Determining the Impact of Using a Social Determinants of Health Screening Tool in Identifying Unmet Needs, Barriers to Care, and Basic Awareness of Social Resources

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Abstract

The purpose of this project was to determine if conducting a short, social determinants of health (SDOH) assessment identified one or more unmet needs, one or more barriers to care, and to assess basic awareness of social resources. Conditions affecting people where they work and live have a strong influence on health outcomes. Social complexity, meaning having one or more unmet need, is directly related to poorer health outcomes. Individuals marginalized by poor social capital, health inequities and ongoing disparities, especially those in low income populations, experience higher morbidity and mortality. These unmet needs also affect the shared-decision making process between patients and providers and make clinical interventions much less impactful. On the contrary, adequate social capital is associated with better health outcomes, especially related to chronic disease management.

Typically, there is no clinical standard of care regarding the use of an assessment tool to identify socially complex individuals. The implementation of a short, 10-minute survey in a free clinic for this project was both easy to implement and feasible to accomplish. The results of the survey demonstrated that the tool was effective at identifying unmet needs, barriers to care, and assessing for basic knowledge of community resources. Demographic data collected on the survey provided information on the potential connection between low social capital and unmet needs and barriers to care. As a result, clinical practice changes are needed to include a standard of care to assess for social complexity and develop targeted interventions to mitigate the effects of low social capital while improving collaboration between key elements of social and medical care.

*KEY WORDS*: Access to care, social determinants of health, unmet needs, social complexity, social capital
Determining the Impact of Using a Social Determinants of Health Screening Tool in a Managed Care Population to Identify Unmet Needs

Conditions affecting people where they work and live strongly influence health outcomes. In communities across the United States, there is a weak link between medical and social need identification and interdisciplinary team collaboration to address unmet non-medical needs in the population. Social determinants of health (SDOH) affect nearly every person but are especially impactful in low income and underserved communities. This can result in unmet needs which influence health care utilization trends, medical compliance, and individual health outcomes. Nationally, the Center for Disease Control and Prevention (CDC) has identified five key domains of social determinants of health: economic, education, health care, environment, and community (Office of Disease Prevention and Health Promotion, 2019). The CDC recognizes the complex interaction of social determinants of health needs on population health. It encourages the development of collaborative community partnerships to improve medical and social care coordination (Centers for Disease Control and Prevention, 2016). The task of screening and developing focused interventions to mitigate the effects of unmet SDOH needs cannot be relegated by one entity. Efforts should be dispersed throughout the health care system at all levels to be meaningful and sustainable.

Overview

Background

The movement from a fee for service model of care to the new era of health care delivery under the Affordable Care Act (ACA) has created a challenging climate requiring close scrutiny to address health care quality, escalating costs, and determinants of health. These challenges pose a significant obstacle to achieving favorable health outcomes for both individual and population
health. Clinical interventions and health care delivery account for only 10-20% of health care outcomes, while determinants of health, personal health behaviors, and genetic predisposition account for the other 80-90% (Shortell, 2013). A more recent article also supports the significant impact that SDOH needs have on clinical outcomes showing a ratio of nearly 4:1 for SDOH needs compared to clinical interventions (Adler, 2018). Health outcomes due to behaviors are subject to patient motivation and perception of need, and this perspective is critical as it affects clinical outcomes (McClintock & Bogner, 2017). The health care system in the United States lags behind other comparable countries in health care quality and access to care and ranks the highest among comparable countries for disease burden (Sawyer & McDermott, 2019). The United States also trails similar countries on social services spending to address SDOH and other non-medical needs (Jones, 2018).

Social services and medical care coordination remain isolated and under coordinated in many healthcare systems. These challenges result in unrecognized and unmet non-medical needs that impact medical care utilization trends and health care spending (Pruitt, Emechebe, Quast, Taylor & Bryant, 2018). The momentum, however, has been gaining nationally to develop policies and interventions that create a collaborative environment between public, social, and medical care through an interdisciplinary team approach designed to identify and address unmet SDOH needs through focused interventions (Hunter, Neiger & West, 2011). Due to the growing knowledge that low-income populations are especially at risk for adverse outcomes and higher health care spending, state Medicaid providers are already busy using or planning to collect SDOH data for their states’ program to improve access to care and decrease spending (Chisolm, Brook, Applegate & Kelleher, 2019). The most common topics of interest identified by Medicaid medical directors were housing and food resources (Chisolm et al., 2019).
Providers recognize that SDOH needs have a significant impact on their patient population and contribute to adverse health outcomes (Kaufman, 2016). Despite this, many physicians report they lack confidence in their ability to address unmet social needs, and that not addressing those needs resulted in their patients’ health suffering (Kaufman, 2016). Although research supports social determinants have a significant impact on health outcomes, many practitioners acknowledge there is currently no structured way to identify and address these needs (Page-Reeves et al., 2016).

The trend toward a population health focus in the United States requires health care providers, health care organizations, and systems to consider innovative ways to address non-medical factors that impact clinical outcomes, particularly unmet SDOH needs (Iovan, Lantz & Shapiro, 2018). While the impact of social determinants of health is not a new concept, using assessment tools as a part of routine health encounters is a newer practice. Utilizing screening tools that address population needs concerning social determinants of health is consistent with the transition to a population-based health care focus, and has the potential to decrease health care costs and improve population health outcomes (Theiss & Regenstein, 2017). This project explored use of an SDOH screening tool in a community clinic setting.

Problem Statement

Social complexity often affects patient health outcomes and can create barriers to competent medical self-management. Standardized protocols for assessing social determinants of health needs are underutilized in many settings. Use of a screening tool could be one intervention to address the issue. The clinical question for this project was: In adults accessing managed care programs and low income clinics, what effect does a social determinants of health screening tool
have on identifying unmet needs, identifying barriers to care, and assessing awareness of community resources?

**Purpose Statement**

The purpose of this project was to determine if using a SDOH needs assessment tool identified one or more unmet needs, one or more barriers to care (either social or health care) and awareness of basic social resources in order to identify socially complex individuals. Social complexity has been defined as having one or more unmet SDOH need on the SDOH screening tool (Katz et al., 2018, Wilson, 2019).

**Outcomes**

Three outcomes of interest were explored for this project and were measured using an SDOH screening tool:

- The SDOH assessment tool identifies one barrier to care.
- The SDOH assessment tool identifies one unmet need.
- The SDOH assessment tool identifies awareness of basic social resources.

**Operational Definitions**

**Access to care.** Mitigating barriers that affect ones’ ability to engage in primary care services access appropriate screening and preventative services for disease prevention and health promotion and optimally managing disease processes.

**Social determinants of health needs.** Are non-medical needs that include, but are not limited to, food, housing, utilities, and transportation resources, which impact ones' ability or motivation to engage health care services and health care providers.

**Unmet needs.** Needs related to food, housing, utilities, and transportation that the respondent has encountered within the last three months.
Social complexity. Refers to having one or more unmet SDOH need to be identified on the SDOH assessment questionnaire.

Social capital. Refers to having resources available in the form of physical support, mental and emotional support, financial support, and community support to mitigate stressors successfully.

Review of the Literature

Search Trail

A search trail was created to assist in searching and locating evidence for the project (see Appendix A). The literature review was conducted using the Cumulative Index of Nursing and Allied Health Literature (CINAHL), Medline, and Cochrane databases. In searching for population-specific identifiers including “high risk” and “managed care,” there were 27,998 hits with Medline and 10,590 hits for CINAHL database. Using these identifiers combined with “and” with terms “health care access” and “adults” in these two databases, there were 266 hits and 10,493, respectively. When searching the problem with keywords of “social determinants of health” and “unmet social determinants of health,” Medline produced 6,353 hits and CINAHL 10 hits. When searching for SDOH “and” unmet needs the Cochrane search produced four hits, and Medline had 1,091. For the “SDOH screening,” CINAHL produced 66, Cochrane 11,117, and Medline 117 hits. Using the “SDOH screening tool,” Medline hits were 13, Cochrane 1,118, and CINAHL 5. Using the search terms of SDOH “and” screening, Medline produced 18 and CINAHL 13 hits.

Inclusion criteria included health delivery, integrating community health and medical health, and screening in adults for social determinants of health needs. The articles were peer-reviewed, involved only adults, were in English, and conducted within the United States. Articles
were excluded if participants were an age less than 19, or the study was unrelated to the project’s question. In total, 28 articles were deemed appropriate based on the criteria for inclusion. Of those 28 articles, further review brought the final count to 17 articles for inclusion on the research matrix (see Appendix B).

**Figure 1.** 2016 Modified Evidence Pyramid SUNY Downstate Medical Center, Medical Research Library

The level of evidence pyramid gives a hierarchy that is useful to determine the highest level of evidence available to support a practice change (Forrest & McGovern, 2019). As the pyramid indicates, there is greater strength in the top levels of the pyramid (Figure 1). Of the 17 articles referenced 2 were systematic reviews, 6 were cohort studies, and 9 studies were expert opinion, reviews, or editorials.

**Problem of Unmet Needs and Access to Care**

Evidence concerning the problem of unmet SDOH needs on individual health and wellness, and population health overall, has gained attention by researchers looking to identify non-medical factors impacting health (CDC, 2016; CDC, 2017; Easterling & McDuffee, 2018;
Handmaker, 2017; Page-Reeves et al., 2016). The effects of social capital and social complexity on physical health are significant. Lack of resources, economic disadvantage, poor social networking, and distrust all have the potential to negatively impact health behaviors in the population (Hunter, Neiger & West, 2011; Katz et al., 2018; Wilson, 2019). Research supports that improved social capital is associated with better health outcomes, especially when it relates to chronic disease morbidity and mortality (Hunter et al., 2011; Katz et al., 2018; Nuruzzaman, Broadwin, Kourouma, & Olson, 2015). These studies concur that unmet SDOH needs are directly related to access to social capital and investments.

Linking medical and social resources to improve social capital is gaining momentum and showing promise. Researchers are finding that social complexity factors, similar to the social capital concept, impact health and wellbeing. These factors are not being routinely discussed with health care providers during routine health encounters (Katz et al., 2018; Wilson, 2019). Linking medical and social data in primary care and developing interventions to address social complexity by uniting patients with community resources may impact overall health outcomes (Katz et al., 2018; Wilson, 2019). Challenges include having appropriate coding, billing, and electronic health record (EHR) data to share, corroborate, and strengthen these findings. Tracking SDOH data in both medical and community-based resources continues to be an opportunity for improvement (Chisolm, Brook, Applegate & Kelleher, 2019; Katz et al., 2018; Pruitt, Emechebe, Quast, Taylor & Bryant, 2018).

Improving social capital and identifying and mitigating unmet SDOH needs results in cost savings and improves individual health perception. As a result of screening, focused interventions to coordinate resources for unmet SDOH needs such as food, income support, care coordination, and housing resources could result in significant cost savings, improved health
outcomes, and improved individual health perception (Naruzzaman et al., 2015; Pruitt et al., 2018; Taylor et al., 2016). The data in these studies demonstrates the need for better coordination of data between medical and social entities. Better identification of targeted interventions to address SDOH needs could improve the delivery of coordinated, holistic care to patients.

**SDOH Assessment**

Addressing the concern of unmet SDOH needs in the health care system, although integral to the success of measurable health outcomes, is not a standard of care and lacks coordinated efforts among key stakeholders. Screening for SDOH needs are often not conducted by health care providers. This creates a barrier to having a better understanding of patient populations and the barriers they experience in everyday life. Mutually determined health outcomes, clinical compliance, health care utilization and access to appropriate care could all be impacted as a result (Kusnoor et al., 2018; Naruzzaman et al., 2015; Page-Reeves et al., 2016). Developing a protocol for routine screening could provide a means to gather data to identify patient needs, pinpoint gaps in community resources, and gain insight into the need for interdisciplinary collaboration to improve health care and health outcomes (Katz et al., 2018; Kusnoor et al., 2018; Page-Reeves et al., 2016).

Screening protocols can be done in primary care and are being completed by payor entities across the country (Page-Reeves et al., 2016; Pruitt et al., 2018; Theiss & Regenstein, 2017). An important consideration when creating a screening tool is that only about 20% of modifiable contributing factors are due to clinical interventions and twice that are related to health behaviors, socioeconomic factors, physical factors, and environmental factors (Adler, 2018; Easterling & McDuffee, 2018).
Screening for SDOH needs has met mixed enthusiasm and support. Barriers to implementing an SDOH assessment tool as a standard of practice have been explored. Studies conclude that providers are feeling overwhelmed with all of their responsibilities and the enormity of their current benchmarks affecting their financial reimbursement (Adler, 2018; Landi, 2018; O’Gurek & Henke, 2018). Other concerns described are related to workflow, reimbursement challenges, and having an interdisciplinary team on hand to assist with screening and the lack of actionable steps to take when needs are identified (Gottlieb, Fichtenberg, & Adler, 2016; Landi, 2018; O’Gurek & Henke, 2018; Solberg, 2016). Other providers believe that economic issues should not be medicalized but rather should be relegated to public health and social work as these better fit their domain (Adler, 2018).

Despite these challenges, there is evidence that screening is both feasible and effective. Data provided by the screening assists clinicians and other health care providers to understand their population and develop targeted interventions to improve access to both medical and non-medical needs that impact overall health outcomes (Kusnoor et al., 2018; Page-Reeves et al., 2016; Pruitt et al., 2018; Theiss & Regenstein, 2017). Conducting SDOH screening has the potential to uncover one or more significant needs impacting vulnerable populations. Identifying these patients is key to addressing factors due to the weight social capital and social complexity have on health outcomes and disease burden, particularly affecting morbidity and mortality (Hunter, et al., 2011; Katz et al., 2018; Nuruzzaman et al., 2015; Page-Reeves et al., 2016).

**Conclusion of Literature Review**

Health inequities and disparities related to SDOH needs, especially among the low-income populations who are especially vulnerable, has been acknowledged by medical professionals. Social and behavioral factors are powerful influencers on health and mortality.
The United States currently spends far more on providing clinical services as compared with other similar countries who have better health outcomes (Adler, Glymour & Fielding, 2016).

Social determinants of health affect people where they work and live. Having unmet basic life needs can impact motivation and prioritization for self-care, health prevention activities, and health promotion engagement. Population health overall is affected by unmet SDOH needs. Research, using Maslow's hierarchy of needs, shows that when a high number of people in a population have their basic needs met they also have a greater proportion of the population who reach the highest-level need of ‘self-actualization’ verses people within a population who are faced with a scarcity of basic needs (Fradera, 2018). When unmet SDOH needs exist, clinical interventions are much less impactful compared to other factors including, health behaviors and socioeconomic factors (Adler, 2018).

Social complexity or having multiple unmet needs is directly related to poorer health outcomes (Katz, 2018). Acknowledging the problem and impact of unmet SDOH needs and developing screening protocols to identify individuals who are socially complex and uncover needs that are otherwise unknown to clinicians is imperative to population health outcomes. Acknowledgment of the problem and initiating screenings are necessary steps to develop higher-level focused interventions to bridge the divide between medical and social resources. The result could lead to potential cost savings and better health outcomes.

**Theoretical Framework**

The conceptual framework for this project was the 2013 Clinical-Community Relationships Evaluation Roadmap developed by the Agency for Healthcare Research and Quality (AHRQ) (Figure 2). While it is rooted in the design and implementation of effective clinical-community relationships to address clinical preventative services, its design is broadly
applicable to include implementation of effective connections to address the collaborative efforts of both clinical and non-clinical service domains (AHRQ, 2013). Six major components include three elements and three didactic relationships. The relationship between the elements influences the effectiveness of the clinic or clinician to connect patients with community resources (AHRQ, 2013). The main focus of the framework is the interaction between patients, clinical resources, and community resources (AHRQ, 2013).

A foundation for creating and sustaining dyadic relationships between the three core elements is integral to this framework. The clinic/clinician-patient relationship requires trust, a focus on shared decision-making, and the development of mutual support for self-management (AHRQ, 2013). The clinic/clinician – community relationship influence includes efforts to connect patients with resources through effective referral mechanisms. Feedback between clinicians and community resources could better capture collaboration, utilization, and successful integration. Tracking these efforts, combined with patient outcome data, could improve accountability and provide valuable data on the effects of community-clinician combined efforts to improve the coordination of care and decrease health and social disparities that negatively influence health outcomes (AHRQ, 2013). The SDOH needs assessment can help clinicians to identify unmet needs to better understand their population.

Lastly, patient-community relationships are related to the trustworthiness of community resources as perceived by the patient, effective referral mechanisms, and effective communication between the patient and the community-based resource (AHRQ, 2013). These foundational dyadic relationships are integral to the success of utilizing an SDOH assessment data gathering tool that could improve access to care and mitigate unmet SDOH needs by identifying needs and creating awareness of a problem. The influences between these
relationships can work in a cooperative manner to understand the problem of social complexity in the community dwellers utilizing these services.

**Figure 2.** Conceptual model from the Agency for Healthcare Research and Quality

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**Organizational Assessment**

State Medicaid programs and low-cost clinics are two of the many stakeholder businesses interested in addressing conditions that have significant implications on health outcomes and medical costs. There is an increasing number of enrollees in these programs, especially due to the Medicaid expansion legislation passed in several states. As of 2016, Medicaid programs cover more than 70 million people in the United States (Gottlieb, Ackerman, Wing & Manchanda, 2017). That is nearly 1 in 5 Americans, making it the most extensive government health insurance program in the nation (Stoddard, 2019). The free clinic and managed care
community outreach site in this project would be directly impacted as an anticipated 94,000 additional residents could access health care in 2020 through Medicaid expansion (Stoddard, 2019).

As shown with the expansion population in other states, the population that Medicaid serves have significant needs such as homelessness, mental health needs, and chronic health conditions that have and will continue to affect health care utilization trends and spending. The free clinic in this project serves patients who are uninsured or underinsured and may have significant economic and social challenges that impact their ability to engage in primary or tertiary care services. Those accessing the free clinic are some of the 2000 people who are homeless on any given night in the Midwestern city’s metro area. This population has basic SDOH needs that impact their physical, mental and social health, which is an important focus of the sponsoring organization providing services to these individuals and their families. As such, they expressed interest in learning how SDOH needs and barriers to care are impacting their populations and possibly using this data to secure grants to improve services for those accessing the free community-based clinic.

**Methodology**

This project was designed to provide essential data on the utility of a SDOH assessment tool. Informational displays were implemented at two sites, and a SDOH needs assessment survey was used to collect data about unmet SDOH needs and barriers to care in populations that are most likely to experience vulnerable conditions.

**Setting**

Two settings utilized for the project included a managed care community engagement room and a community-based free clinic. Both locations were located in the same Midwest metro
area. A Community Health Needs Assessment conducted by Professional Research Consultants (2018) found that 12% of individuals in this Metro area live below the federal poverty level and almost 29% of residents live below 200% of the federal poverty level. Those who access the two settings are typically patients of lower income status. The free clinic site primarily provides services to adult males and serves approximately 300-450 men per month. The free clinic and the community room were appropriate settings to capture self-reported survey results related to SDOH based on the population the clinics served.

Sample

Recruitment for the survey was targeted toward community dwellers who access the free clinic and community engagement center offered by a local managed care organization. Inclusion criteria requirements were the respondents had to be at least 19 years of age or older, have the ability to read and understand either English or Spanish, and understand that completion of the self-reported survey implied consent to participate. Anyone over the age of 18, regardless of their sex, sexual orientation, race, ethnicity, religion, income, health status, or education level was able to participate. Exclusion criteria included individuals less than 19 years of age and those who were not able to read and understand either English or Spanish.

Implementation Procedures

The Clinical-Community Relations Evaluation Roadmap conceptual framework developed by AHRQ (2013) provided the foundation for implementation procedures. Permission was obtained to utilize the two settings for implementation. Once Institutional Review Board approval was secured, the project facilitator coordinated exact dates for implementation with site leadership. Implementation took place March 9, 2020 to March 25, 2020.
Once the timeline and project space was secured, the primary researcher delivered the capstone project materials to each site and ensured the final set-up was adequate and had a professional appearance. The project facilitator provided large trifold displays at both locations. The displays included an invitation to participate statement, visual aids to depict the overlap between social capital and core health measures, and community resource lists. The SDOH surveys were in a tray next to the trifold display. All materials were provided in both English and Spanish. The displays were located on tables with sufficient room for both the trifold project and a lock box for completed surveys. Throughout the implementation of the SDOH needs project, the project facilitator checked back at least weekly to collect completed surveys from the lockbox and ensure the display remained intact throughout the implementation timeframe. Completed surveys were transferred to a locked cabinet offsite until the implementation period was complete. On the final day of implementation, all display materials, remaining surveys, and the lockbox, were collected by the project facilitator and data collection concluded.

**Measurement Instrument**

The SDOH survey was the measurement instrument for this project. The SDOH tool was developed by the project facilitator to specifically measure the outcomes of the project. The SDOH survey was reviewed by a statistician prior to use and recommended changes were implemented to the final product.

The SDOH survey tool was used to collect quantitative data on SDOH needs, specific barriers to medical or social care, and to assess awareness of basic community resources. Questions developed for the tool were intended to incorporate three of the most impactful non-medical needs as defined by the CDC (2017) and related to housing, utilities, and transportation.
Demographic, health accessibility, and questions related to current awareness of community-based resources were also included.

The most critical social needs are related to food, housing, transportation, and economic assistance (CDC, 2016; CDC, 2017; DeMilto & Nakashian, 2016; Taylor et al., 2016). For the design of this survey, these needs were the main focus. Question design included seven yes/no questions with N/A as an option, and 12 multiple-choice questions. Eight questions related to the outcome of unmet SDOH needs. Four questions related to the outcome of access to medical and social care. Four questions related assessed awareness of community resources. In addition, four demographic-based questions related to income, age, benefits, and employment status. The demographic questions allowed for more in-depth exploration into specific data related to SDOH needs and accessibility to medical and social care.

The SDOH survey was provided in paper format, in both English and Spanish. The Spanish version was interpreted to correlate question by question with the English version. The versions were reviewed and edited by a Spanish academic professional at Nebraska Methodist College for consistency and content.

Data Collection Procedures

Data was collected at the location of the displays in the two settings. Instructions for completion of the surveys were provided in both English and Spanish, along with the actual surveys. No facilitator was present for survey completion, although the project facilitator’s contact information was available on the display if questions arose. Participants completed the surveys voluntarily on their own merit. The display had an invitation to participate and consent statement for individuals who utilized the services in each location. Once a participant completed the survey, they were instructed to place it into the secure lock box located within the capstone
project display. The lock box was clearly marked, in both English and Spanish, with instructions for participants to return all completed surveys to the locked box after completion to maintain privacy and confidentiality.

**Ethical Requirements**

Prior to implementation, the Institutional Review Board reviewed the project, and both the project facilitator and supporting faculty mentor completed Collaborative Institutional Training Initiative (CITI) certification. Data collection consisted of an anonymous survey. No interaction with participants occurred. No personal identifiable information was collected. There was minimal to no risk to individuals who chose to participate. Surveys were secured in a locked box both on and off site. Data was stored on a computer in a protected file for data organization and analysis. Only the project facilitator had access to the surveys and computer file. Signed informed consent was not obtained for the anonymous, self-reported survey, however, there was an informed consent statement within the invitation to participate on the display. The statement indicated by completing and submitting the survey, the participant understood the risks and benefits and consented to participate in the project.

**Data Analysis**

Data from the SDOH survey was entered into a Microsoft Excel for Macintosh (2018) spreadsheet and analyzed using the program's data analysis package. Each respondents' survey was labeled with an ID number. The answers were coded numerically. The Spanish survey questions were developed to correlate identically with the English version so the coding of answers and responses would mirror each other for data entry into the Microsoft Excel spreadsheet from the English version. Once information from each survey had been entered into the spreadsheet, each question was analyzed using pivot and contingency tables, as applicable,
in the Excel program. Throughout the process a statistician was utilized to assist with data analysis and to ensure information was accurate.

Descriptive statistics were used to measure central tendency and frequency. Graphs were created in Excel to summarize data into visual form. Categorical data was analyzed using cross-tabulation to explore if there was a relationship between variables.

**Results**

In total, 31 surveys were completed and submitted to the lockbox. The free clinic produced all 31 surveys for the project. The community engagement room did not produce any surveys. Demographic data was gathered to provide additional depth and data for cross-tabulation analysis. When asked to describe their current situation, 64% (N=31) of respondents reported being between the ages of 19-64 and uninsured (Figure 3). This data is important for developing future interventions for assessing and mitigating social determinants needs as this population will be some of the more than 90,000 people accessing health care, many for the first time, when the Medicaid expansion is implemented in the setting’s state in fall of 2020. As noted in previous expansions in other states, many individuals are experiencing two or more needs or barriers to care as they enroll in Medicaid expansion programs, in addition to their current, and often undertreated, physical health needs.

**Figure 3. SDOH Question 16: Which best describes your situation?**

![Figure 3](image_url)
Additional demographic data was collected concerning income status, which is relevant to understanding the impact of social capital on unmet needs and barriers to care. An overwhelming 61% of respondents reported having no income at all. Only 18% of respondents reported having adequate income to meet basic needs (Figure 4).

**Figure 4.** SDOH Question 17: Which of the following best describes your current income status?

Lastly, income status was assessed to determine additional information on the status of social capital for those participating. More than 40% of respondents indicated they were unemployed and looking for work. Only 14% of respondents reported having full-time employment and 21% were unable to work due to a physical or mental disability. These statistics indicate inadequate social capital and lack of security for basic life needs (Figure 5).

**Figure 5.** SDOH Question 18: Which best describes your employment status?
Outcomes

In addition to demographics data, there were three outcomes for this capstone project measured by the SDOH needs assessment; unmet needs, barriers to care, and awareness of social resources.

**Unmet needs.** The first outcome was to determine if the SDOH needs assessment identified at least one unmet need. The unmet needs in this survey were related to housing, food, and utilities to determine social complexity. A total of 73% participants indicated at least one time in the past three months they did not have enough money for food.

Food insecurity was further broken down into the number of times in the last three months they did not have enough money to purchase food. A majority 53% percent indicated three or more times they did not have enough money for food, while 20% indicated once or twice in the last three months. Only 26% of those surveyed indicated that they had not experienced any lack of means to purchase food in the past three months or that it was not applicable (Figure 6).

**Figure 6. SDOH Question 2: How many times in the last three months have you not had enough money to purchase food?**
Concerning the basic need for shelter/housing, respondents were asked to indicate if they had experienced homelessness or near homelessness in the last three months. An overwhelming 83% of respondents had experienced homelessness or near homelessness in the past three months. Analysis using contingency tables identified of those living in a shelter or temporary housing, 40% were ages 19-64 and either uninsured or receiving Medicaid benefits. Of those, 12% were uninsured between ages 19-64 and therefore met the criteria for being socially complex and at increased risk for poor health outcomes because they were experiencing poor access to health care due to lack of insurance and housing insecurity at the same time.

Another high-risk group with multiple basic needs included 28% of respondents who indicated that they had no income at all and were ages 19-64 and uninsured. This is particularly important for the Midwestern state because of the Medicaid expansion for those who meet poverty level income requirements, which is scheduled to be implemented in October 2020. For the same respondents, 43% indicated they had safety concerns related to their current housing situation.

When respondents were asked to describe their current housing situation over the past three months, 52% indicated they live in a shelter or short term housing while 33% had no stable housing at all. Stable housing was defined as having safe, secure housing and having a choice as to whether to stay or move from their current housing situation. Only 15% of respondents indicated they had stable housing either with or without public assistance (Figure 7). When looking at the contingency table data for stable housing and demographics, 28% reported being 19-64 with no insurance, experienced homelessness, and had no stable housing. The second largest group of, 28% were between ages 19-64 with Medicaid only and living in a shelter or temporary housing.
Figure 7. SDOH Question 5: Stable housing means having safe, secure housing and having a choice in whether to stay or move. What best describes your housing situation over the past three months?

When asked if respondents had their utilities either shut off or nearly shut off in the past three months, 59% indicated they did not experience this unmet need. Given that more than half of respondents indicated they lived in a shelter or short term housing, this was likely a factor in the reason the need did not directly apply to them.

Transportation needs were also assessed on the SDOH needs survey (Figure 8). Of those who reported transportation was a concern that impeded obtaining basic needs, 27% reported this was a daily occurrence. A total of 53% respondents indicated this need was experienced between daily and at least once per month. Of those who reported experiencing transportation needs daily, 14.3% of them were between the ages of 19-64 with no insurance. Another 10.7% of those reported having experienced a daily transportation need were between the ages of 19-64 with Medicaid only. Of those who experienced this need on a daily or even a few times per week basis, 28.6% were those who also reported they had no income.
Figure 8. SDOH Question 9: How often have you not had transportation to grocery stores, pharmacies, medical appointments and/or work in the last three months?

Barriers to care. The second outcome for this project related to whether or not this survey identified at least one barrier to care. Respondents were asked if they had discussed concerns related to non-medical needs that may impact their health care. Participants in this SDOH needs assessment indicated that 60% had not discussed SDOH needs concerns with their health care providers. This finding is evidence of a care gap that requires further research and interventions to improve the care coordination and collaboration between the three key elements of health care as defined in the AHRQ (2013) model.

Prescribing medications to manage health conditions is one of the essential clinical interventions used by care providers. Medication compliance is dependent on many non-clinical factors including SDOH needs and accessibility barriers. The SDOH survey asked if individuals had experienced difficulty in taking their medications over the past three months due to financial barriers (Figure 9). Only 33% indicated that they had no incidence of this barrier during the time period. A majority of the remaining respondents, approximately 37%, indicated cost and financial resources was a barrier less than one time per month over the past three months. The
remaining 30% experienced difficulty with medications from a few times to approximately one time per month over the last three months.

Further analysis revealed more than 46% of respondents who indicated they had at least one unmet need with medications, were between the ages of 19-64 and also uninsured. More investigation is needed to understand if those who did not experience cost barriers to medications had been receiving primary or tertiary care for chronic health conditions and how many of the more than 33% with no medication cost concerns had health care providers who were routinely co-managing their health.

**Figure 9.** SDOH Question 13: How often have you experienced difficulty in taking your medications over the past three months because of cost?

Another important barrier to care assessed by the survey related to health care visits and cost. Participants were asked how often they had avoided seeing a health care provider for any reason over the past three months due to cost. While 57% of respondents indicated this was either not experienced at all or not applicable to their situation, 44% indicated that they had experienced barriers to seeing a health care provider at least once and others more than three times over the past three months (Figure 10).
Further analysis revealed 19.2% of respondents who were 19-64 and uninsured had experienced this need more than three times in the past three months, compared to 3.8% of individuals between 19-64 with Medicaid only who had the same level of need in the past three months. This is approximately 5 times higher for those who are uninsured versus those with insurance in the same age group.

**Figure 10. SDOH Question 14:** How often have you avoided seeing a health provider for any reason due to cost in the past three months?

![Figure 10](image)

**Basic knowledge of community resources.** The third outcome related to assessing basic knowledge of community resources, which showed mixed results. Related to nutrition, 64% of respondents were aware of community resources the addressed food needs, although only 18% of those aware had used the resources to meet the need (Figure 11).

**Figure 11. SDOH Question 3:** Have you contacted community resources or support resources to assist with finding basic life needs, such as food?

![Figure 11](image)
Concerning the need for knowledge of assistance with basic utilities, half of respondents indicated that it was not applicable. Almost 30% of respondents indicated they were aware of resources for utility assistance, but only 3% had attempted to access assistance from community resources (Figure 12).

**Figure 12. SDOH Question 8: Have you contacted local community resources or support services for assistance with your need of basic utilities?**

![Figure 12](chart.png)

Another consistent response regarding knowledge of community resources is reflected in only 3% of respondents indicating they knew of community resources for transportation and had engaged these services to meet their transportation needs (Figure 13). There were roughly equal responses between those who stated they were aware of community transportation resources and those who indicated they were not aware of these resources, or it was simply not applicable to them at this time.
Figure 13. SDOH Question 11: Have you contacted local community resources or support services for assistance with your need of basic transportation?

As a means of mitigating uncovered needs in those who participated in the SDOH need survey, a short list of specific community resources was offered through the SDOH capstone display. In order to capture the impact of offering such a resource, respondents were asked if they were likely to take this resource to use on their own to attempt to meet needs relating to food, transportation, health care, and utilities. More than 80% of respondents indicated they were likely to take the resource list to self-manage some of their unmet needs and barriers.

**Discussion**

The goal of implementing the SDOH assessment was to identify unmet needs, barriers to care, and to assess awareness of community resources. Access to care issues identified included concerns with medications and engagement with care providers. Related to access to medications, 67% of respondents reported that they had experienced difficulty with taking their medications at least one time over the previous three months due to lack of economic capital. Treatment failure is a major concern with some studies showing there is a 50% medication compliance rate among patients. There are many factors contributing to this issue and involve patients, providers, and the health care systems. Two important patient factors are health literacy and active involvement in the shared decision-making process (Brown & Bussell, 2011).
However, there are confounding factors and these are related to unmet SDOH needs and barriers to care. According to Maslow’s theory on hierarchy of needs, concrete physiological needs supersede higher level needs, including health (Fradera, 2018). It is imperative that unmet physiological needs be identified and access to care issues acknowledged in order to develop targeted, coordinated team-based interventions to improve health outcomes, especially for those most at risk including, underserved, underinsured, and economically and socially challenged populations.

Access to care issues involving provider engagement were also identified through this survey. This assessment found that 44% of respondents indicated that they had avoided seeing a health care provider due to financial concerns. Given that 46% of respondents indicated they were 19-64 and uninsured and another 82% reported having no income or inadequate income, there is significant concern that low social capital among those of the working age population contributes to health disparities and inequities in this community. Controversy occurs when determining whose professional wheelhouse this issue fits into and how to effectively and fiscally utilize an interdisciplinary team to identify and mitigate these needs. Gaps in care are especially apparent with the recent severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic (CDC, 2020). The current SARS-CoV-2 pandemic has illuminated inequalities and marginalization of populations who are adversely impacted by social and economic disparities, and as a result, having poorer health outcomes if acquiring the virus. Another example of the importance of utilizing a SDOH needs assessment to identify unmet needs and develop effective interventions to meet those needs (Adler, 2018).

Results obtained from the SDOH survey showed that completing a simple, short survey was both effective and feasible for uncovering social determinants factors that contribute to poor
health outcomes. Alarmingly, 60% of survey respondents indicated that they had never discussed concerns about unmet SDOH needs with their health care provider although these factors influence their engagement in the shared-decision making process.

Health providers should also take ownership of the issues surrounding identifying and addressing SDOH needs. A recent study identified out of 1000 physicians, 4 out of 5 of them recognized social needs were just as important to address as medical issues (Kaufman, 2016). These same physicians, however, expressed they lacked confidence in their ability to address unmet social needs and by not addressing these needs, their patients’ health suffered (Kaufman, 2016). An assessment tool to identify socially complex individuals could serve as a remedy. Collaborative progress toward the development of sustainable, coordinated interventions to mitigate these factors in vulnerable populations could then be developed.

Basic knowledge of community resources was also assessed in this survey. Results indicate that although respondents were largely aware of community resources, very few reported use of the resources. It is unclear why resources are not utilized. More research needs to be done on accessibility, ease of engagement, and availability of community resources to determine potential barriers and gaps in services. Input from those who are attempting to engage community resources is needed to better understand how processes and/or products being offered to those needing assistance with mitigating basic life needs could be improved.

Limitations

One limitation of the project was the narrow population scope from the two sites. Both sites serve a similar population in the same Metro area. Results are not generalizable for this reason. Future screening is needed to a more broad population and in a variety of clinic and community settings.
In addition, during the short implementation phase, the SARS-CoV-2 pandemic impacted the area, including the two project sites. Government mandated safety restrictions were put in place, which impacted the public, patients, and staff of the implementation sites. The capstone display was removed a few days early, as per the request of the implementation sites. The project may have benefited from more participants and data if it were implemented over a longer timeframe.

**Plan for Sustainability**

This survey could be sustained within the clinic locations or community by case-workers, both medical and social, and outreach programs in either paper or electronic versions. Collaboration would be needed between these entities with appropriate diagnosis and billing codes for use by the community and clinic organizations.

The information from this survey will be used by the free community-based clinic to seek funding and support to meet the needs of their population locally. Due to the abrupt closure of the clinical and community sites due to the SARS-CoV-2 pandemic, there was no plan for sustainability instituted between the project facilitator and implementation sites. In the future, however, the project facilitator would like to continue advocacy for the need by sharing these results with the managed care organization and the community based clinic where implementation occurred.

**Implications for Practice**

Project results could support health policy changes to improve healthcare awareness, access, and interventions to mitigate the predominate factors affecting health outcomes. These are often non-clinical interventions related to SDOH needs and health care accessibility. Those in minority populations have a higher morbidity and mortality burden and suffer economic and
social disparities at a higher rate than other populations. This has become glaringly apparent in
the Center for Disease Control findings that Blacks and Hispanics have a much higher death rate
than White or Asian populations in urban areas with SARS-CoV-2. SDOH needs must be
addressed in populations as these factors have a significant impact on health outcomes.

Results of this project will be shared with the intention to raise awareness in key
stakeholders to support action be taken to address these care gaps. The SDOH assessment tool is
a valuable means of gathering data and has minimal impact on workflow. The results can lead to
actionable information that has demonstrated, in other studies, to lead to productive
interdisciplinary team interventions with clear objectives. These teams can work together to
mitigate significant barriers to optimal, cost-containing health outcomes that result in healthier
lives (Kusnoor et al., 2018). Data from the self-reported survey in this vulnerable, low-income
population provided instant feedback to the project facilitator and could do the same for
practitioners in a variety of settings. Understanding SDOH needs for individuals could assist in
the development of targeted, practice-based interventions to better meet the SDOH needs and
barriers to care that result in poorer health outcomes for many in the population.

Conclusion

In conclusion, this project addressed the impact and feasibility of conducting an SDOH
needs survey to identify unmet SDOH needs and barriers to access to care. This SDOH needs
survey also included an assessment of basic knowledge of community resources to address the
three major elements of effective healthcare: patients, clinics/clinicians, and community
resources. Overall, findings did indicate that a short, targeted SDOH survey tool identified one
or more barriers to care or unmet SDOH needs in respondents. It also provided data on the
knowledge and engagement of community resources. Understanding SDOH needs can lead to
practice changes in clinic and community based services to identify at-risk, socially complex populations. To mitigate uncovered needs and barriers and bridge the gap between disciplines, a clinic and community-based referral system linking clinicians, patients, and local community resources is imperative to serve patients better and improve population health overall.
References


In adults accessing managed care programs what is the effect of using a social determinants of health screening tool compared to not using a social determinants of health screening tool on access to care and unmet SDOH needs over 4 months?

Appendix A. Literature Search Diagram

**Population**

**Searches completed in Cinahl (C), Medline (M), Cochrane (CO)**

**Problem**

SDOH
6,353 (M)
Unmet SDOH needs
10 (C)

**Intervention**

SDOH screening
66 (C)
1,117 (CQ)
176 (M)
SDOH screening tool
5 (C)
1,118 (CO)
13 (M)

**Unmet Needs “and” SDOH**

4 (CO)
1,091 (M)

**SDOH “and” access to care**

1 (M)
943 C

**SDOH “and” standardized screening tool**

28 (M)
13 (C)
SDOH “and” screening “and” high risk adults.
18 C

**Limitations**

- Last 12 years
- Peer Reviewed
- All Adults
- English
- Research article
- United States

**Inclusion**

Health delivery integrating community health and medical health and screening in adults and challenges

**Exclusion**

- less than 19 years of age
- wrong population
- No relationship to PICOT question or identify with specific condition

**Final Results**

28
### Appendix B. Literature Search Matrix

#### REFERENCE MATRIX

**Clinical Question**

In adults accessing a managed care program what is the effect of using a social determinants of health screening tool compared to not using a social determinants of health screening tool on access to care and unmet SDOH needs over 2 months?

<table>
<thead>
<tr>
<th>Citation/Level of Evidence</th>
<th>Participant/Setting/Sample Size</th>
<th>Purpose/Background</th>
<th>Method/Design/Limitations</th>
<th>Findings/Summary/Strengths/Weaknesses</th>
<th>Applicability to Own Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hunter, B. D., Neiger, B., &amp; West, J. (2011). The importance of addressing social determinants of health at the local level: the case for social capital. <em>Health &amp; Social Care in the Community, 19</em>(5), 522–530. <a href="https://doi.org/10.1111/j.1365-2524.2011.00999.x">https://doi.org/10.1111/j.1365-2524.2011.00999.x</a></td>
<td>This is a systematic literature review. 2554 articles total. 854 articles related to SDOH, 779 concerning social capital, 121 on health inequalities, 234 on health inequities, 362 on local health department. The result was 36 articles were selected for inclusion,</td>
<td>To identify moderating variables that impact social determinants of health in the community. It discusses social capital and importance of local policies and health programs in bridging the gap.</td>
<td>Systematic literature review of over 2554 articles of which 36 were selected based on inclusion and exclusion criteria. Exclusion: not in English, did not include search terms in title/abstract, lack of relevance in addressing SDOH needs, weak methodology. Of RCT and quasi-experimental studies included, 85% showed positive health impacts or reduced health spending.</td>
<td>The purpose of this article is to show that lack of actual or perceived social capital such as social networking, belonging, trust, resources, economic advantages all have the potential to conversely impact health behaviors, stress responses and stress related behaviors. Social capital is associated with better health outcomes, specifically chronic disease morbidity and mortality. Weakness is that most literature involves national programs/policies and a more local view is necessary to impact local health and wellbeing,</td>
<td>The empirical evidence provided on the impact of social determinants of health and social capital provide support that in order to achieve improved health outcomes and decrease health care spending we must assess vulnerable populations in a consistent, systematic fashion, and to be equitable assess all populations, for unmet SDOH needs in order to identify barriers and non-medical</td>
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<tr>
<td>Author</td>
<td>Title</td>
<td>Type</td>
<td>Abstract</td>
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<tr>
<td>Jones, M. L. (2018).</td>
<td>The importance of addressing health literacy &amp; the social determinants of health. <em>Mississippi RN, 80</em>(2), 8–14. Retrieved from <a href="https://www.msbn.ms.gov/">https://www.msbn.ms.gov/</a></td>
<td>OPINION PAPER</td>
<td>This is an opinion paper. There is no sample. However, it is based on information on health in Mississippi population characteristics specifically. The purpose of this article is to discuss the impact of social determinants of health on individual health outcomes. The specific components of SDOH as defined by the World Health Organization provides a framework of importance and influence. Opinion paper so no method or design or limitations discussed. The paper discusses the importance of considering SDOH as it relates to social and economic factors that impact medical health and chronic disease management and the policies that affect people where they work and live in the community. It discusses solutions to identify SDOH needs and provide community follow up and focus more on individuals within their community for optimal health outcomes. This article supports my research by providing global criteria describing SDOH issue and supports that SDOH are the most prevalent driving force in individual health. This article provides potential solutions through assessment of needs, health literacy and providing &quot;community liaisons&quot; to follow patients in community to provide continuity of care.</td>
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<tr>
<td>Landi, H. (2018).</td>
<td>Putting social determinants of health data into</td>
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<tr>
<td>Wilson Pecci, A. (2019). Five ways social determinants of health affect the revenue cycle. <em>Healthcare Leadership Review, 38</em>(1), 7–9. Retrieved from <a href="https://www.hcpro.com/publicatio">https://www.hcpro.com/publicatio</a> A consumer surgery of health care consumers. The article is an opinion article based on the results from the consumer survey. The purpose of this article is to show that consumers are reporting challenges in the A survey was conducted by Waystar, revenue cycle experts discussed the results of the survey as it relates to health care revenue. This article discusses the outcome of a self-reported answers on a survey conducted by Waystar RCS. The results show that there is a care gap between SDOH and</td>
<td>action. <em>Healthcare Informatics, 38</em>–41. Retrieved from <a href="https://journals.sagepub.com/home/jhi">https://journals.sagepub.com/home/jhi</a> OPINION PAPER health screening and impact of health screening in accountable care organizations and providers on health outcomes. No specific sample or participants. demonstrate that those health systems that are incorporating health data concerning SDOH for patients are well advanced in their approach and impact than those who are not. The transition from fee for service to value based will require a population based approach to individualized health care and describes challenges to a comprehensive approach to screening and actionable steps as a result of screening. limitations or design discussed. implementing screening in clinical settings related to financial limitations, screening tool limitations, lack of action plan to address SDOH needs in those who are screened. This article also discusses the importance of early intervention through predictive analytics. There is a finite amount of resources to distribute in a value-based care environment and all angles must be explored for maximum impact. research by showing the potential impact of utilizing predictive/risk tools, such as comprehensive SDOH assessment tools and other system based analytics to intervene early and prevent or delay resource exhaustion and improve health outcomes for individuals. The need to develop a comprehensive view of the patient and needs is essential to providing appropriate care and develop an actionable plan for linking medical care with social and community based resources.</td>
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area of SDOH yet also report that 60% of those deemed highest risk for adverse health outcomes have never discussed this issue with their providers. 22% report they have addressed at least one SDOH need with their care provider. cycles for payors and providers.

common threat between clinical, financial and SDOH needs. These items include no show, adherence factors affecting bundled payment models, readmissions (20% improvement when SDOH elements integrated in clinical routine), poor follow up and poor health outcomes. It discusses the challenges of engaging patients to address SDOH challenges due to ineffective efforts and interventions at this time. medical care and though a majority of survey respondents reported at least one SDOH need, only 22% engaged their primary care provider to address this need. Unidentified, unmet, and lack of actionable steps to link patients to appropriate resources is creating loss in revenue and reimbursement and penalties are incurred related to bundled payments and readmissions and describes the challenge in allocating resources, both human and financial in order to adequately address whole person care to improve outcomes. Screening for unmet SDOH needs and developing a
<table>
<thead>
<tr>
<th>Study Design</th>
<th>Participants</th>
<th>Methods</th>
<th>Results</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort Study</td>
<td>Study sample of Medicare Advantage or Medicaid managed participants in 14 states who contacted the Health connections program seeking referrals for community based services in 15 month period. 2718 total participants in the analysis.</td>
<td>This study was to analyze the impact of coordinating medical and social needs. It also sought to determine the impact of a social services referral program on cost savings and outcomes related to needs met.</td>
<td>Retrospective, secondary data analysis between 2 groups of members, those who had social needs met and those who did not out of the 2718 in the analysis. Limitations include self-reporting and lack of experimental design to randomly assign members to usual social program, if any, and enhanced social/medical coordinated program. Lack of precise measurements of social services data due to lack of billing codes to track and generalize data.</td>
<td>This study discusses how an analysis of self-referrals to a social services program to help meet unmet SDOH needs resulted in a significant costs savings over the second year among those who had needs met. Limitations include self-reporting and self-referrals verses randomization to a screening group verses a self-referral group or no intervention is needed to determine the impact. Better billing and data from community based organizations is needed in order to thoroughly examine the impact as well as health care organizational data on the impact of meeting needs on health measures and costs.</td>
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<tbody>
<tr>
<td>Expert opinion article. No sample or specific population</td>
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<tr>
<td>Purpose of this opinion article is to discuss the challenges related to integrating more screening or practice responsibilities on primary care providers resulting in additional stress and burnout and without well measurable results. It addresses the patient centered medical home as the newest change that is still slowly implementing. (However, the model patient centered medical home addresses social and community care</td>
</tr>
<tr>
<td>Expert opinion article.</td>
</tr>
<tr>
<td>This article is an opinion against screening and intervening for SDOH in primary care. Reports that physician burnout reported to be 46%, 38% reported depression, 37% felt work/life balance concerns. Another con against screening is the already overburdened practitioners with additional responsibilities, including forms, coordination, modify health behaviors and control chronic conditions. It is felt that medicine should not intersect with social justice because it is out of the realm of the scope of practice.</td>
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<tr>
<td>This supports my research because the value based model of care is not going away. New practices that utilize the entire health care team, rather than one independent practitioner, have the potential to provide a higher level and quality of care and reduce some of the burdens on practitioners such as, missed office visits, poor performance metrics, decreased reimbursement and fines, and more complex patients with seemingly no upward trajectory</td>
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To the data available and further research on what population health needs are and contribute to a solution for best practices for health care delivery.
with an emphasis on care transitions and coordination of care across the care continuum.

Prevention is the goal, screening for unmet SDOH needs that adversely impact individual health is in the scope of the health prevention and population health model of care and is shown to have significant influence on health outcomes.

Addresses potential barriers.


<p>| Kaufman, A. (2016) Theory vs practice: Should primary care practice take on social determinants of health now? Yes. <em>Annals of Family Medicine</em>, 14(2), 100-101. <a href="https://doi.org/10.1370/afm.1915">https://doi.org/10.1370/afm.1915</a>. | This is an expert opinion paper, no sample or specific population. | This article discusses the needs and objections related to addressing SDOH needs in primary care. It shows that screening and treatment for chronic disease in a Native American population in New Mexico did not improve outcomes and that high quality health care cannot | No method or design due to expert opinion paper. | This article shows that 4 out of 5 practitioners agree that SDOH needs play a major role in health outcomes in patients but there is lack of knowledge and confidence in how to address needs if screening is completed. | This article supports my research by identifying barriers to implementing the SDOH assessment tool and the stakeholders that need to be engaged in order to address concerns and work collaboratively between all stakeholders to configure best practices for addressing this |
| Theiss, J., &amp; Regenstein, M. (2017). Facing the need: Screening practices for the social determinants of health. <em>Journal of Law, Medicine &amp; Ethics, 45</em>(3), 431–441. <a href="https://doi.org/10.1177/1073110517737543">https://doi.org/10.1177/1073110517737543</a> | compensate for SODH needs that are decades long. | significant health issue and improving research data to support gathering SDOH data and developing actionable steps for the information gathered. | 405 legal partners that collaborate in Medical-Legal Partnership involving health care providers and legal providers of this organization. | Purpose of the study was to survey participants and determine if the MLP used formal screening protocols, which populations were screening and if and how many referrals were made to legal services (this is one of the SDOH needs that has been identified in multiple literature articles). | 405 health care and legal partners were sent surveys via email in qualitative descriptive study. The response rate was 63%. | Limitations concerning respondent rate of 63%. Lack of standardizes screening protocols and bias in selection of subjects chosen for screening based on suspected or known needs as perceived by the administrator of the tool. Lack of long term integration of MLPs into practice. This article discusses the needs to operationalize and normalize SDOH screening in an unbiased, standardized means. The barriers to screening are compensation to providers, lack of confidence in implementing screening tool and ability to address identified needs. This study found that This article shows that there is a need to operationalize screening in non-conventional means for SDOH needs. This will identify needs and help the care team prioritize needs and prompt the integrated collaboration between medical and social resources to meet individual SDOH needs and identify gaps in resources impacting health in the population. It discussed the barrier of inclusion of key stakeholders in that according to a survey conducted by Robert Woods | Case control |
| O’gurek, D. T., &amp; Henke, C. (2018). A Practical approach to screening for social determinants of health: Screening patients to understand their social context is the gateway to addressing barriers and improving health. <em>Family Practice Management</em>, 25(3), 7–12. Retrieved from <a href="https://www.aafp.org/home.htm">https://www.aafp.org/home.htm</a> | This is an editorial/position article. No specific setting/population. | This article seeks to inform practitioners of the challenges related to recommendations and implementations for screening or not screening for SDOH needs. A major concern discussed is the potential for harm. | No methods/limitations discussed. | This article discusses the challenges and barriers to addressing social determinants of health needs in the clinical setting despite knowledge that unmet needs affect clinician ability to implement EBP standards of care and results in poor health outcomes. It also discusses tools that are available to use in the clinic workflow to | Foundation found that 80% of physicians were not confident in ability to address SDOH needs in their patients. Expanding the care team to support physician led care teams and collaborative efforts between providers and payor and other stakeholders will be necessary in order to address these concerns and implement changes for SDOH screening and referrals. |</p>
<table>
<thead>
<tr>
<th>Opinion Paper</th>
<th>Expert opinion paper</th>
<th>This article was to address the view of one expert that screening is potentially unethical through unintended consequences related to</th>
<th>No methods or designs.</th>
<th>This article also discusses that there is a dearth of evidence in the realm of SDOH needs and best practices surrounding assessing and actions to take with data. It does also give credence to the anecdotal evidence that</th>
<th>This research supports my research in that there is a gap in research to provide appropriate direction in the best practices for assessment of</th>
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<tr>
<td><strong><a href="https://doi.org/10.1089/pop.2016.0092">https://doi.org/10.1089/pop.2016.0092</a></strong></td>
<td>inappropriate referrals or lack of ability to address needs.</td>
<td>is shown in research that addressing and screening can improve treatment, identify patients needing additional support, and potential interventions such as care coordinators or social navigators. More research is needed on the effects of SDOH screening.</td>
<td>SDOH needs. It also supports that the little evidence that is available seems to support the need to address unmet SDOH needs as part of the entire clinical patient picture in order to achieve optimal health outcomes.</td>
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| **Opinion Paper** | | | |

| **Kusnoor, S. V., Koonce, T. Y., Hurley, S. T., McClellan, K. M., Blasingame, M. N., Frakes, E. T., Huang, L., Epelbaum, M.I. & Giuse, N. B. (2018). Collection of social determinants of health in the community clinic setting: a cross-sectional study. BMC Public Health, 18(1), 550. https://doi.org/10.1186/s12889-018-5453-2** | One hundred adult participants in urban community care clinic in Tennessee. 220 were asked to participate and 101 enrolled, 119 declined. | Addressing SDOH needs may help to improve overall health outcomes for community health patients. Assessing for SDOH needs may help clinicians to have a more in-depth understanding of their patients. | This supports my research by providing evidence of feasibility of creating and adapting an assessment tool that can be used in the clinic setting to evaluate patients in a non-discriminatory and non-bias manner that will enable practitioners to identify areas of need that may be barriers to both the individuals and the providers desired health outcomes. It also demonstrates the tool is effective in identifying needs. |

| **Case Control** | An 11 question questionnaire was completed that included items from National Academy of Medicine and Protocol for Responding to and Assessing Patient Assets, Risks, and Experiences instrument. | The questionnaire provided valuable information into the SDOH needs and demonstrated feasibility of implementing this tool in the clinic setting. A limitation of this study was lack of identified actionable steps related to using the information in meaningful fashion, Other limitations were that there was a high non response rate on some questions indicating a need for survey revision or administration procedure changes. Those with identified medical needs also showed higher median number of social needs than those without certain | |
**Case study**


| There were 3048 participants in family medicine clinics in 2 public university hospitals and 1 cone federally qualified community health clinic over 90 day period. |

| The background is that it is known that SDOH needs have a larger influence on health outcomes than healthcare and that there is currently no structured way for clinicians to measure and act on unmet SDOH needs in patients. The purpose of this study was to determine the feasibility of implementing an assessment in the clinic setting to provide information that assists provider lead teams in addressing these needs. |

| Surveys, WellRx Tool, were completed either by self-administered method or by medical assistant during check in. The survey was based on eleven previously identified needs on a pretested, 11 question questionnaire in either English or Spanish. Out of 3048 surveyed, 46% reported at least one unmet SDOH need from survey and 63% indicated multiple needs. The screening of all patients over 30 days identified patients who had needs that had previously been unknown to providers. Community Health workers and Mas assisted patients in accessing services according to their needs. Utilizing Community Health workers as part of the care team and enhanced team role performance and increased feasibility of addressing the “how” of assessing and the “what now” of acting on the data obtained. There were no reports from sites concerning negative efficacy results using WellRx Tool. |

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<th>This article supports my research showing that it is feasible to utilize a screening tool that is tailored to the population and administering the short questionnaire can either be done self-reported at check in or administered by appropriate staff without significant interruption to the clinic flow. It also shows that a majority of those screened have unmet needs that impact their individual health outcomes. It shows that there is actionable steps that can be taken by using community</th>
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<td>Mixed Methods Research Descriptive Case Study</td>
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<td>Online surveys and semi-structured face to face interviews in a mixed-methods design. The population is the representatives from the Medicaid Medical Directors Network. 42 member states invited to participate and 17 responses received for survey. 14 out of 21 state representatives took part in the interviews.</td>
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<td>The goal of the study was to identify the current and future priorities of states in identifying and addressing SDOH needs through screenings, referrals and community partnerships.</td>
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<td>Mixed method design with surveys and interviews to collect data. Limitations are related to lack of generalizability of data to all states due to uniqueness of each individual states program and budget. Other limitations are that the interview data and survey was representative of less than half the states.</td>
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<td>Weakness to implementing data sharing concerning SDOH is lack of standardized data formats and definitions. Lack of standardization of method of data collection, self-report verses case worker or other health care worker administered. Many barriers to addressing SDOH drivers of healthcare including technology, standardization of care, policies, politics, financial limitations. It also finds that piecemealing components of SDOH needs rather than using a tool to identify holistic picture of health workers to address needs with patients to extend the reach of clinic based staff and could even provide improved care transitions through home visits in the community to follow up on resource engagement.</td>
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<td>This contributes to my research showing that there is a need for standardization of data, including assessment tools and a need to address the major SDOH factors impacting overall health as defined by WHO. States are moving toward value-based care that includes SDOH needs but to fully implement this it will take changes in standards of care delivery, policies, political</td>
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<td>Data gathered from Manitoba Population Research Data Repository of 626, 264 primary care patients. Data included primary care patients between 2010-2013 in large urban center of Winnipeg. 26 primary care indicators were used in the study.</td>
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<td>This study was conducted to address the concern that in primary care, there is increased awareness that health concerns and wellbeing are shaped by SDOH factors. This study was to assess quality of care among patients receiving primary care in association with social</td>
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<td>Distribution data of 626,264 patients was measured. Inclusion criteria was that primary care patient made at last 3 visits to PCP in timeframe between 2010-2013. Linear mixed modeling was used.</td>
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<td>The article showed that linking medical and social data in primary care may be a supported and interventions could be developed to address social complexity in primary care. The study further supports that brief surveys in PCP settings is feasible and acceptable to patients and has resulted in some communities developing interventions to link patients with community resources. Limitations were related</td>
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<td>patients’ needs will not yield complete results.</td>
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<td>environments, overcoming financial limitations and remodeling of funding toward prevention rather than tertiary care. This starts with a SDOH needs assessment and simultaneous development of actionable referral opportunities and community partnerships to address identified needs.</td>
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This supports my research by showing that patients accessing primary care are socially complex. The need to address social complexity in patients is needed. Identifying appropriate care team members who can conduct SDOH assessments and linking community resources is also needed. This study
| Case Report | This is a case report describing two patients with diabetes and specifically detailing the community specific struggles of patients in community in Kentucky in managing diabetes and overcoming social inequities. |
| | The goal of this study was to depict the population health issue that is community specific, state specific and region specific. Food deserts in many communities make diabetes management and clinician impact of clinical management of these patients especially challenging. |
| | Comparative case report describing two people with diabetes and the significant impact of socioeconomic factors in relation to estimated impact from clinical care to be 20%. Health behaviors, physical environment and social and economic factors play an integral role in populations health and prevalence of chronic disease and mental health. |
| | No weaknesses discussed. Findings are that national recognition of this issue by the CDC, WHO, and NCQA along with the change in fee-for-service to value based and the responsibility of providing effective and efficient care requires organizations to take steps to identify non-medical risk factors through data gathering. The NCQA encourages these non-medical assessments to gather nonclinical elements of patient data. While there is no way to completely alleviate these SDOH issue sin patient populations there are |
| | This study provides support for my research by showing that there are global and national stakeholders and national organizations who are aware and concerned about the issue of SDOH. It provides examples of population specific issues that impact chronic disease management and these account for 80% of health outcomes verses 20% of health outcomes |

This article discusses the implementation of a SDOH screening tool in a Norwalk Community Health Center. The population involves underserved, vulnerable patients. While it is known that SDOH needs play an important role in overall health, especially among vulnerable populations. Using a brief, EBP screening, No study, method, design discussed in this descriptive article concerning retrospective look at the implementation of a SDOH screening tool in a community clinic. This article discusses the important of incorporating SDOH screening into routine medical appointments. The pilot showed that time and team member assigned to gather the data made significant impact on the workflow of the tool. Using a This article demonstrates that the often stated barriers of time and responsibility are best managed by utilizing a team based approach to implement the brief, EBP.
| Opinion Paper | tool to screen every patient and identify unmet needs can have a significant impact on treatment and health outcomes. This article demonstrates an efficient manner in which to implement this tool within an episode of care utilizing a team based approach. | team based approach is an effective, feasible manner to implement the tool into the EMR and workflow in order to ensure the screening was complete and lessened the burden on the practitioner. | screening tool. It also affirms that SDOH screening should be a part of the standard of care for routine medical care in order to affect individual and overall health and wellbeing of the population serviced, particularly vulnerable populations. Training of staff, utilizing EMR, and efficiency in incorporating it into the workflow are important variables to successful and sustainable implementation, This article also describes that ethically an intervention to address needs should be developed to |
| Adler, K. G. (2018). Screening for Social Determinants of Health: An Opportunity or Unreasonable Burden? Family Practice Management, 25(3), 3. Retrieved from https://www.aafp.org/fpm/2018/0500/p3.html | This is an expert opinion article. | This discusses the issue of whether or not screening should be expanded into primary care due to the fact that only 10-20% of modifiable contributors to health are clinical and 80-90% are from modifiable factors such as health behaviors, socioeconomic factors, physical and environmental factors. | No method or design. | Findings are that SDOH needs are known to be significant contributors for health outcomes. Primary care is hesitant to take on yet another responsibility to provide systematic screening. To date there is limited evidence on actual benefits although anecdotal evidence is promising. It discusses that economic issues should not be “medicalized” and public health and social work are responsible for this domain. | This article supports my research in that there needs to be further research done on the impact of assessments for SDOH needs and the impact of addressing unmet needs. It demonstrates the divide between medical and social providers as to who’s responsibility it is to screen and intervene, however, the quality measures for providers are impacted to a large degree by non-medical factors. |