Accounting for Social Determinants of Health in Clinical Care

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Abstract

Accounting for Social Determinants of Health in Clinical Care

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Little is known regarding effective interventions taken by Primary Care Providers (PCP) to address Social Determinants of Health (SDOH) and the "nonmedical" health related social needs of their patients. Healthcare Payors almost exclusively determine how SDOH are addressed in health care. Perspectives and input from patients most impacted by SDOH have been largely absent from current efforts to address SDOH in medicine. Because structural racism is a principal driver of SDOH, it's critical that healthcare policy research attempt to control for its overreaching influence. Consequently, this preliminary community-based research offers a people-centered vs systems centered inquiry into how social determinants of health could best be addressed in patient visits with their PCP.

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Introduction

Purpose

There is a deficit of knowledge regarding practical actions the healthcare sector can take to effectively address and reduce SDOH among patients (Fichtenberg, National Academies, 2018). Previous research indicates that there is a need to "better understand the factors that facilitate or hinder implementation of effective, sustainable SD[O]H processes" in clinical settings (Grub, 2021). Perspectives and input from patients most impacted by SDOH have been largely absent from current efforts to address SDOH in medicine. This paper aims to a.) examine current practices designed to address SDOH in medicine, b.) explore perceptions of healthcare consumers and providers regarding SDOH in clinical care c.) offer an analysis of opportunities and d.) suggest areas for further research exploration while using a racial justice lens, because SDOH in the United States are frequently driven by structural racism.

[Note: "Non-medical health related social needs" are considered the clinical presentation of SDOH among patients throughout this paper.]

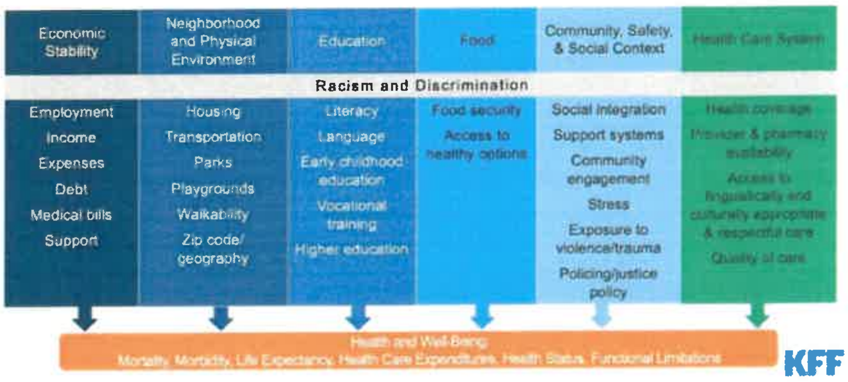
Social Determinants of Health in Health Care

Social Determinants of Health (SDOH) are the conditions of the environment that are formed by past or present-day policies and impact the health of populations and individuals. These factors, often referred to as "upstream causes" that influence health outcomes include economic stability, physical environment or neighborhood, access to educational investments, food access and access to quality health care. (Kaiser Family Foundation, 2022). In America, race (as well as other social classifications) has been used to divide access to these health-related social resources. Structural racism is the term used to encompass policies and procedures that drive racial disparities (Bravemen, 2022). Science also recognizes that exposure to interpersonal racism and discrimination also impacts one's health (Colin, 2018; Gee 2007; Chae 2014; Lewis, 2006). In recent years, it has been recognized that 70-90% of one's health is determined not by access to health care or by genetics, but by social factors that influence their health (Public Health Institute of Western MA, 2022).

When discussing social determinants of health and "non-medical" health-related social needs, it's important to recognize that we are discussing exposure to structural and interpersonal racism and its effects. At a forum held by the Academies of Science, Engineering, and Medicine in 2019, Dr. Chokshi, a primary care doctor, public health official and professor at NYU, explains: "Accepting that social determinants are the root causes of many health issues is the first step in a trajectory toward social justice. This requires taking on such structural inequities as racial discrimination, mass incarceration, and poverty" (Chokshi, National Academies, 2019). There is an important distinction to be made: racism is not only a SDOH, but also an active agent that catalyzes policies and procedures that create SDOH and resulting disparate health outcomes. This distinction informs how SDOH and non-medical health related social needs could be addressed in medicine. Racism is a dynamic force that permeates the entirety of society (Brooks, 2022), including research. Therefore, research should also be considered limited by

Figure 1

Health Disparities are Driven by Social and Economic Inequities



racism. Community-rooted research allows for an examination outside of the boundaries established to maintain status quo (Brown, 2019).

Social Determinants of Health have increasingly gained attention as a.) public and private payors aim to reduce health care costs, b.) community groups and public health leaders seek to address root causes of disease and c.) providers consider how to serve patients most impacted by SDOH. Nonetheless, effectively accounting for SDOH in clinical medicine and reimbursement practices remains irresolute with collection and utilization of SDOH data in clinical settings continues to vary across the country (Heidari, 2022). Incorporating SDOH in clinic settings can help provide personalized, targeted care, referrals and inform treatment plans by addressing some of the root causes of disease. Presumably, this practice would improve health outcomes while simultaneously increasing the cost effectiveness of health care spending. (National Academies, 2018).

The move to address SDOH in the clinical setting is occurring alongside the growing use of technology to gather and integrate healthcare data. Large amounts of healthcare data associated with "non-medical" social health needs are being collected every day. Some private payors are reimbursing providers for data collection, (Groves, 2013) while many Medicaid and Medicare programs require extensive data collection of their participants (Steinwachs, 2017; Stepanikova, 2004;).

Providers often have a financial incentive to collect data and thus benefit from the practice. Yet the question remains: are patients benefitting? Patient and privacy advocates are examining how the data collected are protected, the purpose of data dissemination, and the associated benefit (and risk) to the patient. In light of the current political and judicial climate, this concern has increasing significance as it relates to reproductive medical decisions. Concern also stems from the fact that racism pervades the collection and use of data. If gathering data is a central component of current efforts to address SDOH in clinical setting, how can those efforts be attentive to the presence and function of racism in the approaches being used? In order for patients to benefit, additional questions should be considered: Do providers have what the need to respond to the information they gather about SDOH? Do patients feel comfortable enough to disclose? And what are the current trends associated with payment models and data collection? Without satisfactory answers to these questions, the collection of SDOH data in the clinical setting will fail as a tool for promoting health and wellbeing and serve only as another method of data extraction from patients.

Analysis of Literature

Current Trends Related to SDOH in Payment Models

Healthcare payors are being called to examine their practices to be responsive to the heightened attention focusing on SDOH. As a result, both public and commercial payors have introduced creative programs that incentivize providers to address SDOH, and thereby reduce health care costs. (Tao, 2016). Payors have been influential in determining how SDOH are addressed in clinical medicine, incorporating SDOH as a factor informing risk-sharing agreements between providers and Payors through value-based programs such as risk adjusting and pay-for-performance models (Roberts, 2018; Tao, 2016; Friedberg, 2010).

Risk Adjustments Risk or "rate" adjustments are a practice of attempting to mitigate the imbalanced financial responsibility providers take on when caring for medically complex patients who tend to be highly impacted by SDOH (Roberts, 2018). It is a formula that is used to determine exposure to SDOH to determine the "risk" of a patient being costly. When applied, the rate-adjustment may pay a provider at a higher rate based upon how "risky" the model determines their patients. This higher premium is intended to account for the additional time and resource these patients require. Rate-adjusting still proves inadequate to cover costs associated with the care of medically complex patients and those with numerous co-morbidities (Tao, 2016), as there is variability in the cost of addressing specific social needs in different patient populations, and a standard formula used across populations may not account for true costs of care (Owen, National Academies, 2019).

Pay-for-performance programs increase the rate providers are reimbursed based upon their patient's health outcomes. The practice may incentivize addressing SDOH to address root-causes of illness, but does not provide the resources, direction, evaluation, or longitudinal analyses necessary for such interventions (Roberts, 2018). While intended to improve "quality," pay-for-performance programs may be contributing to health disparities without improving health outcomes, as intended (Roberts, 2018), by for example, refusing to pay to address the true needs of patients, such as secure housing, and instead simply providing a financial incentive to systems that reduce patient visits among chronic users (who may or may not need the medical attention). Practices that serve patients most burdened by social determinants of health, may continue to be disincentivized to treat these patients due to inadequate or unrealistic evaluation measures (Sandhu, 2021; Hood, 2007).

1115 Waiver The Washington State Health Care Authority, the state's largest healthcare payor, has committed to addressing SDOH (Washington State Health Care Authority, 2022). Through the Medicaid Transformation Grants passed as part of the Affordable Care Act, Washington's 1115 Waiver seeks to incentivize projects that support interventions that address SDOH. Across the country, states have taken different approaches to this work, all with the goal of improving patient health outcomes and finding ways in which to incentivize and fairly compensate systems that are addressing social factors in their clinical practices. In setting standards for Washington's Medicaid transformation through the 1115 Waiver, the Health Care Authority is working to address SDOH and hold healthcare systems to a standard of care in order to compensate interventions that address SDOH. In the Health Care Authority's 2022 draft application for the 1115 renewal, they are considering how to use SDOH data to inform population-level health interventions, build infrastructure for collaboration between healthcare providers and social service providers, as well as provide resources to meet unmet health related social needs. (Health Care Authority, May 2022).

Clinical Settings Evidence supports shifting the attention of the healthcare industry to incorporate SDOH into clinical services. The American College of Physicians and the National Academies of Medicine recommend systematically collecting and documenting SDOH data from patients (Grub, 2021). EPIC, the electronic health records (EHR) system widely utilized by local health systems, has responded to the call by developing a mechanism within their latest EHR system where providers can capture information related to patients "non-medical" health related social need in a standardized manner (Monica, 2017). While this trend is gaining momentum and popularity, there is still uncertainty around how to go beyond documenting SDOHs to addressing these determinants in healthcare. Currently, hospital systems can generate profit from the data collected, through reimbursement and the sale of not only de-identified but also data with direct patient identifiers (Mandl, 2021; Washington Healthcare Compare, 2022). This raises the question, is the driver for this data collection innovation in patient care, or the market and the potential for (expedited) increased profits?

Big Data SDOH data is currently being collected, banked and sold (Wetsman, 2021). Washington is one of the few states that has an all-payors database, where medical data from all of the insurance companies on the state exchange report their healthcare data to a central bank (Health Care Compare, 2022). SDOH are currently being held (albeit not uniformly collected) in this location. Nationally, SDOH data are also collected by the Center for Medicare and Medicaid Services through the "Health-Related Social Needs Screening Tool." SDOH also are being collected and held by the U.S. Department of Health & Human Services in the Social Vulnerability Index, through the Centers for Disease Control & the Agency for Toxic Substances and Disease Registry, which highlights communities that face a determined formula of quantifiable SDOH. These data are also being collected and held by non-profit hospital systems as well as private corporations. Hospital systems such as Providence and insurance companies such as Aetna and Humana are capturing the data of their patients around the country in single locations (Salmon, 2021). Large healthcare databanks assist with population health surveillance, inform medical and pharmaceutical research, and shape consumer marketing (Wetsman, 2021).

There's an obvious financial incentive for providers to document SDOH that their patients present with. Importantly, there is little to be found in the literature regarding patient perceptions of disclosing SDOH-related information to providers, the handling of these data, or efficacy of treatments/interventions once in the hands of healthcare providers institutions and systems.

Tensions In Current Practices

When looking to solve for social determinants of health and the "non-medical" health related social needs of patients (i.e. solve for racism and promote social/health justice) in the clinical setting, explicit attention and care should be given to ensure that structural and interpersonal racism are not part of the process. "There is nothing neutral about data and nothing passive about surveillance" (Lo, 2022). Data-driven predictive and sorting practices rarely work in favor of marginalized communities who are most impacted by SDOH. And data surveillance that claims to be in the best interests of community members most impacted by SDOH is nothing new. Analysis of datasets that highlight threats and indicate risks, while perhaps well-intended, often cause harm to already marginalized communities and may even exacerbate health inequities (Lo, 2022). Racism as a driver of SDOH is not currently being accounted for in processes or systems. Data collection methodologies as they exist today, also have been found to have racist practices and procedures. (Gavin, 2021; Owens, 2021;) In fields outside of health, there are examples that attempt to control for racism by removing practices from existing institutions and developing new systems and methods for operating. These new systems and methods have a high level of intentionality around anti-racism. (University of Minnesota, 2021)

Much of the private sale of health and medical data is for the new field of "precision health" and clinical AI (artificial intelligence). These use predictive algorithms with the aim of directing patient care (Gavin, Labblog). Truveta, which is partially owned by Providence Medical systems, claims to bank health care data from their hospital system around the country with the goal of developing predictive algorithms. However, algorithms come with risks and are responsible for the deaths of patients, specifically people of color, as a result of built-in racial discrimination (Christensen). Moreover, there is common agreement that currently, most large datasets are insufficient concerning SDOH (Ng, 2017).

As insurance companies collect data on their subscribers and store it in large data banks, there concerns with privacy have risen. In recent years, there have been giant mergers between insurers and retail giants. For example, Aetna merged with CVS, and Humana merged with Walmart (Salmon, 2021). There is concern that sensitive healthcare information is being freely disseminated without patients having knowingly consented to research or the selling of their data (Wetsman, 2021; National Research Council, 1997). Furthermore, there is always the risk that the data might be hacked, leaked, or re-identified (Wetsman, 2021). Such events could have devastating consequences for people reporting "non-medical" health-related social needs to their providers.

While collection of sensitive medical information should be for the benefit of patients, many health care providers screen for SDOH and unmet needs but lack the process and follow-through to address them (Lindau, National Archives). Interventions typically consist of a referral to a social service organization. When a Provider offers a referral for a patient to a community-based organization (CBO), they are not addressing unmet health needs, just as telling someone where to catch a bus does not get them to their desired location. Under most current practices, systems are struggling to develop effective value-based models, and providers and hospital systems are receiving higher reimbursement rates for essentially telling people where to catch a bus.

Social service CBOs do not operate with profit margins, prestige, or employee pay comparable to those of hospital systems. Yet, CBOs seek solutions to people's health care needs without the same concern related to profits or returns on investments. Healthcare systems appear ill-equipped to address these same needs but are capable of documenting them. This dynamic is known as the "wrong-pocket" problem: where one organization makes the investments but another benefits from those investments (McCullough, 2019).

Return on investments (ROI) is a profitability measure that is often used to determine how worthy an investment is. Payors want to see a that the services they cover reduce or in some cases delay future healthcare expenditures. In the U.S. healthcare system, a sustainable healthcare model that addresses "non-medical" health interventions must address ROI. Dr. John Auerbach, current Director of Intergovernmental and Strategic Affairs at the CDC, has pointed out that most medical services are approved for reimbursement without ROI analyses. In contrast, non-medical health related social needs have to meet high ROI standards (Auerbach, National Academies). This has been a contentious point for proponents of substantial investments into addressing SDOH in clinical encounters.

Payors do not yet see the value and cost effectiveness of providing non-medical health interventions and services (Chin, 2016). The Centers for Medicare and Medicaid Services

(CMS) is "testing to see if systematically finding and dealing with the health-related social needs of Medicare and Medicaid beneficiaries has any effect on their total health care costs" and improve health outcomes (United States Department of Human Services, 2018). There is evidence that shows that dealing with unmet health related social needs can help improve health outcomes and reduce health care related costs (Chin, 2016). Yet, how CMS intends to "deal with" unmet health related social needs is not clearly defined.

Additional tension points include:

- Providers lack training in how to hold sensitive conversations with patients about these sensitive topics.
- Providers lack resources to address SDOH and the unmet social needs of their patients (time, funding, staffing, etc.)
- Providers lack the tools to track or evaluate interventions in their patients' lives.
- Inability of providers to identify nonmedical social health needs and SDOH.
- Lack of payment for advocacy work that directly addresses policies that uphold SDOH
- Societal stigma related to "non-medical" health related social needs, and SDOH also create barriers in Provider/Patient encounters
- Research regarding data collection methods of a SDOH and "non-medical" health needs in clinical visits are limited to the evaluation of intake tools.

Existing literature shows that patients most impacted by SDOH are often the same patients that cite poor communication with their providers and lack of trust in their medical providers (Greenwood, 2020; Anderson, 2020; Sun 2022). Data also show that having racially concordant providers improves communication, enhances trust, and improves health outcomes (Anderson, 2020, Greenwood, 2020, Sun 2022). Additional research is needed to provide an analysis of current practice and opportunities associated with addressing SDOH in clinical care.

Exploratory & Preliminary Health Consumer and Provider Surveying

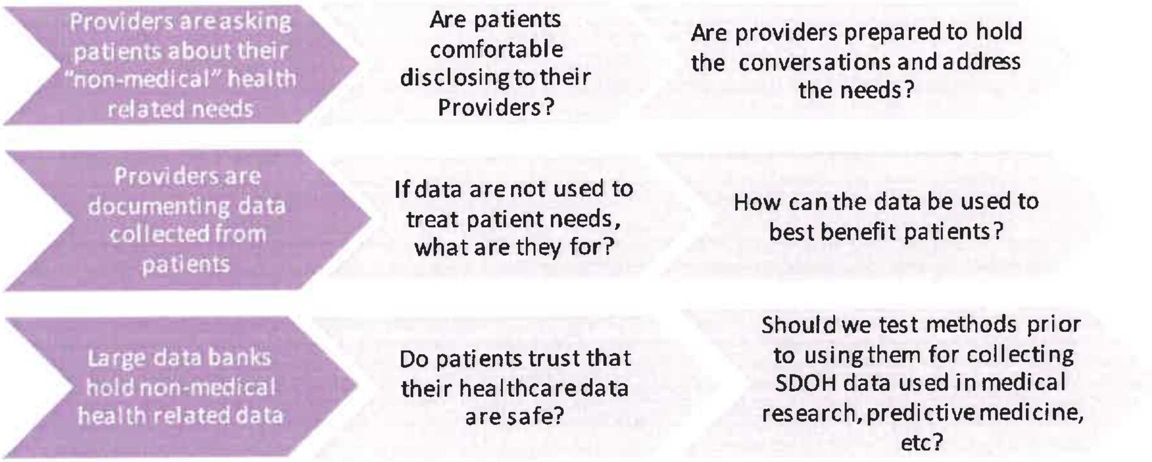


Figure #2 *Pathway of Inquiry*

Research Question

Given the void of research regarding the clinical applicability of SDOH data (how clinicians use the data for patient benefit), two pilot exploratory surveys began to examine perceptions of healthcare consumers and Primary Care Providers while analyzing the role of racism and lived experience. The Tubman Center for Health & Freedom hosted two informal community surveys to collect preliminary data on the topic of sharing SDOH/"non-medical" health needs with their primary care providers. The survey is piloting questions for a formal research study in the future. The Tubman Center for Health and Freedom (TCHF) is building a community Health Center to meet the needs of marginalized people in the Puget Sound region. The organization is seeking to better understand how to address patient's social determinants of health both in and out of clinical settings. TCHF was a natural partner to pilot these surveys.

Methodology of Health Care Consumer Survey

The health care consumer survey *"Trusted Talk,"* was offered to all community members over the age of 18. The survey was intended to reach recipients of healthcare. Data collection occurred as part of Tubman Health's summer outreach efforts, which included canvassing and tabling at community events in well attended public spaces over the course of two Saturdays in August, 2022. Outreach workers were equipped with iPads and asked passersby if they would be willing to take a short community survey. Some people opted to scan a QR code on their phones and take the survey in the future. This outreach strategy offered a convenience sampling of community members across the Puget Sound region over the age of 18. There were 60 unique respondents that completed the survey and these data were used in data analysis (N=60).

Demographics of Healthcare Consumer Survey Respondents

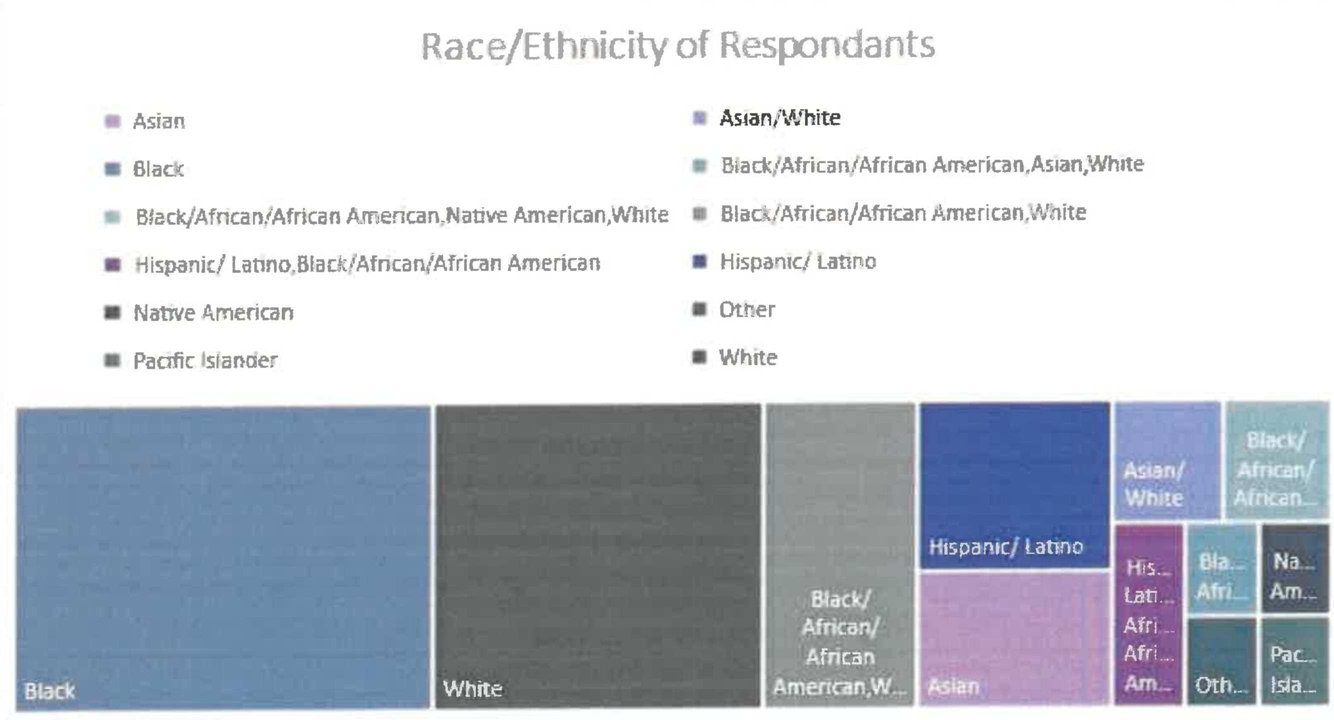


Figure #3 *Self-reported racial diversity of healthcare consumer respondents*

age	n
25-31	9
32-39	8
40-47	14
48-54	6
55-61	5
62-69	7
70+	7

Figure #4 *Age spread of healthcare consumer respondents*

All respondents were able to self-identify their ethnicity/race. All that identified as something other than "White" were categorized and grouped as "People of Color" (POC). The POC group was then examined, and those who identified as "Black" exclusively or alongside other races/ethnicities were subgrouped and categorized as "Black or Multi-raced Black."

When asked, 48 of the 60 survey respondents reported having a Primary Care Provider. All respondents that identified as White reported having a Primary Care Provider.

Health Care Consumer Findings

There were five questions which included some demographic questions on the "Trusted Talk" healthcare consumers survey. The survey was meant to gauge what people felt comfortable sharing with their primary care providers. Data was disaggregated by race/ethnicity and age, which acted as a proxy for exposure to racism. Due to the rampant nature of anti-Black racism explicitly, of those who were identified as People of Color, data was disaggregated again, to look specifically those who self-identified as Black or Multiple races that included Black.

Respondents were asked about eight hypothetical scenarios.

1.) Struggling to afford or maintain housing	2.) can't afford healthy foods	3.) live in an environment that feels unhealthy	4.) exposure to trauma growing up
5.) involved with the criminal justice system	6.) dealing with employment discrimination	7.) the stress of racism	8.) don't have money for transportation

Figure #5 *Survey Questions*

Generally, people reported that they did not feel comfortable unreservedly sharing their non-medical health related social needs with their PCP's offices/clinics.

Communicating "Non-medical" Health Needs Participants were asked "In a typical visit with your doctor, IF you had any of the experiences [above], would you share it with your primary care provider's (i.e. doctor's) office?" They were given the option to choose "Yes," "No," "Only if I felt really comfortable," and "Only if asked directly."

Among all survey respondents (N=60), people were far less likely to share with their providers: employment discrimination, involvement with the criminal justice system and struggling to afford or maintain housing. This was particularly the case for respondents that identified as Black, or Multi-race Black. 48% of Black, Multi-race Black reported that they would not share information about involvement with the criminal justice system with their provider; this is compared to 20% of White respondents. Meanwhile, most respondents said that they would share information regarding their difficulty securing housing with a Primary Care Provider "only if I was really comfortable," and 39% of Black/Multi-race Black reported that they would not tell their Primary Care Provider that they were having difficulty affording or maintaining housing compared to only 13% of White respondents.

Respondents were more comfortable disclosing that they lived in an environment that felt unsafe to their Primary Care Provider. This was reflected similarly among People of Color (35%) and White people (33%).

Data Use Most survey respondents reported being concerned that sensitive non-medical health related social needs information would be used against them somehow. There was difference of perspective between People of Color and White respondents.

- 60% of White respondents *did not* report concern, while 56% of People of Color *did* report feeling concern.

Might you be concerned that personal information shared with your provider would somehow be used against you?

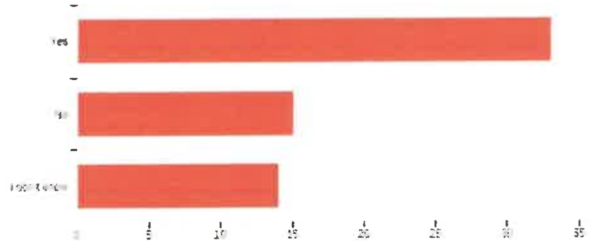


Figure #6 *Survey Findings: Concerned personal information may be used against them*

Patient/Provider Concordance When asked if people would feel "more" or "less" comfortable sharing personal information with a Primary Care Provider that has a shared identity background or life experience as them, there was overwhelming support for Primary Care Providers with a shared identity among People of Color (96%) and Black/Multi-raced Black respondents (97%) compared to 47% of White respondents. White respondents were much more likely to report neutrality regarding a Providers background (53% compared to <5%). No one reported feeling less comfortable with a provider who shared an identity, background, or life experience with them.

Discussion of Health Care Consumer Survey

Though the convenience sample size is small (N=60), the data in this preliminary healthcare consumer survey suggests several barriers to addressing SDOHs in clinical care and inspires questions around efficacy and applicability of addressing unmet health related needs in clinical environments.

People of Color more frequently expressed apprehension around sharing information regarding "non-medical" health related needs compared to White respondents. This is likely in part due to the long history and the present-day existence of medical racism imposed upon many of these communities. Similarly, it could suggest why the survey revealed a strong preference for having PCP that share identity/life experience among respondents that are People of Color, compared to White respondents. Previous research indicates that Black patients believe they experience better patient care when they have Black providers (Hoffman, 2016). Furthermore, health outcomes are improved, when cared for by Black doctors (Greenwood, 2020; Anderson 2020). The science clearly indicates that racism interferes with clinical care.

Further research should examine how the race and economic background of providers who work with patients who are burdened by SDOH influence communication, assumptions, behaviors and medical treatment of patients who experience "non-medical" health related social needs.

Additional opportunities for further research include studying communication with patients around how their healthcare data are used and the implications concerning disclosure. There should also be an inquiry into patients' perceptions regarding their Provider's ability to help address "non-medical" health related social needs.

There were numerous limitations to this preliminary pilot survey and analysis, most obviously, the size of the sample populations. Additionally, the analysis offered in this paper did not account for differences among age groups. Different generations may have distinctive ideas around disclosing, collecting, and use of their healthcare data. Furthermore, race was used as a proxy for exposure to racism, but race should not be confused with phenotype, which was not taken into account. Some people do not necessarily look like the race they identify with and may experience more or less discrimination based upon this factor. Moreover, factors such as colorism and proximity to Whiteness might impact ones' exposure to racism.

The questions used in this study will be further developed and used in a rigorous research study that further investigates the issue. Due to the racism that permeates the field of medicine and research (Brown, 2019), it will be critical that future research be grounded in and led by communities most impacted by SDOH.

Methodology for the Primary Care Provider Survey

The Primary Care Provider (PCP) survey was circulated online for one week prior to the very preliminary analysis offered in this paper. The Tubman Center for Health & Freedom sent the survey via email to PCP and asked that providers help circulate it among their networks. This convenience sample yielded 17 Primary Care Provider respondents.

Preliminary Primary Care Providers Survey Findings

Currently, there is an active survey for Primary Care Providers to share their experiences with SDOH. At the time of this analysis, the convenance sample had 17 respondents with a range of years of experience, licensing, racial identities and grew up under different economic circumstances. A larger sample size will be used in a more thorough analysis of the data.

Demographics of Primary Care Provider Survey

Licensing 12 White Providers; 8 POC Providers 3 Grew up low-income

- 10 MD
- 6 ND
- 1 PA
- 0 ARNP
- 0 DO

Identifying and Defining SDOH Out of the 17 respondents 9 were able to provide an accurate definition of SDOH. When asked to identify SDOH that they would document

- 9 of the 17 respondents misidentified patient behavior "smoking a pack a day" as a SDOH
- 4 of the 17 misidentified patient behavior of "losing 50 lbs from regular swimming" as a SDOH
- 2 PCP did not believe "being the only Black person at work" was a SDOH that they would document

Overall, PCP believe they are moderately well trained in how to hold sensitive conversations with their patients regarding SDOH. Generally, PCPs believe they received the most training on how to talk to patients about their employment status/types of work, followed by patient's housing. Respondents believe they were least trained to hold sensitive conversations with patients regarding "impact of racial discrimination" but much more prepared to hold conversation regarding the "impact of homophobia."

When asked if PCP believed they and their colleagues "have access to resources that would allow them to address SDOH [their] patients disclose in their treatment plans," 12 of the 17 believed that they do have access to resources to address their patients SDOH. 16 of the 17 indicated that they believe it is part of their clinical responsibility to respond to their patient's SDOH, while 1 participant was unsure.

Finally, the survey asked which tools PCP are most likely to use/rely upon from their toolbox: 1.) insights from your professional training 2.) resources from community groups you are in relationship with 3.) hospital or social work services 4.) insights from personal lived experience.

If a patient came in with all of the concerns listed above, what tools are you MOST LIKELY to use/rely upon from your toolbox?

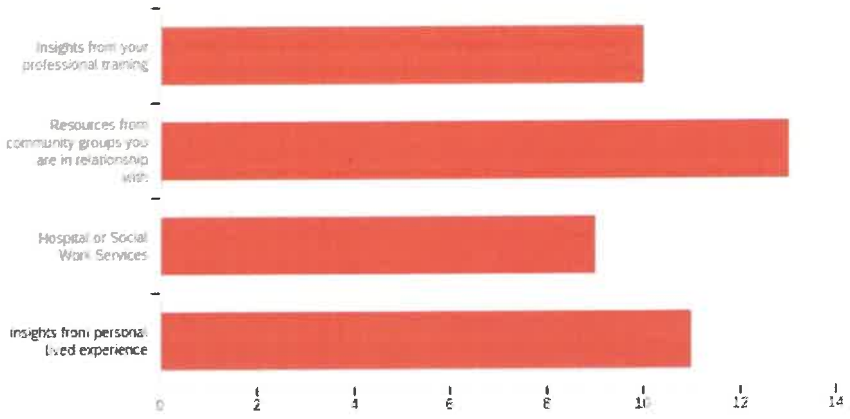


Figure #7 *Survey Finding Re: Tools*

- The most indicated answer was "resources from community groups that you are in relationship with." This was followed by "insights from personal lived experience."
- The least indicated response was "Hospital or Social Work Services."

Survey responses will continue to be collected until a small (more) representative convenience sample is reached, at which point the data will be disaggregated by race and licensure. The questions used in this study will be further developed and used in a rigorous research study that further investigates the issue.

Discussion of Health Care Provider Discussion

Our sample population is quite small and does not reflect the racial make-up or licensure of the primary care workforce. However, the preliminary data offer intriguing themes to continue to explore.

- Providers may believe that they have adequate resources (and training) to address their patient's SDOH needs; however, overwhelming public health data shows otherwise.
- Providers may have the language to explain SDOH, but do they have the ability to offer tangible interventions that address the "non-medical" health related social needs of their patients?
- Providers are relying upon their personal relationships and lived experience to inform the care they are offering to patients with SDOH. Yet, most primary care providers do not have a lived experience of managing "non-medical" health related social needs and SDOH.
- Do PCP who have a lived experience of being affected by SDOH have more success addressing/treating SDOH among their patients?
- Without the means to track the clinical interventions that PCP are suggesting to their patients, there may be a false belief among Providers that they have the necessary resources to address SDOH in their patient populations.

Conclusion

Addressing SDOH in clinical care should not be left to the determination of healthcare Payors. Health care consumers and patients most impacted should be determining how SDOH are incorporated into clinical care (de Freitas, 2015).

Data collection should not be occurring for the sake of collecting data, without a tangible intervention the provider can offer (beyond a referral). The "Principle of Beneficence" in health care, where a provider must always act in the patients' best interest to bring about a positive outcome (Verkey, 2021), must extend to the collection of patient SDOH information.

Public health data is useless if not used to drive population-level change. Therefore, healthcare spending investments should target policy-level change with investments into community groups that have advocating to address SDOH for years. This might include groups that support *public investments* such as safe, affordable housing and public transportation or work to address *policies* such as "ban the box" or ending the incarceration of children. Simultaneously, Payors should prioritize investments to cover the true costs of tangible investments for "non-medical" health-related social services. This might include providing free, safe housing until a patient and their family can get back on their feet or paying court fees for a patient who is unable to otherwise and threatened with removal from their family.

Solutions to addressing SDOH and nonmedical health needs currently exist outside of health systems. CBOs that have been working for decades to provide these services should not be overlooked or counter-invested in by Payors or healthcare systems. CBOs should be receiving healthcare and public health revenue for the services and advocacy they provide. Opportunities like those being considered in Washington state, where service and healthcare providers can join shared networks for care collaboration, present a promising opportunity. Any ROI related to addressing SDOH in a patient population should reinvested into the model, thereby increasing services to patients.

Accounting for systemic racism in research related to SDOH is essential. Research led by researchers and community groups who are among communities most impacted by SDOH offers a methodology that will likely examine refreshing queries, yield more accurate community data, and challenge the status quo of structural racism in healthcare policy and research.

Further research is necessary to determine how patients can best have their "non-medical" health related social needs addressed in a doctors visit with their Primary Care Provider.

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APPENDIX

I. Additional Resources

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II. "Trusted Talk" Healthcare Consumer Survey

III. "Application of SDOH in Clinical Settings" Primary Care Provider Survey

Informed Consent

TRUSTED TALK Survey

The Tubman Center for Health & Freedom is interested in understanding **how people feel about sharing personal information with their doctors**.

This is an anonymous and confidential survey that will help inform the design of new healthcare delivery models.

The survey typicallys takes about 3 MINUTES to complete.
Your participation in this research is voluntary.
You have the right to withdraw at any point during the survey process.

By clicking the button below, you acknowledge:

- Your participation is voluntary.
- You are over 18 years of age.
- You are aware that you may choose to terminate your participation at any time for any reason.

○ I consent, begin the study

○ I do not consent, I do not wish to participate

Demographics

Age?

○ 18-24
○ 25-31
○ 32-39
○ 40-47
○ 48-54
○ 55-61
○ 62-69
○ 70+

What is your ethnicity? (check all that apply)

☐ Hispanic/ Latino
☐ Black/African/African American
☐ Native American
☐ Asian
☐ Pacific Islander
☐ Middle Eastern
☐ White

☐ ☐ Other

Do you have a primary care provider?

(A Physician, Nurse Practitioner, or Physician Assistant, that is your main point of contact for your overall health)

○ Yes
○ No
○ I'm not sure

Hypothetical

In a typical visit with your doctor, IF you had any of the experiences below, would you share it with your primary care provider's (i.e. doctor's) office?

	Yes	No	Only if I felt really comfortable	Only if I was asked directly
Struggling to afford or maintain housing.	○	○	○	○
Involved with the criminal justice system.	○	○	○	○

	Yes	No	Only if I felt really comfortable	Only if I was asked directly
Can't afford healthy foods.	○	○	○	○
Dealing with employment descrimination	○	○	○	○
Live in an environment that feels unhealthy.	○	○	○	○
The stress of racism is getting to you.	○	○	○	○
Was exposed to a lot of trauma growing up.	○	○	○	○
Don't have money for transportation.	○	○	○	○

Might you be concerned that personal information shared with your provider would somehow be used against you?

○ Yes

○ No

○ I don't know

Comfort & Concordance

Would you feel MORE or LESS comfortable discussing personal information with a Primary Care Provider that has a shared identity, background or life experience as you?

○ MORE comfortable

○ LESS comfortable

○ Neutral, wouldn't matter to me

Powered by Qualtrics

Informed Consent

Welcome to the "*Application of SDOH in Clinical Settings*" Survey

This is a community-based survey is being conducted by the Tubman Center for Health & Freedom.

We are interested in understanding the clinical applicability of social determinate of health (SDOH) in medicine. Social determinants of health play an important role in population health and our health care system is struggling with how best to identify and address these factors to improve patient outcomes. We want to learn how primary care providers feel about including questions about social determinants of health as part of routine medical histories and addressing these factors as part of clinical care.

You will be presented with TEN QUESTIONS relevant to your background and experience with SDOH as a Primary Care Provider. Your responses will be kept completely ANONYMOUS.

The survey may take you about FIVE MINUTES to complete. Your participation in this survey is voluntary an you have the right to withdraw at any point.

By clicking the button below, you acknowledge:

- You are a Primary Care Provider
- Your participation in the study is voluntary.
- You are over 18 years of age.
- You are aware that you may choose to terminate your participation at any time for any reason.

○ I consent, begin the study
○ I do not consent, I do not wish to participate

DEMOGRAPHICS

Years in Clinical Practice?

○ 1-4 years
○ 5-10 years
○ 10+ years

Licensure?

☐ MD
☐ ND
☐ DO
☐ ARNP
☐ PA

Ethnicity? (check all that apply)

☐ Hispanic/ Latino
☐ Black/African American
☐ Native American
☐ Asian
☐ Pacific Islander
☐ Middle Eastern
☐ White
☐ ________ Other

In your youth, would your family have qualified for "free or reduced lunch"?

○ Yes
○ No

○ I don't know

Defining SDOH

This is the only open ended question on this survey.

What are Social Determinates of Health?

Identifying SDOH

Please identify ALL SCENARIOS below that include a Social Determinate of Health (SDOH) that you might document.

☐ Pt just had car repossessed and has no transportation
☐ Pt just got released from jail but may have to return after court next week
☐ Pt doesn't have enough money to purchase healthy foods
☐ Pt has to move due to landlord selling house and is worried about finding housing
☐ Pt can't find affordable childcare
☐ Pt feels discriminated against at work
☐ Pt cares for aging parent

- ☐ Pt complains that it's hard to exercise now that they live in in a neighborhood without sidewalks
- ☐ Pt is a single parent
- ☐ Pt is in foster care
- ☐ Pt mentions partner was recently killed in a police shooting
- ☐ Pt reports moving here for a job, and doesn't have any friends or family locally
- ☐ Pt reports smoking a pack a day
- ☐ Pt mentions that they are the only Black person at work
- ☐ Pt is undocumented
- ☐ Pt is gender-queer/nonbinary and faces discrimination daily
- ☐ Pt is a sex-worker
- ☐ Pt is disabled and living independently on social security
- ☐ Pt was bullied on bus for wearing hijab on the way to her visit with you
- ☐ Pt lost 50 lbs from regular swimming

Preparedness

Were you and your colleagues TRAINED TO HOLD sensitive conversations with patients related to the subjects below in your medical training?

Not effectively at all
Slightly effectively
Moderately effectively
Very effectively
Extremely effectively

0 1 2 3 4 5 6

Not effectively at all | Slightly effectively | Moderately effectively | Very effectively | Extremely effectively

0 1 2 3 4 5 6

PATIENT'S HOUSING ○ ☐

FOOD INSECURITY ○ ☐

EMPLOYMENT STATUS/ TYPES OF WORK ○ ☐

INCARCERATION ○ ☐

IMPACT OF RACIAL DISCRIMINATION ○ ☐

IMPACT OF HOMOPHOBIA ○ ☐

If a patient came in with all of the concerns listed above, what tools are you MOST LIKELY to use/rely upon from your toolbox?

- ☐ Insights from your professional training
- ☐ Resources from community groups you are in relationship with
- ☐ Hospital or Social Work Services
- ☐ Insights from personal lived experience

Do you and your colleagues have ACCESS TO RESOURCES that would allow you to ADDRESS the SDOH your patients disclose to you in their TREATMENT PLANS?

You may elaborate in the text box, if you'ld like.

○ ☐ Yes

○ ☐ No

○ ☐ I don't know

Responsibility

Do you believe you have a CLINICAL RESPONSIBILITY to address the SDOH your patients present with?

○ Yes

○ No

○ I don't know