccinations, and preventive services and screenings to improve their health.

### Opportunities

More can be done to leverage primary care to advance health equity. At its core, primary care is about building trust and relationships, two key ingredients to mitigating the social and structural drivers of inequities. Primary care practices can connect patients to available sources of health insurance, use telehealth and other digital health interventions to enhance access, provide culturally and linguistically appropriate care, utilize an expanded care team and community assets to address unmet social needs, and engage the community in practice- and system-level decision-making.

To fully leverage this opportunity will require changing both how we pay for primary care and how much is invested in primary care. Related policy levers include maintaining and expanding the primary care safety net, incorporating equity and social needs in data collection, quality assessment and measurement, transforming primary care's fee-for-service payment paradigm, adapting telehealth flexibilities to reduce inequities, and monitoring implementation.

### Conclusion

Inequities have deep roots in our broader society, and neither primary care nor the broader healthcare system can provide the only solution to overcoming barriers that prevent healthy outcomes. However, primary care does play a vital role in ensuring population health and equity by providing whole-person care, advocating for policies to accelerate practice transformation, and partnering with sectors outside of clinical medicine like social programs.



AUTHORS

- **Larry McNeely**, Policy Director, Primary Care Collaborative (PCC)
- **Megan Douglas**, Assistant Professor and Director of Research and Policy, National Center for Primary Care (NCPC), Morehouse School of Medicine
- **Noah Westfall**, Program Coordinator, Primary Care Collaborative (PCC)
- **Ann Greiner**, President and CEO, Primary Care Collaborative (PCC)
- **Anne Gaglioti**, Associate Professor of Family Medicine, Center for Community Health Integration, Case Western Reserve University, and Senior Strategic Advisor, National Center for Primary Care (NCPC), Morehouse School of Medicine
- **Dominic Mack**, Professor of Family Medicine and Director, National Center for Primary Care (NCPC), Morehouse School of Medicine

REVIEWERS

- **Anders Chen**, Society of General Internal Medicine (SGIM)
- **Sarah Coombs**, National Partnership for Women and Families (NPWF)
- **Carrie Cochran-McClain**, National Rural Health Association (NRHA)

**“Coming out of this pandemic, we have a ‘window of opportunity’ to amplify the role of primary care in addressing worsening health inequities. This report is a clarion call to action for policymakers and decision-makers to appreciate the robust evidence for primary care to improve health outcomes while advancing health equity.”**

**Dominic Mack, MD, MBA**, Professor of Family Medicine and Director, National Center for Primary Care, Morehouse School of Medicine

SECTION 1

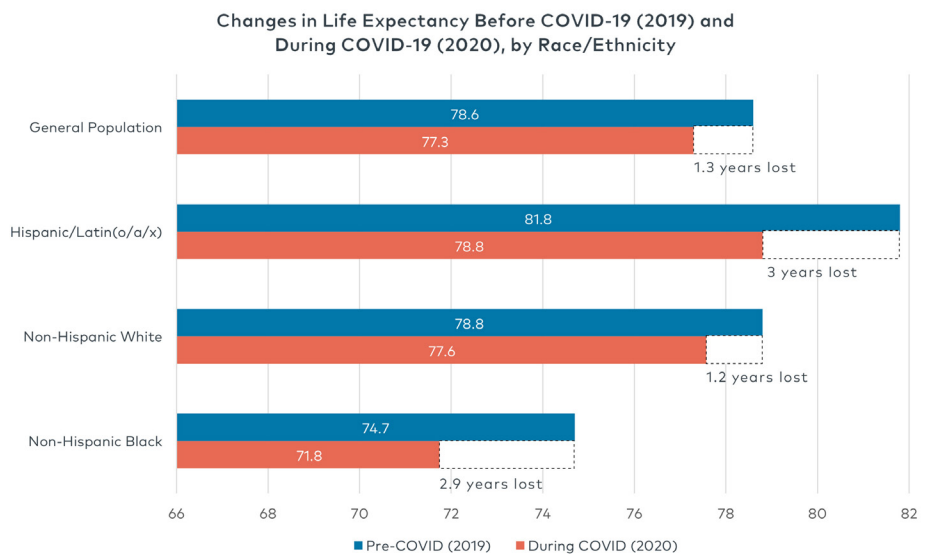
SNAPSHOT OF CURRENT INEQUITIES IN THE U.S.

Health inequities are prevalent, pervasive—and preventable. Longstanding inequities in health outcomes and health status have been observed across nearly all measures of health and associated with a range of sociodemographic characteristics.<sup>1,2,3</sup> Life expectancy, a common marker of overall health, illustrates the culmination of health inequities across three sociodemographic factors: geography, race/ethnicity, and income (see Figure 1).<sup>4</sup>

In 2018, the overall life expectancy of the U.S. population was 78.7 years, but when stratified by race, life expectancy was 74.7 for the non-Hispanic Black population, 78.6 years for the non-Hispanic White population, and 81.8 for the Hispanic/Latin(o/a/x) population.<sup>5</sup>

DIFFERENCES IN LIFE EXPECTANCY BY RURALITY, RACE/ETHNICITY, AND INCOME

FIGURE 1



Source: Arias E, Tejada-Vera B, Ahmad F, Kochanek K. Provisional Life Expectancy Estimates for 2020. Vital Statistics Rapid Release. July 2021. www.cdc.gov/nchs/data/vsrr/VSRR015-508.pdf

TABLE 1

Rural/Urban (2005-2009)	Life Expectancy in Years
Rural	76.8
Urban	78.8

Source: Singh GK, Siahpush M. Widening rural-urban disparities in life expectancy, U.S., 1969-2009. *Am J Prev Med.* 2014 Feb;46(2):e19-29.

Between 2005 and 2009, the life expectancy for populations living in metropolitan areas was 79 years, compared to 77 years in rural areas (see Table 1).<sup>6</sup>

TABLE 2

Income (2001-2014)	Life Expectancy in Years
Highest 1%	87.3
Lowest 1%	72.2

Source: Chetty R, Stepner M, Abraham S, et al. The Association Between Income and Life Expectancy in the United States, 2001-2014. *JAMA.* 2016;315(16):1750-1766. doi:10.1001/jama.2016.4226

Higher income is also associated with longer life expectancy. In one study, the gap in life expectancy between the richest 1 percent and the poorest 1 percent was nearly 15 years (see Table 2).<sup>7</sup>

The COVID-19 pandemic amplified and exacerbated these longstanding inequities, resulting in higher cases and death rates among communities of color, rural residents, and other socially vulnerable populations. Peaking in September 2021, rural Americans had a mortality rate due to COVID-19 more than twice the rate of their urban counterparts and have generally

experienced higher COVID-19 mortality rates throughout the pandemic.<sup>8</sup> Additional research estimates the COVID-19 pandemic increased the Black-White gap in life expectancy from around 3.6 years to over 5 years between 2019 and 2020, a difference not observed since 2006.<sup>9</sup> The Hispanic population also suffered the greatest reduction in life expectancy—three years—between 2019 and 2020, mostly attributed to the disproportionate burden of COVID-19 mortality compared to non-Hispanic White and non-Hispanic Black populations. Finally, communities with wider income inequality tended to have more COVID-19 cases and deaths.<sup>10</sup>

Preventable health and socioeconomic differences not only manifest as shorter lives and poorer health; they also impose substantial economic costs on our health system and society. One study estimates that eliminating race-based health inequities would have reduced direct medical costs by \$230 billion and indirect costs by more than \$1 trillion between 2003 and 2006.<sup>11</sup> A recent report from Citigroup found if racial gaps in social drivers of health like wages, education, housing, and investment for Black people were closed 20 years ago, \$16 trillion could have been added to the U.S. economy.<sup>12</sup>

### WHAT IS HEALTH EQUITY, AND WHAT DRIVES HEALTH INEQUITIES?

For purposes of this report, we have adopted the health equity definition advanced by Dr. Paula Braveman, University of California, San Francisco:

*Everyone has a fair and just opportunity to be as healthy as possible. This requires removing obstacles to health such as poverty, discrimination, and their consequences, including powerlessness and lack of access to good jobs with fair pay, quality education and housing, safe environments, and health care. For the purposes of measurement, health equity means reducing and ultimately eliminating disparities in health and its determinants that adversely affect excluded or marginalized groups.<sup>13</sup>*

**"An ongoing relationship between patients and primary care clinicians builds trust—a key but often overlooked enabler to better health and reducing inequities due to social and structural drivers."**

Ann Greiner, MCP, President and CEO, Primary Care Collaborative

## SOCIAL DRIVERS OF HEALTH

Health equity is achieved when differences in health between advantaged and disadvantaged/marginalized populations are eliminated. This requires addressing the underlying causes of inequities, which are driven in large part by social drivers of health, or as the World Health Organization puts it, social determinants: “the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life.”<sup>14</sup> While there are numerous factors that influence individual differences in life expectancy and health, there is a growing recognition of the need to address social drivers, which include non-medical factors like housing, transportation, food security, income, education, and health coverage. Interrelated social drivers can compound other factors like race, geography, and socioeconomic status to create further disadvantage and poor health in populations with fewer resources.

## SYSTEMIC RACISM AND OTHER STRUCTURAL CAUSES OF INEQUITIES

Social drivers of health can be traced to structural inequities caused by policies, resource allocation/distribution, and infrastructure in rural communities, communities of color, and poor communities. Systemic racism is a root cause of health inequities and creates many of the social and institutional factors that have systematically disadvantaged Black, Indigenous, and people of color in the U.S. Dr. David Williams and colleagues define racism as

*An organized social system in which the dominant racial group, based on an ideology of inferiority, categorizes and ranks people into social groups called “races” and uses its power to devalue, disempower, and differentially allocate valued societal resources and opportunities to groups defined as inferior.<sup>15</sup>*

Systemic racism and other structural inequities in the U.S. contribute to poorer health and have deteriorated trust in the health system overall.<sup>16,17</sup> Political disempowerment like gerrymandering and voter suppression laws, residential segregation, discriminatory lending practices, environmental injustice (e.g., selectively locating coal-fired power plants in or near communities of color), criminal justice issues like the “school-to-prison pipeline,” implicit bias, and aggregating racial and ethnic data based on only five categories have contributed to inequities and the loss of trust in the healthcare system.<sup>18</sup> While neither primary care nor the broader healthcare system can provide the only solution to population health, primary care does play a vital role in supporting efforts to achieve health equity.

## WHAT IS PRIMARY CARE?

To be consistent in our application of definitions, this report uses the National Academies of Sciences, Engineering, and Medicine (NASEM) definition for primary care as a starting point:

*High-quality primary care is the provision of whole-person, integrated, accessible, and equitable health care by interprofessional teams that are accountable for addressing the majority of an individual’s health and wellness needs across settings and through sustained relationships with patients, families, and communities.<sup>19</sup>*

Furthermore, primary care as characterized generally by the “4 Cs” (first contact that is *comprehensive, continuous, and coordinated*) provides patients with access to a usual source of care,<sup>20</sup> chronic disease management,<sup>21</sup> vaccinations<sup>22</sup> and preventive services and screenings.<sup>23</sup>

### SHARED PRINCIPLES OF PRIMARY CARE

The Primary Care Collaborative has promoted the Shared Principles of Primary Care, which characterize advanced primary care as:<sup>24,25</sup>

- person- and family-centered
- continuous
- comprehensive and equitable
- team-based and collaborative
- coordinated and integrated
- accessible and high-value

Over 350 organizations have signed on to these Shared Principles.

SECTION TWO

PRIMARY CARE'S POTENTIAL TO SUPPORT HEALTH EQUITY

Primary care, when recognized as a common good, is strongly positioned to lead the healthcare system toward equity. At its core, primary care is about building trust and relationships. Many primary care clinicians have longstanding relationships with patients—they get to know them as individuals and their families. These relationships are needed to respond to and help mitigate the health effects of social drivers and structural inequities like systemic racism. During the COVID-19 pandemic, primary care clinicians were rated as the most-trusted source of information about vaccines, and large proportions of Black and Hispanic people reported preferring to get vaccinated in their doctor’s office over other settings.<sup>26</sup>

PROVIDING THE FOUNDATION FOR HEALTH: A USUAL SOURCE OF CARE

A usual source of care is a foundational relationship that allows patients to be proactive, helping prevent and manage common chronic conditions before they become more severe and costly. For patients with a usual source of primary care, a greater percentage received high-value services like colorectal cancer screenings, mammography, high-value diabetes care, vaccinations, blood pressure monitoring, and had a more positive experience with their care compared to individuals without a source of primary care (see Table 3).<sup>27</sup>

SERVING LOW-INCOME, UNINSURED AND COMMUNITIES OF COLOR

Overall, primary care delivers a disproportionate share of ambulatory care to the overall population compared to specialists.<sup>28</sup> Primary care practices are of particular importance to populations experiencing health inequities. According to one study, adults with markers of social

**TABLE 3** PERCENTAGE OF PATIENTS WHO RECEIVE HIGH-VALUE SERVICES AND EXPERIENCE OF CARE FOR PATIENTS WITH PRIMARY CARE VERSUS PATIENTS WITHOUT PRIMARY CARE

	No Primary Care (%)	Has Primary Care (%)
<b>High-Value Cancer Screening</b> (includes screening for cervical, breast, and colorectal cancers)	67	78
<b>Diagnostic and Preventive Testing</b> (includes dental checkups, blood pressure and cholesterol measurement, and flu vaccine)	70	80
<b>Diabetes Care</b>	64	71
<b>Counseling</b>	45	52
<b>Doctor Communication</b> (includes whether doctor listened, provided good explanations, showed respect, and spent enough time with patient)	54	64
<b>Excellent-Rated Health Care</b>	69	79
<b>Experience of Access to Care</b> (includes whether patient got appointment and care when ill or injured as soon as wanted)	52	59

**Source:** Levine DM, Landon BE, Linder JA. Quality and Experience of Outpatient Care in the United States for Adults With or Without Primary Care. *JAMA Intern Med.* 2019;179(3):363–372.

disadvantage (e.g., experiencing poverty, person of color, uninsured) received nearly half (45.6 percent) of their ambulatory visits from family physicians compared to adults with no markers of social disadvantage, who received only about a third (30.5 percent) of ambulatory visits from a family physician.<sup>29</sup>

INCREASING LIFE EXPECTANCY AND DECREASING MORTALITY

Greater access to primary care has been associated with improved life expectancy. According to a recent study, people living in U.S. counties with less than 1 primary care physician per 3,500 residents had a shorter life expectancy than people living in counties above that threshold. Increasing the ratio of primary care physicians above the 1:3,500 threshold

would be expected to increase mean life expectancy by 22.4 days.<sup>30</sup> A systematic review of the literature also found that increased continuity of care, a pillar of primary care, is associated with lower mortality rates.<sup>31</sup>

Unfortunately, the United States spends less on primary care compared to other countries. For example, the average primary care spending for 22 OECD countries was roughly 14 percent of total healthcare spending, while the U.S. spends only 5 percent to 7 percent on primary care.<sup>32,33</sup> In addition to lower spending on primary care, the U.S. experiences lower life expectancy and worse health compared to other wealthy countries,<sup>34</sup> and this gap has gotten much larger as a consequence of COVID-19.<sup>35</sup>

## INEQUITY IN ACCESS TO PRIMARY CARE PERSISTS

Despite the evidence linking greater availability of primary care with improved life expectancy, the U.S. health system fails to support equitable access to primary care. In U.S. communities, access to primary care and the distribution of the primary care workforce is rationed based on racial and ethnic makeup, rurality, and poverty.

### SHORTAGE OF PRIMARY CARE WORKFORCE AND SOCIOECONOMIC CHALLENGES

A Health Professional Shortage Area (HPSA) is a geographic designation set by the U.S. Health Resources and Services Administration (HRSA) that assesses geographic access to primary care physicians, behavioral health, and oral health. Residents living in HPSAs tend to have poorer health compared to residents not living in shortage areas.<sup>36</sup> Overall, 86 million people nationwide live in primary care HPSAs and face both limited access to primary care and socioeconomic challenges.<sup>37</sup> Poverty and rurality were some of the most common markers of socioeconomic challenge faced by HPSAs.<sup>38</sup>

### COMMUNITIES OF COLOR AND INDIGENOUS POPULATIONS

Researchers have documented particularly stark differences in access to primary care by race and socioeconomic status.<sup>39</sup> For example, between 2002 and 2015, individuals classified as Black, Latino, or Asian had a decreased likelihood of having a usual primary care provider.<sup>40</sup> Another study found the odds of being in a low-access area were 28 times greater for census tracts with a high proportion of African Americans than in tracts with a low proportion of African Americans.<sup>41</sup> American Indian and Alaska Natives are less likely to report having a personal doctor or healthcare clinician than non-Hispanic whites (63.1 percent versus 72.8 percent).<sup>42</sup>

## RURALITY

Rural regions tend to have poorer health and lower access to primary care compared to the overall population. However, not all rural communities face the same barriers to primary care or socioeconomic conditions. The Rural Health Information Hub calls attention to rural regions with particularly acute challenges including the rural South, Appalachia,<sup>43</sup> Mississippi River Delta region,<sup>44</sup> U.S.-Mexico border region,<sup>45</sup> and rural tribal populations.<sup>46,47</sup> According to one study, communities of color living in rural areas had poorer self-reported health compared to White residents and were less likely to have a usual source of care. Furthermore, variation within rural communities can be masked if data is aggregated inappropriately or when the heterogeneity of rural communities is not recognized.<sup>48</sup>

Overall, rural areas face a larger burden of primary care physician shortages compared to urban areas.<sup>49</sup> Over 60 percent of all health professional shortage areas are in rural areas, affecting nearly 24 million rural residents nationwide.<sup>50</sup> In an effort to ameliorate workforce shortages, rural communities rely on primary care clinicians' ability to administer a broad range of services. A case in point: An estimated 12.1 percent of family medicine physicians—who are trained to deliver a broader array of services—practice in rural areas, substantially higher than other primary care specialties or physicians overall.<sup>51</sup> Another strategy is to leverage other kinds of clinicians, e.g., physician associates (PAs) or nurse practitioners (NPs), as well as clinical support staff. Between 2008 and 2016, the percentage of rural practices that employed at least one NP increased from 31 percent to 43 percent and made up a quarter of the providers working in rural areas in 2016.<sup>52</sup> However, on the current trajectory, neither the physician workforce nor increasing interprofessional practice will alleviate rural-urban inequities.

**"46 million residents currently live in rural areas, comprising about 15 percent of the U.S. population and contributing to the diverse and vibrant fabric of American society. Primary care must be a leading force in addressing the health inequities faced by rural populations because rural communities often greatly depend on primary care clinicians as a usual source of care and a comprehensive source of care."**

**Alan Morgan**, MPA, CEO,  
National Rural Health  
Association

## SECTION THREE

### PRIMARY CARE'S ROLE IN PROMOTING HEALTH EQUITY

As previously highlighted, primary care plays a critical part in improving health outcomes among all patients and is uniquely positioned to address longstanding health inequities. High-quality primary care is already providing a trusted healthcare relationship to many people in communities facing health inequities, helping individuals and families coordinate and integrate their care. In the wake of the COVID-19 pandemic, primary care can play an even more active and focused role in reducing preventable differences in health. Emerging research and practice have identified several opportunities for primary care to advance health equity.

#### LEVERAGE AN EXPANDED CARE TEAM AND COMMUNITY ASSETS TO ADDRESS PATIENTS' UNMET SOCIAL NEEDS

Research underscores the value of adding care team members within the practice itself, particularly those from the community, to address unmet social needs. Community health workers (CHW) and similar roles like community health representatives, *promotores de salud*, and peer support specialists, are supported by decades of research.<sup>53</sup> A more recent randomized clinical trial in the U.S. has shown that low-income primary care patients had reduced hospitalizations and improved self-reported quality of care when CHWs provided goal-setting, coaching, social support, and navigation for patients, compared to patients without CHW support.<sup>54</sup> CHWs and other similar roles often have existing social networks and cultural competencies that enable them to build trusted relationships with patients and connect them to needed services. Unfortunately, under the current payment paradigm, reimbursement for these types of essential, non-clinical services is lacking, hindering

team-based primary care and broader practice transformation.

Addressing the variety of unmet social needs requires looking beyond the clinic walls. Screening and referral systems can have a powerful impact on a variety of unmet social needs. One study of primary care practices found improvements in blood pressure and cholesterol levels for individuals who received referrals to community-based resources that addressed common unmet needs like food, transportation, and housing.<sup>55</sup> A more targeted food-delivery intervention for diabetes patients alleviated food insecurity, increased consumption of fruits, vegetables, and whole grains while decreasing fat, alcohol, and added sugar consumption.<sup>56</sup>

Even for those patients with complex medical or social needs, connection to social needs interventions can be a powerful prescription for better health. A pilot randomized trial of the Housing Prescriptions for Health intervention provided families experiencing housing instability and medically complex circumstances with a wide range of wraparound services in partnership with community organizations. The intervention yielded improvements in healthcare use, the percentage of children in fair/good health, and anxiety and depression among children.<sup>57</sup>

Medical-legal partnerships (MLP) are another strategy to address social drivers of poor health. After screening positive for unmet civil/legal needs, a patient is referred to a legal service professional who can address income supports, health insurance, public benefits, housing and utilities, education, employment, legal status, and personal or family-stability issues.<sup>58</sup> In one study, a primary care-based medical-legal partnership yielded dramatic reductions in hospitalizations among a pediatric population.<sup>59</sup>

### CONNECT PATIENTS TO AVAILABLE SOURCES OF HEALTH INSURANCE

Health insurance coverage is a powerful tool to improve access to primary care, with evidence suggesting that coverage is associated with lower mortality.<sup>60</sup> While insurance coverage alone does not always guarantee access to needed services, its absence is a barrier to access. Previously, low-income individuals who became covered through state Medicaid expansion were significantly more likely to have a usual source of care, receive preventive services, and have excellent self-rated health, which may reduce differences in access because people of color and low-income individuals are more likely to be uninsured.<sup>61,62</sup> Primary care practices—particularly those with embedded CHWs or other staff—have a role to play in connecting patients and their families with stable health coverage and a usual source of care by providing navigation services to help eligible patients enroll in Medicaid (including emergency Medicaid) or other insurance plans.<sup>63,64</sup>

### DEMONSTRATE CULTURAL COMPETENCE AND PROVIDE CULTURALLY AND LINGUISTICALLY APPROPRIATE CARE

By 2045, the Non-Hispanic White population is projected to be a minority population in the U.S., underscoring the need for culturally competent healthcare services integrated into health systems and policies. Individuals' values, beliefs, and behaviors are shaped by factors like race, ethnicity, nationality, sexual orientation, gender identity, religion, occupation, disability, socioeconomic status, and geography. For example, patients with limited English proficiency were more likely to have adverse events than English speakers.<sup>65</sup> Previous research has also demonstrated that women and Black patients are more likely to experience

patient safety events in primary care settings.<sup>66</sup> Given that primary care provides a majority of ambulatory visits and creates a longitudinal relationship with patients, primary care has an opportunity to meet the needs of diverse patients in the community.

Cultural competence training has been associated with increased patient satisfaction and improved knowledge and skills of health professionals and medical students.<sup>67,68</sup> However, cultural humility, cultural competence, and providing culturally and linguistically appropriate healthcare services go well beyond cultural competence training.<sup>69</sup> Healthcare settings that demonstrate awareness and respect for individuals differences can improve health outcomes, reduce inequities, and improve care experiences of their patients.

Approaches used to improve cultural competence are highly variable depending on practice needs but can include interpreter services, increasing workforce diversity, translating health education and promotion materials into various languages, employing community health workers and traditional healers, engaging in anti-racist work at the individual, team, and practice level, and providing alternative locations and hours to accommodate work schedules and mitigate transportation barriers.

## LEVERAGE TELEHEALTH AND OTHER DIGITAL HEALTH INTERVENTIONS

Digital health interventions (DHI), including health information technologies like electronic health records, clinical decision support, and telehealth, have tremendous potential to improve health outcomes and reduce health inequities.<sup>70,71</sup> However, many patients and healthcare professionals experience significant barriers to access and use of DHIs.<sup>72</sup> For example, many people living in rural areas continue to lack internet access, which limits their access to telemedicine. Inequities in digital health literacy and challenges with clinical implementation of innovative technology limit the benefits of DHIs for people living in underserved communities.<sup>73</sup>

The COVID-19 pandemic expanded the use of telemedicine, with many patients and clinicians using it for the first time.<sup>74</sup> This expansion made access to telemedicine more equitable for some communities. However, under the federal government funding legislation enacted in March 2022, absent further action, many of the public policy changes that supported this telemedicine expansion will lapse five months following the end of the COVID-19 Public Health Emergency.<sup>75</sup>

## ACTIVATE THE COMMUNITY

The 2021 NASEM report calls for broader implementation of a community-oriented model by including community members in their governance and practice design and partnering with community-based organizations.<sup>76</sup> Since the Federally Qualified Health Center (FQHC) program's inception, FQHCs have been governed by local boards of directors, on which community members/patients are the majority. However, community engagement need not be limited to FQHCs. A variety of practices can form patient advisory councils to help improve clinic performance by considering the patient voice.<sup>77</sup> Another approach is to partner with researchers through practice-based research networks (PBRN). Practice-based research networks can gather and combine local health data to better characterize and respond to differences in the local population.<sup>78,79</sup>

For example, the Southeast Regional Clinicians Network (SERCN) is a PBRN comprised of federally qualified health centers and primary care associations in eight Southeastern states that exists to improve health and advance health equity in the region. SERCN has developed stakeholder engagement tools and has supported safety-net primary care settings to address cardiovascular conditions, mental health, and diabetes.<sup>80,81</sup>



## SECTION FOUR

### POLICY STEPS TO STRENGTHEN PRIMARY CARE TO ADVANCE HEALTH EQUITY

Sections one and two discussed persistent inequities in primary care access and documented an unjustifiable gap in areas of coverage, access, and outcomes associated with race/ethnicity, rurality, and socioeconomic status. These inequities and their magnitude, however, are not inevitable.

The research discussed in section three shows that access to primary care overall and specific primary care-based programs and interventions can shift outcomes for populations experiencing health inequities, including those inequities rooted in social drivers of health. This section describes five important directions policymakers can pursue to strengthen primary care and engage primary care more fully in the fight against health inequities.

#### STEP 1: MAINTAIN AND EXPAND THE PRIMARY CARE SAFETY NET

The first step is to strengthen the primary care safety net. Community health centers provide access to essential primary care services and a usual source of primary care to 29 million patients in which nearly half (48 percent) were covered by Medicaid and nearly a quarter (23 percent) were uninsured.<sup>82,83</sup>

Federally Qualified Health Centers, rural health clinics, and other specialized health center programs have demonstrated their effectiveness and value.<sup>84,85</sup> FQHCs are supported through both federal grants and enhanced levels of payment, provided through prospective payment systems (PPS) established in federal law and regulation. Rural health clinics receive enhanced payments through an all-inclusive rate (AIR) for medically necessary primary health services and qualified preventive health services furnished. Health center advocates argue that maintaining these enhanced payments are vital to continuing to serve these vulnerable communities.

Policymakers should preserve enhanced payments and federal appropriations needed to support the primary care safety net. Insofar as community health centers serve only about one-third of patients living in poverty, sustained new investments should be considered.<sup>86,87</sup> However, achieving more equitable health care also demands broadening policymakers' lens to consider both health centers and the full range of other primary care practices on which communities rely, as discussed below.

#### STEP 2: INCORPORATE EQUITY AND SOCIAL NEEDS IN DATA COLLECTION

Appropriate, targeted interventions to address health inequities require information about the extent and magnitude of preventable differences in any given population. Practices, health systems, health plans, and policymakers all need information to help identify who is at risk and whether they are providing equitable care. Understanding the characteristics of a patient population is vital to quality care in any setting and particularly in primary care.

When it comes to collecting race and ethnicity data, self-reported patient information is the established gold standard. Policymakers should accelerate efforts to support and promote collection of self-reported race and ethnicity data. Wherever possible, data should be disaggregated to reflect differences among sub-populations. Over time, this collection of self-reported data should be expanded to a broader set of characteristics that include primary language, geographic location, socio-economic status, gender identity, sexual orientation, age, and ability status.

Such information must be collected in a way that minimizes the burden on primary care clinical teams and the costs associated with updating EMRs to receive such data. With proper support, primary care practices can play a role in appropriate collection of this data—both for their own performance-improvement goals and to better provide culturally competent care, screen for unmet health-related social

**“Primary care is the indispensable foundation of a better healthcare system that ensures that every single person in our country has the opportunity to live a healthy life. We cannot continue with health care as usual and expect to eliminate inequities. We must change how resources are distributed and the way primary care is delivered to value everyone equally, fix avoidable inequities, and address both historic and contemporary injustices.”**

**Sinsi Hernandez-Cancio, JD,**  
Vice President for Health Justice, National Partnership for Women and Families

needs, and provide linkages to and integration with social services.

This is a role that some primary care clinicians are already embracing. Based on a national sample of general internists, over half obtained self-reported race from patients, and 84 percent were comfortable collecting race/ethnicity data from patients.<sup>88</sup> However, some primary care practices need support and training to implement these processes. Moreover, after years of declining investment in primary care and the well-documented epidemic of burnout, primary care would need support to function as a data-collection hub for such information. This will require both investments by payers in primary care practices and policy steps to ensure that EMRs support the collection of self-reported data.

### STEP 3: TRANSFORM PRIMARY CARE'S FEE-FOR-SERVICE PAYMENT PARADIGM

Appropriate collection of data stratified by race, ethnicity, and a range of other social factors is necessary but far from sufficient. To support access to the type of primary care teams needed to respond to health inequities and unmet social needs, the underlying primary care payment structure must be transformed and centered on equity.

Today, the default form of compensation for primary care is payment for services delivered (e.g., clinic visit, screening, test, etc.) to a patient. This fee-for-service approach systematically undervalues the time-intensive, trust-building care at the heart of primary care.<sup>89</sup> However, a 2021 Consensus Report of the National Academies of Sciences, Engineering, and Medicine (NASEM) called for reforms to strengthen primary care.<sup>90</sup> In 2022, the Primary Care Collaborative, along with the National Center for Primary Care and 39 other stakeholder organizations, launched a new campaign to move the report's primary care payment and investment

recommendations into policy. Building on the NASEM recommendations, these organizations have released five Concordance Recommendations. The recommendations call upon policymakers to establish pathways for primary care practices to transition from a predominantly fee-for-service model to a predominantly population-based prospective payment (hybrid) model that properly values primary care. The per-member, per-month component of such payment models needs to be tailored to the population of the practice according to health status, risk, social drivers of health and social risk, historic under-investment, and other elements.

Broad adoption of risk-adjusted comprehensive payment alone may not be sufficient to close health equity gaps in primary care. For this reason, the same Concordance Recommendations call for up-front investments in safety net primary care practices, improved primary care investment in Medicaid, appropriate support to overcome structural barriers that impact health for people and communities most affected by structural inequities, and support for:

*multidisciplinary primary care teams that reflect, and can meet the needs of, diverse populations...providing high-quality, comprehensive, integrated care to communities that are structurally disadvantaged by discrimination and other social drivers.*<sup>91</sup>

### STEP 4: ADAPT COVID-RELATED TELEHEALTH FLEXIBILITIES FOR LONG-TERM DISPARITY REDUCTION GOALS

As noted above, telehealth utilization skyrocketed during the pandemic. Telehealth visits, including telemedicine services like remote patient monitoring and self-management apps, have the potential to contribute to health equity. Audio-only telehealth encounters have

increased access for many vulnerable patients and communities.<sup>92</sup> Ensuring continued coverage of these services while simultaneously supporting policies that expand high speed internet access is critical.<sup>93</sup>

Telehealth flexibilities also have the potential to worsen inequities if policies to support equitable access are not implemented in the long-term. Broadband access (which differs by rurality, income, and race/ethnicity),<sup>94</sup> lack of infrastructure, provider readiness, and patient engagement are all barriers to telehealth utilization, especially for rural communities (21 million people still lack broadband, including 30 percent of rural residents).<sup>95</sup> Even if adequate access is available, cost can remain a barrier across rural, urban, and suburban communities. Rates of home broadband access vary substantially by income; 43 percent of adults with incomes below \$30,000 did not have home broadband access, compared to only 7 percent for adults earning more than \$100,000.<sup>96</sup>

Clinical workflows, patient engagement, and support for practice implementation are critical. Data are still emerging on inequities related to telehealth utilization, cost, and outcomes during the pandemic. It will be critical to ensure policies that allow permanent telehealth flexibilities are based on meaningful evidence.

To ensure equitable access and use of DHIs moving forward, permanent policy change may be needed to improve clinical workflows, affordability of innovative DHIs, and patient access. For example, evidence may reveal that in-person visit requirements for tele-mental health services in Medicare undermines primary care's ability to scale integration of behavioral health services.<sup>97</sup> Policymakers should insist that any permanent policy be supported by evidence regarding clinical impact, access, and utilization across a variety of diverse sub-populations.

## STEP 5: MONITOR IMPLEMENTATION AND ADVOCATE FOR EVIDENCE-BASED POLICY CHANGES FOR IMPACTED COMMUNITIES

For implementation of any of the steps described above to be successful, it will be important to determine whether policies are, in fact, reducing health inequities.

Too often, policy initiatives framed as helping communities experiencing inequities have caused further harm.<sup>98,99</sup> Furthermore, implicit bias exhibited by clinicians, systemic bias embedded in the healthcare system, and associated negative outcomes can foster mistrust and limited engagement with the health system.<sup>100</sup> To avoid further damaging communities experiencing health inequities today, policymaking related to primary care and health equity would benefit from robust feedback loops, incorporating:

- a. clear, quantitative metrics
- b. ongoing and effective input from the community members impacted by health inequities, and
- c. research and evaluation assessing policy impacts and implementation

### Quantitative Metrics

Over time, broader collection of self-reported data on race/ethnicity and a variety of other social risk factors will enable policymakers to better evaluate the equity impact of the policies detailed above. In the interim, policymakers could consider emphasizing new metrics for assessing policy, including the proportion of practices in underserved areas engaging in bi-directional communication between primary care practices and social services like including CHWs or similar roles on the care team. Another metric could assess whether the practice population was representative of the community population at large.

### Community Feedback and Engagement

At the same time, policymakers should consider how to expand patient advisory councils and practice-based research. An axiom of community organizing—the people closest to the problem are closest to the solution—could inform the design, implementation, and evaluation of the policy steps discussed above. Efforts to engage patients in patient-centered outcomes research may also offer insights for the evaluation of such policies.<sup>101</sup>

### Research

Finally, research funding and priorities should be assessed to consider whether sufficient resources are devoted to evaluating the equity impacts of primary care policy. Primary care research in general is underfunded and underprioritized. Currently, only 13 percent of Agency for Healthcare Research and Quality projects were considered primary care research, and less than 1 percent of projects funded by the National Institutes of Health were considered primary care research, and recent analysis has identified the role of primary care in addressing equity as a research gap.<sup>102</sup>

## CONCLUSION

The gaps in life expectancy across race and ethnicity, rurality, and income illustrate the myriad dimensions of health inequity found in the U.S. today. While health inequities are deeply rooted and cannot be addressed by primary care alone, preventable differences in access to high quality primary care are an important contributor to the problem.

Primary care has a crucial role to play in addressing health inequities and closing the gaps that contribute to those inequities' persistence. Research has identified powerful points of opportunity for practices to respond both within and beyond the walls of the clinic. Policymakers can take steps, like those identified in this report, to help

and encourage primary care to seize opportunities that could make the lives of underserved patients demonstrably better. Ultimately, strengthened primary care can help improve the care people receive across all communities and move the U.S. further down the path toward health equity.

## Endnotes

1. Odlum M, Moise N, Kronish IM, et al. Trends in Poor Health Indicators Among Black and Hispanic Middle-aged and Older Adults in the United States, 1999-2018. *JAMA Netw Open*. 2020;3(11):e2025134. doi:10.1001/jamanetworkopen.2020.25134
2. Fiscella K, Sanders MR. Racial and Ethnic Disparities in the Quality of Health Care. *Annu Rev Public Health*. 2016;37:375-94. doi: 10.1146/annurev-publhealth-032315-021439. Epub 2016 Jan 18. PMID: 26789384.
3. U.S. Cancer Statistics Working Group. U.S. Cancer Statistics Data Visualizations Tool, based on 2020 submission data (1999-2018): U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; www.cdc.gov/cancer/dataviz, released in June 2021.
4. A recent Executive Order identified several groups including Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality. See <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/20/executive-order-advancing-racial-equity-and-support-for-underserved-communities-through-the-federal-government/>
5. National Center for Health Statistics. Health, United States, 2019: Table 004. Hyattsville, MD. 2021. Available from: <https://www.cdc.gov/nchs/healthcontent/2019.htm>
6. Singh GK, Siahpush M. Widening rural-urban disparities in life expectancy, U.S., 1969-2009. *Am J Prev Med*. 2014 Feb;46(2):e19-29.
7. Chetty R, Stepner M, Abraham S, et al. The Association Between Income and Life Expectancy in the United States, 2001-2014. *JAMA*. 2016;315(16):1750-1766. doi:10.1001/jama.2016.4226
8. Weber L. Covid Is Killing Rural Americans at Twice the Rate of Urbanites. *Kaiser Health News*. September 2021. <https://khn.org/news/article/covid-death-rate-rural-america/>
9. Andrasfay T, Goldman N. Reductions in 2020 US life expectancy due to COVID-19 and the disproportionate impact on the Black and Latino populations. *Proc Natl Acad Sci U S A*. 2021 Feb 2;118(5):e2014746118. doi: 10.1073/pnas.2014746118. PMID: 33446511; PMCID: PMC7865122.
10. Tan AX, Hinman JA, Abdel Magid HS, Nelson LM, Odden MC. Association Between Income Inequality and County-Level COVID-19 Cases and Deaths in the US. *JAMA Netw Open*. 2021;4(5):e218799. doi:10.1001/jamanetworkopen.2021.8799
11. LaVeist TA, Gaskin D, Richard P. Estimating the economic burden of racial health inequalities in the United States. *Int J Health Serv*. 2011;41(2):231-8. doi: 10.2190/HS.41.2.c. PMID: 21563622.
12. Peterson D, Mann C. Closing the Racial Inequality Gaps: The Economic Cost of Black Inequality in the US. (Sept. 2020). Citi GPS: Global Perspectives & Solutions. Available at <https://www.citivelocity.com/citigps/closing-the-racial-inequality-gaps/>
13. Braveman P, Arkin E, Orleans T, Proctor D, and Plough A. What Is Health Equity? And What Difference Does a Definition Make? Princeton, NJ: Robert Wood Johnson Foundation, 2017. <https://www.rwjf.org/en/library/research/2017/05/what-is-health-equity-.html>
14. Social Determinants of Health. World Health Organization. [https://www.who.int/health-topics/social-determinants-of-health#tab=tab\\_1](https://www.who.int/health-topics/social-determinants-of-health#tab=tab_1)
15. Williams DR, Lawrence JA, Davis BA. Racism and Health: Evidence and Needed Research. *Annu Rev Public Health*. 2019 Apr 1;40:105-125. doi: 10.1146/annurev-publhealth-040218-043750. Epub 2019 Feb 2.
16. Evans MK, Rosenbaum L, Malina D, Morrissey S, Rubin EJ. Diagnosing and Treating Systemic Racism. *N Engl J Med*. 2020;383(3):274-276. doi:10.1056/NEJMe2021693
17. Musa D, Schulz R, Harris R, Silverman M, Thomas SB. Trust in the health care system and the use of preventive health services by older black and white adults. *Am J Public Health*. 2009;99(7):1293-1299. doi:10.2105/AJPH.2007.123927
18. Braveman PA, Arkin E, Proctor D, Kauh T, Holm N. Systemic And Structural Racism: Definitions, Examples, Health Damages, And Approaches To Dismantling. *Health Aff (Millwood)*. 2022 Feb;41(2):171-178. doi: 10.1377/hlthaff.2021.01394. PMID: 35130057.
19. National Academies of Sciences, Engineering, and Medicine. 2021. Implementing High-Quality Primary Care: Rebuilding the Foundation of Health Care. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25983>
20. Levine DM, Landon BE, Linder JA. Quality and Experience of Outpatient Care in the United States for Adults With or Without Primary Care. *JAMA Intern Med*. 2019;179(3):363-372. doi:10.1001/jamainternmed.2018.6716
21. Reynolds R, Dennis S, Hasan I, Slewa J, Chen W, Tian D, Bobba S, Zwar N. A systematic review of chronic disease management interventions in primary care. *BMC Fam Pract*. 2018 Jan 9;19(1):11.
22. Wilkinson E, Jetty A, Petterson S, Jabbarpour Y, Westfall JM. Primary Care's Historic Role in Vaccination and Potential Role in COVID-19 Immunization Programs. *Ann Fam Med*. 2021 Jul-Aug;19(4):351-355.
23. Hostetter J, Schwarz N, Klug M, Wynne J, Basson MD. Primary care visits increase utilization of evidence-based preventative health measures. *BMC Fam Pract*. 2020 Jul 28;21(1):151.
24. Epperly T, Bechtel C, Sweeney R, et al. The Shared Principles of Primary Care: A Multistakeholder Initiative to Find a Common Voice. *Fam Med*. 2019;51(2):179-184. <https://doi.org/10.22454/FamMed.2019.925587>.
25. Shared Principles of Primary Care. The Primary Care Collaborative. <https://www.pccpc.org/about/shared-principles>
26. Klein S, Hostetter M. The Room Where it Happens: The Role of Primary Care in the Next Phase of the COVID-19 Vaccination Campaign. *The Commonwealth Fund*. July 7, 2021. Available at <https://www.commonwealthfund.org/publications/2021/jul/room-where-it-happens>.
27. Levine DM, Landon BE, Linder JA. Quality and Experience of Outpatient Care in the United States for Adults With or Without Primary Care. *JAMA Intern Med*. 2019;179(3):363-372. doi:10.1001/jamainternmed.2018.6716
28. Willis J, Antono B, Bazemore A, Jetty A, Petterson S, George J, Rosario BL, Scheufele E, Rajmane A, Dankwa-Mullan I, Rhee K. The State of Primary Care in the United States: A Chartbook of Facts and Statistics. October 2020.
29. Ferrer RL. Pursuing equity: contact with primary care and specialist clinicians by demographics, insurance, and health status. *Ann Fam Med*. 2007;5(6):492-502. doi:10.1370/afm.746
30. Basu S, Phillips RS, Berkowitz SA, Landon BE, Bitton A, Phillips RL. Estimated Effect on Life Expectancy of Alleviating Primary Care Shortages in the United States. *Ann Intern Med*. 2021 Jul;174(7):920-926.
31. Pereira Gray DJ, Sidaway-Lee K, White E, et al. Continuity of care with doctors—a matter of life and death? A systematic review of continuity of care and mortality. *BMJ Open* 2018;8:e021161. doi:10.1136/bmjopen-2017-021161.
32. Spending on Primary Care: First Estimates. Organisation for Economic Co-operation and Development (OECD). December 2018. <https://www.oecd.org/health/health-systems/Spending-on-Primary-Care-Policy-Brief-December-2018.pdf>
33. Kempfski A, Greiner A. Primary Care Spending: High Stakes, Low Investment. Primary Care Collaborative. December 2020. [https://www.pccpc.org/sites/default/files/resources/PCC\\_Primary\\_Care\\_Spending\\_2020.pdf](https://www.pccpc.org/sites/default/files/resources/PCC_Primary_Care_Spending_2020.pdf)

34. Health at a Glance 2021: OECD Indicators Highlights for the United States. OECD. 2021. <https://www.oecd.org/unitedstates/health-at-a-glance-US-EN.pdf>
35. Ortaliza J, Ramirez G, Satheeskumar V, Amin K. How does U.S. life expectancy compare to other countries? Peterson-KFF Health System Tracker. September 2021. <https://www.healthsystemtracker.org/chart-collection/u-s-life-expectancy-compare-countries/#Life%20expectancy%20at%20birth%20in%20years,%201980-2020%C2%A0>
36. Liu JJ. Health professional shortage and health status and health care access. *J Health Care Poor Underserved*. 2007 Aug;18(3):590-8. doi: 10.1353/hpu.2007.0062. PMID: 17675715.
37. Designated Health Professional Shortage Areas Statistics. First Quarter of Fiscal Year 2022 Designated HPSA Quarterly Summary. Bureau of Health Workforce Health Resources and Services Administration (HRSA) U.S. Department of Health & Human Services. Accessed on January 1, 2022 from <https://data.hrsa.gov/topics/health-workforce/shortage-areas>
38. Streeter RA, Snyder JE, Kepley H, Stahl AL, Li T, Washko MM. The geographic alignment of primary care Health Professional Shortage Areas with markers for social determinants of health. *PLoS One*. 2020;15(4):e0231443. Published 2020 Apr 24. doi:10.1371/journal.pone.0231443
39. Shi L, Chen CC, Nie X, Zhu J, Hu R. Racial and socioeconomic disparities in access to primary care among people with chronic conditions. *J Am Board Fam Med*. 2014 Mar-Apr;27(2):189-98.
40. Levine DM, Linder JA, Landon BE. Characteristics of Americans With Primary Care and Changes Over Time, 2002-2015. *JAMA Intern Med*. 2020;180(3):463-466. doi:10.1001/jamainternmed.2019.6282
41. Brown EJ, Polsky D, Barbu CM, Seymour JW, Grande D. Racial Disparities In Geographic Access To Primary Care In Philadelphia. *Health Aff (Millwood)*. 2016 Aug 1;35(8):1374-81.
42. Adakai M, Sandoval-Rosario M, Xu F, et al. Health Disparities Among American Indians/Alaska Natives — Arizona, 2017. *MMWR Morb Mortal Wkly Rep* 2018;67:1314-1318. DOI: <http://dx.doi.org/10.15585/mmwr.mm6747a4>
43. Singh GK, Kogan MD, Slifkin RT. Widening Disparities In Infant Mortality And Life Expectancy Between Appalachia And The Rest Of The United States, 1990-2013. *Health Aff (Millwood)*. 2017 Aug 1;36(8):1423-1432. doi: 10.1377/hlthaff.2016.1571. PMID: 28784735.
44. Gennuso KP, Jovaag A, Catlin BB, Rodock M, Park H. Assessment of Factors Contributing to Health Outcomes in the Eight States of the Mississippi Delta Region. *Prev Chronic Dis*. 2016 Mar 3;13:E33. doi: 10.5888/pcd13.150440. PMID: 26940300; PMCID: PMC4778371.
45. Lady B, Henning-Smith C, Kunz S. Addressing Health and Health Care Needs in the United States-México Border Region: Executive Summary. National Rural Health Association Policy Brief. May 2018. [https://www.ruralhealthinfo.org/NRHA/media/Emerge\\_NRHA/Advocacy/Policy%20documents/2019-NRHA-Policy-Document-Addressing-Health-and-Health-Care-Needs-in-the-United-States-Mexico-Border-Region.pdf](https://www.ruralhealthinfo.org/NRHA/media/Emerge_NRHA/Advocacy/Policy%20documents/2019-NRHA-Policy-Document-Addressing-Health-and-Health-Care-Needs-in-the-United-States-Mexico-Border-Region.pdf)
46. Probst J, Ajmal F. Social Determinants of Health Among Rural American Indian and Alaska Native Populations. Rural and Minority Health Research Center. July 2019.
47. Rural Health Information Hub, 2019. Rural Health Disparities [online]. Rural Health Information Hub. Available at: <https://www.ruralhealthinfo.org/topics/rural-health-disparities> [Accessed 11 April 2022]
48. James CV, Moonesinghe R, Wilson-Frederick SM, Hall JE, Penman-Aguilar A, Bouye K. Racial/Ethnic Health Disparities Among Rural Adults — United States, 2012–2015. *MMWR Surveill Summ* 2017;66(No. SS-23):1–9. DOI: <http://dx.doi.org/10.15585/mmwr.ss6623a1>
49. Zhang D, Son H, Shen Y, et al. Assessment of Changes in Rural and Urban Primary Care Workforce in the United States From 2009 to 2017. *JAMA Netw Open*. 2020;3(10):e2022914. doi:10.1001/jamanetworkopen.2020.22914
50. Designated Health Professional Shortage Areas Statistics. Third Quarter of Fiscal Year 2021 Designated HPSA Quarterly Summary. Bureau of Health Workforce Health Resources and Services Administration (HRSA). U.S. Department of Health & Human Services. June 30, 2021. <https://data.hrsa.gov/topics/health-workforce/shortage-areas>
51. Willis J, Antono B, Bazemore A, Jetty A, Petterson S, George J, Rosario BL, Scheufele E, Rajmane A, Dankwa-Mullan I, Rhee K. The State of Primary Care in the United States: A Chartbook of Facts and Statistics. October 2020.
52. Barnes H, Richards MR, McHugh MD, Martsolf G. Rural And Nonrural Primary Care Physician Practices Increasingly Rely On Nurse Practitioners. *Health Aff (Millwood)*. 2018 Jun;37(6):908-914. doi: 10.1377/hlthaff.2017.1158. PMID: 29863933; PMCID: PMC6080248.
53. WestRasmus, Emma K. BA; Pineda-Reyes, Fernando B.S.; Tamez, Montelle BA; Westfall, John M. MD, MPH Promotores de Salud and Community Health Workers, Family & Community Health: April/June 2012 - Volume 35 - Issue 2 - p 172-182 doi: 10.1097/FCH.0b013e31824991d2
54. Kangovi S, Mitra N, Norton L, et al. Effect of Community Health Worker Support on Clinical Outcomes of Low-Income Patients Across Primary Care Facilities: A Randomized Clinical Trial. *JAMA Intern Med*. 2018;178(12):1635-1643. doi:10.1001/jamainternmed.2018.4630
55. Berkowitz SA, Hulberg AC, Standish S, Reznor G, Atlas SJ. Addressing Unmet Basic Resource Needs as Part of Chronic Cardiometabolic Disease Management. *JAMA Intern Med*. 2017;177(2):244-252. doi:10.1001/jamainternmed.2016.7691
56. Berkowitz SA, Delahanty LM, Terranova J, Steiner B, Ruazol MP, Singh R, Shahid NN, Wexler DJ. Medically Tailored Meal Delivery for Diabetes Patients with Food Insecurity: a Randomized Cross-over Trial. *J Gen Intern Med*. 2019 Mar;34(3):396-404. doi: 10.1007/s11606-018-4716-z. Epub 2018 Nov 12. PMID: 30421335; PMCID: PMC6420590.
57. Bovell-Ammon A, Mansilla C, Poblacion A, Rateau L, Heeren T, Cook JT, Zhang T, de Cuba SE, Sandel MT. Housing Intervention For Medically Complex Families Associated With Improved Family Health: Pilot Randomized Trial. *Health Aff (Millwood)*. 2020 Apr;39(4):613-621. doi: 10.1377/hlthaff.2019.01569. PMID: 32250672.
58. Williamson A, Trott J, Regenstein M. Health Center-Based Medical Legal Partnerships: Where They Are, How They Work, and How They are Funded. National Center for Medical Legal Partnership. January 2018. <https://medical-legalpartnership.org/wp-content/uploads/2017/12/Health-Center-based-Medical-Legal-Partnerships.pdf>
59. Beck AF, Henize AW, Qiu T, Huang B, Zhang Y, Klein MD, Parrish D, Fink EE, Kahn RS. Reductions In Hospitalizations Among Children Referred To A Primary Care-Based Medical-Legal Partnership. *Health Aff (Millwood)*. 2022 Mar;41(3):341-349. doi: 10.1377/hlthaff.2021.00905. PMID: 35254924.
60. Woolhandler S, Himmelstein DU. The Relationship of Health Insurance and Mortality: Is Lack of Insurance Deadly? *Ann Intern Med*. 2017 Sep 19;167(6):424-431. doi: 10.7326/M17-1403. Epub 2017 Jun 27. PMID: 28655034.
61. Tolbert J, Orgera K. Key Facts about the Uninsured Population. Kaiser Family Foundation. November 2020. <https://www.kff.org/uninsured/issue-brief/key-facts-about-the-uninsured-population/>
62. Sommers BD, Maylone B, Blendon RJ, Orav EJ, Epstein AM. Three-Year Impacts Of The Affordable Care Act: Improved Medical Care And Health Among Low-Income Adults. *Health Aff (Millwood)*. 2017 Jun 1;36(6):1119-1128. doi: 10.1377/hlthaff.2017.0293. Epub 2017 May 17. PMID: 28515140.

63. Islam N, Nadkarni SK, Zahn D, Skillman M, Kwon SC, Trinh-Shevrin C. Integrating community health workers within Patient Protection and Affordable Care Act implementation. *J Public Health Manag Pract*. 2015;21(1):42-50. doi:10.1097/PHH.000000000000084
64. Saluja S, Hochman M, Dokko R, et al. Community-Based Health Care Navigation's Impact on Access to Primary Care for Low-Income Latinos. *J Am Board Fam Med*. 2022;35(1):44-54. doi:10.3122/jabfm.2022.01.210253
65. Divi C, Koss RG, Schmaltz SP, Loeb JM. Language proficiency and adverse events in US hospitals: a pilot study. *Int J Qual Health Care*. 2007;19(2):60-67. doi:10.1093/intqhc/mzl069
66. Piccardi C, Detollenaere J, Vanden Bussche P, Willems S. Social disparities in patient safety in primary care: a systematic review. *Int J Equity Health*. 2018;17(1):114. Published 2018 Aug 7. doi:10.1186/s12939-018-0828-7
67. Govere L, Govere EM. How Effective is Cultural Competence Training of Healthcare Providers on Improving Patient Satisfaction of Minority Groups? A Systematic Review of Literature. *Worldviews Evid Based Nurs*. 2016 Dec;13(6):402-410.
68. Jernigan VB, Hearod JB, Tran K, Norris KC, Buchwald D. An Examination of Cultural Competence Training in US Medical Education Guided by the Tool for Assessing Cultural Competence Training. *J Health Dispar Res Pract*. 2016 Fall;9(3):150-167.
69. Greene-Moton E, Minkler M. Cultural Competence or Cultural Humility? Moving Beyond the Debate. *Health Promot Pract*. 2020 Jan;21(1):142-145.
70. Willis VC, Thomas Craig KJ, Jabbarpour Y, Scheufele EL, Arriaga YE, Ajinkya M, Rhee KB, Bazemore A. Digital Health Interventions to Enhance Prevention in Primary Care: Scoping Review. *JMIR Med Inform*. 2022 Jan 21;10(1):e33518.
71. Thomas Craig KJ, Fusco N, Lindsley K, Snowdon JL, Willis VC, Arriaga YE, Dankwa-Mullan I. Rapid review: Identification of digital health interventions in atherosclerotic-related cardiovascular disease populations to address racial, ethnic, and socioeconomic health disparities. *Cardiovasc Digit Health J*. 2020 Nov 6;1(3):139-148.
72. Kruse CS, Stein A, Thomas H, Kaur H. The use of Electronic Health Records to Support Population Health: A Systematic Review of the Literature. *J Med Syst*. 2018 Sep 29;42(11):214.
73. Smith B, Magnani JW. New technologies, new disparities: The intersection of electronic health and digital health literacy. *Int J Cardiol*. 2019 Oct 1;292:280-282.
74. Samson, L., Tarazi, W., Turrini, G., Sheingold, S., Medicare Beneficiaries' Use of Telehealth Services in 2020 – Trends by Beneficiary Characteristics and Location (Issue Brief No. HP-2021- 27). Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. December, 2021
75. American Telemedicine Association. Press release. 2022 Mar 9. Available at <https://www.americantelemed.org/press-releases/gta-and-ata-action-command-congress-for-extending-telehealth-flexibilities-post-public-health-emergency-to-temporarily-avoid-the-telehealth-cliff-but-will-continue-to-work-with-cong/>
76. National Academies of Sciences, Engineering, and Medicine. 2021. Implementing High-Quality Primary Care: Rebuilding the Foundation of Health Care. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25983>.
77. Sharma A, Angel L, Bui Q. Patient Advisory Councils: Giving Patients a Seat at the Table. *Fam Pract Manag*. 2015;22(4):22-27.
78. Westfall JM, Roper R, Gaglioti A, Nease DE Jr. Practice-Based Research Networks: Strategic Opportunities to Advance Implementation Research for Health Equity. *Ethn Dis*. 2019;29(Suppl 1):113-118. Published 2019 Feb 21. doi:10.18865/ed.29.S1.113
79. Gaglioti AH, Werner JJ, Rust G, Fagnan LJ, Neale AV. Practice-based Research Networks (PBRNs) Bridging the Gaps between Communities, Funders, and Policymakers. *J Am Board Fam Med*. 2016;29(5):630-635. doi:10.3122/jabfm.2016.05.160080.
80. Gaglioti AH, Walston D, Vasquez Guzman CE, Toppin Dera N, Ortiz C, Wright LC, Roberts T, Parker S, Young V. A Practical Approach to Establishing a Practice-Based Research Network Stakeholder Engagement Infrastructure. *J Am Board Fam Med*. 2019 Sep-Oct;32(5):695-704. doi: 10.3122/jabfm.2019.05.190046. PubMed PMID: 31506365.
81. Powe BD, Daniels EC, Metoyer T, McCray G, Baltrus P, Rust GS. Increasing knowledge of cardiovascular risk factors among African Americans by use of community health workers: the ABCD community intervention pilot project. *Journal of the National Medical Association*. 2012;104(3-4):179-185.
82. For example, diabetes risk differs across various Hispanic and Asian-American-Pacific Islander sub-populations. See Cheng YJ, Kanaya AM, Araneta MRG, et al. Prevalence of Diabetes by Race and Ethnicity in the United States, 2011-2016. *JAMA*. 2019;322(24):2389-2398. doi:10.1001/jama.2019.19365
83. Community Health Center Chartbook, 2020. National Association of Community Health Centers. Available at <https://www.nachc.org/wp-content/uploads/2020/01/Chartbook-2020-Final.pdf>.
84. Other specialized health center programs include Community Health Center look-alikes, Indian Health Service clinics, and Ryan White Clinics see: Health Center Program Look-Alikes. HRSA Health Center Program. July 2021. <https://bphc.hrsa.gov/programopportunities/lookalike/index.html>
85. For more information on the value and cost-effectiveness of community health centers see: Health Centers Provide Cost Effective Care Fact Sheet. National Association of Community Health Centers. July 2015. [https://www.nachc.org/wp-content/uploads/2015/06/Cost-Effectiveness\\_FS\\_2015.pdf](https://www.nachc.org/wp-content/uploads/2015/06/Cost-Effectiveness_FS_2015.pdf)
86. Community Health Center Chartbook, 2020. National Association of Community Health Centers. Available at <https://www.nachc.org/wp-content/uploads/2020/01/Chartbook-2020-Final.pdf>.
87. NASEM has proposed exactly such investments. See National Academies of Sciences, Engineering, and Medicine. 2021. Implementing High-Quality Primary Care: Rebuilding the Foundation of Health Care. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25983>.
88. Bonham VL, Umeh NI, Cunningham BA, Abdallah KE, Sellers SL, Cooper LA. Primary Care Physicians' Collection, Comfort, and Use of Race and Ethnicity in Clinical Practice in the United States. *Health Equity*.
89. Sinsky CA, Dugdale DC. Medicare Payment for Cognitive vs Procedural Care: Minding the Gap. *JAMA Intern Med*. 2013;173(18):1733-1737. doi:10.1001/jamainternmed.2013.9257
90. National Academies of Sciences, Engineering, and Medicine. 2021. Implementing High-Quality Primary Care: Rebuilding the Foundation of Health Care. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25983>.
91. Concordance Recommendations for Primary Care Payment and Investment. Primary Care Collaborative. <https://www.pccpc.org/concrecs>
92. Uscher-Pines L, Sousa J, Jones M, et al. Telehealth Use Among Safety-Net Organizations in California During the COVID-19 Pandemic. *JAMA*. 2021;325(11):1106-1107. doi:10.1001/jama.2021.0282
93. Chang JE, Lindenfeld Z, Albert SL, et al. Telephone vs. Video Visits During COVID-19: Safety-Net Provider Perspectives. *J Am Board Fam Med*. 2021;34(6):1103-1114. doi:10.3122/jabfm.2021.06.210186
94. 21 Million Americans Still Lack Broadband Connectivity. Pew Charitable Trusts. June 2019. [https://www.pewtrusts.org/-/media/assets/2019/07/broadbandresearchinitiative\\_factsheet\\_v2.pdf](https://www.pewtrusts.org/-/media/assets/2019/07/broadbandresearchinitiative_factsheet_v2.pdf)
95. Internet/Broadband Fact Sheet. Pew Research Center. April 2021. <https://www.pewresearch.org/internet/fact-sheet/internet-broadband/?menutem=89fe9877-d6d0-42c5-bca0-8e6034e300aa>
96. The benefits and costs of broadband expansion. Brookings Up Front. November 2021. <https://www.brookings.edu/blog/up-front/2021/08/18/the-benefits-and-costs-of-broadband-expansion/>
97. PCC's Medicare PFS Comments Stress Investment in Primary Care, Health Equity. Primary Care Collaborative. September 2021. <https://www.pccpc.org/2021/09/28/pccs-medicare-pfs-comments-stress-investment-primary-care-health-equity>
98. Arcaya MC, Figueroa JF. Emerging Trends Could Exacerbate Health Inequities In The United States. *Health Aff (Millwood)*. 2017 Jun 1;36(6):992-998. doi: 10.1377/hlthaff.2017.0011. PMID: 28583956.
99. Swietek KE, Gaynes BN, Jackson GL, Weinberger M, Domino ME. Effect of the Patient-Centered Medical Home on Racial Disparities in Quality of Care. *J Gen Intern Med*. 2020 Aug;35(8):2304-2313. doi: 10.1007/s11606-020-05729-x. Epub 2020 Feb 24. PMID: 32096075; PMCID: PMC7403275.
100. Hall WJ, Chapman MV, Lee KM, et al. Implicit Racial/Ethnic Bias Among Health Care Professionals and Its Influence on Health Care Outcomes: A Systematic Review. *Am J Public Health*. 2015;105(12):e60-e76. doi:10.2105/AJPH.2015.302903

101. Mackay E, Gillespie D, Hernández-Cancio S, et al. Patient & Family Engagement: Improving Health and Advancing Equity. National Partnership for Women and Families. <https://www.nationalpartnership.org/our-work/resources/health-care/patient-family-engagement-report.pdf>
102. Mendel, Peter, Courtney A. Gidengil, Andrada Tomoia-Cotisel, Sean Mann, Adam J. Rose, Kristin J. Leuschner, Nabeel Qureshi, Vishnupriya Kareddy, Jessica L. Sousa, and Daniel Kim, Health Services and Primary Care Research Study: Comprehensive Report. Santa Monica, CA: RAND Corporation, 2021. [https://www.rand.org/pubs/research\\_reports/RRA1503-1.html](https://www.rand.org/pubs/research_reports/RRA1503-1.html).

#### ABOUT THE PRIMARY CARE COLLABORATIVE

The Primary Care Collaborative is a national multi-stakeholder organization dedicated to advancing an effective and efficient health system built on a strong foundation of primary care. Its mission is to engage and unify diverse stakeholders from the public and private sectors in support of high-performing primary care. It convenes stakeholders, disseminates evidence and best practices, and connects primary care leaders and advocates.

#### ABOUT THE NATIONAL CENTER FOR PRIMARY CARE AT THE MOREHOUSE SCHOOL OF MEDICINE

The center serves as a national resource for front-line practitioners, educators, researchers, and policymakers who impact our primary healthcare system. Its mission is strengthening the primary care system through education, research, and training to improve health outcomes while advancing and sustaining health equity.