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SelfMade Health Network (SMHN) is one of eight national disparity networks which are part of the Centers for Disease Control and Prevention (CDC) Consortium of National Networks established to address health equity by reducing cancer and tobacco-related disparities specifically among vulnerable populations. SMHN focuses on populations with low socioeconomic status (SES) characteristics.

On Behalf of SelfMade Health Network (SMHN), we the members of the SMHN Leadership Council are joined together to heighten national awareness about the significance of equitable COVID-19 vaccine allocation, distribution, and commitment to measuring and addressing health equity challenges exposed by the COVID-19 pandemic. This includes ensuring that populations with low socioeconomic status (SES) characteristics (including the medically vulnerable) receive the COVID-19 vaccine in a timely manner.

As a national disparity network, we primarily address cancer and tobacco-related disparities; however, we also understand the severity and prevalence of chronic diseases (including comorbidities) among populations diagnosed with cancer and tobacco-related medical conditions. We understand that the toll of the COVID-19 pandemic has fallen disproportionally on the nation's most vulnerable populations. And we acknowledge the importance of seeking solutions to minimize the collective human and economic toll of the COVID-19 pandemic on Americans diagnosed with chronic diseases nationwide, especially among low-income populations. Vulnerable populations include the economically disadvantaged or low SES populations, elderly, uninsured, racial and ethnic minorities, and medically vulnerable (low-income populations diagnosed chronic health conditions) residing in rural, metropolitan and frontier counties.

### MORE SEVERE COVID-19 RELATED OUTCOMES: HOSPITALIZATIONS, COMPLICATIONS AND MORTALITY

Coronavirus (COVID-19) has become the leading cause of mortality, surpassing heart disease, cancer, and chronic obstructive pulmonary disease (COPD) among adults. In partnership with agencies and organizations at different levels (state, county, local) representing multiple sectors, SelfMade Health Network focuses on reducing cancer and tobacco-related disparities on a national scale including areas where disease burden is most prevalent. Substantial differences in the COVID-19 hospitalization and death rates exist; communities with the greatest number of persons living in poverty or higher area deprivation index such as: socioeconomically disadvantaged communities are experiencing higher rates of COVID-19 hospitalization and death. In addition, lower levels of COVID-19 testing, especially among communities with socioeconomic challenges might mask the higher burden of COVID-19 disease within in these communities throughout United States.<sup>2</sup> COVID-19 presents with a broad spectrum of illness, ranging from asymptomatic or mild infections to severe disease subsequently leading to critical illness and cascade of multiple organ failure.3 COVID-19 multiple organ failure or dysfunction oftentimes involves the heart, lungs, liver, kidney and circulatory systems. 4 Underlying medical comorbidities such as: cancers, hypertension, diabetes, chronic kidney disease (CKD), cardiovascular diseases, chronic obstructive pulmonary disease (COPD) and cirrhosis all are contributing factors associated with increased COVID-19 mortality. Among cancer patients; factors such as: disease stage (e.g. active, latestage), advanced aged, and history of smoking also impact COVID-19 mortality rates.<sup>5</sup>



In the United States, chronic diseases are among the most prevalent and expensive medical conditions. Approximately 45% or 133 million of all Americans suffer from at least one chronic disease and this rate continues to increase. More than two thirds of all deaths are caused by one or more of these five chronic diseases including: heart disease, cancer, stroke, chronic obstructive pulmonary disease (COPD), and diabetes. Populations with cancer possess an impaired or weaker immune system status; and often have multiple comorbid medical conditions such as: diabetes (Type 2) and cardiovascular disease; and as a result; are more likely acquire COVID-19 including populations with cancers such as: leukemia, lung cancer, liver cancer, breast cancer, pancreatic cancer, colorectal cancer, prostate cancer and Non-Hodgkin lymphoma (NHL).

Chronic medical conditions (including multiple chronic conditions) are particularly common among the millions of people diagnosed with cancer or cancer survivors, approximately three quarters of whom (72%) are age ≥ 60 years. And among cancer survivors, common chronic conditions such as: heart disease and stroke are associated with higher medical expenditures.<sup>8</sup> In addition, populations with multiple chronic conditions (two or more) have higher hospital readmission rates and much higher health care expenses.<sup>9</sup> And populations diagnosed with some of the nation's leading medical conditions may also possess tobacco-related health complications.

#### GREATER ECONOMIC IMPACT ON ALREADY ECONOMICALLY DISADVANTAGED POPULATIONS

In addition, the economic downturn caused by the coronavirus pandemic has renewed attention on health insurance coverage as millions have lost their jobs and potentially their health coverage including low SES populations. More than 43 percent of working-age adults had inadequate health insurance when the COVID-19 pandemic started. Uninsured adults or adults with inadequate healthcare coverage, gaps in coverage, or difficulties accessing or navigating the health care system might delay or not use recommended clinical preventive services (CPS) and other needed medical care. Such delays lead to: increased health disparities, unfavorable health complications or outcomes, premature mortality, and increased financial risk, especially among racial/ethnic minorities, persons with disabilities, and other vulnerable populations such as: cancer survivors, pregnant women, homeless persons. As a result, there is an essential need to remove barriers to healthcare by increasing COVID-19 vaccination access among uninsured, underinsured, unemployed, and disabled populations (including prioritizing those diagnosed with medical conditions or COVID-19 risk factors).

A consensus exists that there is a vital need to address disparities across the entire cancer control continuum including cancer care continuum. Factors commonly identified as having the greatest potential impact on cancer health equity and patient outcomes include health system changes, healthcare access, coordination of care, patient navigation, community-clinical linkages, and community engagement. These factors can also be applied to cancer survivors with chronic diseases or comorbidities. Some barriers correlated with cancer screening, diagnosis, treatment, and survivorship include: geographic and social isolation within underserved or economically disadvantaged communities, employment demands or instability, low health literacy, and unsustainable financial



models for patient navigation programs. Such barriers potentially exacerbate or contribute to higher COVID-19 prevalence and mortality rates.<sup>12</sup>

"Health equity is defined as everyone having a fair and just opportunity to be as healthy as possible, an ethical and human rights principle that motivates us to eliminate health disparities." Significant differences, disparities or variations in cancer outcomes continue to be associated with factors such as: socioeconomic status, geography, age, race/ethnicity, and levels of health literacy.<sup>13</sup> Neighborhood socioeconomic status (SES) is linked to access to health care services, with people residing in low SES neighborhoods being less likely to have access to health care services, which further increases the risk of adverse health outcomes related to COVID-19, such as higher hospitalizations and mortality. Populations residing in economically disadvantaged communities defined by low income and education, higher unemployment, and substandard living conditions possess a greater risk of unfavorable health outcomes associated with chronic diseases including diabetes, cancer, and heart diseases. Risk factors leading to COVID-19 disease, hospitalization, and mortality exist not only at the individual or biological level; neighborhood-level factors and their interactions with individual-level factors also attribute to disparities.<sup>14</sup>

Counties that have experienced persistent poverty face health risks that have accumulated for decades. Cancer mortality is higher in counties that experienced persistent poverty compared to other counties and are generally comprised of larger populations of with lower levels of annual household income, less formal education, greater unemployment rates, racial and ethnic minorities, and more children under the age of 18. As part of the National Public Radio (NPR) Special Series: The Coronavirus Crisis and NPR references in its recent news article that "Communities of color have been disproportionately harmed by the COVID-19 pandemic. Now they are at risk of being left behind in the vaccine rollout. The reasons are both unique to each place and common across the region." Both social and structural determinants contribute to disparities in cancer outcomes among rural and racial/ethnic minority populations. Rural populations comprise as much as nearly 20% of the total population or 59 million people. Especially in rural communities, a combination of structural, social, and environmental factors at the macro and supra-macro levels such as: policies, area-level poverty, area-level distance to care as well as micro-level factors such as: health insurance status, behaviors affect cancer outcomes across the cancer control continuum (including cancer survivorship).

"Primary care physicians provide nearly half of all vaccines in the United States and their role may help assure successful delivery of the COVID-19 vaccines to communities across the nation, including rural and remote communities. Primary care practices (PCPs) may play an even more important role in vaccine counseling, building local community trust, and serving as a source of scientific knowledge about the COVID-19 vaccine." Finally, it will remain critical to establish, strengthen and expand public-private partnerships to increase access to both COVID-19 testing and vaccinations in underserved communities (both rural and metropolitan) throughout each state. 19



### **CONCLUSION:**

The health domains of vulnerable populations (including low SES) are physical, psychological, and social.<sup>20</sup> In some instances, populations with low SES characteristics have experienced bias in COVID-19 testing. They have experienced worse health outcomes from Coronavirus and their health and livelihood has been disproportionally affected by this pandemic. This reflects the disproportionate burden of their underlying heath conditions. This population has also suffered greater financial impact from this pandemic. It is essential to make the distinction between COVID-19 vaccine hesitancy and lack of or inadequate access to COVID-19 vaccination. In light of these facts and given the public health state goal of protecting those most vulnerable, it is imperative that this population is prioritized to receive the COVID-19 vaccine.

### **RECOMMENDATIONS:**

- Throughout all vaccination allocation and administration phases, it will be essential to define
  "equity" and "equitable" allocation with consistently clear messaging. Such messaging should be
  supported by congruent operational principles, practices, and monitoring, especially under
  conditions in which safe and effective vaccine supplies may become scarce or unplanned delays
  in distribution (national, state, county levels) may occur.
- 2. Establish interconnected national, state and county-level databases to continuously track and monitor resource allocation, medication dosage appropriateness, and safety (side effects, adverse drug events-ADEs) to detect and respond to medication safety events in real time and ensure fairness in treatment access.
- 3. Broaden COVID-19 vaccination locations where vulnerable communities may more easily access vaccines, such as primary care clinics.
- 4. Establish or enhance collaborations with faith-based organizations and community centers involving use of mobile vans to underserved areas, low-income senior housing, multi-unit housing in both rural and metropolitan areas including weekends.
- 5. Develop culturally competent messages around vaccine readiness rather than vaccine hesitancy to disseminate nationally.
- 6. Partner with ministers, lay ministers and parish nurses to encourage vaccine readiness with the lived experience through national networks.
- 7. Discuss the myths behind the concept of vaccine hesitancy in the African American Community.
- 8. Collect data at vaccine sites on age, gender, race, chronic conditions and risk factors nationwide.
- 9. Eliminate costs for vaccine for all groups, especially low resourced or low-income populations.
- 10. Use a nation-wide texting services to support vaccine readiness.
- 11. Consider innovative approaches to reach low-income populations by age and geography with limited computer access, and low digital proficiency.
- 12. Strengthen community-clinical linkages by establishing vaccination sites within areas with limited or non-existent internet access.
- 13. Develop messaging, and health education campaigns to address language barriers, health literacy challenges and limited English proficiency (LEP).



- 14. "Prioritizing communication to, and vaccination of, Black, Latinx, Indigenous and other disproportionately affected populations through population health indexing, neighborhood deprivation scores and census information. Includes support for improving access to vaccine appointments, including vaccine wait-lists, calling consumers who lack internet access and offering interpretation services for non-English speakers."<sup>21</sup>
- 15. Establish partnerships with businesses to address transportation needs that support initial vaccination and second vaccination appointments (where applicable) to ensure vaccine adherence with manufacturing recommendations.
- 16. Expand COVID-19 vaccination sites to areas characterized by low annual household income, and other poverty-related indicators as well as areas comprised of populations that have been victimized by racism. Given the historical abuse of disadvantaged populations, especially Black Americans (African Americans), in federally sponsored science, outreach efforts should be culturally tailored address their understandable reluctance to be vaccinated are necessary and are an ethical obligation.
- 17. Expand COVID-19 vaccination sites to locations near public recreation centers and where applicable, coordinate efforts with cancer, diabetes and blood pressure screening efforts.
- 18. As part of the hospital discharge planning process, recommend the COVID-19 vaccine to patients including those discharged to skilled nursing facilities (SNFs), long-term care facilities (LTCs), assisted living facilities (ALFs) as well as adults aged 18 and older one or more chronic conditions or underlying conditions placing them at high risk for COVID-19 complications.

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### **ADDITIONAL RESOURCES:**

- Centers for Disease Control and Prevention (CDC)-COVID-19 Tracker: COVID-19 Vaccinations in the United States at: <a href="https://covid.cdc.gov/covid-data-tracker/#vaccinations">https://covid.cdc.gov/covid-data-tracker/#vaccinations</a>
- SelfMade Health Network (SMHN) Coronavirus Fact Sheet Series at: https://selfmadehealth.org/educate/determinants-of-health-fact-sheets/
- Centers for Disease Control and Prevention (CDC)-Guidance for Planning Vaccination Clinics Held at Satellite, Temporary, or Off-Site Locations/Healthcare Providers and Professionals at: <a href="https://www.cdc.gov/vaccines/hcp/admin/mass-clinic-activities/">https://www.cdc.gov/vaccines/hcp/admin/mass-clinic-activities/</a>
- CDC Social Vulnerability Index at: <a href="https://www.atsdr.cdc.gov/placeandhealth/svi/index.html">https://www.atsdr.cdc.gov/placeandhealth/svi/index.html</a>
- COVID-19 Vaccination Communication: Applying Behavioral and Social Science to Address Vaccine Hesitancy and Foster Vaccine Confidence [National Institutes of Health (NIH)] at: <a href="https://obsr.od.nih.gov/wp-content/uploads/2020/12/COVIDReport Final.pdf">https://obsr.od.nih.gov/wp-content/uploads/2020/12/COVIDReport Final.pdf</a>
- National Breast and Cervical Cancer Early Detection Program (NBCCEDP) at: https://www.cdc.gov/cancer/nbccedp/index.htm
- National Colorectal Cancer Roundtable (NCCRT)-80% In Every Community Initiative (Colorectal Cancer Screening) at: <a href="https://nccrt.org/">https://nccrt.org/</a>