

# **Physicians Beliefs About Determinants of Health**

**Allison Lowenstein**

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Committee:  
**Stephen Bezruchka**  
**Phil Haas**

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Allison Lowenstein

University of Washington

## **Abstract**

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Allison Lowenstein

Charis of the Supervisory Committee:  
Stephen Bezruchka  
Phil Haas

There has been little work thus far to evaluate the beliefs of medical professionals regarding their conceptualization of health determinants. This research discusses physicians' beliefs about health and healthcare. This thesis investigates the beliefs of current practicing physicians concerning health in the United States. Specifically, we ask doctors what they believe to be the contributing factors towards individual as well as community health, and what is needed to improve population health. We conducted semi-structured interviews with 11 physicians of 4 different specialties. We used convenience sampling to recruit participants. We recorded and transcribed the interviews and carried out a thematic analysis. Physicians believe that more robust social services are needed to improve access to basic needs. They believe medical systems in the United States are too focused on illness treatment. Moreover, they hold that preventive medicine cannot compensate for social and environmental factors affecting health. Front line physicians interviewed in this study believe that social determinants of health (SDOH) are significant factors in producing health outcomes for the population and the individual patients they treat. As physicians are respected and trusted authorities of health, expanding this research would be an important next step that could inform health and social policy in the U.S. on how to improve population health outcomes.

## **Introduction**

To date, there is little research on physicians' perspectives and beliefs regarding population health in the U.S. Exhaustive literature reviews found little qualitative or quantitative research of physicians' conceptual understanding of the determinants of population health.

The majority of recent literature is confined to the values and beliefs represented in the position papers of medical organizations such as the American Medical Association (AMA) and the American College of Physicians (ACP). The positions

asserted by these organizations may not reflect the knowledge and opinions of practicing physicians: the AMA membership includes less than 15% of practicing physicians. Its position papers focus on physicians' ideas about payment models for healthcare, and scarcely address their ideas about determinants of health. The ACP's position papers place a greater focus on causal pathways to health outcomes and emphasize the need for a paradigm shift within healthcare to treat the SDOH<sup>1</sup>. The individualized beliefs of practicing physicians were not explored in these papers.

Studies assessing the opinions and experience of physicians in the U.S. looked at burnout and resilience of doctors, their views regarding their ability to change behavior, and their beliefs on the relative importance of personal behaviors<sup>2-6</sup>. In 1985 Sobal et al. sent surveys by mail, asking doctors in Maryland to rate 25 health behaviors as "very important," "important," "unimportant," or "very unimportant" for promoting an "average" person's health. Survey respondents rated health behaviors such as cigarette smoking, eating a balanced diet, and wearing seatbelts. This study was based on previous research conducted in 1981 in Massachusetts by Wechsler et al<sup>2</sup>. Wechsler et al. revisited the topic in 1996 by comparing the results of a number of similar survey studies, all seeking physicians' beliefs regarding personal behaviors and health promotion<sup>5</sup>.

One Canadian investigation studied physicians' definitions of the emerging healthcare concept of "population health approach". Cohen et al. used a semi-structured interview guide to interview senior doctors at healthcare facilities. These doctors had expertise in the population health approach to healthcare. This study found a "paucity of research focused on population health applications and respective terminology within the formal healthcare sector" <sup>7(p2)</sup>. Cohen et al. determined from the interviews a core set of definitional elements for a "population health approach" shared by study participants including: a focus on health & wellness; emphasis on population health; needs assessment by community outreach; consideration of equity, health disparities, SDOH; and partnering with agencies outside of healthcare<sup>7</sup>.

This writer was motivated to pursue the topic after conversing with research advisor Stephen Bezruchka about the state of U.S. population health. At that time, this writer was interning as a social worker at the Swedish Emergency Department in Ballard, Seattle. While working at the E.D., this writer was intrigued by the hard-bitten, and at times cynical perspectives of many physicians. Admirably, they seemed to realize the social challenges patients face to their health.

In the public health world today, a greater emphasis is placed on social conditions, rather than on personal behavior, as health determinants<sup>8</sup>. Each decade the Office of Disease Prevention and Health Promotion (ODPHP) releases a 10-year "Healthy People," plan for improved population health. The second item on Healthy People 2020's mission was to "increase public awareness and understanding of the determinants of health, disease, and disability and the opportunities for progress"<sup>9</sup>. Among its stated goals were to "create social and physical environment that promotes good health for all" and to "promote quality of life, healthy development, and healthy behavior"<sup>9</sup>. Nonetheless, SDOH remain subordinated to healthcare services, which focus overwhelmingly on illness treatment and management as opposed to prevention<sup>10</sup>. This research explores physicians' beliefs and understanding of SDOH,

and their relative importance for health in comparison to healthcare services and personal behavior.

In the U.S., doctors remain the most credible source of health information in the eyes of the public: today, Dr. Anthony Fauci is America's most trusted source of information regarding COVID-19 and population health proceedings. Indeed, he is one of America's most trusted public figures<sup>11</sup>. In 1986 Valente et al. described a "paucity of research" exploring the "health promotion beliefs, attitudes, and practices of physicians"<sup>4(p82)</sup>. This paucity remains. This work explores doctors' views of individual and population health determinants. It seeks to identify which interventions doctors believe would be the most efficacious for improving population health.

## **Methods**

Before beginning the study, we obtained approval from the University of Washington Human Subject Division for Institutional Review Board approval waiver. We then drafted a semi-structured interview guide which we piloted with several practicing physicians. We used convenience sampling to recruit doctors practicing in emergency medicine, family medicine, pediatric medicine, and obstetric medicine in King County, WA. To recruit physicians for interviews, we asked professional contacts to refer us to colleagues in the field. We conducted the 11 interviews in this study from December, 2019 to early March, 2020. We recorded each of the interviews, transcribed them by hand, coded and analyzed their content for themes.

In this paper, the following shorthand will be used to indicate each physicians' specializations, and the numerals '1', '2', and '3' will be used to distinguish among physicians of like specialty:

EP – Emergency Physician

FMP – Family Medicine Physician

Ped – Pediatric Physician

ObG – Physician of Obstetrics & Gynecology

## **Findings**

The SDOH and their importance to health outcomes came up in each of the 11 interviews in this study. Doctors emphasized the importance of social determinants such as the environment, economic status, and social identity (race, gender, and ethnicity). Doctors included in this study shared the belief that all people benefit from increased access to healthcare, regardless of their belief in the ability of healthcare as practiced in the U.S. to benefit health. The quotes featured below demonstrate the prevailing view among study participants that social determinants are as important, if not more important, to the health outcomes of individuals and populations than health care itself. The statement immediately below reflects a widespread opinion among doctors in this study: upstream social and institutional factors affect the level of health a person is able to achieve.

“I’m a big proponent of social determinants of health. I think that it's naïve for a physician to say what a patient sleeps in, what food they’re eating, what education they have, what social support they have doesn’t affect their health.”  
– ObG 1

Seven basic themes emerged:

**(1) The health of the natural environment and the qualities of the built environment are fundamental to foster and promote healthy communities**

“If we don’t improve our environmental health...in terms of increased climate events, fires and flooding, climate refugees, air quality, and people being dislocated... it's pretty much a disaster on the horizon” – FMP 1

“Environment has a lot to do with access: is there a hospital nearby; do you have to worry about locking your doors at night or about people shouting at night when you're trying to sleep? ... it draws in economic status and race, too.”  
– Ped 2

“Our sedentary lifestyle has to do with the way we've structured our society around cars...I think exercise is a response to the environment” – FMP 2

Physicians stressed the importance that the natural and built environment have for the facilitation of health. EP 3 stated that climate change will also indirectly lead to negative health outcomes because many people’s livelihoods depend on the environment. ObG 1 commented on the importance of air and water quality for healthy pregnancy. Among this sample, access to clean air and water is universally considered vital to human health.

The built environment (infrastructure and city design) was also discussed by doctors. They spoke of geographic convenience or access to fresh food, green space, education, and healthcare. Ped 2 acknowledged that economic status and race are primary determinants of one’s environment. FMP 2 compared his personal experiences in Texas and Washington: the vastly different infrastructure seemed to determine health behaviors: “I walked because we live in a place that is pleasant to walk in,” Ped 1 also remarked on the infrastructure-origins of unhealthy sedentary lifestyles in the U.S.

**(2) Economic status & wealth inequality determine the access individuals have to basic needs, safety, and security to pursue health:**

“If you decrease wealth inequality that includes alleviating poverty, so I'd definitely put my money there. I 100% believe universal healthcare is something we should have in this country, but if we do that without eliminating poverty, we'll set ourselves up to make universal healthcare quite a money pit and ... a large segment of the population [will] get stuck in the healthcare system.” – EP 1

“Poverty is defined by the ability to meet bodily needs...Decreasing wealth inequality is the mediating factor to people meeting their bodily needs of food, shelter, exercise...I think that giving people more uniform access to the means to get those resources will [enable] people” – FMP 2

“Wealthy people ...don't have to spend as much of their time worrying about the basics [such as] housing, food, jobs, and security. They can spend more time on their health...”. – EP 3

Physicians in this study believe that economic status is particularly important for health in the U.S. because money enables access to basic needs which are minimally supported by the government. Economic status fosters the pursuit of health improvement by enabling preventive health care, the fulfilment of basic needs, as well as the pursuit of leisure to cultivate mental health and overall wellbeing. Physicians in this study believe that reducing or eliminating poverty will lead to improved population health. Some believe reducing poverty is more fundamental to health than healthcare itself. FMP 2 notes that wealth inequality skews a population's access to basic needs. FMP 1 states that decreasing wealth inequality is, “number one,” to improve population health. FMP 3 shares this opinion. EP 3 suggests that “everyone could be economically equal but very poor and have poor health outcomes.” In general, poverty is viewed by all respondents to be a harbinger of poor health, and wealth to be a facilitator of better health.

### **(3) Social identity constructs such as gender and race correlate with health outcomes. Negative health correlation with minority groups is viewed as a product of racism.**

“Gender identity and race is a huge determinant of access to a lot of the perimeters that make up a healthy life...the problems of microaggressions and early childhood trauma that set people up for a lifetime by adverse childhood events, create anxiety and depression which affect all of the bodily systems... racism and gender inequality have insidious ways of undermining health.”  
–FMP 1

“Whether it be overt racism or underlying racism... study after study show that black women have worse pregnancy outcomes than white women when you control for everything [else]: neighborhood, income, education... black women still do worse.” – ObG 2

“I had a GYN patient my 2nd year [of residency], and she was apologizing profusely because she was 2 hours late to the appointment... she tells me, "there were gunshots being shot into my house, and I had to hide my kids."... That level of stress and unsafety is not healthy... stress is related to preterm birth which is significantly higher in the African American population and in lower socioeconomic populations.” – ObG 3

“Very prominent [Black] women like Serena Williams or Beyoncé who did not get heard from the medical community had near misses.... you’d think that if anyone is going to have good medical care, it would be someone who could pay for it, like a celebrity” -ObG1

The excerpts above speak to the negative health impact racism, trauma, and stress have on members of gender and racial minorities. FMP 1 describes the causal pathways to poorer health outcomes in minority populations. ObG 2 articulates that race is not a mere confounder for environment, education, or wealth, but a social construct that punches above its weight, overcoming other socioeconomic forces. The narrative offered by ObG 3 demonstrates the real-life threats members of minority communities face to their safety, and their increased exposure to stressful events. In addition to the doctors quoted above, ObG 1, FMP 2 and FMP 3, and EP 3, and Ped 2 each comment on the challenges (e.g. implicit bias, discrimination, and social expectations) which racial minorities and women face in the pursuit of health. ObG 1 acknowledges racially stratified maternal mortality rates in the U.S., African American women are 6x more likely to die during pregnancy, and in Washington state, Native American and Alaskan Native women are 8x more likely to die during pregnancy. Similarly, EP 3 remembers a cohort study showing worse health outcomes across multiple parameters for ethnic, racial, and gender minorities. He poignantly summarized that, “even wealth isn’t enough to protect [minorities] from worse health outcomes.

#### **(4) Social interaction is positive for an individual’s health and for community health**

“The way our cities and towns are built can affect health. In your environment can you go days without connecting to anybody, or must you connect? I think a lot of our health issues now, from what I see as a pediatrician, have do with our lack of connections, and how isolated people are getting, which leads to depression and anxiety... Connections in the virtual world don’t replace actual interactions.” – Ped 1

“True neighborhoods where people know each other and were able to help each other out, like [to] help watch a neighbor’s kids...I think that kind of support helps lead to the health of a society and makes people feel more comfortable... a feeling of safety” – ObG 3

A number of physicians interviewed stressed the importance of social interaction for human health at both an individual level and a social level. They believe—a poignant issue during the COVID-19 epidemic—that as social beings, humans must interact to be healthy. Many doctors, like EP 2 and ObG 1, argue that a community should ideally have public green space and/or community centers to foster safe interaction. ObG 2 adds that it is important for people to feel safe in the shared environment. Ped 1 believes that schools should put more emphasis on teaching the complexities of social interaction such as “how to deal with awkward” situations or “people that are different

from you.” EP 1 states that the way a patient interacts with staff is a first sign of their mental, behavioral health, and overall health.

#### **(5) Mental health is an important aspect of overall health and wellbeing**

“Mental health issues [are] becoming more prominent in the community... I think coming soon will be the big mental health realization” -EP 2

“Mental health informs our decision making and... affects our access to housing, higher education, our utilization of healthcare, and it affects how we approach our environment ...because if you're not mentally healthy, you don't really care about tomorrow.” -Ped I

Physicians viewed mental health as an important component of overall health, which they find is undervalued in the medical model embraced in the U.S. They believe that the population would be healthier if individuals, particularly from vulnerable populations (i.e. racial minorities, low-income, older adults, child-bearing, etc.), had access to mental health and behavioral health resources prior to the onset of potentially serious issues. Moreover, mental health should be emphasized from a young age to effectively promote the use of healthy coping skills. Doctors believe that individuals with more mental stability will be better equipped to meet their basic needs, such as monitoring their physical health, and contributing to the community.

#### **(6) Many health outcomes seem to result from personal behaviors. Personal behaviors are widely recognized to be facilitated or inhibited by the environment, early life, and socioeconomic factors**

“I think personal behavior is a symptom of other things ... It's very rare for example that you see someone with heroin use disorder that doesn't have low socioeconomic status, Adverse Childhood Experiences (ACEs), and all the other things that may have predisposed them to be in that position.” – FMP 3

“Personal behavior and genetics are huge [health determinants] ...I think economic status determines the resources someone has either to make decisions or be able to engage in behaviors that promote their own health” – EP 1

Physicians stated that an individual's behavior directly affects his, her, or their health, and that behaviors are responses to environment, upbringing, and social circumstances. Several physicians view personal behavior as consequential of such societal factors. One dissenting view came from EP 2, who believed that personal behavior could overcome environmental advantage or disadvantage. He states that people can overcome unhealthy environments if “they choose to live a certain way.” Conversely, well-off people can squander their advantages through “poor choices and screw up their health.” All others believed behavior is a response to environmental and social conditions.

**(7) Health outcomes are worse in the U.S. than in most other OECD countries. This is thought to be largely due to inadequate social support programs and an over dependence on an illness-based healthcare system.**

“Maternity and paternity leave are drastically worse here than in other countries. Here, if a mom has 12 weeks off they’re lucky; in Canada they have a year. That affects the baby ...To me as a pediatrician, the biggest challenge is our country's poor support of brand-new families and [relative lack] of parental leave” – Ped 1

“[Scandinavian and European] healthcare systems put much more emphasis on primary and preventive care, and we've seemed to [under-]incentivize primary and preventive care and [incentivized] care after disease processes have already happened” – EP 3

“Robust institutions to address social determinants of health make [European] countries healthier...access to housing, nutritious food, safe communities, absence of gun violence—those are all major life preservatives” – FMP 2

Physicians’ understanding of the U.S. population health relative to other nations is summarized in Table 1:

	<b>How does U.S. life expectancy rank in comparison to all other countries?</b>
<b>EP 1</b>	“higher side of the middle range”
<b>EP 2</b>	“Top half at least... not the highest”
<b>EP 3</b>	“In the 20s or 30s range, which is not great”
<b>FMP 1</b>	“Among developed countries, one of the lowest”
<b>FMP 2</b>	“25 <sup>th</sup> percentile globally. 50 <sup>th</sup> percentile among OECD countries”
<b>FMP 3</b>	“Probably about 50 live longer”
<b>Ped 1</b>	“Between 15 and 20... lower than what we all think it is”
<b>Ped 2</b>	“Close to 10”
<b>ObG 1</b>	“Probably one of the lowest of the developed countries”
<b>ObG 2</b>	“Not great compared to other developed countries. Probably 10-20 come before us”
<b>ObG 3</b>	“I’d say one third have higher life expectancy... 60 or 70”

Table 1

Physicians interviewed in this study believe that health outcomes such as life expectancy and mortality rates are worse than they should be. The U.S. lags behind other developed nations, they agree, due to poor social support that leaves vulnerable populations either unable to meet basic needs or exposed to excess stress. Numerous physicians believe that poor support of families is a major cause of worse health outcomes. Excluding the three EPs, all others address maternity/paternity leave, weaker in the U.S. than in other Organization for Economic Cooperation and Development (OECD) nations. ObG 1, for instance, states that “a year of maternity/paternity leave

generally makes for a healthier population.” The EPs each spoke to inadequate housing and behavioral health resources in the U.S. Most of the physicians also note that inadequate social support to improve access to healthful food and public safety negatively affect population health in the U.S. Doctors also point out that healthier nations place a greater emphasis on preventive medicine than is currently practiced in the U.S. Ped 1 adds that “too much pressure is placed on the healthcare system” to enable health in this country.

### **Limitations**

This qualitative study is not generalizable.

### **Discussion**

Doctors included in this study believed that people in the U.S. could live longer, healthier lives and reduce their need for health care with more robust institutions of social support and better environmental protection. Physicians are aware of the poor population health outcomes in the U.S., and concerned that our current approach to health is misdirected. Although doctors’ estimates of life expectancy in the U.S. (relative to other countries) varied, all physicians believed that the U.S. could achieve better results. According to the OECD, U.S. life expectancy at birth averaged 78.6 years in 2017; populations in 27 developed countries had longer expectancies at birth<sup>12</sup>. The Central Intelligence Agency reports that 42 countries, including nations with lower per-capita gross domestic products, have longer life expectancies than the U.S.<sup>13</sup>.

Economic status is a primary determinant of health in the U.S. Economic inequality, along with a lack of social support, reduces access to fundamental basic needs. Disturbingly, health is stratified along an economic gradient: health decreases as wealth decreases<sup>14</sup>. Wealth is the portal to an array of factors that contribute to health: housing, a clean environment, healthy food, safety, education and employment. It also allows for spare time for leisure, exercise, socializing, and the pursuit of health improvement<sup>15</sup>. Health reporter T.R. Reid found that, “the variation of health due to wealth or the lack of it is less pronounced in nations that give everybody cheap or free access to medical care”<sup>10(p193)</sup> – these countries also cast wide nets of social support. Most public health experts affirm that “health deteriorates lower down the social scale and is worse for more people in more unequal societies”<sup>14(p242)</sup>, while others “challenge the premise that relative economic inequality exerts an independent effect apart from its association with absolute levels of material deprivation”<sup>15(p165)</sup>.

Social factors such as socioeconomic status, race, and geopolitics determine the level of access people worldwide have to a healthy natural environment, but any such access is threatened by climate change. Resulting natural disasters threaten agriculture, industry, and entire human habitats<sup>16</sup>. The destruction of animal habitat leads to increased contact among species, and can lead to spillover events such as the spread of SARS-CoV-2 from bats to humans<sup>17</sup>. Environmental destruction is the proximal cause of the current COVID-19 pandemic. Much of human industry depends upon current environmental conditions; as they change, we are likely to see increased rates of poverty. If we value human health, we must value the natural environment.

Human health is facilitated by a healthy natural environment and a complementary built environment. Behavior is a response to the proximal environment. Americans are not to blame for their sedentary lifestyles or fatty diets<sup>10</sup>. Like other people; they adapt to their surroundings. People in New York City mostly need to use the subway to get to work. Those in Los Angeles commute in cars. Whereas doctors in previous studies believed in their ability to change patients' behavior, doctors in this study are cognizant of their limited ability to influence, let alone change, the behavior of patients who face economic or geographic constraints<sup>6</sup>. The natural and social environment are critical to healthy human development. Healthy fetal development is dependent upon a mother's minimal exposure to toxins. Toxic exposure to chemicals, as well as stress, increase an infant's risk of developmental disorder or future chronic disease, and a mother's risk of mortality during pregnancy<sup>18</sup>.

Social bias and discrimination result in inequitable access to healthy environments to live, grow, work, and age. In the U.S., African Americans, Native Americans, and other racial/ethnic minorities have poor population health in comparison to Whites. The high levels of stress that people of color experience are manifested by disproportionate rates of chronic disease, maternal mortality, and low life expectancy<sup>19</sup>. Minorities experience excess stress due to overt discrimination and racism, institutional racism, and structural violence. The American Public Health Association reports an estimated 54,754 years of life lost to structurally violent law enforcement in 2016; at least 50% of years lost to unjust law enforcement were among communities of color, who account for under 40% of the population<sup>20</sup>. Minorities are also more likely to have low economic status and to live in polluted areas, and less likely to have access to fresh fruit and vegetables<sup>21</sup>. Early data suggest that people of color have had more difficulty receiving COVID-19 tests and are experiencing disproportionately high rates of infection and mortality<sup>22</sup>.

Mental health is an essential facet of overall health that is often neglected in society and healthcare. A sense of community and positive human interaction, and safety are determinants of mental health. As social beings, people need to feel a sense of community and to have positive social interaction. Conversely, high stress and poor mental health are risk factors for maternal mortality, chronic disease, suicide ideation, alcohol and substance use disorder. Life expectancy in the U.S. has been on a downward trend from at least 2014-17 due to the increased prevalence of "deaths of despair" (i.e. resultant from drugs, alcohol, or suicide)<sup>23</sup>. A base level of mental health is necessary for individuals to find value in maintaining physical health—i.e., to keep living.

As long as economic inequality prevails and poor social conditions continue to undermine health of the socially disadvantaged, the U.S. will see high rates of chronic disease and mortality<sup>15</sup>. As Bezruchka puts it, "medical care"—which the U.S. spends more on than the rest of the world combined—"is about diagnosing and treating illness and injury"<sup>24</sup>. While such diagnostics and treatments may benefit health, access to basic needs and a healthful environment are more fundamental to individual health. Equitable distribution of such resources is critical to improve U.S. population health.

## **Conclusion**

This research, which began prior to the COVID-19 pandemic, sought physicians' perspectives on the determinants of health. As the epidemic and consequent lockdowns continue, it is clear more than ever that Americans depend on the clinical perspective of doctors. As physicians are respected and trusted authorities of health, larger scale research is an important next step to inform health and social policy.

The front-line physicians in primary care, obstetrics, and emergency care interviewed in this study believe that social determinants of health are significant factors of health outcomes for the population and the individual. They believe that wealth is a primary access point to basic parameters of health: shelter, healthful food, and a healthy natural environment. They believe that medical systems in the U.S. do not emphasize preventive care or mental health care services sufficiently. Nonetheless, it is widely agreed that merely expanding health care services would do little, in and of itself, to improve population health. We must also increase access to the basic needs cited throughout this paper. Indeed, the doctors surveyed believe that an expansion of social services would actually lessen the burden on medical systems and improve Americans' population health.

As a next step, we recommend that this research be done on a state-by-state basis using mixed methods. Physician insights could be used to guide the objectives of Healthy People 2030 and future 10-year plans of the Office of Disease Prevention and Health Promotion (ODPHP). We recommend that future research add a quantitative component for synthesis of physician viewpoints that may be generalizable. The qualitative component will add to quantitative data; together the two can be very effective tools to influence key stakeholders. Healthy People endeavors to include all stakeholder voices to formulate its 10-year objectives<sup>9</sup>; future research could bring the physician perspective to the ODPHP's attention.

COVID-19 shines a harsh light on the magnitude of the impact of SDOH. Evidence indicates higher infection and death rates in low-income and minority populations. Poor people have higher rates of disease and lower life expectancy, and, while the research is obviously in a formative stage, COVID-19 appears to be no different<sup>25</sup>. The apparently lopsided COVID-19 infection and mortality rates among minorities, as with other health inequities, are attributed to disparate social, economic, and environmental conditions. Notably, COVID-19 mortality rates are closely linked to preexisting conditions. Higher mortality among minority populations point to the critical need for expanded access to primary care to treat underserved communities, as well as to improve work conditions<sup>26</sup>. Minorities have also experienced greater obstacles receiving medical attention or testing for suspected SARS-CoV2 infection<sup>22</sup>. The current pandemic shows the sorry truth that the current system has failed to serve the health of the population. At this juncture, the perspective of physicians bears particular weight, and it is imperative that we listen so that we may seize the opportunity to delink health outcomes from the wealth gradient. A first step might be to decrease wealth inequality.

Physicians interviewed in this study believed that the SDOH foster or inhibit positive health outcomes, and that healthcare and personal behavior are both secondary determinants of health. Several themes emerged including the dependence of personal behavior upon wealth, the environment, and social identity. Physicians held that poor U.S. health outcomes (such as chronic disease and high mortality), relative to prevalence in most industrialized countries, are attributable in large part to this country's

lack of social support resources and insufficient access to primary healthcare. The physician perspective on health determinants is greatly needed to further inform health improvement plans nationwide. States that take these perspectives into account will be better equipped to meet the Healthy People objectives which center equitable access to healthful social and physical environments for population health improvement. We recommend a larger scale investigation of physicians' perspectives using mixed methods.

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