Summer 8-2-2022

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DOI: https://doi.org/10.46409/sr.HHUZ5485

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Berry, B. (2022). *Evidence-Based Best Practice Toolkit for Social Determinants of Health: A Program Evaluation Review*. [Doctoral project, University of St Augustine for Health Sciences]. SOAR @ USA: Student Scholarly Projects Collection. https://doi.org/10.46409/sr.HHUZ5485

Evidence-Based Best Practice Toolkit for Social Determinants

of Health:

A Program Evaluation Review

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This Manuscript Partially Fulfills the Requirements for the

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Approved: 08/02/2022

Abstract

Despite an increase in healthcare expenditure, racial and ethnic disparities remain a substantial concern among adult primary care patients in the United States. This is largely due to the focus on medical intervention and disregard for the underlying factors that contribute significantly to health outcomes such as economic stability, educational access and quality, healthcare access and quality, neighborhood and built environment, and social and community context. The PICOT question that guided this program evaluation review project is: In adult clients seeking care at a primary care clinic (P), how does a SDOH toolkit based on the CDC framework (I) compared to no SDOH toolkit (C) affect identification of unmet health related social needs (O)? The evidence suggests that screening for SDOH identifies unmet social needs, improves provider referrals to relevant resources, and improves overall health outcomes. In addition, the literature supports the use and development of nursing toolkits to influence evidence-based interventions in healthcare. A detailed and thorough program evaluation review of the Centers for Disease Control and Prevention, Healthy People 2030, and the Health Leads Network SDOH programs revealed that the evaluated SDOH programs meet the requirements of a program per the CDC Program Evaluation framework. Additionally, the evidence supported the use of these programs as established to support the development of an SDOH screening toolkit for the specialty population of adult primary care patients. Screening for SDOH in adult primary care is a necessary component for improving health outcomes and use of an SDOH screening toolkit in the clinical practice setting will help assist in the smooth and successful implementation of SDOH screening for all adult primary care patients.

Evidence-Based Best Practice Toolkit for Social Determinants of Health: A Program

Review

"Social determinants of health (SDOH) are defined as the constructs in which people are born, live, learn, work, play, worship, and age (Healthy People 2030, n.d.). SDOH are highly influential factors for the health and wellness of individuals across the globe. These circumstances are shaped by the distribution of money, power, and resources at the local, national, and global levels (Healthy People 2030, n.d.). Socially determined circumstances and social position can negatively impact an individual's opportunity to attain their full health potential. Underlying factors such as poverty, unequal access to healthcare, lack of education, stigma, and racism contribute to health inequities (Tikannen & Abrams, 2020).

The purpose of this DNP program evaluation review project was to search and evaluate current evidence on best practice for assessing SDOH. In addition, this paper evaluated the Centers for Disease Control and Prevention (CDC), Healthy People 2030, and the Health Leads network current SDOH screening programs and position statements to make recommendations based on evidence utilizing the CDC's Program Evaluation framework (PEF). Finally, following evaluation of best practices and analysis of the existing programs, this project includes an up to date and relevant SDOH toolkit which includes a position statement, policy statement, screening tool examples, and current education materials for varied audiences.

Significance of the Practice Problem

Addressing social determinants of health is the only way to achieve health equity (Centers for Disease Control and Prevention, 2019). Despite an increase in healthcare expenditure, racial and ethnic disparities remain a substantial concern. The United States spends more on healthcare compared to other high-income countries yet has worse health outcomes. This is largely due to the focus on medical intervention and disregard for the underlying factors that contribute significantly to health outcomes (Tikannen & Abrams, 2020.).

According to the Organization for Economic Co-operation and Development (OECD), (n.d.) the United States spends nearly twice as much on healthcare compared to other high-income countries. This is especially alarming because the U.S. has the lowest life expectancy and highest suicide rates among other high-income countries. In 2017, the average American's life expectancy was 78.6 years which is two years lower than the OECD average life expectancy.

Despite an increase in healthcare expenditure, racial and ethnic disparities remain a substantial concern. Non-Hispanic white Americans live an average of 78.8 years compared to non-Hispanic black Americans who live an average of 75.3 years (Tikannen & Abrams, 2020.). The United States has seen a dramatic decrease in infant mortality during the past eight decades; however, African American infants are 2.3 times more likely to die compared to a white infant (11.4 vs. 4.9 per 1000 births) (Singh et al., 2017).

"Racial/ethnic, socioeconomic, and geographical disparities are marked by increased morbidity and mortality from cardiovascular disease, cancer, diabetes, COPD, HIV/AIDS, homicide, psychological stress, hypertension, smoking, obesity, and access to quality health care (Singh et al., 2017, p.1942)." The U.S. has the highest chronic disease burden with one-quarter of adult Americans having been diagnosed with one or more chronic conditions. Obesity is highest among English speaking countries. Factors that contribute to obesity include unhealthy living conditions, socioeconomic and behavioral factors, and decreased access to quality food and nutrition (Tikannen & Abrams, 2020.).

According to the Robert Wood Johnson Foundation (2014) one-fifth of all American children live in poverty and nearly 50% of all black children live below the poverty line. Twenty percent of Americans live in communities with limited job opportunities, high rates of pollution, limited access to healthy food, poor housing conditions, and reduced opportunity for physical activity. By 2043, most Americans will be people of color; however, people of color disproportionally suffer due to economic disadvantages and have worse health outcomes caused by preventable reasons.

Communication deficits surrounding SDOH are a major cause for concern. Racial and cultural differences have resulted in distrust and poor communication, especially amongst black Americans and minorities (Butler & Sheriff, 2021). Poor communication reflects the shortcomings of the American health system and inhibits the goal of obtaining equitable care for all people.

The field of medicine places major emphasis on behavioral modification as the main strategy for disease and illness prevention (Andermann & CLEAR Collaboration, 2016). This approach has not proven to be the most effective strategy as individuals are not likely to be in control of health-related social factors that are contributing to their poor health outcomes (Andermann & CLEAR Collaboration, 2016). Broader interventions such as creating more supportive environments are necessary for reducing unhealthy behaviors and supporting healthy choices.

Widespread adoption of the electronic health record (EHR) has led to the creation of the Promoting Interoperability Programs (PIP) by the Centers for Medicare and Medicaid services (Chen et al., 2020). Stage three of the PIP involves the use of the EHR to demonstrate continuous quality improvement of care and elimination of healthcare inequality across all groups of people. The number of healthcare institutions that are exploring ways to capture SDOH data, referrals, and interventions to meet the needs of vulnerable populations is on the rise. Adoption of an SDOH toolkit is helpful for minimizing pitfalls and overcoming barriers to screening and treating for health-related social factors affecting patient outcomes.

Purpose of the Program Evaluation Project

The purpose of the program evaluation review project was to evaluate three professional organizations and their current SDOH screening programs according to best practices so that recommendations could be made for improvement. Secondly, by evaluating existing toolkits in practice for currency and relevance, a new toolkit was developed for the specialty population of adult patients in primary care. The newly developed toolkit more accurately represents the

evidence related to reducing SDOH risks that contribute to poor adherence to health measures in at risk populations. The population of interest includes adults over age 18. The setting includes primary care clinics and any organization that supports the population of interest. The intervention includes an SDOH toolkit that was derived from evaluation of existing toolkits. In addition, the CDC's PEF served as the guide for the evaluation of the three professional organizations or government agencies so that recommendations for change could be made.

Project Objectives

The objectives of this project have been outlined using the SMART format (specific, measurable, attainable, realistic, and timed) and are as follows:

1. The project manager (PM) will identify three professional organizations or government agencies current social determinants of health screening program by the end of week 5 of the project proposal development period.

2. Using the CDC's program evaluation framework, the PM will make at least two recommendations through practice/position statements by the end of week four of the project proposal development period.

3. The PM will develop a social determinants of health toolkit to include an updated position statement, policy statement, screening tool examples, and current education materials for varied audiences by the end of week four of NUR7803.

Program Problem Statement

The PICOT that guided the development of this program evaluation review project is: In adult clients seeking care at a primary care clinic (P), how does a SDOH toolkit based on the CDC framework (I) compared to no SDOH toolkit (C) affect identification of unmet health related social needs (O)? The population of interest includes adults over age 18. The setting includes primary care clinics and any organization that supports the population of interest. Despite a growing interest in capturing data surrounding SDOH and the effects on health outcomes, there was a lack of an effective toolkit to conduct SDOH screening in primary care.

Utility of Program Review

Evidence-based toolkits improve healthcare and facilitate practice change to a variety of audiences (Barac et al., 2014). They often include useful materials such as implementation guidelines, participant training, and audit materials which are presented in a variety of formats (Yamada et al., 2015). A definitive toolkit for SDOH screening was not located within the literature.

Relevant stakeholders for the program evaluation, analysis, and the development of the SDOH screening toolkit include: health practitioners, patients, community and health organizations, policy makers, and members of the public. Reviewing SDOH programs through the lens of stakeholders is valuable because it provides insight into the values and perspectives on the program's objectives, operations, and outcomes (CDC, 2017).

Primary care is the setting that was most influenced by completing the program change because this setting most supports the population of interest. The American Academy of Family Physicians (AAFP) reports that screening for SDOH in primary care is critical because primary care is a natural point of integration amongst other forms of healthcare (public health, behavioral health, and community-based services) (AAFP, 2022). Fifty-one percent of adults in the United States made a visit to a primary care physician in 2019 (CDC, 2021). Based on this, screening for SDOH at primary care visits has the capacity to reach vulnerable patients to provide them with the support they need to improve their health outcomes. Thus, the evaluation, analysis and revision will improve current conditions by ensuring that practice/position statements are in alignment with what the literature suggest as best practice and using the CDC's PEF.

Analytical Framework

Program evaluation holds healthcare organizations accountable and committed to improving health outcomes. The CDC's PEF is a six-step process and is as follows:

1. Engage stakeholders
2. Describe the program

3. Focus the evaluation design

4. Gather credible evidence

5. Justify conclusions

6. Ensure use and share lessons learned.

Each step is interdependent but must be fulfilled to facilitate an accurate understanding of the program's context (CDC, 2017). Further discussion of each step provides a structured way to review a program and understand the standards for program effectiveness.

Engage Stakeholders

The evaluation cycle began by examining those individuals or organizations that will be affected by what was learned from the evaluation and what will be done with the knowledge. The principal groups of stakeholders include those involved in program operations, those served or affected by the program, and the primary users of the evaluation. (CDC, 2017). During this step of the framework, the PM gained a better understanding of the stakeholders' values and perspectives on important elements such as the program's objectives, operations, and outcomes.

Describe the Program

Detailed program descriptions were necessary to convey the mission, goals, and objectives of the program being evaluated. A complete program description should include information about the programs need, expected effects, activities, resources, stage of development, context, and logic model (CDC, 2017). Program descriptions were useful during the program evaluation project to compare the program to similar programs. In addition, it helped to facilitate the connection between the program and its effects on healthcare.

Focusing the Evaluation Design

The standards for effective evaluation include utility, feasibility, propriety, and accuracy (CDC, 2017). These standards were met by planning the direction of the evaluation in advance. The PM utilized this step of the framework to clarify the intent of the evaluation, identify how the

results of the evaluation were to be used, and to develop practical methods for data collection, analysis, and interpretation.

Gather Credible Evidence

A successful and credible evaluation is one that collects information that produces an accurate depiction of the program in its entirety. Credible evidence provides for subsequent strong evaluation judgments and recommendations for change (CDC, 2017). During this stage of the framework evaluation, the PM identified indicators which served as a basis for measuring meaningful effects of the program (i.e.: ability to deliver services, client satisfaction, resource efficiency, etc.).

Justify Conclusions

Evaluation of conclusions can only be justified when they have been linked to the evidence gathered and when they have been compared to agreed upon benchmarks set by the stakeholders (CDC, 2017). This process required standards, analysis and synthesis, interpretation, judgement, and recommendations. The standards served as a basis for developing judgments about the program's performance success. Analysis and synthesis pinpointed patterns and findings about the evidence gathered. Interpretation was useful for understanding the significance of the information learned during the project evaluation. Judgements were made about the significance of the program by comparing the findings to other pre-selected standards. Finally, the recommendation to continue, expand, redesign, or terminate a program was based on evidence and stakeholder values.

Ensure Use and Share Lessons Learned

The ensure use and share lessons learned phase of the framework involves the translation of evaluation findings into practice. The purpose of this step was to ensure that the evaluation achieved its primary purpose (CDC, 2017). Thus, the PM described the essential features of the program, defined the focus of the evaluation and any limitations, identified the strengths and weaknesses, and discussed any recommendations for action.

Evidence Search Strategy, Results, and Evaluation

The Cumulative Index to Nursing and Allied Health Literature (CINAHL) and PubMed database were searched using the following Boolean operator, (social determinants of health) AND (social determinants of health screening tool). Key terms include *social determinants of health, health equity, health inequality, health disparity, health risk assessment, and social determinants of health screening tool*. An additional CINAHL search was performed with the following Boolean operator, nursing AND toolkit AND best practice. Inclusion criteria are articles that contain at least one or more social determinant of health categories or toolkit related topics. Filter criteria include academic journals, full text, peer reviewed articles, articles from the United States, articles published within the last 25 years, and articles written in the English language. Exclusion criteria are articles that measure patient perception in relation to social determinants of health.

A literature review was conducted in the Cumulative Index to Nursing and Allied Health Literature (CINAHL) and PubMed database. The initial search was limited due to the inconsistent definitions and key words surrounding social determinants of health. The literature review was expanded to consist of articles published between 1996 – 2021. The initial screening before search limitations and screening for duplicates yielded 383 results. After applying the search limitations (full text, academic journals, peer reviewed, United States, and English language), the search yielded 276 articles. After removing 4 duplicates, 272 articles underwent further screening. A title and abstract review eliminated an additional two articles. A reference review of the articles included in the evidence table yielded an additional three articles. A total of 16 articles were included for analysis. Of the 16 articles included, the designs varied and included a systematic review, randomized controlled trial, quasi-experimental, prospective cohort, prospective intervention, pilot, observational, cross sectional, explanatory correlation, and secondary data analysis. A PRISMA diagram illustrates the evidence selection process (Figure 1).

The John Hopkins Nursing Evidence-Based Practice evidence level and quality grade (Table 1) was used to grade the level and quality of evidence for this literature search result (Dang & Dearholt, 2017). The primary research included level I, II, and III evidence with a quality grade ranging from A-B (Appendix A). The search yielded six level I articles (Fowler & Reising, 2021; Hassann et al., 2015; Okafor et al., 2020, Omary et al., 2021; Garg et al., 2015, Sokol et al., 2019), three level II articles (Bechtel et al., 2021; Califf et all., 2021, To et al., 2014) and seven level III articles (Bittner et al., 2021; Buitron de la Vega et al., 2019; Baer et al., 2015; Sokol et al., 2021, Tsui et al., 2021, Kushel et al., 2006; Rust et al., 2020). There was one systematic review (Sokol et al., 2019) and it was classified as a level 1 with a quality A rating (Appendix B).

Eight articles received a quality rating of A (Buitron de la Vega et al., 2019; Hassann et al., 2015; Okafor et al., 2020; Sokol et al., 2021; Garg et al., 2015; To et al., 2014; Sokol et al., 2019; Kushel et al., 2006). 7 articles received a quality rating of B (Baer et al., 2015; Bechtel et al., 2021; Bittner et al., 2021; Califf et al., 2021; Rust et al., 2020; Tsui et al., 2021; Fowler & Reising, 2021). One article received a quality rating of C (Omary et al., 2021).

Critical Appraisal of the Evidence with Themes

A thorough analysis of the literature identified the common themes and trends associated with screening for SDOH. The literature synthesis identified the following four themes: screening successfully identifies SDOH concerns, screening for SDOH encourages referrals to community resources, screening positive for SDOH is correlated with other negative health findings, and nursing toolkits and their importance to best practices.

Screening for SDOH Identifies Concerns

Food insecurity was among the most prevalent social domain identified in the literature and is associated with other social problems such as healthcare access, housing, income insecurity, and substance use (Bear et al, 2015; Bechtel et al, 2021; Buitron de la Vega et al., 2019; Hassann et al., 2015; Okafor et al, 2020; Sokol et al., 2021; Tsui et al., 2021; Kushel et

al., 2006; To et al., 2014). Housing insecurity or hazards within the home was identified as a significant social domain need in over half of the articles included in the synthesis and is associated with postponing needed medical care, postponing medications, increased emergency department visits, and increased hospitalizations (Bear et al, 2015; Bechtel et al, 2021; Buitron de la Vega et al., 2019; Hassann et al., 2015; Sokol et al., 2021; Tsui et al., 2021; Kushel et al., 2006; To et al., 2014; Bittner et al., 2021). Financial insecurity or unemployment was identified as a major social domain problem in five different articles and results in problems affording medication (Buitron de la Vega et al., 2019; Hassann et al., 2015; Baer et al., 2015; Sokol et al., 2021; Bittern et al., 2021). In addition, an annual income of less than $75,000 was associated with an increased risk for having greater than two unmet social needs (Tsui et al., 2015; Garg et al., 2015).

Screening for SDOH Encourages Referrals

Implementation of a SDOH screening workflow was successful in identifying and providing relevant resource referrals (Buitron de la Vega et al., 2019; Hassann et al., 2015; Sokol et al., 2021; Garg et al., 2015; Bittner et al., 2021). In a randomized controlled trial of 336 mothers, they received at least one relevant resource referral, and after 12-months were enrolled in a new community resource (Garg et al., 2015). According to an observational study of 1,696 participants, 86% of participants received a relevant resource referral (Buitron de la Vega et al., 2019). Hassann et al (2015) revealed similar results with 83% of participants receiving a follow up notification for their identified need and 47% reported "completely" or "mostly" resolving their priority problem.

Effects of Screening Positive for Unmet Needs

Being negatively affected by SDOH increases the risk for comorbidities and other negative health practices. According to Califf et al (2021), PHQ-9 scores were higher among unemployed, unmarried, low education individuals, females, younger participants, and those with Hispanic ethnicity. Housing and food instability was independently associated with

postponing necessary medical care, postponing medications, increased emergency department visits, and increased hospitalizations (Kushel et al., 2006). Finally, another study revealed that food insecurity in children is associated with less moderate to vigorous physical activity than food secure children and lack of adherence to physical activity in adults (Baer et al., 2015).

Nursing Toolkits Supporting Best Practices

Toolkits contribute to the nursing profession as guides for best practices. They are available to provide current and relevant information on a variety of topics such as electronic health records (EHR), fall prevention, post-acute care regulations, and prevention and management of obesity in adults (Fowler et al., 2021; Omary et al., 202; Rust et al., 2020; Worsowicz & Singh, 2019). There are multiple purposes for the use of toolkits such as increasing knowledge about best practices of nursing related topics, optimization of patient outcomes, and in enhancing patient care (Fowler et al., 2021; Omary et al., 202; Rust et al., 2020; Worsowicz & Singh, 2019).

Fowler et al (2021) demonstrated improved patient outcomes following the use of a patient centered fall prevention toolkit. According to a pre and post intervention test, patients were more knowledgeable about fall risk factors and interventions, fall rates, and injury rates. Furthermore, there was an overall reduction in patient falls from 3.3% to 1.9%. Omary et al (2021) utilized a pre and post intervention test to determine nursing knowledge about use and management of EHR data into practice. One hundred percent of participants experienced a median of 17.6% increase in scores following use of the training content and assessments.

In another study, a post-acute care (PAC) toolkit was utilized across an accountable care organization to assist physicians in choosing the most appropriate PAC setting when discharging a patient to ensure optimal patient outcomes (Worsowicz & Singh, 2019). A primary care clinic in Lexington Kentucky utilized steps from the Registered Nurses Association of Ontario toolkit to implement best practice guidelines for the prevention and management of obesity in adults (Rust et al., 2020). Following a 12-week period, providers were consistently

assessing for comorbidities, setting appropriate goals, and successfully managing the weight of their obese patients. In addition, providers increased their documentation of readiness for change.

Program Review Recommendation Statement

The studies included in the literature synthesis examine a variety of populations and outcomes. The recommendation to screen for SDOH is a relatively new concept, but the literature focused primarily on pediatric populations. There is limited data available to address how SDOH affects adults. However, the literature is conclusive on the idea that screening for SDOH identifies unmet social needs, improves provider referrals, and improves overall health outcomes. In addition, the literature supports the use and development of nursing toolkits to influence evidence-based interventions in healthcare.

Based on this literature review, the recommendation is that SDOH programs should be reviewed in accordance with the CDC's PEF to guide the development of an implementation toolkit for SDOH screening in adult patients at primary care clinics. This recommendation answers the PICOT question: In adult clients seeking care at a primary care clinic (P), how does a SDOH toolkit based on the CDC framework (I) compared to no SDOH toolkit (C) affect identification of unmet health related social needs (O)?

Program Analysis and Evaluation Plan

A definitive toolkit for SDOH screening was not located within the literature. Therefore, as the PM reviewed practice/position statements, the development of an implementation SDOH toolkit took place to fill the gaps between current practice and best practices as supported by the literature. The Centers for Disease Control and Prevention (CDC) Program Evaluation framework (PEF) guided the implementation of the program change and development of the SDOH toolkit.

The programs and toolkits that were selected for review are The Centers for Disease Control and Prevention, Healthy People 2030, and Health Leads (Health Leads screening

toolkit). According to the AAFP, primary care is a natural point of integration amongst other forms of healthcare (public health, behavioral health, and community-based services). Healthy People 2030, CDC, and Health Leads were selected due to their dedication to improving overall health through data driven national objectives, community-level health initiatives, accelerating practice, and targeted advocacy.

Engage Stakeholders

The individuals who were affected by the program and toolkits should be used for the evaluation (CDC, 2018). The PM sought to understand the population of interest for each program and the intended audience for the toolkits. In doing so, the PM gained a better understanding of the stakeholders' values and perspectives on important elements such as the program's objectives, operations, and outcomes.

Describe the Program

To accurately depict the mission, goals, and objectives of the program being evaluated, the programs inputs, activities, outputs, outcomes, impacts, and moderators should be identified (CDC, 2017). Through identification of what the program does to affect change, the PM developed a logic model (Figure 2) which created a clear depiction of the link between program activities and the intended outcomes.

Focusing the Evaluation Design

The PM identified the purpose of the program and toolkit evaluation (gain insight, change practice, assess affects, and affect participants). The PM outlined the purpose of the program and toolkit evaluation as part of the project proposal. According to Harris et al. (2018) this stage of the framework guides the development of the project objectives utilizing the SMART goals format.

Gather Credible Evidence

Credible evidence provides for subsequent strong evaluation judgments and recommendations for change (CDC, 2017). In searching for such evidence, the PM investigated

the partnerships, community-level health initiatives, and research conducted by the three selected programs to determine the success of each.

Justify Conclusions

An analysis and synthesis of the results of the evaluation should be applied to detect patterns by isolating important findings from each program and toolkit (CDC, 2017). In addition, the examination served to detect similarities among the programs to reach a larger understanding of its value. The PM interpreted the results to answer questions about the programs performance and practical significance, and then to make recommendations. These recommendations include whether to continue, expand, redesign, or terminate the program, and are based on evidence and stakeholder values from the CDC model. The recommendations were translated into the form of a more current and relevant toolkit for SDOH.

Ensure Use and Share Lessons Learned

A deliberate effort is required to ensure that the findings of the program and toolkit evaluation are distributed appropriately (CDC, 2017). As mentioned previously, the PM identified the design of the evaluation as part of the project proposal. This was important to highlight the intended purpose of the program analysis review. The PM utilized the findings of the program review to develop a toolkit for SDOH screening in primary care clinics. The PM developed a plan for dissemination to ensure the timely communication of lessons learned to the appropriate audiences.

Program Evaluation Discussion and Recommendations

Programmatic evaluation of existing social determinants of health programs was conducted using the CDC's Program Evaluation framework to analyze the published content related to three SDOH programs: CDC, Healthy People 2030, and Health Leads. These programs were chosen for their emphasis on SDOH as well as applicability to the target population of adults in primary care.

The evaluation utilized the six identified categories and evaluated the three programs thoroughly using the prescribed standards within each of the six categories. Across the three programs, the PM identified consistent findings related to stakeholder engagement, programmatic description, evaluation design, evidence credibility, programmatic evaluation standards to justify conclusions, and utilization and dissemination strategies. Each category was subdivided into standards ranging in number of four to nine depending on the evaluation step. Those standards were further categorized by group (accuracy, propriety, and utility).

Each program was reviewed using the steps and standards tool and determined to meet expectations, exceed expectations, or not meet expectations based on the standard definitions and evidence review. This determination was then coded for descriptive statistical analysis with 0= not meet, 1= meet, 2= exceeds. The descriptive statistical mean value ≥1 indicates that the program consistently met the standards as related to the six program evaluation step criteria. The observations for Health People 2030 presented an average of 0.76, with CDC presented an average of 1.05, and the Health Leads program with an average of 1.11. See Table 2 for further details.

Next, the programs were evaluated to understand their relevancy to the evidence synthesized in support of the development of an SDOH toolkit specifically for the adult primary care population. This evaluation consisted of applying the identified themes and supporting evidence and analyzing the three identified programs for currency of literature and relevancy to the population. This analysis is essential to understand the gap within the relevant literature and published programs to support the development of the population specific toolkit. This was accomplished by a thorough review of the published programs against the evidence with coding of present and current (PC), present and needs updating (PU), and missing current evidence (M).

This evaluation determined that the CDC and Healthy People 2030 programs were published in two locations but the same program in terms of evidence relevancy and currency.

Due to this identification the two programs are presented in the review as a single program.

Health Leads, however, differed enough in content to be evaluated as a unique program (See

Table 3).

The evidence concurrency and relevancy to the literature review was statistically

analyzed using Intellectus Statistical software (2021). A two-tailed Wilcoxon signed rank test

was performed to understand if there was a significant difference between the analysis of the

two identified programs, Healthy People 2030 (which includes the CDC duplicate program) and

the Health Leads Network program. The two-tailed Wilcoxon signed rank test results were

significant based on an alpha value of .05, $V = 0.00$, $z = -2.53$, $p = .011$. This indicates that the

differences between Healthy_People_2030 and Health_Leads_Network are not likely due to

random variation. The median of Healthy_People_2030 ($Mdn = 1.00$) was significantly lower

than the median of Health_Leads_Network ($Mdn = 2.00$). See Figure 3 for a boxplot depiction of

the ranked values of the two compared programs.

The objectives of this project were to identify and evaluate three SDOH programs,

objectively analyze the program content to develop practice recommendations, and develop a

SDOH toolkit for a specialty population. The evaluation results indicate that the evaluated

SDOH programs meet the requirements of a program as per the CDC Program Evaluation

framework. Additionally, the evidence supports the use of these programs as established to

support the development of a SDOH screening toolkit for the specialty population of adult

primary care patients. The evaluation conclusion determined that the Health Leads Network

program, according to the CDC Program Evaluation framework and the thematic analysis for

currency and relevancy of evidence, is the more complete program for social determinants of

health.

Limitations of this review include the program evaluation was completed utilizing public,

published content for programmatic implementation, but did not measure programs in use

currently. Subject matter experts were consulted in the development of the SDOH for adult

primary care toolkit, but the toolkit has not been placed into use at this time. See Appendix G for the Adult Primary Care SDOH Screening toolkit.

Dissemination Plan

Dissemination of the project was executed by the PM, who shared the project virtually with each organization discussed during the program evaluation. In addition, the PM disseminated the results via an in-person meeting the project outcomes with a primary clinic that serves uninsured and low-income populations. This project is archived within the University of Saint Augustine for Health Sciences Library Scholarship and Open Access Repository (SOAR) as a student capstone. A virtual poster presentation was submitted to disseminate the project to other DNP students and faculty at the University of St. Augustine for Health Sciences.

Conclusion

With growing interest in SDOH and its effects on health outcomes, a program evaluation review of the CDC, Health Leads, and Healthy People 2030 was a unique way to answer questions about the program's performance and practical significance so that recommendations for change could be made. The objectives of this project were to identify and evaluate three SDOH programs, objectively analyze the program content to develop practice recommendations, and develop a SDOH toolkit for a specialty population. The evaluation results indicate that the CDC's, Healthy People 2030, and Health Leads Network SDOH programs meet the requirements of a program as per the CDC Program Evaluation framework. Additionally, the evidence supports the use of these programs as established to support the development of a SDOH screening toolkit for the specialty population of adult primary care patients.

A synthesis of the literature was effective in evaluating the meaning and relevance of the research findings which focused on screening for SDOH, identifying possibilities for addressing those unmet needs, and the role of toolkits in nursing. A complete and thorough program evaluation in accordance with the CDC's program evaluation framework was useful for

identifying gaps between existing knowledge surrounding SDOH screening for adult patients in

primary care and best practices. Identification of said gaps led to the creation of a current SDOH

toolkit for adult patients in primary care clinics complete with a purpose statement, audience

recommendation, key definitions, implementation strategy, evaluation strategy and tool,

stakeholder engagement and analysis tool, communication planning tools, position and policy

statement, screening tool examples, and education for clinicians, patients, and their support

persons.

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Table 1

JHNEBP Levels of Evidence for Articles Used in this Paper

Evidence Levels	Quality Grades
Level I - Experimental study, randomized controlled trial (RCT) Systematic review of RCTs, with or without meta-analysis	**A –** High Quality
Level II - Quasi-experimental study, Systematic review of a combination of RCTs and quasi experimental, or quasi-experimental studies only, with or without meta-analysis	**B** – Good Quality
Level II - Non-experimental study Systematic review of a combination of RCTs, quasi-experimental and non-experimental studies, or non-experimental studies only, with or without meta-analysis Qualitative study or systematic review with or without a meta synthesis	**C** – Low Quality

Table 2

Summary Statistics Table for Interval and Ratio Variables

Summary Statistics Table for Interval and Ratio Variables

Variable	*M*	*SD*	*n*	*SE$_M$*	Min	Max	Skewness	Kurtosis
Healthy_People_2030_SDOH	0.76	0.54	38	0.09	0.00	2.00	-0.13	-0.27
CDC_SDOH	1.05	0.73	38	0.12	0.00	2.00	-0.08	-1.09
Health_Leads_Network	1.11	0.80	38	0.13	0.00	2.00	-0.19	-1.37

Note. '-' indicates the statistic is undefined due to constant data or an insufficient sample size.

Table 3

Determination of Currency and Relevancy of Evaluated SDOH Programs

Theme From Literature Synthesis	Relevant Evidence	[a]Healthy People 2030	Health Leads
1. Screening for SDOH identifies concerns	1.1 FI associated with other social problems	PC	PC
	1.2 Delays in seeking medical care	PC	PC
	1.3 Medication adherence	PC	PC
	1.4 Increased ED visits and hospitalizations	PU	PC
2 Screening for SDOH encourages referrals	2.1 Relevant resource referrals	M	PC
	2.2 Follow up notifications	M	PC
	2.3 Resolution of unmet needs	M	PC
3 Effects of screening positive for unmet needs	3.1 Risk for comorbidities	PC	PC
	3.2 Decreases in physical activity	PC	PC
	3.3 Elevated PH9 scores	PC	PC
4 Nursing toolkits supporting best practices	4.1 Toolkits enhance knowledge	M	PC
	4.2 Optimization patient outcomes	M	PC
	4.3 Enhances patient care	M	PC

Figure 1

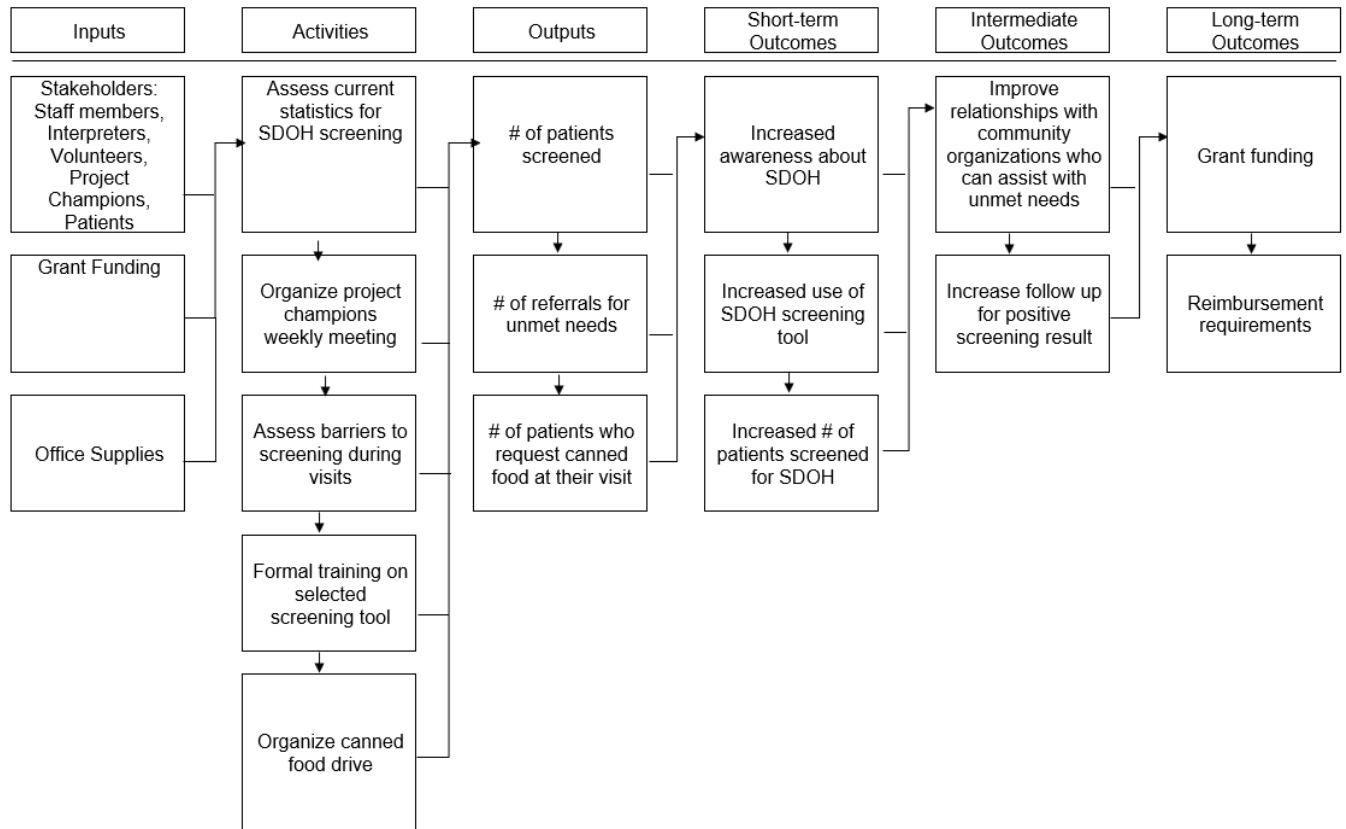*PRISMA Literate Search Strategy Diagram*
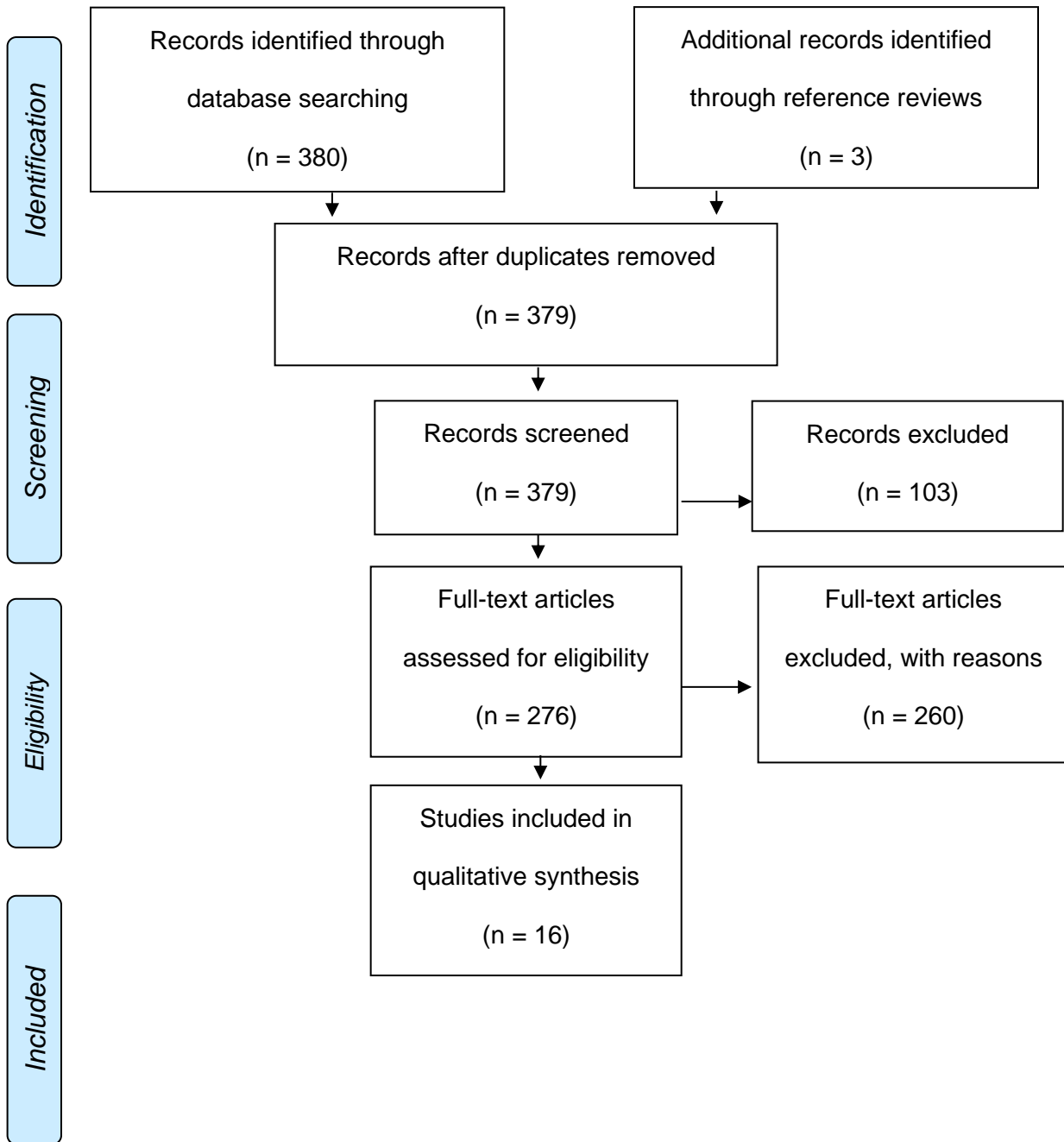
Note. Adapted from Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLOS Medicine, 6*(7), e1000097. https://doi.org/10.1371/journal.pmed.1000097
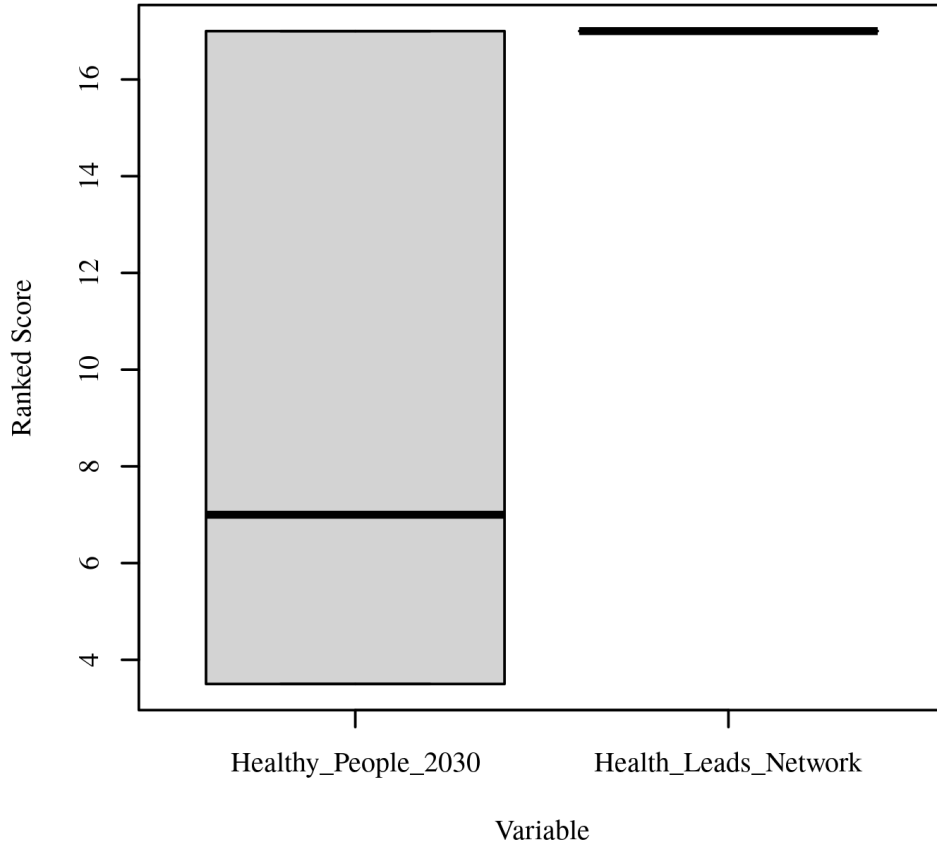
Figure 2

Logic Model

Inputs	Activities	Outputs	Short-term Outcomes	Intermediate Outcomes	Long-term Outcomes
Stakeholders: Staff members, Interpreters, Volunteers, Project Champions, Patients	Assess current statistics for SDOH screening	# of patients screened	Increased awareness about SDOH	Improve relationships with community organizations who can assist with unmet needs	Grant funding
Grant Funding	Organize project champions weekly meeting	# of referrals for unmet needs	Increased use of SDOH screening tool	Increase follow up for positive screening result	Reimbursement requirements
Office Supplies	Assess barriers to screening during visits	# of patients who request canned food at their visit	Increased # of patients screened for SDOH		
	Formal training on selected screening tool				
	Organize canned food drive				

Figure 3

Ranked values of Healthy People 2030 and Health Leads Network Boxplot

Appendix A

Summary of Primary Research Evidence

Citation	Design, Level Quality Grade	Sample Sample size	Intervention Comparison (Definitions should include any specific research tools used along with reliability & validity)	Theoretical Foundation	Outcome Definition	Usefulness Results Key Findings
Buitron de la Vega, P., Losi, S., Sprague Martinez, L., Bovell-Ammon, A., Garg, A., James, T., Ewen, A. M., Stack, M., DeCarvalho, H., Sandel, M., Mishuris, R. G., Deych, S., Pelletier, P., & Kressin, N. R. (2019). Implementing an EHR-based screening and referral system to address social determinants of health in primary care. *Medical Care*, *57*(Suppl 2). https://doi.org/10.1097/mlr.0000000000001029	Observational study Level III High Quality A	1,696 pediatric patients	EHR-based SDOH screening and referral model (THRIVE), adapted from the WE CARE model for pediatrics WE CARE – Unemployment, caregiving, and utility needs The Hunger Vital Sign – food insecurity	N/A	Understand the burden of SDOH Evaluate feasibility of implementing a systematic clinical strategy to screen new primary care patients for SDOH Print patient language congruent referrals to available resources upon patient request	Implementing a systematic clinical strategy in primary care using EHR workflows was successful in identifying and providing resource information to patients with SDOH needs 70% of eligible patients were screened Most prevalent concerns Employment (12%) food insecurity (11%) problems affording medications (11%) Housing insecurity (8%) Homelessness (7%) Transportation needs for appointments (7%) Utility needs (6%) Child and elder care needs (6%)

						22% requested help connecting with community resources 86% received a relevant resource referral guide upon request (1 page resource referral guide)
Hassann, A., Scherer, E. A., Pikcilingis, A., Krull, E., McNickles, L., Marmon, G., Woods, E. R., & Fleegler, E. W. (2015). Improving social determinants of health: Effectiveness of a web-based intervention. *American Journal of Preventive Medicine*, *49*(6). https://doi.org/10.1016/s0749-3797(15)00647-9	Prospective Intervention Study Level I High Quality A	401 youth, age 15-25	The Online Advocate (screens for 9 HRS domains) Developed from validated screens and questions: Youth Risk Behavior Survey, Growing up today study, and U.S. department of Agriculture food security scales	N/A	Determine whether a web-based intervention can connect youth to services to address these problems Increase their resolution	76% identified at least 1 problem 74% identified 2 or more problems Most prevalent concerns healthcare access (37%) Housing (34%) Food security (29%) Income security (21%) 83% follow up notification 40% contacted a selected agency and 47% reported "completely" or "mostly" resolving their priority problem
Okafor, M., Chiu, S., & Feinn, R. (2020). Quantitative and qualitative results from implementation of a two-item food insecurity screening tool in healthcare settings in Connecticut. *Preventive Medicine Reports*, *20*, 101191.	Pilot study Level I High Quality A	1,130 pediatric and adult patients	Hunger Vital Sign (Food insecurity screening) 2 question, validated tool (97% sensitive and 83% specificity)	N/A	Assess the prevalence of households at risk for food insecurity	41.4% at risk for food insecurity 40% responded sometimes or always true to "would worry food would run out before got money to buy more food" Male respondents had higher prevalence than

https://doi.org/10.1016/j.pmedr.2020.101191						females (46.3% vs 38.9%, p = 0.009) Hispanics (34.4%) less than Whites (54.4%) and Blacks (53.8%) (p < 0.001) Addressing food insecurity is an important issue as low-quality diet leads to chronic health conditions.
Baer, T. E., Scherer, E. A., Fleegler, E. W., & Hassan, A. (2015). Food insecurity and the burden of health-related social problems in an urban youth population. *Journal of Adolescent Health*, 57(6), 601–607. https://doi.org/10.1016/j.jadohealth.2015.08.013	Explanatory Correlational Level III Good Quality B	400 patients age 15-25	US Household Food Security Survey Module (Ages 18-25) Adult Food Security Survey Module (Ages 18-25) Self-Administered Food Security Survey Module (ages 12-17) screened for 6 additional HRSD: health care access, education, housing, income insecurity, substance use, and intimate partner violence	N/A	Determine prevalence of food insecurity Examine association between presence and level of food insecurity with other health-related social problems	Most prevalent concerns 52.8% = High food security 14.8% = Marginal food security 17.5% = Low food security 32.5% = food insecure (according to USDA definition of food insecurity) 32.5% screened positive food insecurity level is significantly associated with cumulative burden of social problems ($p < .001$) Health care access ($p < .001$) Education ($p = .003$) Housing ($p < .001$) Income insecurity ($p = .03$)

						Substance use ($p < .001$)
Bechtel, N., Jones, A., Kue, J., & Ford, J. L. (2021). Evaluation of the core 5 Social Determinants of Health Screening Tool. *Public Health Nursing*. https://doi.org/10.1111/phn.12983	Quasi-experimental pre-post test Level II Good Quality B	311 patients aged 18 and older	Core 5 SDH screening tool (Assessing food, housing, utilities, transportation, and safety needs)	N/A	Identification of SDOH needs Number of ED visits pre and post intervention	43% report at least 1 need Most prevalent concerns Food insecurity - 62.2% Transportation -50.4% Utilities - 43% Housing - 38.5% Safety - 3.7% ED visits decreased at 3 months post intervention compared to 3 months before ($IRR = 0.64$, 95% $CI = 0.41, 0.999$)
Califf, R. M., Wong, C., Doraiswamy, P. M., Hong, D. S., Miller, D. P., & Mega, J. L. (2021). Importance of social determinants in screening for depression. *Journal of General Internal Medicine*. https://doi.org/10.1007/s11606-021-06957-5	Prospective cohort study Level II Good Quality B	2,502	PHQ-9	N/A	Assess the relationship between PHQ-9 score and a broad array of measurements intended to assess social determinants of health	Higher PHQ-9 scores – Among female, younger participants, POC, Hispanic ethnicity, minimal education, unmarried, unemployed, and lack of health insurance Depression = comorbidity when social determinants of health are addressed
Sokol, R. L., Mehdipanah, R., Bess, K., Mohammed, L., & Miller, A. L. (2021). When families do not request help: Assessing a social determinants of health screening tool in practice. *Journal of*	Explanatory Correlational Level III High Quality A	39,251 encounters 30,486 unique children age 0-18	SDH screening tool: Addressing food insecurity, housing insecurity, utility insecurity, financial strain, transportation needs,	N/A	% Of encounters where a SDOH need was identified % Of encounters in which a participant requested	8% indicated a need 2% requested a resource connection Most prevalent concerns with resource request Housing

			employment needs, elder or childcare needs, and literacy needs Adapted questions from the Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences assessment tool		resources for identified need	(OR 3.49) Employment (OR 3.15) Food (OR 1.89) Transportation (OR 1.82)
Pediatric Health Care, *35*(5), 471–478. https://doi.org/10.1016/j.pedhc.2021.05.002						
Tsui, J., Yang, A., Anuforo, B., Chou, J., Brogden, R., Xu, B., Cantor, J. C., & Wang, S. (2021). Health related social needs among Chinese American primary care patients during the COVID-19 pandemic: Implications for cancer screening and Primary Care. *Frontiers in Public Health*, *9*. https://doi.org/10.3389/fpubh.2021.674035	Explanatory Correlational Level III Good Quality B	236	HRSN survey 38 item surveys available on iPads in English and Chinese	N/A	Examine the prevalence of HRSN during a period spanning the COVID-19 pandemic	50% report at least 1 HRSN: (E) = 48%, (T) = 56%, (S) = 55% (*p*-value: 0.533) 14% >2 HRSN Housing instability: (S) = 23%, (T) = 5%, (E) = 12% (*p*-value: 0.038) Food insecurity: (S) = 16%, (E) = 9%, (T) = 7% (*p*-value: 0.317) Transportation needs: (T) = 16%, (E) = 5%, (S) = 7% (*p*-value: 0.039) incomes < $75,000 = higher odds of reporting ≥2 HRSNs (OR 2.53)
Garg, A., Toy, S., Tripodis, Y., Silverstein, M., & Freeman, E. (2015). Addressing social determinants of health at Well Child Care Visits: A cluster RCT.	Cluster, Randomized controlled trial Level I High Quality A	336 mothers	WE CARE	N/A	Assess needs for child-care, education, employment, food security, household heat, and housing	Most families had household incomes <$20 000 (57%) 68% had ≥2 unmet needs

PEDIATRICS, *135*(2). https://doi.org/10.1542/peds.2014-2888						WE CARE mothers received ≥1 referral at the index visit (70% vs 8%; adjusted odds ratio [aOR] = 29.6; 95% confidence interval [CI], 14.7–59.6). 12-month visit, WE CARE mothers had enrolled in a new community resource (39% vs 24%; aOR = 2.1; 95% CI, 1.2–3.7) WE CARE mothers had greater odds of being employed (aOR = 44.4; 95% CI, 9.8–201.4). WE CARE children had greater odds of being in childcare (aOR = 6.3; 95% CI, 1.5–26.0) WE CARE families had greater odds of receiving fuel assistance (aOR = 11.9; 95% CI, 1.7–82.9) lower odds of being in a homeless shelter (aOR = 0.2; 95% CI, 0.1–0.9)
Kushel, M. B., Gupta, R., Gee, L., & Haas, J. S. (2006). Housing instability and food insecurity as barriers to health care among low-income Americans. *Journal of*	Secondary data analysis of National survey of American Families Level III High Quality A	16,651 low-income adults	Self-reported measures of past-year access (1) not having a usual source of care	N/A	Determine the association between housing instability and food insecurity and access to ambulatory	3.6% of subjects had housing instability 42.7% had food insecurity housing instability was independently

General Internal Medicine, 21(1), 71–77. https://doi.org/10.1111/j.1525-1497.2005.00278.x			(2) postponing needed medical care (3) postponing medication; and past year utilization: (1) not having an ambulatory care visit (2) having emergency department (ED) visits (3) inpatient hospitalization.		healthcare and rates of acute healthcare utilization	associated with not having a usual source of care (AOR 1.31) postponing needed medical care (AOR 1.84) postponing medications (AOR 2.16) increased ED use (AOR: 1.43) increased hospitalizations (AOR 1.30) Food insecurity was independently associated with postponing needed medical care (AOR 1.74) postponing medications (AOR 2.15) increased ED use (AOR 1.39) Increased hospitalizations (AOR 1.42)
To, Q. G., Frongillo, E. A., Gallegos, D., & Moore, J. B. (2014). Household food insecurity is associated with less physical activity among children and adults in the U.S. population. *The*	Continuous cross-sectional study Level II High Quality Grade A	PAM: 2261 children and 2712 adults. PAQ: 788 children and 4886 adults	Physical activity measured by accelerometry (PAM) Physical activity measured by	N/A	Examine the association between food insecurity and physical activity in the U.S. population	Food insecure children did less moderate to vigorous physical activity than food secure children (P= 0.02)

Journal of Nutrition, *144*(11), 1797–1802. https://doi.org/10.3945/jn.114.198184			questionnaire (PAQ) data from the NHANES			In adults, food insecurity was significantly associated with adherence to physical activity (P = 0.03) but was not associated with sedentary minutes (P > 0.05)
Bittner, J. C., Thomas, N., Correa, E. T., Hatoun, J., Donahue, S., & Vernacchio, L. (2021). A broad-based approach to social needs screening in a pediatric primary care network. *Academic Pediatrics*, *21*(4), 694–701. https://doi.org/10.1016/j.acap.2020.08.021	Explanatory Correlational Level III Good Quality B	100,097	Adapted from the Health Leads Tool Kit 4 Domains: food, housing, transportation, utilities	N/A	Percentage of SDOH identified Referral requests	8% identified at least 1 social need Most prevalent concerns Financing utilities Outside support Hazards in the home 33% requested assistance Medicaid assistance insured request more often than commercially insured (37% vs. 21%, p = < 0.0001)
Omary, C., Cox-Henley, M., Hertzberg, V. S., Cranmer, J. N., & Simpson, R. L. (2021). Toolkit for Best Practice Use of Electronic Health Record Data in Quality Improvement. *CIN: Computers, Informatics, Nursing*, *39*(12), 921–928. https://doi.org/10.1097/CIN.0000000000000757	Pilot Study Level I Low Quality Grade C	16 DNP students	20 questions content related skills assessment about using EHR data when planning QI initiatives Wilcoxon rank sum test	N/A	Pre and post-test scores	25% increase on the data definitions sub-scale (IQR, 0.0%–50.0%; Wilcoxon rank sum test, p = .0033) 18% increase for QI research (IQR, 0.0%–31.3%; Wilcoxon rank sum test, p = .0033). planning QI using data (IQR, 0.0%–20.0%; p = .0088). No increase between pre- and post-test CMV/general nursing

						knowledge questions (0%; IQR, −16.7 to 0.0; **P** = .1615) No statistical differences in the change of scores based on baseline participant characteristics including level of DNP training, DNP track, years of nursing experience, age, sex, or race
Rust, C., Prior, R. M., & Stec, M. (2020). Implementation of a clinical practice guideline in a primary care setting for the prevention and management of obesity in adults. *Nursing Forum*, *55*(3), 485–490. https://doi.org/10.1111/nuf.12453	Explanatory Correlational Level III Good Quality B	51 records of patients with overweight or obesity were randomly selected and reviewed	The Toolkit: Implementation of Best Practice Guidelines (2nd ed) created by the Registered Nurses' Association of Ontario (RNOA)	Knowledge-To-Action conceptual framework

The framework articulates the complex process where new healthcare information is created (the "knowledge cycle") and then applied at the bedside (the "action cycle") | Audits of records were conducted during the first and third month following the educational intervention to evaluate whether the CPG was being implemented appropriately using a tool that evaluated each step of the algorithm to determine if care was congruent with the CPG recommendations. | Providers were setting goals and discussing strategies to promote a healthy weight in greater than 91% of reviewed episodes of care

Readiness for weight management was being documented in less than 40% of patients with a BMI in the obese range (consistent with findings in the literature demonstrating that visit time limitations make it difficult for providers to address weight as a stand-alone health concern in patients with both obesity and comorbidities)

Patients classified as overweight discussed weight management with providers almost 90% of the time. |

						Readiness for change was assessed in only about 30% of patients with a BMI ≥ 25 and a weight-related goal was set just over 40% of the time.
Worsowicz, G. M., & Singh, R. (2019). Post-Acute Care Toolkit: An Introduction to a Comprehensive Guide on Post-Acute Care Regulations. *PM & R: Journal of Injury, Function & Rehabilitation*, *11*(9), 1013–1019. https://doi.org/10.1002/pmrj.12201						
Fowler, S. B., & Reising, E. S. (2021). A Replication Study of Fall TIPS (Tailoring Interventions for Patient Safety): A Patient-Centered Fall Prevention Toolkit. *MEDSURG Nursing*, *30*(1), 28 34	Pre and post-test intervention design Level I Good Quality Grade B	Patients on the medical telemetry unit at a 327- bed community hospital over 6 months (average of 30 patients per day)	Use of a risk assessment poster and intervention guide, as well as nursing action, to engage the patient and family in discussions of fall risk and prevention	N/A	Pre and post intervention comparison of identify fall risk and knowledge of prevention	Question 1: Identify fall risk pre-compared to 1 month p=0.035 pre-compared to 2 months p = 0.05 pre-compared to 6 months p = 0.034 Question 2: Knowledge of prevention pre-compared to 1 month p= 0.001 pre-compared to 2 months p = 0.013 pre-compared to 6 months p = 0.000

Legend:
SDOH or SDH – Social Determinants of Health
EHR – Electronic Health Record
(T) Chinese Traditional
(S) Chinese Simplified
HRSN - Health related social needs

HRSD – Health Related Social Domain
WE CARE - Well Child Care Evaluation Community Resources Advocacy Referral Education
ED – Emergency Department
PHQ-9 – Patient Health Questionnaire
(FRS-CVD) – Framingham Risk Score Coronary Vascular Disease
NHANES – National Health and Nutrition Examination Survey
RNOA - Registered Nurses' Association of Ontario
CPG – Clinical practice guidelines
BMI – Body mass index

Appendix B

Summary of Systematic Reviews (SR)

Citation	Quality Grade	Question	Search Strategy	Inclusion/ Exclusion Criteria	Data Extraction and Analysis	Key Findings	Usefulness/Recommendation/ Implications
Sokol, R., Austin, A., Chandler, C., Byrum, E., Bousquette, J., Lancaster, C., Doss, G., Dotson, A., Urbaeva, V., Singichetti, B., Brevard, K., Wright, S. T., Lanier, P., & Shanahan, M. (2019). Screening children for social determinants of health: A systematic review. *Pediatrics*, *144*(4). https://doi.org/10.1542/peds.2019-1622	High Quality Grade A	Review SDOH screening tools used with children, examine their psychometric properties, and evaluate how they detect early indicators of risk and inform care	**Databases included:** PubMed, CINAHL, Embase via Elsevier, Cochrane Central Register of Controlled Trials, and Web of Science Core Collection. English only Inception of database to November 2018 Search terms: SDOHs, pediatric population, screening administered by a child service provider	Inclusion criteria: Tools that screened children for multiple SDOHs United States peer-reviewed English **Exclusion Criteria:** only screened for 1 SDOH did not conduct screening among children (age 0–25 years) or their caregivers and/or informants Not published in English Conducted outside of the United States; or were book chapters, reviews, letters, abstracts, or dissertations.	Extraction domains included study characteristics, screening tool characteristics, SDOHs screened, and follow-up procedures.	17 studies	future research should evaluate if referrals and interventions after the screening effectively address SDOHs and improve child well-being.

Legend:
SDOH or SDH – Social Determinants of Health
WE CARE - Well Child Care Evaluation Community Resources Advocacy Referral Education

Appendix C

Project Schedule

NUR 7802 DNP Practicum II	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14	W15
Faculty conferencing-weekly - Primary Faculty	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
DNP Preceptor conference biweekly - DNP Mentor/Preceptor	X		X		X		X		X		X		X		
Program Evaluation and Toolkit Development Proposal Development	X	X	X	X	X	X	X								
Introduction, Significance of the Practice Problem, Purpose of the Program Review Project, and Program Problem Statement	X														
Utility of Program Review, Analytical Framework		X													
Evidence Search Strategy, Results, and Evaluation with PRISMA diagram			X												
Critical Appraisal of the Evidence with Themes, Program Review Recommendation Statement				X											
Policy Analysis and Evaluation Plan					X										
Pre-review Toolkit Elements (Framework for toolkit)						X									
Dissemination Plan, Conclusion, and Complete Recommended Revisions to Policy Evaluation/Toolkit Proposal							X								
Program Evaluation and Toolkit Development Proposal Submission								X							
Program Evaluation and Toolkit Development Proposal Acceptance Letter									X						
Program Evaluation and Toolkit Development Proposal Toolkit Elements Permission Identification											X				
Program Evaluation and Toolkit Development Proposal Toolkit Elements Permission Letter(s)												X			
Program Evaluation and Toolkit Implementation Activities												X	X	X	X

NUR 7803 DNP Practicum III	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14	W15
Faculty conferencing-weekly - Primary Faculty	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
DNP preceptor conference biweekly - DNP Mentor/Preceptor	X		X		X		X		X		X		X		
Program Evaluation Manuscript Development Activities	X	X	X	X	X	X	X	X	X	X					

Program Evaluation and Toolkit Development Manuscript Development			X		X	X			X							
Program Analysis and Evaluation Results- Updated Toolkit/ Outputs			X													
			X													
Program Evaluation Discussion and Recommendations (with identified appendicies)					X											
Dissemination						X										
Conclusion and Abstract									X							
Final Policy Review Manuscript (with revision week 12 if needed)											X		X			
ePortfolio													X			
Archival to SOAR															X	
GoReact Project Presentation															X	

Appendix D

CDC Practice/Position Statement

"This website connects you to CDC resources for SDOH data, research, tools for action,

programs, and policy. They may be used by people in public health, community organizations,

research organizations, and health care systems to assess SDOH and improve community well-

being. Information and tools available on this website were generated or funded by CDC within

the last 10 years (Centers for Disease Control and Prevention, n.d.)."

https://www.cdc.gov/socialdeterminants/index.htm

Appendix E

Healthy People 2030 Practice/Position Statement

The link below will direct the reader to the Healthy People 2030 objectives and data webpage.

Healthy people 2030 groups SDOH into five domains: economic stability, education access and

quality, health care access and quality, neighborhood and built environment, and social and

community context. More information is available on each domain in the form of hyperlinks. In

addition, information about how Healthy People 2030 addresses SDOH, the SDOH workgroup,

research related to SDOH, and other efforts to address SDOH is available.

[Social Determinants of Health - Healthy People 2030 | health.gov](#)

Appendix F

Health Leads Practice/Position Statement

"We are an innovation hub that seeks to unearth and address the deep societal roots of racial inequality that impact our health. Founded in 1996, we helped set the standard for health systems and clinics looking to integrate programs that connect people to essential resources like food, heat, and housing. Today, we work both nationally and locally, across the U.S., to build partnerships and redesign systems so every person, in every community, can live with health, well-being and dignity (Health Leads, 2020)."

About Us — Health Leads (healthleadsusa.org)

Appendix G

Evidence-Based Best Practice Toolkit for the Implementation of Social Determinants of Health Screening in Adult Primary Care Clinics

PURPOSE STATEMENT:

The purpose of this toolkit is to serve as a guide for the implementation of a social determinants of health screening (SDOH) in primary care clinics and to inspire front line clinicians to recognize and validate the connection between unmet social needs and health outcomes.

AUDIENCE:

The audience for which this toolkit includes: all primary care clinic staff members, clinicians, patients, and family/support members. Specific people of interest include family physicians, family nurse practitioners, registered nurses, medical assistants, certified nursing assistants, patients, and family members.

I.   **DEFINITIONS:**
   A. **CDC's Definition of Social Determinants of Health: "**Are conditions in the places where people live, learn, work, and play that affect a wide range of health and quality-of life-risks and outcomes to address."

B. **Healthy People 2030's Definition of Social Determinants of Health:** "Social

determinants of health (SDOH) are the conditions in the environments where people

are born, live, learn, work, play, worship, and age that affect a wide range of health,

functioning, and quality-of-life outcomes and risks."

C. **CDC's Definition of Health Equity: "**Health equity is achieved when every person

has the opportunity to "attain his or her full health potential" and no one is

"disadvantaged from achieving this potential because of social position or other

socially determined circumstances."

D. **CDC's Definition of Health Disparity: "**Preventable differences in the burden of

disease, injury, violence, or opportunities to achieve optimal health that are

experienced by socially disadvantaged populations."

E. **World Health Organizations' Definition of Health Inequality:** Differences in

health status or in the distribution of health resources between different population

groups, arising from the social conditions in which people are born, grow, live, work,

and age.

II.   **IMPLEMENTATION STRATEGY:**
         A. Identify the problem

             a. It is important to identify the problem the clinic is facing. Are patients being

                 screened for potential unmet social needs which could be contributing to poor

                 health outcomes? Are some patients being screened when others are not?

                 What are the negative outcomes the patients are experiencing due to their

                 unmet needs (medication adherence, missed appointments, increased

                 hospitalizations, etc.)?

         B. Research and select evidence-based strategies

a. After the problem has been identified, evidence-based strategies and solutions should be reviewed to determine the best course of action. This toolkit is current and based on evidence-based practice recommendations for implementation of social determinants of health screening. There are a variety of current screening tools available for use as well as educational material for clinicians, patients, and support persons.

C. Plan for implementation

a. SMART (Specific, Measurable, Attainable, Relevant, Time-Based) goals

b. Staff Inclusion

    i. Keep staff informed about important discussions regarding project implementation

    ii. Discuss the barriers to screening

c. Develop a timeline

    i. Staff education

    ii. Important meeting dates

    iii. Implementation start date

d. Develop a budget / identify the resources required to be successful

e. Identify Stakeholders / Project Champions

    i. Who are the individuals who are vital to the success of the implementation of SDOH screening?

    ii. What individuals can assist with compliance of SDOH screening?

f. Develop an Audit Tool

g. Discuss questions, concerns, and provide clarification prior to initiation of project implementation

D. Implement Social Determinants of Health Screening

    a. Go live celebration

    b. Monitor screening compliance

    c. Check in with project champions / stakeholders

    d. Ask questions / request feedback about implementation status from clinicians

E. Reflect

    a. After a pre-determined amount of time, reflect on the success of the project. Have the SMART goals been met? If not, what barriers are still in place.

    b. Review the audit tool for compliance

    c. Meet with staff, stakeholders, and project champions to discuss implementation adjustments going forward
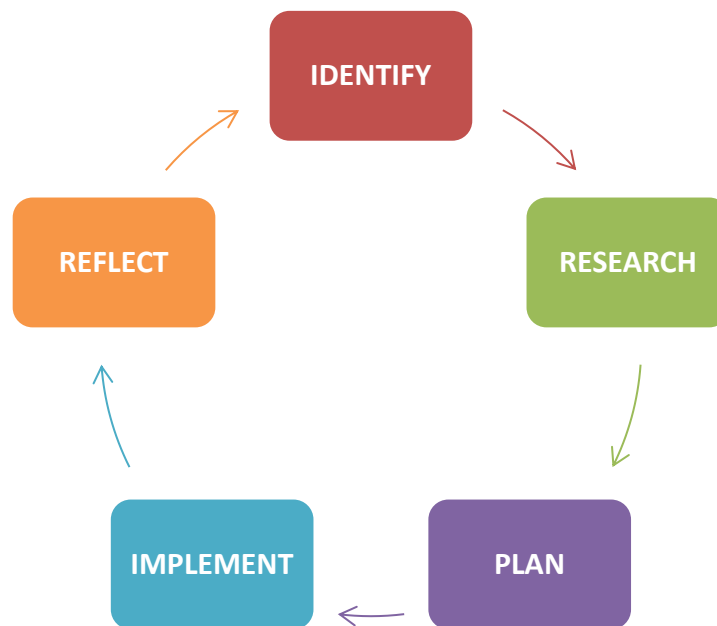
III.   EVALUATION STRATEGY AND TOOLS:

A methodology is necessary to establish whether the implementation of social determinant of health screening was functional. This is done through use of an audit tool such as the one below. The tool below is generalized and can be adapted to meet the needs and goals of the clinic.

ID # _____

**TO BE COMPLETED IN TRIAGE

Completed Screening Tool
YES / NO

* TO BE COMPLETED BY PROVIDER DURING PATIENT ENCOUNTER

Identified Needs

- o   Food Insecurity
- o   Utilities
- o   Housing Instability
- o   Child Care
- o   Unable to seek medical care due to financial insecurity
- o   Transportation
- o   Requires help reading hospital materials
- o   Lacks companionship

Patient Requests Assistance	Referral	Follow Up
YES / NO	**YES / NO**	**YES / NO**

IV.   **STAKEHOLDER ENGAGEMENT AND ANALYSIS TOOL**
        Stakeholders are the individuals, group, and organizations that are most affected by the

        clinic. Examples of primary stakeholders include upper management, physicians, nurse

        practitioners, triage, patients, and their family and support people. These individuals can

        help facilitate change within the clinic, but they can also be responsible for resistance

        which could negatively impact the results of the intended change. To maintain

        successful relationships with the stakeholders of the project change, there must be a

        way to monitor stakeholder engagement. The stakeholder analysis template below is

one way to identify the stakeholders, their relationship to the project, and their level of

commitment.

Stakeholders			Project Relationship				Level of Commitment C = Current Level R = Required Level				
Name	Title	Role	Level of Impact (High, Medium, Low)	Level of Influence (High, Medium, Low)	Content Expert (Y/N)	Decision Authority (Y/N)	No Commitment	Let It Happen	Help It Happen	Make It Happen	Strategies for Moving Commitment
1)											
2)											
3)											
4)											
5)											
6)											
7)											
8)											
9)											
10)											

Cincinnati Children's — changing the outcome together

Stakeholder Analysis

Version#.Date : _____

V.   **COMMUNICATION PLANNING TOOLS:**

Effective communication is key to the success of any project change. Communication

ensures that all participants are on the same page, and it also helps to keep everyone

engaged. To ensure effective communication, you must understand your audience and

choose the right channel. Listed below are some examples of communication channels

that may be effective for use in your clinic.

   a. Email

   b. Virtual Meetings (Zoom, TEAMS, Ring Central)

   c. Lunch and Learn

   d. In Person Meetings

VI.   **POSITION STATEMENT:**

Screening for social determinants of health is a vital component of the patient's complete health history and should be reviewed and updated at least annually to ensure optimal health outcomes.

VII.   POLICY STATEMENT:

Primary care providers should ensure that an up-to-date screening for social determinants of health is on file annually. The PCP should review the results of the screen, determine if help for the unmet social need is requested, provide an adequate resource, or refer per the clinics policy and procedures, and follow up accordingly to ensure the need has been met.

VIII.   SCREENING TOOL EXAMPLES:

There are numerous screening tools that are prominent in the literature. The tools vary according to the populations they serve, length of the screening tool, and subject matter. Organizations and government agencies such as the Health Leads Network, The American Academy of Family Physicians, National Associations of Community Health Centers, and The Centers for Medicare & Medicaid Services have developed screening tools which can be used to identify the unmet needs of the populations that your clinic serves. The tools can be administered by clinical and non-clinical staff, or they can be distributed to the patient for self-administration. It is important to note, the screening tools available for review within this toolkit are not exclusive.

A. **Health Leads Screening Tool**

   a. **C:\Users\Owner\Desktop\Health Leads screening tool.pdf**

B. **The PRAPARE Tool**

   a. **C:\Users\Owner\Desktop\PRAPARE-English.pdf**

C. **The EveryONE project Screening Tool**

   a. **C:\Users\Owner\Desktop\AAFP social needs screening tool.pdf**

D. **The EveryONE project Screening Tool - Short Tool**

    a. [**C:\Users\Owner\Desktop\Social Needs Screening Tool (Patient Short Form).pdf**](#)

E. **The Centers for Medicare & Medicaid Services Accountable Health Communities' 10-question Health-Related Social Needs Screening Tool (AHC-HRSN)**

    a. [*AHCM-HealthSocialNeedsScreeningTool.pdf*](#)

IX. **STAFF / CLINICIAN EDUCATION TOOLS**

    a. **Social Determinants of Health an Introduction – YouTube Video**

    [**https://www.youtube.com/watch?v=8PH4JYfF4Ns**](https://www.youtube.com/watch?v=8PH4JYfF4Ns)

    b. **5 Social Determinants of Health in Healthy People 2030**

    [**https://youtu.be/2UK7NrHOsmA**](https://youtu.be/2UK7NrHOsmA)

    c. **Commercial Determinants of Health**

    [**Commercial determinants of health (who.int)**](#)

    d. Bias Preface: Biases and Heuristics – Youtube Video

    https://www.youtube.com/watch?v=BwYFhJO9t50&t=41s

X. **PATIENT / SUPPORT MEMBER EDUCATION TOOLS**

    a. Social Determinants of Health – Factors that Influence your Health