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Evaluation of Patient and Clinical Staff Perceptions of Screening for Social Needs in an Underserved Population

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Evaluation of Patient and Clinical Staff Perceptions of Screening for Social Needs in an

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By

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Abstract

Background. Despite ample strong evidence linking social determinants of health (SDOH) and unmet social needs to higher healthcare costs and worse health outcomes across the lifespan, only 16% of healthcare practices screen their patients for social needs. Various barriers contribute to low screening rates, including uncertainty about best methods for screening, the amount of time it takes to screen, and lack of confidence in knowing what to do once needs have been identified. As movements toward value-based models of care change the healthcare landscape, healthcare systems must find practical and effective methods to effectively screen for social needs utilizing a multi-level approach.

Purpose. The purpose of this study was to foster organizational readiness for the implementation of social needs screening through the evaluation of patient and staff perceptions regarding social needs screening practices.

Methods. This quality improvement (QI) project took place in a primary care clinic serving a diverse population. Staff (N=11) and patients (N= 40) who met inclusion criteria completed a survey related to social needs screening perceptions and practices (staff only) and screening preferences (staff and patients) over a one-week time period. Two weeks following survey completion, tailored education, survey results, and screening recommendations were provided for available staff (N=4) through a 20-minute in-person educational presentation. A post-survey evaluated the impact of the presentation components and initial perceptions regarding application of recommendations into clinical practice.

Results. Thirty five percent (n=14) of the patient population preferred face-to-face screening methods, while 27.5% (n=11) prefer the paper method. Conversely, 36.4% percent (n=4) of staff prefer electronic screening via a tablet device or similar in the waiting area. The biggest barrier to staff for screening for social needs was lack of time followed by a lack of resources to address identified needs. The educational session was reportedly helpful and informative for participating staff (N=4) and they all planned to apply something they learned into their clinical practice. Staff members were asked two months later if they had implemented the recommended resources, documentation, or screening into clinical practice. One respondent had not yet utilized the components, but expressed using it should the need arise. The other

respondent described the positive impact, having already shared the community resource finder, the AAFP EveryONE Project "Neighborhood Navigator," with other providers. The respondent noted the teamwork the project fostered, sparking the rooming staff and interpreters to begin facilitating the screening process with the provider and social worker.

Conclusion. Perspectives on the best methodology for social needs screening differed between the staff and patient population. Evidence strongly supports the use of a technological screening method to maximize screening consistency, efficiency, and effectiveness. When support is available to assist patients if technological difficulties occur, they are typically more receptive to using technology-based methods for healthcare related activities. Recommendations from this study include the use of the electronic health record (EHR) based screening method as well as staff education prior to implementation. An educational session prior to implementation of social needs screening with inclusion of valid screening tools, documentation information, and community resources found through the AAFP EveryONE Project "Neighborhood Navigator" was helpful in preparing the organization for piloting social needs screening in a specific setting. This feasible and effective approach can foster long-term success in assessing and addressing social needs in clinical practice.

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Background and Significance

Problem Statement

It has been well-documented in recent years that social determinants of health (SDOH), or the conditions in which we are born, live, work, and play, can impact health outcomes (Garg et al., 2015). While most healthcare providers would agree that "social needs" impact health, many are reluctant to screen for them due to challenges in addressing the needs identified (Fraze et al., 2019). Social needs are the patient-level extension of the SDOH by which healthcare systems are manifesting interventions to improve long-term health outcomes (Drake et al., 2021). Compared to the general population, patients with unmet social needs experience higher rates of depression, obesity, emergency department use, and missed appointments for routine office visits (Cole & Nguyen, 2020). Children are especially vulnerable to unmet social needs. Unmet social needs impact childhood development early in life and can impact health outcomes by increasing the rates of injury, infection, heart disease, and asthma, amongst others (Gottlieb et al., 2014). Furthermore, the chronic toxic stress of these psychosocial issues can compromise children's mental health leading to conditions such as depression and substance abuse (Morgenlander et al., 2019). Low-income individuals are more likely to have multiple social needs at once (Kreuter et al., 2021). With as many as 20% of the nation's children living in poverty, poor health outcomes are rising alongside of co-occurring social needs (Morgenlander et al., 2019).

The health conditions caused by unmet social needs are being recognized nationally as a source of higher healthcare costs and poor patient outcomes across the lifespan (Hardy et al., 2021). In a study by Hardy et al. (2021), it was found that just one unmet social need among underprivileged youth is correlated with an increase in emergency services as well as a decrease in well-childcare visits. Social needs across the lifespan are associated with negative health-related behaviors such as smoking, illicit drug use, and a lack of preventive healthcare (Kreuter et al., 2021). This has long-term implications for higher cost and negative health outcomes, such as a lack of the administration of immunizations, heart disease, and heart

failure. Heart failure, a condition that impacts millions of Americans, is associated with billions of dollars in healthcare costs (White-Williams et al., 2020). Unfortunately, costly and complex chronic conditions such as heart failure are rising in prevalence with the aging population (White-Williams et al., 2020). When the cost of managing one's health outweighs the cost of basic living, many patients are faced with difficult decisions as they balance things like food and housing needs against prescriptions and co-pays (White-Williams et al., 2020).

Whilst evidence on the impact of unmet social needs and the associated cost across age groups is profound, the methodology on how healthcare systems should address them is mixed. Major organizations such as the American Academy of Family Physicians (AAFP), American Academy of Pediatricians (AAP), and others have advocated for addressing the SDOH in clinical practice for several years, yet only 16% of healthcare practices are screening their patients for social needs (Hardy et al., 2021). Before healthcare systems can effectively respond to the need to screen for social needs, it is imperative to find practical and effective methods in how to do so to foster organizations that are better prepared for the change. In doing it properly, healthcare practices can also prevent unintended consequences such as further stigmatizing vulnerable patients (Butler et al., 2020). With an effective and practical method in place using a stepwise approach, healthcare systems can increase their social needs screening practices, identify unmet social needs, and address social needs for vulnerable patients.

Context, Scope, and Consequences of the Problem

Movements toward value-based models of care now require many healthcare organizations to make social needs a priority in clinical practice (Fraze et al., 2019). The Covid-19 pandemic and resulting recession increased social needs and exacerbated health disparities, resulting in a push to address these issues faster. Unfortunately, making changes too soon and without a proper approach can increase the potential for harm amongst vulnerable populations, such as legal implications (Butler et al., 2020). Engaging patients on sensitive topics such as intimate partner violence, abuse and neglect, unstable housing, and more can unveil legal consequences, particularly surrounding child custody, while further stigmatizing the patient (Butler et al., 2020). Precautions should be taken to prevent undue reporting for things like child

neglect that are subject to mandatory reporting by healthcare professionals. An intentional, cautious approach should be taken by health systems to screen only consenting individuals and to use methods that are sensitive toward patients (Butler et al., 2020). Evidence-based strategies need to be identified and implemented in the clinical setting prior to piloting these interventions.

Ongoing evidence suggests that not all screen-and-refer processes are effective in the long-term and organizations should invest in multi-level interventions to have a lasting impact (Butler et al., 2020). Levels to these interventions should involve implementing organizational readiness strategies and identifying universal screening modalities that are 1) evidence-based 2) patient preferred and 3) staff preferred (Butler et al., 2020). Patient and clinical staff's voice regarding proper screening practices has been limited across the evidence-base. This study serves to address these problems by recommending social needs screening implementation strategies based on the available evidence as well as recommendations by the most important stakeholders in the process: the patients and the front-line staff. Addressing social needs will become crucial as payment reform continues, and a proper approach is key to success. These underutilized strategies and modalities will be outlined throughout this overview.

While requirements surrounding social needs screening is a relatively new concept, many organizations have been working toward addressing social needs for several years. The Centers for Medicaid and Medicare Services (CMS) is taking steps to address the gap by mandating reporting of five domains of SDOH: food insecurity, housing instability, transportation needs, utility difficulties, and interpersonal safety (Heilman, 2022). While this reporting is currently voluntary, annual mandatory reporting for inpatient health systems will begin in January of 2024. The outpatient setting SDOH data must also be tracked in order to maintain the enterprise' value-based care contract. As a result, the enterprise of this project site is working diligently to create thoughtful and comprehensive screening protocols that can be streamlined across both the inpatient and outpatient setting. Their goal is to incorporate the screening into existing workflows with patient and staff preferences in mind. Using this multi-level approach, a safe and reliable method of social needs screening is possible. Currently, a social needs screening tool at this project site is available in the electronic medical record (EMR) through their software known as "Epic" but

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is not yet being mandated within the enterprise as planning and development of a standard process of screening and documentation is underway. At the request of the Ambulatory Care Population Health team leaders, this study serves to seek stakeholder perspectives on the best methodologies for social needs screening in a primary care practice.

Current Evidence-Based Strategies Targeting the Problem

In 2016, the AAP became the first medical organization to recommend routine screening for the SDOH (Garg et al., 2019). Since this statement release, much has happened in the medical world. In addition to mandatory reporting, other changes made by CMS have contributed to the spotlight on social needs in recent years. The Medicaid and Children's Health Insurance Program (CHIP) combined had over 83 million enrollees nationwide in July of 2021 (Medicaid.gov, 2022). A component of both Medicaid and CHIP is the Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) benefit, which ensures that children receive coverage for all "medically necessary" services. Traditionally, each state's EPSDT benefit is strongly influenced by the AAP "Bright Futures" Guidelines (Malhotra et al., 2021). In recent years, the AAP "Bright Futures" recommendations have been expanded to include screening and addressing the SDOH as a part of routine pediatric preventive care (AAP, 2017). The AAP Guidelines recommend routine social needs screenings at pediatric preventive care visits. While states can still choose whether to honor the new recommendations and deem them medically necessary under the EPSDT benefit, this step is a move toward addressing health inequities among children (Malhotra et al., 2021).

There are many action models and protocols that have been formulated to aid healthcare practices in their adoption of social needs screening processes. The most common social needs screen-and-refer protocol in the U.S. is the Protocol for Responding to and Assessing Patients Assets, Risks, and Experiences (PRAPARE) (Drake et al., 2021). Other examples include the Health Leads Toolkit (HealthLeads, 2022) and the EveryONE Project toolkit by the AAFP (2018). All of these protocols provide not only screening tools, but also tools to aid in the implementation of them such as actions plans and workforce education. The EveryONE Project contains a tool called the "Neighborhood Navigator" that can locate community resources within a given zip code (AAFP, 2018). Not only can this platform help in connecting patients to

resources within their community, but it can help providers gain a better understanding of resources that are available within their practice's community (Sherin et al., 2019).

According to the Epic support team associated with the enterprise of the current project, the social needs screening tool embedded into the EMR is backed by evidence from a multitude of studies and protocols, including the PRAPARE and Health Leads. This screening tool automatically changes its questions based on the age of the patient. For example, if the patient is a child, there are questions regarding their caregiver's health. If the patient is an adult, questions are geared toward the adult's health. This screening tool will soon be mandated across the enterprise and modified to focus on the CMS core domains as reporting requirements change in 2024. While the screening tool is embedded into the electronic medical record, there are several options for obtaining the patient's information to answer the questions. These methods include utilization of a tablet device, self-completed through the electronic patient portal, a paper form, face-to-face, or a combination of methods. The Population Health Team seeks to understand the patient- and staff-preferred methodologies in completing the screening tool. In this way, stakeholder perspectives can be included in the enterprise-wide change. Current evidence-based strategies for social needs screening implementation focus on multi-level interventions and emphasize that informal social needs screening is inadequate (Gottlieb et al., 2014). The implementation of social needs screening protocols should focus on patient and staff preferences, staff education, and a team-based approach to have a lasting effect (Hare et al., 2023).

Purpose/Objectives

Social needs screening in primary care has shown promising evidence for improvement of patient health outcomes. While most providers agree that social needs screening should be part of standard care, many providers do not discuss these issues at healthcare visits. Some of the most cited reasons for not discussing are time constraints and a lack of resources to address identified needs (Schickedanz et al., 2019). The goal of the project is to evaluate patient and provider preferences for social needs screening. In turn, this will involve the entire healthcare team, including patients, in the decision-making process for the implementation of social needs screening protocols in the selected primary care setting. The purpose of this

project is to provide the enterprise with valuable information they can use to develop social needs screening protocols. Information for the enterprise will include patient and staff screening preferences as well as a discussion of the impact of staff education. The three specific objectives of this project are to:

1. Collect survey data on patient and staff preferences on how to best screen for social needs over the course of a one-week time period.

2. Develop and implement a tailored educational intervention for staff based on survey results, feedback, and educational needs within two weeks of data collection.

3. Evaluate the impact of the educational intervention through staff surveys immediately following the intervention, and again two months after the intervention via informal email discussion.

Review of the Literature

Social needs screening has been found to improve patient health outcomes, however, methodology on how to best implement the practice remains unclear. To evaluate the evidence surrounding available strategies to successfully implement social needs screening protocols, a literature review was conducted. The literature review was guided by the PICO question, "Amongst clinicians, patients, and healthcare organizations, what are the recommendations surrounding the successful implementation of social needs screening in primary care?"

Databases utilized in this literature review include the Cumulative Index for Nursing and Allied Health Literature (CINAHL) and PubMed. The CINAHL search included the key terms "social needs screening" AND "perspectives," was limited to full text, and written within the past ten years. This search yielded eight articles, four of which are being used in this literature review. The PubMed search included the subject heading "social needs screening at primary care visits," was limited to full text, and written within the past ten years. This yielded 335 articles, six of which were used in this literature review. Results between both search engines were narrowed down based on their applicability to the project. Studies were included if they focused on implementation strategies for social needs screening protocols, and excluded if they focused on screening tool efficacy or unrelated topics. A total of ten articles were reviewed between the two search engines.

Synthesis of the Evidence

The articles were analyzed for methodologies to support patients, staff, and organizations in implementation of social needs screening protocols. Common themes were noted. The literature overwhelmingly supports the need for staff training prior to and throughout implementation of social needs screening initiatives (Trochez et al., 2023; Drake et al., 2021; Kanatlı & Yalcin, 2021; Buitron de la Vega et al., 2019; Tong et al., 2018; Hare et al., 2023; Sokol et al., 2021). Sokol et al. (2021) notes that the American Academy of Pediatrics recommends all providers be trained and educated about SDOH as well as provided with continuing education on the topic. Specific recommended educational needs vary, but many describe a need for training on the use of specific screening tools, finding community resources, and knowledge surrounding the patient experience.

Another facilitator for implementation that the literature supports is integration of screening and processes into the electronic health record (EHR) (Trochez et al., 2023; Drake et al., 2021; Buitron de la Vega et al., 2019; Greenwood-Ericksen et al., 2021; Hare et al., 2023; Sokol et al, 2021; Massar et al., 2022). Buitron de la Vega et al (2019) describes EHR integration as "critical" to successfully relay this information between providers. Utilizing technological methods have been found by many researchers to be preferred by clinicians and increase efficiency in the clinical setting (Hare et al., 2023). In addition, Hare et al. (2023) found that several patients in their study felt that technology-based screening was easier and quicker to do than via a paper form.

The evidence also supports a need for more community resource information for staff (Trochez et al., 2023; Drake et al., 2021; Kanatlı & Yalcin, 2021; Tong et al., 2018; Greenwood-Ericksen et al., 2018; Sokol et al., 2021). In fact, Kanatlı & Yalcin (2021) state it is unethical to screen for needs without resources to meet them. Suggestions they make include providing resources to the staff in the form of websites and brochures. Many researchers also note the need for more accessible resources in the community to facilitate the process for organizations (Kanatlı & Yalcin, 2021; Trochez et al., 2023). The study by Rogers et al. (2020) found that patients also support the need for more community resources and support the utilization of more healthcare funds toward the cause.

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Another common theme noted as a facilitator in social needs screening initiatives is having support staff to facilitate referrals and follow-ups (Trochez et al., 2013; Drake et al., 2021; Kanatlı & Yalcin, 2021, Greenwood-Ericksen et al., 2018, Sokol et al., 2021; Massar et al., 2022). Staff members recommended for assistance vary and include on-site social workers, community health workers, case managers, and remote patient navigators. Hare et al. (2023) notes the importance of having an interdisciplinary team to assist with needs to avoid compromising the experience between the patient and the provider. Many preferred to be screened electronically in the waiting area rather than in the patient room to avoid taking time away from their healthcare visit with their provider (Hare et al., 2023).

The last facilitator of implementation that the literature supports is incorporating both front-line staff members and patient perspectives in the decision-making process for social needs screening implementation (Drake et al., 2021 and Buitron de la Vega et al., 2019). These perspectives have been limited across the evidence base and the limited evidence is primarily comprised of only the clinician perspective. Stakeholder perspectives can help guide change strategy and foster the quality improvement initiative. Drake et al (2021) describes these perspectives as "critical" to informing care delivery recommendations.

Gaps in Literature

This study serves to contribute to the knowledge of patient and clinical staff perspectives on social needs screening. Much research to date has been limited to only the clinician perspective. This study serves to reduce this gap by eliciting input from both the patients and staff within the same clinic to promote a shared understanding between the staff and the patients they directly serve. In addition, this project will aim to support the literature by implementing education for staff at the given clinic to facilitate organizational readiness for social needs screening. It is recommended to provide staff education on the SDOH in general, how to best address social needs, and the patient experience throughout the process (Sokol et al., 2019; Kanatlı & Yalcin, 2021; Tong et al., 2018). There was no evidence found documenting the success of specific educational topics. This project will provide insight into the staff perspective on the educational components that were most beneficial. Only after we educate the team and

elicit their perspectives on the process can we move into piloting valid screening tools with effective, feasible methods.

Theoretical Model

The processes performed through this project align with Lewin's Change Theory. This theory emphasizes that individuals are influenced by restraining forces that counter driving forces that maintain the status quo (Wojciechowski et al., 2016). The driving forces are what push actions toward change. Tension between these two forces maintains the equilibrium. To foster change, the three steps organizations should take are "unfreezing", "changing", and "re-freezing." In the unfreezing stage a problem is recognized, and the equilibrium is set off balance. In the changing stage alternatives are examined, and new ways are implemented. In the refreezing stage integration of the new process is formally reached, and the equilibrium is stabilized again (Wojciechowski et al., 2016). Throughout this process, stakeholders should remain involved. This project "unfroze" the equilibrium at the specific primary care clinic by performing a multi-level intervention that opened the conversation about social needs screening. The levels to this multi-level intervention involved: 1) eliciting patient perspectives, 2) eliciting clinical staff perspectives, 3) providing education about the topic to raise awareness and promote a shared understanding, 4) assess the impact of the education received, and 5) provide final recommendations for implementing social needs screening protocols. Following this project, many clinics across the enterprise of this project site are in the "changing" stage as social needs screening piloting efforts are underway. The "refreezing" stage will be reached once widespread screening is implemented, these processes become the new norm, and continued education and leadership involvement is fostered.

Methods

Study Design

The study is a non-experimental quality improvement project. Both qualitative and quantitative data were obtained through the analysis of staff and patient perceptions of social needs screening. Education on the topic was provided, and a post-survey quantitively and qualitatively evaluated the

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impact of the education. Specifically, feedback was elicited surrounding a community resource recommendation provided through this educational session.

Setting

Agency Description

The Polk-Dalton clinic is in the north side of Lexington, providing outreach to Lexington's urban population. The clinic offers family medical services to people of all ages, from infancy through adulthood (UK Healthcare, n.d.). The clinic is managed by UK Healthcare which is comprised of 9,000 healthcare workers, dispersed between the hospital, clinics, and outreach programs (UK Healthcare, n.d.). The Polk-Dalton Clinic is one of the 80 clinics in this enterprise and encompasses the organization's mission, vision, and values. The mission of UK Healthcare, an academic institution, is to align the pillars of research, education, and clinical care (UK Healthcare, n.d.). The UK Healthcare vision is to create "one community committed to creating a healthier Kentucky (UK Healthcare, n.d.)." The institution's five values, known as "Living DIReCT" values, are diversity, innovation, respect, compassion, and teamwork (UK Healthcare, n.d.). The Polk-Dalton clinic aligns with the UK mission, vision, and values by expanding care to a vulnerable population, accepting almost all insurances, and providing a one-stop-shop for common healthcare services (UK Healthcare, n.d.).

The Population Health AssessmenT Engine (PHATE) shows that the Polk Dalton Clinic in Fayette County, KY falls into a census tract that has a "Community Vital Sign" of 89 on a 1-100 scale, indicating it is an area of high deprivation (Center for Applied Research and Engagement Systems (CARES) et al., 2023). This score is based on the social deprivation index that is comprised of the following components: single-parent household, population below poverty level, rate of no car ownership, less than 12 years of schooling, renter-occupied housing, non-employed, and percent overcrowded (Butler et al., 2013). In this census tract, almost 40% of individuals fall below the poverty level (CARES et al., 2023). Low-income patients commonly have a multitude of social needs (Kretuer et al., 2021), making it important to screen this population of high vulnerability.

Project Congruence

UK Healthcare has a 2025 strategic goal to build on a more value-based culture. Part of this goal is to foster an inclusive community of healthcare providers who provide quality care to patients of all backgrounds. The current project will support this goal by enabling providers to address social needs in practice among a diverse population. As part of this goal, UK hopes to foster a sense of community amongst all providers. Through a team-based effort to engage in this change at the clinic level, the impact could be widespread across the enterprise. This project is in congruence with the plans that CMS has in place for mandatory reporting of social determinants of health in January of 2024 (Heilman, 2022). At the request of enterprise leadership, the data obtained regarding patient and staff perspectives on social needs screening modalities will be considered and utilized as social needs screening becomes imminent.

Stakeholders

There are several stakeholders that were involved in this project. First, the staff at the Polk Dalton Clinic including the providers, medical assistants, support staff, Spanish interpreters, and the social worker have all played a role in the development and implementation of this project. Polk Dalton Clinic management as well as the site mentor aided with facilitation of project components. The participating patients and families were stakeholders of the project. Members of the Population Health team at UK Healthcare were also stakeholders in this project and were involved throughout the process by providing project direction and expertise in the subject area. Project recommendations are supported by literature and community resources such as the Neighborhood Navigator provided by the AAFP (2018). In addition, the project is supported by the UK College of Nursing administration.

Site-Specific Facilitators and Barriers to Implementation

The largest facilitator in implementing this project was the staff's passion for working with the underserved population. This created a culture of willingness to aid with implementation, such as handing out patient surveys with positivity. Some were interested in learning about the topic and expressed gratitude for opening the conversation. Having significant resources on-site at this clinic, such as a social worker and community health worker, help to interest staff in the topic as well. Having the EHR social

determinants health screen already present for staff use in Epic was a facilitator as this gives a real-world look at the screening tool they will soon be using. Other facilitators in completing this project at the Polk-Dalton clinic were administrative buy-in, the ease of clinic access, and availability of listservs for emails. The main barrier to implementing the project was coordinating patient survey hand-outs across multiple disciplines (management, clerical staff, rooming staff, etc.) and ensuring the process would not impede workflow. In addition, finding ample time to provide education to the staff after survey completion was a barrier and participation was limited.

Sample

The population for this study consisted of two groups. Population A was a convenience sample of all adult clinical staff at the given clinic (N=18). Inclusion criteria included all members of the clinical healthcare team at the given clinic (healthcare providers, nurses, medical assistants, social worker, community health worker, pharmacist). Exclusion criteria included non-clinical team members (clerical/support staff). Population B was a convenience sample of patients and families at the clinic who were present for a primary care visit and met inclusion criteria (N=141). Inclusion criteria for population B was 1) all adult patients and families present for a primary care visit that 2) speak English and 3) can read and write. Only adult patients and adult caregivers of pediatric patients were included in this study. Exclusion criteria were those who are 1) non-English speaking, 2) cannot read or write, and 3) present for non-primary care visit.

Procedures

IRB Approval

Institutional Review Board (IRB) approval was granted through the University of Kentucky on April 6th, 2023 by expedited review.

Description of Evidence-Based Intervention

The educational intervention that was provided to the staff involved an in-person PowerPoint presentation delivered to a small focus group (N = 4) following baseline survey completion and results analysis (See appendix E). The presentation took approximately 20 minutes, with discussion at the end

lasting an additional 3-5 minutes. The decision to provide staff education was made largely because of evidence from the literature review describing the importance of staff training and education prior to implementation of social needs screening (Trochez et al., 2023; Drake et al., 2021; Kanatlı & Yalcin, 2021; Buitron de la Vega et al., 2019; Tong et al., 2018; Hare et al., 2023; Sokol et al., 2021). Much of the education was tailored based on the staff's survey results surrounding their expressed barriers and facilitators to screening. This included a discussion about the lack of time to screen and a discussion about available resources to ease the process. Content within the intervention focused on screening tools recommended by major entities such as the EveryONE Project by the AAFP, as well as the EveryONE Project's community resource finder called the Neighborhood Navigator (AAFP, 2018). The PRAPARE toolkit, the HealthLeads toolkit, and the CLEAR toolkit were also mentioned, as they all contain aids that help with implementation. Each of these screening toolkits contain not only screening tools, but also aids to help organizations implement them.

Another element of the education involved a discussion of the documentation of SDOH using applicable ICD-10 "Z" codes. As part of the CMS initiative, reporting of SDOH will be mandatory beginning in January of 2024 (Heilman, 2022). The SDOH ICD-10 codes, traditionally documented by the patient's provider during visits, are currently underutilized in practice. In a cross-sectional study by Agarwal et al. (2023), it was found that only 5.6% of patients had a documented SDOH ICD-10 code between the years of 2011-2021. In recent years there has been an uptake in this documentation, but only minimally (Agarwal et al., 2023). According to the enterprise population health team, the SDOH screening tool will be used as the primary means of documenting positivity rate. Documentation of the ICD-10 code can aid with resource referrals and medical decision making (MDM) as it relates to patient complexity, if impacted by SDOH.

The other element of the educational presentation was to provide staff with the survey results and provide initial recommendations for improvement. In the study by Hare et al. (2023), it was recommended to share the patient experience with staff regarding social needs screening as means to promote a shared understanding. Recommendations were provided based upon staff feedback as well as supporting

literature. Following the educational intervention, a survey was administered to evaluate success of the intervention and elicit ideas for future informational sessions (See appendix F). Informal feedback was also elicited via email communication two months after the intervention.

Measures and Instruments

The clinical staff survey contained two demographic questions, six attitude questions, six barrier questions, and two screening methodology questions for a total of 16 questions (see appendix A). Five-point Likert scales were utilized for much of the survey. Questions for the staff survey were largely adapted from the work of Schickedanz et al. (2019) who performed a similar study at a large health system. This survey was anonymous and provided electronically utilizing the Qualtrics software. The link to this survey was embedded into the consent letter (see appendix B) and was sent out via email listserv to the clinical staff. No staff identifiers were provided. The staff were given one week to complete the survey. The survey should have taken individuals less than five minutes to complete.

The patient and family survey contained five demographic questions and four screening methodology questions for a total of nine questions (See appendix C). The elements of the patient and family survey were formulated largely based off the works of Hare et al. (2023) who also elicited patient perceptions of screening for social needs, with a focus on technology-based interventions. The survey was stapled to the back of the consent letter (See appendix D). This survey also should have taken individuals less than five minutes to complete.

Lastly, feedback was elicited from the staff regarding the educational intervention. The anonymous post-survey was on paper and contained four questions (See appendix F). The first two questions assess the overall impact of the education and if they found it helpful. The final two questions were open-ended to gain their insight about specific intervention take-aways and implications for moving forward. This survey took individuals approximately three minutes to complete. Further staff feedback was elicited through informal email follow-ups to the attendees of the educational session. The email asked if any of what was discussed at the session had been applied to their clinical practice; specifically, the Neighborhood Navigator.

Data Collection

Utilizing a morning staff meeting, the PI provided preliminary project information and answered questions on day one of the study implementation period. Both the staff and the patient survey procedures were explained to the staff at this time. Data was collected for a one-week time period for the initial surveys, and then immediately upon completion of the staff educational intervention. The initial staff survey was electronic, and the patient/family survey was on paper. This patient/family survey was provided to patients at families who met inclusion criteria at check-in by the clerical staff. This survey was anonymous, with no patient identifiers included. The survey was stapled to the back of the consent letter and handed out at the clinic for a one-week time period. The patient/family surveys were placed in enclosed file folders located in each patient room and around the clinic. Given each visit only has one patient/family allowed in a room at one time, no other individuals could see one patient/families answers at a given time. Given the anonymity of the surveys, tracing answers to an individual would not be feasible after a visit concludes. The surveys were placed in the folders by either the patient/family or by the rooming staff upon the patient's request. The PI came intermittently throughout the week to collect the surveys and allow room for more. Following survey completion of both groups, a focus group took place in-person at the clinic during the staff's lunch hour on a day that was convenient for them. During this time, the educational presentation was provided that included initial recommendations. These initial recommendations included for them to familiarize with community resources using the Neighborhood Navigator (AAFP, 2018), use a valid screening tool, and utilize the SDOH ICD-10 codes. An evaluation staff survey was provided upon completion that provided qualitative feedback on these recommendations. Two months later, informal emails were sent out to the staff in attendance of the educational session to get qualitative feedback on the use of the recommendations provided through the session.

Data Analysis

Descriptive statistics were used in the analysis of most of the data. Data for the electronic staff survey was stored in Qualtrics and transferred directly into the IBM SPSS statistical software for analysis. From there, result tables were created and saved into a Word document. Demographic information was

reported through frequencies with percentages (See table 3). Attitudes, barriers, and screening

methodology answers were reported through means with standard deviations (See table 4). Data for the

paper patient surveys was manually transferred onto an excel spreadsheet. From there, it was imported

into the IBM SPSS statistical software for analysis. Demographic data was analyzed through frequencies

with percentages (See table 1). Screening methodologies were also analyzed using frequencies with

percentages (See table 2). The staff educational intervention post-survey results were manually

transferred to a word document for a descriptive summary.

Results

Patient and Family Survey

A total of 208 primary care patients were seen during the week-long survey period. Sixty-seven

of those patients were non-English speaking and were ineligible to participate. This left 141 patients

and/or families to be considered for a survey. There was a total of 40 surveys completed, yielding a

response rate of 28.4%.

Demographics

The participants were adult patients (n= 24, 61.5%) and caregivers/guardians of pediatric patients

(n= 15, 38.5%). Over half of the participants were aged 18-44 years (n=26, 65%) and were almost entirely

female (n=33, 84.6%). The participants were nearly half black/African American (n= 19, 47%) and half

white/Caucasian (n=17, 42%). The Hispanic/Latino population was also represented (n=4, 10%). The

participant population was primarily insured by Medicaid or Medicare. See table 1 for a full description

of the patient/family demographics.

Social Needs Screening

Nearly half of the population felt that they had social needs at the time of survey completion (n=

17, 45.9%). The most circled screening preference was face-to-face (n=14, 35%), with the paper method

being the second most chosen (n=11, 27.5%). The vast majority felt that the best time to perform the

screening was in the waiting area, immediately prior to the visit (n=17, 42.5%). Lastly, most of the

population was either "comfortable" or "very comfortable" with their social needs being included in their medical record. See table 2 for a full description of the patient/family social needs screening preferences.

Staff Survey

There were 18 staff members invited to take the survey via email Listserv. There were 11 electronic surveys completed by the staff members, yielding a response rate of 61%.

Demographics

Staff participants were primarily medical assistants/NCTs at the clinic (n= 4, 36.4%) with providers, community health worker/pharmacist/social workers, and individuals classified as "other" representing the rest of those surveyed. The participants were mostly newer staff with five years or less of experience (n=7, 63%). See table 3 for a full description of the staff demographics.

Attitudes

Staff attitudes surrounding their patients' social needs and screening for them were evaluated using a 5-point Likert scale for six questions. Staff overall agreed that social needs were an issue for their patients (4.0 mean, 1.3 SD), that social needs impact the health of both adult (4.09 mean, 1.4 SD) and pediatric patients (4.0 mean, 1.4 SD), and that screening for social needs should be part of standard practice in healthcare (4.2 mean, 1.3 SD). Staff agreed the least with the statements about feeling well prepared for screening and addressing adult and pediatric patients' social needs. See table 4 for a full description of staff attitude results.

Barriers

The staff's barriers to social needs screening were evaluated through five questions using a 5-point Likert scale. The biggest barrier to social needs screening was a lack of time (3.5 mean, 1.5 SD), followed by a lack of resources to address needs once identified (3.2 mean, 1.3 SD) and a lack of confidence in the provider's or organization's ability to address identified needs (3.0 mean, 1.2 SD). Lack of comfort in asking (2.2 mean, 1.1 SD) and lack of training about how to ask (2.9 mean, 1.3 SD) about social needs were the least reported barrier to social needs screening. See table 4 for a full description of the results of the staff's barrier questions.

Screening Methodology

Screening methodology preference was assessed using two multiple choice questions with one answer chosen per question. The majority chose the rooming staff as the staff member who should perform the screening (n= 5, 45.55%), with providers and those classified as "other" being the other two choices. For screening methodology, the majority chose that it should be performed electronically via a tablet device or similar in the waiting area (n= 4, 36.4%). The second most chosen was face-to-face (n= 3, 27.3%). The choices that were less commonly chosen were paper form, electronically at home, and "other." See table 4 for a full description of the staff's screening methodology preferences.

Intervention Evaluation

Staff Post-Survey

The intervention provided to the staff was an educational PowerPoint about what social needs are, social needs screening tools and a resource platform, documentation of SDOH, and survey result dissemination. A paper survey was given to the staff in attendance (n=4) immediately following the presentation that evaluated its impact. The staff present included two nurse practitioners, one social worker, and one Spanish interpreter. All four staff in attendance felt that the information was helpful and informative. All four staff also indicated that they plan to apply something that was discussed into their clinical practice. The survey also asked the open-ended question, "What was the most helpful thing you took away from this presentation?" Responses noted the discussion of the importance of screening, the extra resources, and the patient survey feedback. One individual expressed interest in the community resource and stated she had never heard of the "Neighborhood Navigator" resource before. One response provided a positive note regarding the project and how efforts are being made to "help people in need." The final question elicited open-ended thoughts on what the listeners would want to know more about. Responses were primarily related to the future of addressing the SDOH, while one wanted to know more about community-based assistance that is easily accessible by patients.

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Two months after the educational session took place, the four staff in attendance of the session were emailed and asked informally if they had utilized any of what they learned in their clinical practice. Specifically, they were each asked about the "Neighborhood Navigator." One respondent stated they had not yet applied anything but would if the need arises. The other respondent praised the project and the attention it shed onto addressing SDOH in clinical practice. She expressed gratitude that the project was shared with the entire team, because it fostered teamwork and made them all more proactive in the initiative. She stated that the rooming staff and interpreters are now informally asking patients about social needs before she enters the room and taking the issues directly to the social worker, as a result of this project. She stated that she also has shared the "Neighborhood Navigator" with other providers who expressed wanting to implement its use elsewhere.

Discussion

Discussion of Findings

In this study evaluating the perceptions related to social needs screening among patients and clinical staff in a primary care setting, we found that both patients and providers agree that assessing social needs is important; however, the two groups differ in their preferred methodology for social needs screening. While the staff at this clinic prefer electronic methods, the patients in this group prefer to be asked the screening questions face-to-face or directly on paper. These findings are consistent with the literature in that preferences vary widely across populations on which method is considered the "best." A separate review of the literature was conducted and in all the analyzed studies that evaluated the impact of a social needs screening tool, the identification of social needs and subsequent resource referrals increased (Bleacher et al., 2019; Emengo et al., 2020; Garg et al., 2015; Gottleib et al., 2016; Oldfield et al., 2021; Selvaraj et al., 2019; & Zielinski et al., 2019). This indicates that implementation of a valid screening tool, with a method that works for the clinic, is likely to have success in improving outcomes regardless of methodology. In considering the findings by Hare et al. (2023), technological advancements can improve efficiency in the clinical setting, making the long-term success of these interventions more

likely. As Hare et al (2023) found, many patients who prefer other modalities were still open to completing the survey via a tablet device if they received assistance and many were surprised at how easy it was to do. This provides promising support that if technology-based screening is implemented, it is likely to be successful.

Consistent with findings by Bleacher et al. (2019), Emengo et al. (2020), Garg et al. (2015), Selvaraj et al. (2019), and Zielinski et al. (2019), both staff and patient/family groups agree that the screening should be performed before the visit. Most of these studies involved integration into the EHR. The findings by Trochez et al. (2023), Drake et al. (2021), Buitron de la Vega et al. (2019), Greenwood-Ericksen et al. (2021), Hare et al. (2023), Sokol et al. (2021) and Massar et al. (2022) also support EHR use, and some describe it as critical for relaying of social need information. The findings of the present study also support integration into the EHR, as survey results show that patients are overall accepting of having their needs placed in their medical record. Notably, in the study by Hardy et al. (2023), most patients were comfortable with their information being in the EHR, but some expressed concerns surrounding data confidentiality and the need to emphasize the privacy of it when initiating screening. As Butler et al. (2020) emphasizes, the need to convey confidentiality and only screen consenting individuals is of utmost importance.

The findings of the staff evaluation survey support the literature that staff education and training is important prior to initiation of social needs screening protocols. Researchers Trochez et al. (2023), Drake et al. (2021), Kanatlı & Yalcin (2021), Buitron de la Vega et al. (2019) Tong et al. (2018), Hare et al. (2023) and Sokol et al. (2021) all support education and/or training for staff. As evidenced by the staff survey results, the education provided was informative, applicable to their clinical practice, and it provided at least one piece of helpful information for them to take forward. One of these important pieces of information was the extra resources that the presentation provided. This supports the evidence that staff want to learn about more available community resources (Trochez et al., 2023; Drake et al., 2021; Kanatlı & Yalcin, 2021; Tong et al., 2018; Greenwood-Ericksen et al., 2018; Sokol et al., 2021) and helps to address the barrier of not knowing what to do once needs are identified.

Next Steps

      The project results were conveyed to the population health team at the University of Kentucky in June 2023 and they plan to use it as support when they begin piloting social needs screening. The next step in the SDOH initiative is to educate the staff and pilot social needs screening using the technological modality at multiple sites across this enterprise. According to the population health team, final plans are still underway as to how it will be specifically implemented and if it can be incorporated into electronic patient portals for at-home use. As it is currently, the plan is for the screening to be implemented into existing workflows using existing tablet devices. Their hope is that one day, resource referrals can be automated based on documented ICD-10 codes that reflect the SDOH the patient exhibits. When the screening will be performed at the visit is still under consideration, but they endorse that rooming staff may need to offer assistance to those with difficulty completing the screening on the tablet device. The screening tool will be available in most languages and will connect directly to the EHR. Consistent with the research by Butler et al. (2020), patients will be allowed to decline screening and be able to say whether or not they want to receive assistance with their needs, if any.

      This project provided the enterprise with a first step in the "bottom-up approach" in preparation for the CMS reporting changes coming in early 2024. These upcoming changes will begin the process of social needs screening in clinical practice enterprise wide. While clinicians can use the embedded screening tool now, formal piloting of the embedded electronic screening tool will begin toward the end of 2023. In addition, staff education will take place prior to this implementation. The educational component provided to the staff through this research study was provided to the population health team in hopes that it will foster future educational development tools.

Implications and Recommendations

Clinical Practice Recommendations

      Based on the results of this study and the evidence reviewed, social needs screening should be performed prior to the visit in the waiting area via a tablet device or similar that can be easily integrated into the EHR. While patients prefer face-to-face or paper methods, evidence shows that this is not a

feasible long-term solution for practices. Likewise, technological solutions have shown support from patients even if they prefer other modalities (Hare et al., 2023). In a randomized controlled trial by Gottlieb et al. (2014), it was found that patients had higher disclosure rates of sensitive topics when using the technological method as compared to face-to-face. This provides support that with implementation of technological methods, patients will not limit themselves to socially desirable answers (Gottlieb et al., 2014). Another practice recommendation is to ensure the screening is optional to avoid unintended consequences, such as legal issues, that further stigmatize vulnerable populations (Butler et al., 2020). Despite these recommendations, clinicians should not be fearful of having a face-to-face conversation with patients about their electronic results. Based on the literature findings, it is likely to be a conversation that is welcomed by patients. While screening performed by the provider is not found to be the most efficient method, many patients feel comfortable discussing their identified needs with their provider (Hare et al., 2023). Evidence shows that adding two to three minutes to a visit to address these issues can improve care coordination, reduce stress, and enable the patient (Anderman & CLEAR collaboration, 2016).

When it is time to pilot the screening tool, it is recommended to train the staff in the settings where the pilot will occur. While the impact of the educational component was only informally evaluated through a post-survey, the staff were overall accepting of the material, found it helpful and informative, and planned to apply at least one component to their clinical practice. Evidence supports staff training and conveying of appropriate community resources prior to social needs screening implementation. As such, it is recommended to provide staff with community resource information, such as the AAFP Neighborhood Navigator provided within the educational presentation. This online resource can serve as a gateway to a multitude of community resources for patients, is easily accessible, and quick to use. In addition, background on SDOH, training on the Epic screening tool, and documentation of SDOH "Z" codes are valuable educational components for future training.

Research Implications

The results of this study contribute to the limited body of evidence on which social needs screening modality is most preferred for staff and patients. In addition, the results provide valuable information surrounding the impact of an educational component for staff prior to implementation of social needs screening protocols. Universal screening for the SDOH is on the forefront and much of the literature supports social needs screening. However, unlike the AAP and the AAFP who recommend universal screening and addressing of social needs, the USPSTF has not yet been able to formulate a concrete recommendation on its use (Krist et al., 2019). The USPSTF has incorporated social risk into many of their recommendations as a source of opportunity and has linked them to methods for reducing spending and ER visits. However, the USPSTF has yet to find a concrete linkage to screening resulting in improved health outcomes (Davidson et al., 2021). As Davidson et al. (2021) states, the "absence of evidence of benefit is not evidence that benefit is absent." While evidence on the impact of unmet social needs is profound, evidence on whether screening reduces morbidity and/or mortality is needed in order to create concrete screening recommendations by the USPSTF (Davidson et al., 2020). Specifically, randomized controlled trials that evaluate the impact of screening on relationships between various health conditions and outcomes are needed (Davidson et al., 2020). The University of Kentucky, being a Research I institution, stands in a unique position to draw on this gap and gather longitudinal data that support this need as we move forward with the CMS requirement to screen. From an enterprise perspective, taking advantage of the opportunity to draw data on health outcomes over time is recommended as a means to improve national recommendations.

Cost Implications

There is a growing body of evidence that describes the benefits of addressing social needs in the healthcare setting to prevent costly medical conditions in the future. For example, a study found that low-income adults who report food insecurity have higher healthcare spending than low-income adults who participate in the Supplemental Nutrition Assistance Program (SNAP) (Kreuter et al., 2021). Connecting patients with resources that aid them with their basic needs can reduce healthcare spending. The SDOH

are found to be connected to an excess medical cost of over 90 billion dollars annually (Fischer et al., 2021). This enterprise will be incorporating social needs screening into existing workflows. While the transition to the new electronic medical system, Epic, cost the enterprise upwards of $315,000,000, it came with many features that improved workflow (Newman, n.d.). One of these features is the previously mentioned SDOH screening tool, which is what the enterprise plans to use when it becomes a standardized process. This tool, in addition to tablet devices and resources already in place, will come with no additional cost to the enterprise. Enterprise spending will be mostly limited to staff training, which could be performed in a cost-effective way such as through annual web-based training requirements or a quick lunch break training session. The enterprise will not be providing additional resources (such as patient navigators) for follow-up on resource referrals. This process is still a work in progress with development currently underway. As of now, it is recommended to pilot these interventions in the most cost-effective way possible by implementing them into existing workflows as able.

Limitations

As a non-randomized study with a low sample size, small setting, and underserved population targeted, there is a lack of generalizability to other settings. This project had a low patient sample size (n=40) and a low staff sample size (n=11) for the survey data. Had the survey implementation period lasted longer than one week, the sample size may have been larger. However, due to dependency on support staff to hand out surveys at check-in, it was not feasible to continue surveys longer than necessary. In addition, the limited space and staff availability at the educational intervention session resulted in low participation in the educational session (n=4). In the future, similar studies should consider an asynchronous technology-based educational session to have more reach to the intended audience.

Having to exclude patients that spoke a language other than English at a clinic that serves such a diverse population was also a major limitation of the study. Around 32% of patients/families that came in for a visit during the week-long survey period spoke a language other than English (n= 67). Many of these people could have otherwise been candidates to complete the survey had it been available in other languages. Addressing social needs amongst those with limited English proficiency (LEP) is of utmost

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importance as these individuals are more likely to have a higher presence of social needs and adverse health outcomes (Fischer et al., 2021). More research is needed to gain the perspectives of those with LEP as this portion of the population now represents around 25 million Americans (Fischer et al., 2021).

In addition, avoiding the utilization of clinic resources to carry out the project was a limitation for the sample. Therefore, if the patients needed assistance with the survey or could not read or write, they had to be excluded. Similarly, exclusion of the support staff and Spanish interpreters in the staff surveys was a limitation. One of the Spanish interpreters expressed interest in the project and would have liked to participate. They were excluded because it was not originally seen as beneficial by the principal investigator to include staff who would not be directly responsible for social needs screening and/or referral. Future projects of this nature should be inclusive of this portion of the staff population due to their valued input on this topic.

The patient survey design was also a limitation. Some of the questions were likely too complex or could have been written more clearly. Despite the description at the top, it was evident that some of the patients/families did not understand what "social needs" are through their answer choices. One of the questions also required participants to "rank the order" of their preferences. Participants either did not have time to do this or did not understand the question, because most respondents chose to circle their preferred choice(s). Conclusions had to be made based on the highest frequency answer(s) chosen due to this error. Future studies of this type should choose questions that are more straightforward with explicit descriptions and provide response options that are easy to understand.

Conclusion

This study contributes to the growing body of research surrounding addressing social needs in primary care. This project fostered organizational readiness for implementation of social needs screening. Social needs screening implementation is best done by way of a multi-level intervention. Levels to this intervention should involve eliciting staff and patient perspectives on screening strategies, providing staff with education and resources, and ensuring the education provided was effective. As Lewin's Change

Theory describes, ensuring the continued involvement of staff and members of leadership is a key component to long-term success.

The findings of this study identified both patient and staff preferences on how to best screen for social needs in one primary care clinic setting. Although perspectives on the best methodology differed, evidence from the literature supports leveraging technology-based screening and EHR integration as means of achieving long-term success. Thus, the technological method for screening is recommended and will be part of the enterprise's upcoming plans for piloting social needs screening. Methodologies vary widely, but education prior to implementation of any social needs screening is essential. Providing the staff with baseline education and access to community resources, such as the Neighborhood Navigator, can be helpful in preparing to address social needs in clinical practice. With proper preparation at the organizational level, widespread social needs screening can be implemented with a safe, effective, and feasible approach.

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List of Tables

Table 1. Descriptive Summary of Patient Survey Items: Demographics ($N = 40$)

Demographics	***n (%)***
Participant type	
Adult patient	24 (61.5%)
Parent/guardian of pediatric patient	15 (38.5%)
Age	
18-44 years	26 (65%)
45-64 years	7 (17.5%)
65+ years	7 (17.5%)
Gender	
Male	6 (15.4%)
Female	33 (84.6%)
Race	
White or Caucasian	17 (42.5%)
Black or African American	19 (47.5%)
Hispanic or latino	4 (10%)
Asian or Pacific Islander	0
American Indian or Alaskan Native	0
Other	0
Health insurance (select all that apply)	
Medicaid	25 (62.5%)
Medicare	7 (17.5%)
Employer-sponsored Insurance	4 (10%)
Private insurance	2 (5%)
No insurance	2 (5%)
Other	1 (2.5%)

Table 2. Descriptive Summary of Patient Survey Items: Social Needs Screening (*N* = 40)

Social Needs	*n* (%)
Do you feel like you/your family has social needs as described?	
Yes	17 (45.9%)
No	20 (54.1%)
Screening Preference (Ranking – favorite choice)	
Face-to-face, with staff asking the questions directly	14 (35%)
On paper, patient answering questions on their own	11 (27.5%)
Electronically, via tablet device or similar at the clinic with patient answering questions on their own	8 (20%)
Electronically, at home with patient answering questions on their own	4 (10%)
Prefer not to be screened for social needs	8 (20%)
Best time to perform social needs screening (Select all that apply)	
Online prior to the visit (before coming to the clinic)	7 (17.5%)
Immediately prior to the visit (in the waiting room)	17 (42.5%)
Upon being placed in a room	7 (17.5%)
While the provider is present	2 (5%)
Prefer not to be screened for social needs	8 (20%)
How comfortable are you with social needs being included in medical record?	
Very uncomfortable	3 (8.3%)
Uncomfortable	1 (2.8%)
Neutral	11 (30.6%)
Comfortable	9 (25%)
Very comfortable	12 (33.3)

Table 3. Descriptive Summary of Staff Survey Items: Demographics (N = 11)

Demographics	*n* (%) or *mean* (SD)
Role	
Physician	2 (18.2%)
Nurse Practitioner	1 (9.1%)
Registered Nurse or LPN	0
Medical Assistant or NCT	4 (36.4%)
Member of management or administration	0
Community health worker, pharmacist, or social worker	2 (18.2%)
Other	2 (18.2%)
Years in position	
5 years or less	7 (63.6%)
6-10 years	1 (9.1%)
11-20 years	3 (27.3%)
20+ years	0

Table 4. Descriptive Summary of Staff Survey Items: Attitudes, Barriers, and Screening (N= 11)

Attitudes[a]	n (%) or mean (SD)
Social needs are an issue for many of my patients	4.0 (1.3)
My adult patient's social needs impact their overall health.	4.09 (1.4)
My pediatric patients/families social needs impact the health of child.	4.0 (1.4)
I feel well prepared to screen for and address my adult patient's social needs.	3.5 (1.3)
I feel well prepared to screen for and address my pediatric patient's social needs.	3.8 (1.2)
I feel that screening for social needs should be part of standard practice in healthcare.	4.2 (1.3)
Barriers[a]	**n (%) or mean (SD)**
Lack of time to ask social needs questions is a barrier.	3.5 (1.5)
Lack of comfort in asking about social needs is a barrier.	2.2 (1.1)
Lack of training about how to ask about social needs is a barrier.	2.9 (1.3)
Low confidence in the provider's or organization's ability to address identified needs is a barrier.	3.0 (1.2)
Lack of resources to address social needs once they are identified is a barrier.	3.2 (1.3)
Screening Methodology	**n (%) or mean (SD)**
When screening for social needs, do you feel this would be most effectively performed by rooming staff or by providers during patient visits?	
Rooming staff	5 (45.5%)
Providers	3 (27.3%)
Other	3 (27.3%)
When screening for social needs, do you feel this would most effectively be performed via face-to-face methods, a paper form for patients/families to fill out, performed electronically by the patient/family at home, or electronically by the patient/family in the waiting area?	
Face-to-face	3 (27.3%)
Paper form	2 (18.2%)
Electronically- at home, prior to coming to clinic	1 (9.1%)
Electronically- via tablet device or similar in the waiting area	4 (36.4%)
Other	1 (9.1%)

[a] Response options range from 1) "Strongly disagree" to 5) "Strongly agree"

List of Appendices

Appendix A. Staff Survey Instrument

University of Kentucky

Attitudes

I feel that social needs are an issue for many of my patients.

| Strongly disagree |
| Disagree |
| Neither agree nor disagree |
| Agree |
| Strongly Agree |

I feel that my adult patient's social needs impact their overall health.

| Strongly disagree |
| Disagree |
| Neither agree nor disagree |
| Agree |
| Strongly Agree |

I feel that my pediatric patients and their families' social needs impact the health of the child.

| Strongly disagree |
| Disagree |
| Neither agree nor disagree |
| Agree |
| Strongly Agree |

I feel well prepared to screen for and address my adult patient's social needs.

| Strongly disagree |
| Disagree |
| Neither agree nor disagree |
| Agree |
| Strongly Agree |

I feel well prepared to screen for and address my pediatric patient's social needs.

| Strongly disagree |
| Disagree |
| Neither agree nor disagree |
| Agree |
| Strongly Agree |

I feel that screening for social needs should be part of standard practice in healthcare.

| Strongly disagree |
| Disagree |
| Neither agree nor disagree |
| Agree |
| Strongly Agree |

→

Barriers

Lack of time to ask social needs questions is a barrier.

Strongly Disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

Lack of comfort in asking about social needs is a barrier.

Strongly Disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

Lack of training about how to ask about social needs is a barrier.

Strongly Disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

Low confidence in the provider's or organization's ability to address identified needs is a barrier.

Strongly Disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

Lack of resources to address social needs once they are identified is a barrier.

Strongly Disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

Please add any barriers not listed above in the space below.

→

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Appendix B. Staff Recruitment Cover Letter

Social Needs Screening- Staff Survey

To the clinical staff of the UK Polk Dalton Clinic,

My name is Alysha Greenwell, and I am a student of the UK DNP class of 2023. You are being invited to take part in this anonymous survey because you are a clinical staff member of the UK Polk Dalton Clinic.

Research shows that the "social determinants of health," or the conditions in which we live, work, and play, can impact the health of our patients and their families. "Social needs" include needs in the areas of food, finances, environment, transportation, housing, and more. The goal of this anonymous survey is to get your input regarding the best way to screen for social needs during our patient's clinic visits so that we can serve them in the best way possible.

Although you may not receive direct benefit from participating, obtaining this information will help to create processes that may better serve your future practice. There are 16 questions on this survey that should take you less than 5 minutes to complete. We hope to receive completed responses from up to 30 participants over the time span of one week, so your answers are important to us.

Although we have tried to minimize this, some questions may make you upset or feel uncomfortable and you may choose not to answer them. There are otherwise no known risks to this study.

Of course, you have a choice about whether to complete this survey, but if you do participate, you are free to skip any questions or discontinue at any time. Participation in this research project is voluntary. If you do not want to be in the study, there are no other choices except not to take part in the study. Your job will not be impacted in any way should you choose not to participate.

Your responses to the survey are anonymous. There will be no identifiable information collected that can be used to connect your response to you. Although unlikely, given the nature of the electronic means of data collection, there are risks associated with confidentiality breaches while under the survey company's surveillance. Every effort will be made to safeguard your data. The information gathered will only be used for the purpose of research.

By clicking the link to the survey below, you are agreeing to participate in this study:

https://uky.az1.qualtrics.com/jfe/form/SV_e4f3bzxAOogKZKe

If you have questions or concerns or wish to discuss this survey, please contact myself using the contact information listed below. If you have complaints, suggestions, or questions about your rights as a participant, contact the staff in the University of Kentucky Office of Research Integrity at 859-257-9428 or toll-free at 1-866-400-9428.
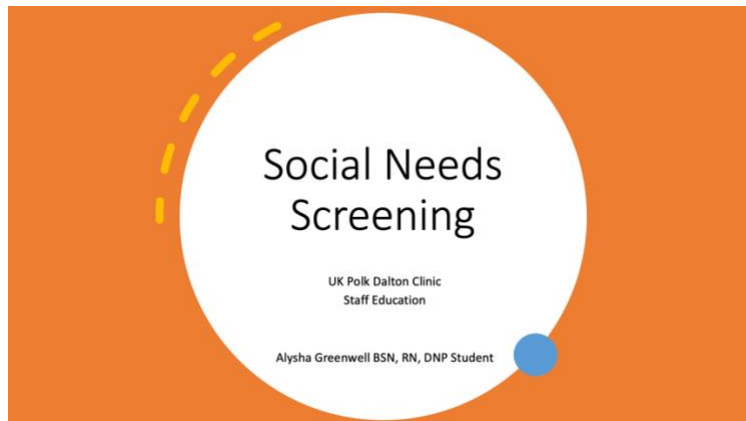
Thank you in advance for considering this invitation to share your feedback!

Sincerely,

Alysha Greenwell, BSN, RN – Principal Investigator
College of Nursing, University of Kentucky
Phone: 859-361-7693
Email: Alysha.greenwell@uky.edu

Appendix C. Patient Survey Instrument.

Social Needs Screening
Patient and Family Survey

Research shows that "social needs" can impact the health of you and your family. Social needs include needs in the areas of food, finances, safety of your environment, transportation, housing, and more. The goal of following questions is to figure out the best way to screen for your social needs during clinic visits so that we can aid you in the best way possible.

Demographic Information

1. Are you an adult patient or the parent/guardian of a pediatric patient being seen today?
   a. Adult patient
   b. Parent/guardian of a pediatric patient
2. What is your age?
   a. 18-44 years
   b. 45-64 years
   c. 65+ years
3. What is your gender?
   a. Male
   b. Female

4. What is your race?
   a. White or Caucasian
   b. Black or African American
   c. Hispanic or Latino
   d. Asian or Pacific Islander
   e. American Indian or Alaskan Native
   f. A race/ethnicity not listed here (please list): _____
5. What is your primary health insurance?
   a. Medicaid
   b. Medicare
   c. Employer-sponsored insurance
   d. Private insurance
   e. No insurance
   f. Other

Social Needs Screening

1. Do you feel that you or your family has "social needs" as described above?
   a. Yes
   b. No
2. When screening for your or your family's social needs, which method do you feel would be best? Please rank your preferred methods with 1 being the best method to you, 2 being second best, and so forth. If you prefer not to be screened, please circle that answer choice.
   a. Face-to-face, with a clinical staff member asking me the questions directly: _____
   b. On paper, with me answering the questions on my own: _____
   c. Electronically via a tablet device or similar at clinic, with me answering the questions on my own: _____
   d. Electronically/online at home, with me answering the questions on my own: _____
   e. I prefer not to be screened for social needs.
3. When screening for your or your family's social needs, when do you feel is the best time do so?
   a. Online prior to the visit (before coming to clinic)
   b. Immediately prior to the visit (in the waiting area)
   c. Upon being placed in a room
   d. While the provider is present
   e. I prefer not to be screened for social needs.
4. Please rank how comfortable you are with your social needs being included in your medical record.
   a. Very comfortable
   b. Comfortable
   c. Neutral
   d. Uncomfortable
   e. Very uncomfortable

Appendix D. Patient Recruitment Cover Letter.

Appendix E. Intervention: Staff Education

PowerPoint Link: https://1drv.ms/p/s!ArUICJ8susSmgQrftjNi5jUq3I1q

Appendix F. Intervention Evaluation: Staff Survey

Staff Survey

1. Did you find this information helpful and informative?
    1. Yes
    2. No
    3. Somewhat
2. Will you apply anything discussed today into your clinical practice?
    1. Yes
    2. No
    3. Possibly
3. What was the most helpful thing you took away from this presentation?
    _____
    _____

4. After hearing this presentation, what do you want to know more about?
    _____
    _____