

A photograph of three children running across a grassy field at sunset. The sun is low on the horizon, creating a warm, golden glow. The children are in motion, running from left to right. The boy in the foreground is wearing a white t-shirt and dark pants. The girl next to him is wearing a pink t-shirt with a red flower pinned to it and blue jeans. The girl behind her is wearing a yellow t-shirt and blue jeans. The background shows a line of trees and a clear sky.

SOCIAL DETERMINANTS OF HEALTH

SCREENING IN THE CLINICAL SETTING

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SCREENING TOOLS FOR SOCIAL DETERMINANTS OF HEALTH

The Center for Child Health Policy and Advocacy at Texas Children's Hospital, a collaboration between the Baylor College of Medicine Department of Pediatrics and Texas Children's Hospital, delivers an innovative, multi-disciplinary, and solutions oriented approach to child health in a vastly evolving health care system and market place. The Center for Child Health Policy and Advocacy is focused on serving as a catalyst to impact legislative and regulatory action on behalf of vulnerable children at local, state, and national levels. This policy brief is written to review current social determinants of health screening tools and provide recommendations for implementing screening into clinical settings.

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EXECUTIVE SUMMARY

Various circumstances such as income, housing quality, and parental mental health comprise the social determinants of health (SDH) and can significantly alter a child's health and socioeconomic trajectories. Research suggests that the death rates attributed to preventable causes, like inadequately met social needs, mirror those caused by leading medical conditions such as heart attacks and lung cancer.

Given the relevance of social circumstance, many healthcare organizations are developing innovative methods to address SDH within clinical settings as a possible strategy to enhance patient care, improve health outcomes, and prevent avoidable health care utilization. One particular approach endorsed by the American Academy of Pediatrics is SDH screening. This process takes place within clinical care settings and relies on clinical teams to administer a validated and standardized survey which seeks to identify unmet social needs or adverse social circumstances within the patient's experience. After completion of the survey, providers discuss results with the patients and their families and develop an action plan for their needs to be addressed. This may be done in a variety of ways, with referrals to community resources being the most common.

Overall, screening is a complex process that will require considerable deliberation before implementing. Clinical care settings will need to consider their staffing capabilities, patient needs, and other variables before deciding upon a tool to use. With proper implementation, SDH screening and the associated referral process have been demonstrated to increase detection and discussion of patients' social needs and to increase families' receipt of beneficial resources. Despite the numerous benefits associated with pediatric screening, no standardized procedure nor tool exists. This policy brief reviews many of the models which implement screening and the characteristics that individual care settings should consider when selecting a tool for their institution. In addition, this brief discusses general implementation strategies and assesses the merits and evidence base of different comprehensive screening tools currently in use.

To improve SDH screening, action is needed at the policy, clinical care setting, and community levels. In terms of policy, innovative funding mechanisms should be implemented to promote screening and care coordination with community resources. Efforts should be made to institutionalize screening. ICD-10 codes should be expanded to account for the full spectrum of SDH. Clinical care settings must adapt their electronic medical records to include data on patients' social needs and invest in provider training on SDH screening. Finally, at the community level, clinical care settings and community partners should work together to develop comprehensive resource lists and establish feedback mechanisms to report on the appropriateness, quality, and quantity of referrals.

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INTRODUCTION

Although disparities among children's health and healthcare utilization along demographic lines like race and income have long been documented as factors influencing health outcomes,^{1,2} more recent research points to the powerful effect that the social determinants of health (SDH) have on children's morbidity and mortality.^{3,4} **SDH are defined by the World Health Organization as the "conditions in which people are born, grow, work, live, and age, and the wide set of forces and systems shaping the conditions of daily life."**⁵ These risk factors include the variety of physical, behavioral, place-based, and social circumstances to which an individual is exposed. Poverty, for example, has adverse and severe consequences on birth weight, language development, and nutrition,⁶ has been shown to inhibit proper psychological and social development,⁷ and has been linked to increased risk of chronic health conditions.⁸ Furthermore, children in poverty are more likely to experience inconsistent access to basic needs like food,⁹ adequate housing,¹⁰ healthcare,¹¹ a safe neighborhood environment,¹² and education.¹³ More concerning, evidence suggests that growing up in poverty or other low-income environments severely diminishes economic potential, making poverty a difficult circumstance to overcome, even across generations.¹⁴

Forty-eight percent of American children have experienced at least 1 type (22% have experienced at least 2) of adverse childhood experience

(ACE), which include instances of child maltreatment, neglect, and exposure to parental substance abuse.¹⁵ Studies have increasingly linked ACEs with increased risk of chronic disease and higher costs of care across the life course.^{16,17} **Together, ACEs, parent psychosocial problems, and unmet social needs comprise the social determinants of health, which ultimately predispose children to worsened physical and mental health and socioeconomic status later in life.**¹⁸ The prevalence of unmet social needs among families often coincides with socioeconomic characteristics such as being low-income and having lower educational attainment.^{19,20} Table 1 lists common SDH and their documented effects on children's development. While not exhaustive, this list does include many common problems which could be addressed with appropriate action.



Table 1 Common SDH that could be identified via standardized screening. Adapted from Garg & Dworkin (2011)

SOCIAL DETERMINANT	HEALTH OR SOCIAL CONSEQUENCES	AVAILABLE RESOURCES	FOCUSED SCREENING TOOL
Child Maltreatment <i>Child physical, emotional, sexual, abuse; child neglect</i>	Psychological trauma ^{21, 22} Physical injury Drug and alcohol abuse ²³ Increased likelihood of suicide ideation ²⁴ Increased likelihood of attempting suicide ²⁵ Depression ^{23, 24} Worsened educational achievement ²⁶	Child Protective Services (CPS) Family therapeutic services Local and state crisis helplines	Child Trauma Questionnaire ²⁷ Parent-Child Conflict Tactics Scale (CTS) ²⁸
Lack of Access to Child Care or Quality Education <i>Inability to afford child care, lack of quality neighborhood schools, poor child educational attainment</i>	Worsened socioeconomic outcomes ^{19, 20} Diminished adult health status ²⁹	Individual Education Plan (disabilities) education English as a Second Language services Encouraging parents to be involved in children's education Encouraging parents to enroll children in pre-K Legal assistance	No specific screener readily available; information can be ascertained via direct questioning
Food Insecurity <i>Difficulty affording or obtaining nutritious food consistently; hunger</i>	Diminished educational achievement ³⁰ Cognitive development problems ³⁰ Malnourishment Hypertension and other chronic conditions ^{31, 32} Behavioral problems ³³ Obesity ³⁴ Diminished educational achievement ³⁵	Food banks, pantries Supplemental Nutrition Assistance Program (SNAP) Women, Infants, & Children Clinics School Meal services Temporary Assistance for Needy Families (TANF)	U.S. Department of Agriculture Household Food Security scale ³⁶ CCHIP ³⁷ 2-item food insecurity scale ³⁸

SOCIAL DETERMINANT	HEALTH OR SOCIAL CONSEQUENCES	AVAILABLE RESOURCES	FOCUSED SCREENING TOOL
Social Isolation <i>Few family, friends; Inability to meet needs through others</i>	Increased death rate ³⁹ Socio-emotional development issues Criminal behavior ⁴⁰ Limited economic prospects ⁴⁰ Increased risk of substance abuse ⁴¹	Protection and restraining orders National and state hotlines Parental education on social isolation Domestic violence shelters Mental health counseling	De Jong Gierveld Loneliness Scale ⁴²
Maternal Depression <i>Post-partum depression; Usually results in reduced proactivity in child's welfare</i>	Depression and behavioral problems ⁴³ Low birth weight ⁴³ Psychiatric problems ⁴³ Food insecurity ⁴⁴	Suicide/depression national and state hotlines Mental health counseling CPS referrals	Beck Depression Inventory ⁴⁵ Edinburgh Postpartum Depression Scale ⁴⁶
Interpersonal Violence (IPV) <i>Children witnessing or experiencing intra-household physical, sexual, or psychological abuse</i>	Child maltreatment ^{47, 48} Drug & alcohol use ^{47, 48} Worsened school performance ^{47, 48} Association with teenage pregnancy ⁴⁹ Future IPV victimization among women and perpetration among men ⁵⁰ Increased risk of attempting suicide ²⁵	National Alliance on Mental Illness (NAMI) Smoking Cessation Classes Alcoholics Anonymous Mental health counseling Legal assistance, Transitional housing Protection and restraining orders	Abuse Assessment Screen ⁵¹ Hurt, Insult, Threaten, and Scream (HITS) ⁵² Women AbuseTool (WAST) ⁵³

SOCIAL DETERMINANT	HEALTH OR SOCIAL CONSEQUENCES	AVAILABLE RESOURCES	FOCUSED SCREENING TOOL
Parental Substance Abuse <i>History of parental substance use and abuse, especially as it occurs during childhood</i>	Child maltreatment ⁵⁴ Psychiatric disorders ⁵⁵ Behavioral disorders ⁵⁵ IPV as adults ⁵⁶ Increased risk of attempting suicide ⁵⁶	Emergency services Suicide/depression national and state hotlines CPS referrals National Alliance on Mental Illness (NAMI) Alcoholics Anonymous (AA) Smoking Cessation Classes	ASSIST ⁵⁷ Alcohol Use Disorders Identification Test (AUDIT) ⁵⁸ CAGE questionnaire ⁵⁹ Drug Abuse Screening Test (DAST) ⁶⁰ Michigan Alcoholism Screening Test (MAST) ⁶¹
Housing & Utilities <i>Inadequate or dangerous housing conditions, homelessness, difficulty paying for rent or utilities</i>	Acute illness symptoms/ diminished adult health status ⁶² Diminished educational achievement ⁶³ Behavioral problems ⁶³ Reduced healthcare access ⁶⁴	Homeless shelters Transitional Housing Low-Income Home Energy Assistance Program (LiHEP) Letters/outreach to landlord Legal assistance	American Housing Survey ⁶⁵
Low Parental Education <i>Translates to parental unemployment or employment in unskilled low-paying jobs</i>	Reduced healthcare access ⁶⁶ Obesity ⁶⁷ Low birth weight ⁶⁸ Adult financial difficulty ⁶⁸ Diminished general health ^{68, 69}	Job training GED classes	No specific screener readily available; information can be ascertained via direct questioning

SDH AND PUBLIC HEALTH

Health promotion refers to the enabling of people to improve and control their wellbeing “beyond a focus on individual behavior towards a wide range of social and environmental interventions.”⁷⁰ Thus, health promotion is a central tenet of preventive medicine, which seeks to avoid the occurrence of disease by targeting its upstream causes.⁷¹ Nearly 40% of US deaths can be averted by behavioral or social changes introduced earlier in life.⁷² Of those 40%, 245,000 deaths are attributable to low education, 133,000 to poverty, 162,000 to low social support, and 119,000 to income inequality.⁷³ These totals are comparable to deaths caused by heart attack, cerebrovascular disease, and lung cancer, reflecting the link between education, SES, and health.

Table 1 outlines the complex consequences of social need. For example, numerous interconnected pathways illustrate how education can influence earning potential and ultimately health,¹ while the reverse – the effect of family income on children’s educational achievement has also been well-documented.⁷⁴ Therefore, **implementing strategies that promote healthy behavior both in the clinic and in communities has reverberations in all facets of life, creating the possibility of compounded effects on children’s health.**^{75, 76} One such example is the advent of the “medical home” model, which values holistic, coordinated, and culturally-sensitive treatment in all health care venues.⁷⁷

Given the significant interplay between education, income, and social needs and their ultimate influence on health outcomes, **addressing SDH from a young age could reasonably achieve the Triple Aim of healthcare – improving quality and experience, and decreasing costs.**^{15, 78, 79} Thus, many care settings and health organizations are implementing interventions which address SDH in innovative ways.^{15, 80} For example, some states and municipalities are adopting a Health in All Policies (HiAP) framework which requires policymakers to consider the health and equity consequences of policy decisions even in non-health sectors.¹³

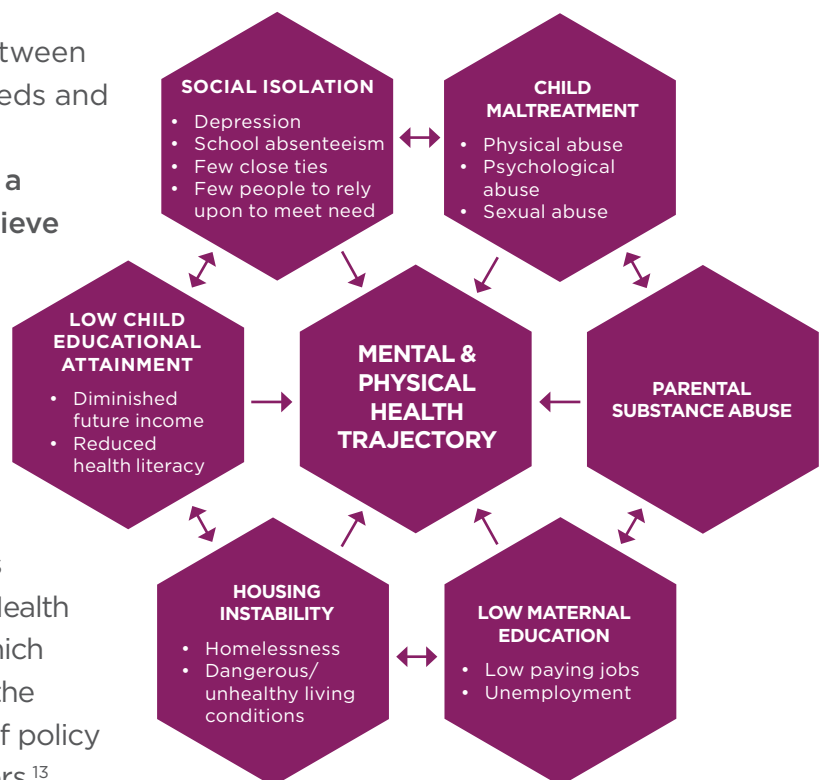


Figure 1 illustrates one of many SDH pathways affecting overall health. Any of these ACEs or social circumstances may directly affect health or exacerbate the intensity of other ACEs, further compounding health consequences.

SDH AND RECENT POLICY INITIATIVES

The American Academy of Pediatrics (AAP) has called for increased attention to SDH in the clinical care setting by screening children for social needs, family psychosocial risk factors, and ACEs that could predispose them to unfavorable outcomes.⁸¹ In 2002, the AAP set up the Bright Futures National Center to assist medical homes in implementing screening and other health promotion strategies which tackle these “new morbidities”.^{81, 82} Further, the Affordable Care Act (ACA) has encouraged healthcare innovations that link health care and community health through screening. In 2016, the Centers for Medicare and Medicaid Services (CMS) established Accountable Health Communities, a 5-year innovation model that specifically promotes SDH screening for all Medicare and Medicaid beneficiaries.⁸³ Participating sites address these needs through three tiers of approaches, with more intensive interventions linked to higher reimbursement. CMS has also formalized an alternative payment model mechanism which should incentivize nonmedical interventions by granting states greater flexibility in dictating the types of services that are covered by health plans.⁸⁴ **Together, the Accountable Health Communities program along with several changes to Medicaid reimbursement policy signify how addressing SDH through screening is gaining traction as a federal policy focus.**

WHAT IS SDH SCREENING?



Given their personal interactions with children and families, health care providers are uniquely positioned to identify risk factors that exist outside of the home.^{85, 86} Surveillance refers to the “flexible, longitudinal, and continuous process whereby knowledgeable professionals perform skilled observations during the provision of health care.”¹⁸ While this strategy is useful for identifying physical or mental health concerns, it should be used in tandem with screening, which assumes a much more standardized process for detecting need.^{18, 87} Furthermore, **screening legitimizes the discussion of sensitive topics in a way that surveillance alone cannot,⁸⁸ and builds trust among patients, fostering more discussion of need.⁸⁹**

Together, the screening results and the provider's personal assessment should serve to identify need and then help connect families to available resources. Garg & Dworkin¹⁸ outline the following components of this technique:

- 1. Asking general questions at all pediatrics visits such as “What are your needs” or “How can I help you?”**
- 2. Screening for specific concerns if necessary and then using a global tool to identify unmet needs**
- 3. Documenting the patient's social history in the medical record**
- 4. Connecting patients and families with professionals and resources that can assist with their needs**

It is especially important that when connecting to community resources, providers avoid taking unilateral action on behalf of the patient without the proper cooperation and consent of the family.⁹⁰ The tool itself should never include thresholds which automatically define or necessitate action regarding need. Instead, the results should be used as a starting point for conversation about sensitive topics which may not have been easily identifiable. Furthermore, it is essential that providers acknowledge families' strengths by reinforcing healthy behaviors and speaking optimistically when addressing concerns. If, for example, a parent screens positive for substance abuse, the provider could mention that while the parent's love for their child is evident, seeking help for substance abuse will further benefit the child, parent, and entire family.

Despite families' desire to discuss SDH and other non-medical issues with their physicians,^{91, 92, 93} and physician's recognition of the connection between social needs and health,^{93, 94, 95} **very few children actually receive any sort of SDH assessment, with providers often citing a lack of time or inadequate knowledge to address social problems.**^{86, 93, 96, 97, 98} (in one study, only 51% of physicians probed further when their patients discussed a social need with them).⁹⁹ Other times, providers may underestimate the prevalence of need among their patients, preventing provision of vital resources.¹⁰⁰ When carried out in clinical settings, SDH screening has produced promising outcomes. One model which employed SDH screening coupled with a referral program demonstrated improvements in blood pressure and low-density lipoprotein cholesterol (LDL-C) levels in adults.¹⁰¹ Although no research has examined the immediate effect of screening on health outcomes in children, these results hint at how addressing unmet needs might proactively prevent or reduce the severity of conditions as well as reduce healthcare cost. Thus far, effective pediatric screening interventions have been shown to increase the detection of unmet needs, the quantity of referrals to community resources, and the likelihood of families enrolling in community resources.¹⁰² **Screening has also decreased the number of families' unmet social needs,¹⁰³ increased patient/family engagement with their care,¹⁰⁴ caused patients to be more proactive in addressing SDH,¹⁰⁵ strengthened families' trust and confidence in their providers,¹⁰⁶ and improved self-reported child health.**¹⁰³

SCREENING PROCEDURES AND BEST PRACTICES

Although screening is receiving increased attention as a health promotion measure, there is no standardized mechanism universally accepted by pediatric care providers. This policy brief will discuss important factors for clinical care settings to consider when choosing an implementation model and then assess the pros and cons of comprehensive screening tools that have been established in the literature. This brief only considers global instruments which detect four or more SDH and that can be administered to all pediatric patients. Thus, social development tools intended for infants or toddlers are not assessed, nor are tools which screen for medical history or current health status.

The screening and surveillance process (hereby referred to as “screening”) should be tailored and specific to the needs and capabilities of the care setting. Nevertheless, screening is only the first step in helping patients manage their social needs. **The screening results should ideally be used to connect patients to resources, effectively bridging the gap between health care and community health.** This section will review the basics of screening and discuss ways to connect families to help.

General Strategies

Providers should always assure patients that their answers will be kept confidential.

In general, patients are receptive, and even appreciate thorough screening,^{91, 100, 106, 107} but reinforcing this fact should reassure those who are more hesitant.⁸⁸ Secondly, if possible, screeners should provide some introduction or explanation of purpose. Including language like “We ask everyone these questions” might ease respondents’ concerns that they have been singled out.¹⁰⁸ Before discussing survey results, providers might also engage the family by asking questions such as “Do you have any needs with which I can help you today?”.⁸²

When should patients be screened?

In most cases, patients or caregivers will complete the screening questionnaire without assistance. Because these questionnaires are usually short and easy to answer, most can be completed in the waiting room or before seeing the provider. However, nurses or social workers might be required to administer the survey orally to accommodate low-literacy populations or those with disabilities.

Who should screen?

Depending on the staffing capability of the clinical care setting, either social workers or providers (physicians, nurses, etc.) should use the results to begin a conversation about social need. **While social workers are often more outwardly knowledgeable**

about these topics and related community resources,⁸⁶ many families may prefer or be more receptive to advice from their healthcare providers.¹⁰⁹

Despite its importance, very few physicians actually report screening patients, often citing a lack of training and staffing constraints as key barriers.^{86, 93, 96, 97, 98} Given such challenges, it is important to devise mechanisms to better position clinical providers to screen for SDH. First and foremost, provider training is an integral part of this process.^{81, 86} The Accreditation Council for Graduate Medical Education (ACGME) already mandates

that health promotion and advocacy be included as general pediatrics residency requirements.¹¹⁰ However, some leaders in pediatrics suggest that an SDH-specific curriculum should also become standard practice.^{107, 108} **Such a curriculum can teach providers of all levels (i.e., physicians, residents, nurses, social workers) to empathize and act on identified needs.** Further, SDH related residency curricula have been shown to increase detection of social issues, the frequency of screening, provider's comfort in addressing sensitive topics, and their competence in linking patients to resources.^{89, 95} One study found that 100% of pediatric interns who underwent a 2 week SDH-specific residency curriculum felt knowledgeable about and comfortable discussing social issues, compared to only 71% and 64% of interns (who did not undergo the same training) in these respective metrics.⁹⁵ An extension of this curriculum, developed by Klein et al.⁸⁹ resulted in greater self-rated competence in screening for SDH, and increased screening frequency for interpersonal violence (IPV) and maternal depression. This curriculum included videos portraying actor residents screening for SDH in appropriate and inappropriate ways as well as “day in the life of” social history vignettes through which families emphasized how screening and intervention personally impacted them. Ultimately, these videos and vignettes combined with community immersion trips to local resources may make residents more aware and empathetic of their families' situations, especially those who do not have personal experience with poverty.^{89, 113}

ONE STUDY FOUND THAT 100% OF PEDIATRIC INTERNS WHO UNDERWENT A 2 WEEK SDH-SPECIFIC RESIDENCY CURRICULUM FELT KNOWLEDGEABLE ABOUT AND COMFORTABLE DISCUSSING SOCIAL ISSUES, COMPARED TO ONLY 71% AND 64% OF INTERNS (WHO DID NOT UNDERGO THE SAME TRAINING) IN THESE RESPECTIVE METRICS. ⁹⁵

Connecting to Resources

During consultation with families, providers should suggest programs or resources to help them meet their needs. Some cities, like Philadelphia have established online tools to access a full list of community resources based on severity and type of need. Studies show that databases like these are effective in educating pediatricians about the missions and availability of community resources.¹¹⁴ Alternatively, care navigators, mental health professionals, or social workers might also be consulted for this component of the intervention if available.¹¹⁵

Clinical care settings might also think about including volunteer-based organizations on-site and forming institutional coalitions with community partners to which they can refer patients. If resources are available, care settings might begin to influence policymakers by advocating for greater accessibility to social needs.¹¹⁶ Table 1 lists some general resources for addressing social determinants of health. This list however is not exhaustive, so **care settings should also be aware of local organizations or other interventions which can provide support.**

Families can also be referred to programs like Help Me Grow, an outreach service operating in 25 states which connects families to outside resources.¹¹⁷ Many states operate telephone hotlines that triage social needs and link families to appropriate programs and groups.¹¹⁸ **Clinical care settings should become familiar with these resources, especially if they have trouble fully addressing need or experience barriers to providing adequate care coordination.**

Other more direct linkage models exist. Medical-legal partnerships (MLPs) are characterized by legal clinics that are embedded in the clinical care setting and involve lawyers or legal advocates throughout the patient's care process, upon referral. **Advocates can even go so far as to engage the legal system to effect policy changes in the families' interest.**¹¹⁹ While the scope of services provided is specific to the site, it is not uncommon for MLPs to assist with needs related to housing, utilities, income, or immigration. MLPs in Cincinnati (Child HeLP) and Palo Alto have been particularly successful in their use of legal advocates to resolve pediatric patients' social needs.^{120, 121, 122}

Alternatively, Health Leads, a US based healthcare organization, is committed to helping clinical care settings design and implement social needs programs which centralize the linkage process.¹²³ In the "help desk" model, families are "prescribed" social needs by providers or are referred to initiate the screening process. There, they are connected to resources by undergraduate volunteers. After being trained, these students also provide adequate follow-up and help patients enroll in resources of interest.^{124, 125} One study using the WE CARE assessment at a Health Leads help desk found that 64% of parents who accessed the desk also contacted a community resource, suggesting that help desk staff were effective navigators.^{118, 126} Fierman et al.¹²⁷ lists some other programs which could be implemented or utilized to assist families.



Despite proactive planning, it can be difficult for institutions and providers to stay up to date with community resources and their eligibility requirements. **Clinical care settings should be proactive in forming relationships with government agencies, health departments, and other organizations which allows for facilitated communication about available resources and eligibility.** In addition, some models, like WE CARE have developed a Community Resource Book that organizes information into 1-page handouts that can be easily distributed to patients.¹⁰² The SEEK model similarly includes one-pagers with general information on risky behaviors and information on resources families can contact for help.¹²⁸ Merely conveying information through written handouts is not nearly as effective for families as having a navigator guide them while contacting resources. One study found that caregivers who used a navigator reported fewer unmet social needs and greater improvement in child overall health than caregivers who were just given handouts.¹⁰³ That being said, providing written information or behavior strategies is an important first step. Local resource information should be included on these handouts.

Assessing Patient Outcomes

Survey developers have evaluated their tools using a variety of metrics including referral rate, screening frequency, and need detection rate. Despite receiving referrals and information about relevant resources, many patients report barriers to using them, including a lack of time. Additionally, one randomized control study found that after 1 month, 41% of parents who were screened for SDH remembered receiving a referral compared to 7% of parents who were not. Although the screening showed significant positive association with parent's recollection, most parents still did not recall receiving a referral, signifying a challenge with patient engagement. Furthermore, this study found that among those who reported receiving a referral, only 34% actually contacted a community resource.¹⁰² In another study of pediatric patients with developmental delays, only 10% of patients with detected delays received services.¹²⁹ Thus, it is important that care settings do not measure the success of their programs merely based on detected need or frequency of referrals. Instead, **institutions should take care to make sure that families take advantage of available services, while working to mitigate the barriers families may face in accessing them.** Staff should be available to answer patients' questions, help with applications, or address any other patient concerns. A reasonable amount of follow-up should be expected. While the literature is relatively limited on this topic, clinicians might use future visits to ask families if the severity of any type of need has improved since utilizing these resources.

Ethical Issues with Screening

Many researchers, policy makers, and community advocates warn against screening for needs or concerns that cannot be adequately addressed. Thus, institutions must refine the scope of their screening to reflect the resources available at the given time. Failure to provide appropriate assistance after families divulge personal



information may erode trust in their providers. Failure to ensure an adequate referral and linkage mechanism exists is arguably unethical.⁸⁶ **Responsible screening involves having information available in an accessible format, maintaining institutional relationships, training providers to competently address sensitive topics, and ensuring community partners have the capacity to receive additional referrals.** Additionally, clinicians should avoid blindly issuing referrals without ensuring the proper information and linkage procedure are conveyed to families.

Despite the benefits of screening, it is important to keep in mind that all instruments are characterized by some degree of imprecision, meaning that they may incorrectly detect need when it exists, or fail to detect the lack of need when it doesn't.¹³⁰ Moreover, the lack or presence of a need does not necessarily predict whether or not a family would like help meeting this need. To address this issue, **many instruments include a question asking respondents whether they would like help meeting a need even after assessing its severity.** Clinicians should avoid determining need based on some predetermined cutoff in the questionnaire; conversely, clinicians should not assume that need does not exist just because families do not screen positively on the questionnaire. Instead, the results should be used as a starting point for conversations that involve the shared decision-making with the families. Further action including community referrals should never be made unilaterally by the provider.

Institutions should communicate with community agencies to assess the extent to which referrals are being utilized, as well as the quality/appropriateness of those referrals.¹³¹ Inappropriate referrals could overburden already stressed community agencies, compromising their abilities to assist those in urgent need. For example, a group of patients (that would not independently qualify for services) which is referred to a food bank by a clinician may consume resources intended for those in dire need. Additionally, adequate communication may help clinical care settings identify patterns which they might then address on a broader level.¹³² For example, the Child HeLP MLP in Cincinnati recognized similar complaints from tenants of a particular public housing project, and subsequently lobbied for building-wide housing improvements.¹²⁰

Lastly, clinicians should be methodical and deliberate in implementing their screening process. Ultimately, SDH screening aims to uncover need, which many times may not be conspicuous or easily identifiable. Thus, they should screen all patients without considering personal biases about the patient, such as their perceived social class.¹³³

Long-Term Documentation

Despite AAP recommendations of screening for all patients,⁸¹ it will be up to individual institutions to determine when and how often that occurs. Regardless, **clinical care settings should keep track of patients' social histories and, the resources they access (if possible) in electronic health records (EHRs), not only to track families' social progress, but also to serve as an acknowledgement of their importance.**^{132, 133, 134} Eventually, providers might even issue referrals to community resources directly through the EHR.¹³⁵ Many sites have already adapted their EHRs to operationalize this process.^{105, 136}

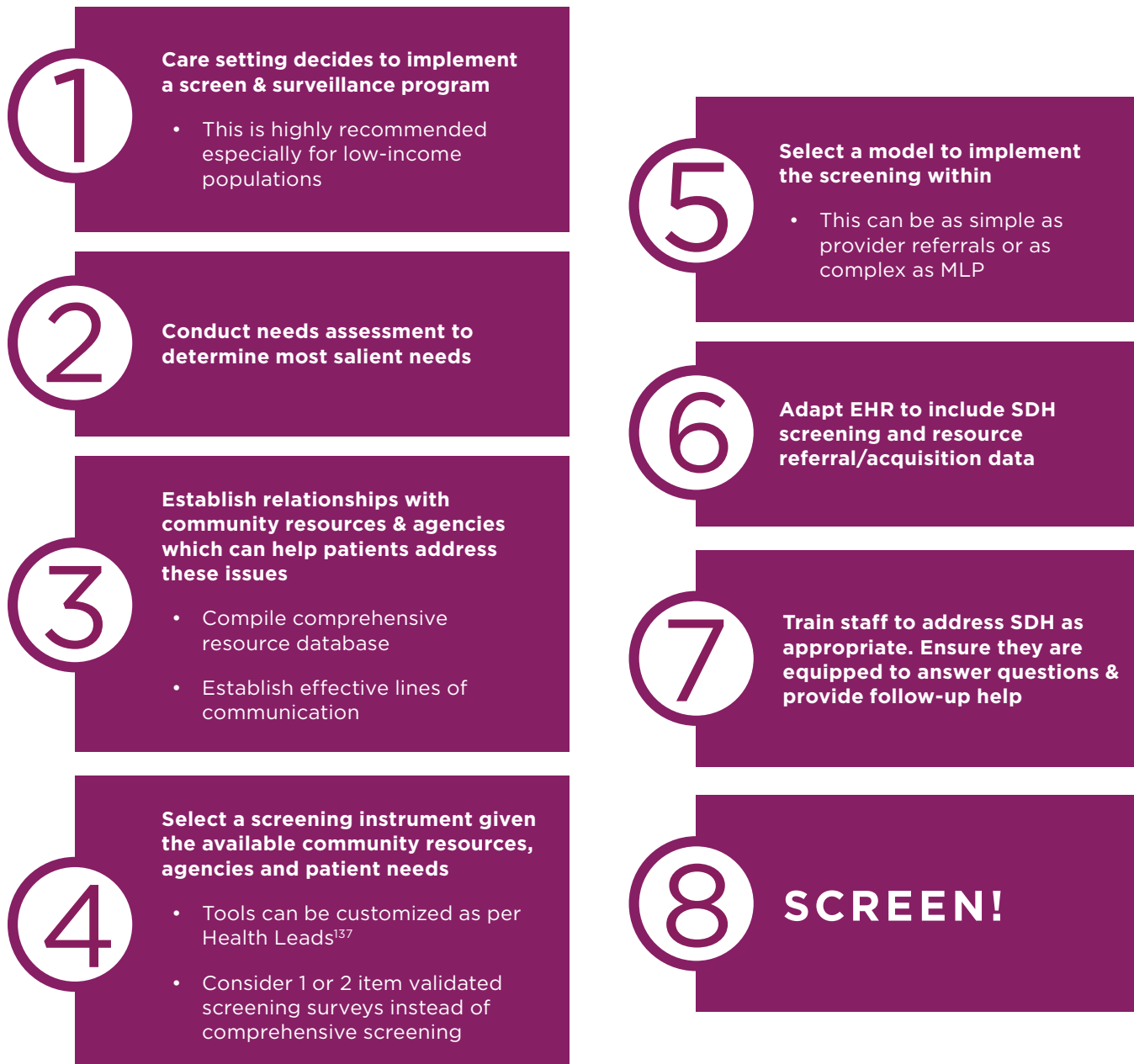


Figure 2 outlines a general step-by-step process which a clinical care setting might employ before implementing a screening program. Health Leads has put together a useful toolkit for care settings interested in creating or adapting their own screening tools.¹³⁷

CONSIDERATIONS WHEN CHOOSING A TOOL

There are many factors to consider before choosing a specific screener or intervention. When reviewing these factors, it is important to keep the implementation setting in mind.

Scope

Accurately defining the scope of the tool is very important. It is impossible to screen for all SDH and thus, the tool should seek to identify those needs that are most applicable to its population.¹³³ Additionally, institutions must consider their workforce capacity and resources available to address specific SDH. Settings with staffing constraints or limited resources to address SDH that are less prevalent among their patient population might consider narrowing the scope of their screening to 1 or 2 needs using validated single issue surveys rather than global instruments (See Table 1).

Secondly, sensitive topics like interpersonal violence or food insecurity can trigger significant discomfort when discussed. Providers need to be knowledgeable and empathetic in addressing these concerns. Fortunately, many interventions have shown that with short, focused training, providers feel more comfortable screening for these issues and competent in engaging patients about possible courses of action.^{89, 106} See “Connecting to Community Resources” for more details.

Length

Health Leads recently published a toolkit with best practices for instrument development.¹³⁷ It recommends short questionnaires, with a general maximum of 12 questions. Longer tools might disrupt patient engagement cut into time that could be spent with the provider. Thus, **the length and concision of the tool however should be tailored to the setting, depending on the time available and the precision of results that are desired.**

Accessibility

First, the tool should be professionally translated into languages spoken by the patient population. Administrators should take caution in assuring that the language in the translations maintains the precision and accuracy from the original survey instrument. These professional translations may incur additional costs.

Second, **the questionnaire should be short and simple, only asking questions that help detect severity of need.** The language should be written at a level that accommodates low-literacy populations or those who may not be fluent in the tool's language. Health Leads recommends that developers target a 5th grade reading level, although tools have been established at slightly more and less advanced levels.¹³⁷

Third, specific questions should involve similar response types to the extent possible. **Multiple choice, Yes/No, and Likert Scale responses are easily understood and helpful for interpretability. However, differentiated response options (i.e. Likert Scale) may generate more precision in the answer than more restrictive responses, like Yes/No.**¹³⁸

Lastly, the tool's administration is important to consider. Computer based screening has been shown to reinforce families' awareness of social need and can print referrals to help them connect to resources.¹⁰⁰ Separately, respondents are prone to social desirability bias, or the underreporting of circumstances that could be viewed as humiliating. Electronic or paper & pencil reporting mechanisms promote disclosure of sensitive topics like IPV or substance abuse in a way that in-person interviews do not.^{139, 140} One randomized controlled trial found that computer based respondents were up to 40% more likely to report a need in a given SDH domain than respondents of an in-person assessment.¹⁴¹ That being said, in-person interventions, such as IHELP, may be more accessible to low-literacy populations.¹⁰⁴ The susceptibility of social desirability bias in electronic administration is equivalent to that in paper & pencil administration.

ONE TRIAL FOUND THAT COMPUTER BASED RESPONDENTS WERE UP TO 40% MORE LIKELY TO REPORT A NEED IN A GIVEN SDH DOMAIN THAN RESPONDENTS OF AN IN-PERSON ASSESSMENT.¹⁴¹

Degree of Patient Involvement

The tool should ideally incorporate some degree of patient input. **It is imperative that clinicians avoid automatic referrals based on threshold or severity of needs without the consent and shared decision-making with the affected family.** Including questions like “Would you/your family like help with this issue”, as WE CARE, SEEK, and Health Leads do, function as important first steps toward initiating discussion on sensitive topics. See “Ethical Issues” for more information.^{102, 128, 137}

Reliability

It is important that the tool accurately detect need when it exists. Thus, the validity of a tool is essential to assess when deciding how to screen for social determinants of health. Clinical care settings that opt to customize instruments should adapt questions from previously validated screenings and then test them to ascertain accuracy and precision. **Sensitivity, the probability of testing positive when need does exist, and specificity, the probability of testing negative when a need does not exist, are good measures of validity.**

Cost

Lastly, cost should be taken into account. Some tools are free of charge, while others are proprietary. Additionally, clinical care settings should consider implementation costs (including but not limited to translation and incorporation within the medical record).

ASSESSING THE TOOLS



The following section will summarize the literature regarding some commonly used comprehensive SDH screening instruments. This section includes models which specifically address SDH and can be applied to all pediatric patients. Tools that screen for additional risk factors or which are too long to be practically used for all patients are excluded.

WE CARE ^{102, 126, 142}

Background

The Well-child Care Visit, Evaluation, Community Resources, Advocacy, Referral, Education (WE CARE) intervention was developed by Arvin Garg, Associate Professor of Pediatrics at Boston University School of Medicine to evaluate the feasibility and impact of SDH screening on low-income children during well child care (WCC) visits.

Purpose

The original survey screens for 10 social domains chosen based on their inclusion in the Bright Futures Pediatric Intake Form and discussion with clinic staff members.¹⁰⁸ According to Garg et al.,¹⁰² “Only those problems for which community resources were available were included in the survey.” These problems included parental education, parental unemployment, parental smoking status, parental drug abuse, parental alcohol abuse, parental depression, intimate-partner violence (IPV), child care need, homelessness, and food insecurity. A later survey was adapted to reflect the needs at an alternative setting.

Development and Validation

The self-report format allowed parents to identify problems and their desire to address to have them addressed by clinicians. Questions were adapted from the Bright Futures Pediatric Intake Form,¹⁰⁸ and other validated screeners. Two parent focus groups recorded high face validity, finding the survey easily understandable. Content validity was assessed by faculty members and social workers. The survey had high test-retest reliability ($r = 0.92$).

Intervention Details

Residents participated in a 20 minute training prior to implementation. Research staff developed a Family Resource Book (FRB) containing 1-page tear-out sheets listing information about available community resources for each of the psychosocial problems. The sample was comprised of low-income, primarily African-American parents at an urban hospital-based pediatric clinic. Parents in the intervention group received the WE CARE screening and discussed need with residents while the FRB was made available to parents in the control group to read/use and their providers to introduce.

Findings

- Parents in the intervention group discussed more psychosocial topics at the WCC visit than parents in the control group.
- Parents in the intervention group reported fewer unmet desired conversations topics with clinicians than parents in the control group, specifically on issues relating to homelessness, drug exposure, IPV, and child care needs.
- Parents in the intervention group were more likely to receive one and more than one referral than parents in the control group.
- Parents in the intervention group had greater odds of receiving referrals for GED programs, job training, food resources, and smoking cessation classes.
- Parents in the intervention group were substantially more likely to recall receiving a referral after 1 month, and were nearly ten-fold more likely to contact a community resource than those in the control group.
- Providers were comfortable with administering the survey and reported that it did not disrupt the WCC visit.

Quick Facts

Length: 10 (or 6) questions

Administration Time: <5 Minutes

Translated Languages: English & Spanish

Reading Level: 3rd Grade

Administration Method: Paper & Pencil, Electronic

Response Type: Yes/No

Cost: None; Permission Required

Discussion

This intervention is well-developed and screens for a comprehensive array of SDH. That being said, it should only be recommended for clinical care settings with the capacity or supports to address these problems. The questionnaire is extremely short which may be especially valuable in settings with high patient volumes. The responses can be answered in a yes/no format, which may make it difficult to assess severity of need. However, the tool also asks respondents to identify whether they would like help addressing the issue, allowing them to initiate the topic of assistance, rather than providers. The findings from this study are positive but suggest the importance of follow-up care. This study excluded infants in its sample; however, similar associations were found in regards to referrals, types of referrals, and resource access rate in a study of infant mothers in Boston CHCs (this study used the abbreviated survey¹⁴²) Lastly, this tool was extremely well-received among independent social workers, and received an 81% score on a collection form adapted from the 108-item Consensus Based Standards for the Selection of Health Measurement Instruments (COSMIN), which uses several constructs to measure overall validity.⁸⁰

Accessing the Tool

The original tool can be found here: <https://www.ncbi.nlm.nih.gov/pubmed/17766528>

IHELP^{91, 104}

Background

IHELP is a multi-step intervention developed by Jeffrey Colvin, Associate Professor of Pediatrics at University of Missouri-Kansas City School of Medicine, and colleagues. It has been adapted from a similar survey, IHELLP.¹¹¹ This intervention uses behavioral change strategies to improve the quality of screening among residents.

Purpose

The screening process itself is performed orally by residents or other providers. The mnemonic IHELP refers to the social domains covered within this questionnaire: Income & insurance, Hunger & housing, Education & ensuring safety (IPV), Legal status, and Power of attorney or guardianship. Residents are encouraged to use discretion in the scope of their screening depending on the situation. For example,

residents may elect not to ask about IPV if both partners are present.

Development and Validation

The questionnaire was adapted from the IHELLP survey developed by Kenyon and colleagues¹¹⁰. Every intervention team History & Physical Examination (H&P) with a documented social need was compared to a full social worker evaluation. Two researchers with master's degree-level social work training scored the first 20 admissions, demonstrating perfect (1.0) inter-rater reliability. Specificity = 0.96; sensitivity = 0.63.

Intervention Details

Interns first met with a study team researcher who discussed SDH for 20 minutes. An IHELP card was provided (intended to be kept on the person) and the method was practiced. Other daily strategies were taught to encourage interns to employ the IHELP questionnaire during patient visits. The use of IHELP in documenting social histories was then critiqued for 3 months. IHELP use was still monitored afterward for a 21-month maintenance period. Interns in the control group were not provided with IHELP training. The sample comprised of 87 interns evaluating majority-white (~54%), primarily government-insured inpatients aged 0-9.



Findings

- H&Ps conducted by interns in the intervention group were almost 5 times more likely to have used the IHELP method than H&Ps conducted by interns in the control group
- Only 20% of interns in the intervention group screened for IPV.
- The median IHELP usage survival time was 8.1 months after the intervention period.
- 30.2% of interns in the intervention group continued to use IHELP after the study period.

Quick Facts

Administration Time: 30 Minutes

Translated Languages: Provider Specific

Reading Level: N/A

Administration Method: Oral

Response Type: Open ended

Cost: None; Permission Required

Discussion

This intervention was effective in increasing the frequency of screening; however, the study did not evaluate the quality of that process, nor the effect on patient outcomes. This intervention is most useful in inpatient settings with extended patient visits. The 30 minute process may not be feasible to implement in higher volume or resource constrained settings. Additionally, this intervention uses conversation to uncover potential need. While studies suggest that oral screening is more susceptible to social desirability bias (underreporting of sensitive topics) than other administration types,¹⁴¹ this method allows providers to tailor their screening to the specific needs the clinical care setting is able to address at the given time. That being said, this intervention is not standardized like other pre-established surveys.

Accessing the Tool

The survey questions can be found here: <https://www.ncbi.nlm.nih.gov/pubmed/?term=multiple+behavior+change+intervention+colvin>

ISCREEN^{103, 141}

Background

This questionnaire was designed by Laura Gottlieb, Associate Professor of Family and Community Medicine at the University of California San Francisco to screen for SDH and then compare self-reporting frequency between the electronic version and the face to face interview.

Purpose

The original survey screens for 8 social domains including child care, immigration, school safety, public benefits, housing, income security, food security, and neighborhood safety. An additional 14-item was developed for a different patient population in a different care setting. Both interventions are described below.

Development and Validation

Most domains were comprised of questions adapted from the MASQ.¹⁴³ Other questions were adapted from previously validated survey items.

Intervention Details¹⁴¹

Caregivers in the intervention group used an electronic version of the questionnaire. They were also provided with a headset which had identical prerecorded questions

available. Caregivers in the intervention group were interviewed (with identical questions) in either English or Spanish. The study comprised of mostly low-income Hispanic and African-American caregivers whose children were admitted to a large urban children's hospital emergency department.

Findings

- Respondents in the intervention group were more likely to disclose IPV, income, and substance abuse
- Respondents in the intervention group reported more unmet needs overall than did parents in the control group

Intervention Details¹⁰³

Another study comprised of a similar patient population at 2 safety-net hospitals was conducted. All families used a modified 14-question electronic survey; families in the intervention group had access to a care navigator who helped them address needs they endorsed, while families in the control group were given written resource handouts. The care navigators were recruited from local universities and underwent 8 hours of training.

Findings

- Caregivers in the intervention group reported a decrease of 0.39 needs after 4 months, while control arm caregivers reported a 0.22 increase.
- Caregivers in the intervention group reported an increase in child health of 0.36 points on a Likert scale after 3 months compared to an improvement of 0.12 reported by caregivers in the control arm.

Quick Facts

Length: 23 (or 14) multi-part questions

Administration Time: 10 Minutes

Translated Languages: English & Spanish

Reading Level: 5th Grade

Administration Method: Oral, Electronic

Response Type: Likert-Scale

Cost: None; Permission Required

Discussion

First, it is important to note that neither study had a no-treatment control. Thus, neither specifically studied the effect of the iScreen



survey on need. That being said, the survey is quite extensive. Many SDH are examined which may not be appropriate for settings with limited resources. The questions are adapted from existing surveys, and the Likert response-types makes it easier to assess severity of need. However, because of multi-part questions, this questionnaire might affect patient engagement and may be difficult for providers to interpret, especially in fast-paced, high-volume settings.

Accessing the Tool

The original tool can also be found here: <http://pediatrics.aappublications.org/content/suppl/2014/10/29/peds.2014-1439.DCSupplemental>



SEEK^{145, 106, 144, 146, 148, 149,150, 148, 128}

Background

This intervention developed by Howard Dubowitz, Professor of Pediatrics at the Maryland School of Medicine, is widely used as a tool to curb child maltreatment and neglect by briefly introducing and addressing issues at the direction of the family. The tool is endorsed by the Agency for Healthcare Research and Quality and the AAP's Bright Futures.¹²⁸

Purpose

The Safe Environment for Every Kid (SEEK) model can be administered electronically or via paper & pencil. It involves a 15 question survey covering the following domains: Parental depression, parental substance abuse, parental stress, IPV, food security, and corporal punishment.

Development and Validation

The research team specifically chose questions which could easily be addressed through community resources. The research team has carefully refined the questionnaire after extensive feedback. Each domain was tested against the accepted gold standard individual screener. All measures had moderate to high specificity (the lowest was depression: 80%) with moderate to very low sensitivity.

Intervention Details

Residents underwent an 8 hour training which included booster sessions every 6 months. They learned how to address SDH in a deferential manner through the REAP (Reflect, Empathize, Assess, Plan) approach. 1-page handouts were developed for specific issues which providers could issue to parents. These handouts reinforced health behavior and included information on national, state, and local resources. Parents then completed a 20 (eventually trimmed to 15) item questionnaire. A social worker was available in case residents or parents wanted additional consultation. Residents in the control group did not obtain the training, nor did their patients fill out the questionnaire. The study was conducted with low-income, primarily African-American patients in an inner-city pediatric clinic.

Findings

- Families in the intervention group had fewer instances of non-adherence to medical care, delayed immunizations, and severe or very severe physical assault than families in the control group.
- Families in the intervention group were less likely to experience a Child Protective Services incident for up to 4 years post-study.
- Families in the intervention group were more likely to maintain SNAP benefits than families in the control group.
- Families in the intervention group felt more positively about their interactions with their doctors than families in the control group.
- Residents in the intervention group screened for all domains more frequently than did residents in the control group.
- Residents in the intervention group generally reported improvement in thinking and behavior regarding depression, IPV, stress, and food insecurity (but not

among corporal punishment or substance abuse) relative to controls. These findings held for up to 18 months after the intervention.

- SEEK did not require significant additional time for medical professionals to address SDH.

Quick Facts

Length: 15 questions

Administration Time: 3 Minutes

Translated Languages: English, Spanish, Chinese, Vietnamese

Reading Level: 4th grade

Administration Method: Electronic, Paper & Pencil

Response Type: Yes/No

Cost: One-time payment; may be subject to other costs

Discussion

This intervention is widely used and highly endorsed. While implementation does incur a fee (seekwellbeing.org), multiple materials

are made available including trainings, modules, and one-pager customizable handouts for patients. Very positive results have been demonstrated in this study with regards to provider comfort in detecting need and family ability to access assistance; an additional RCT among relatively low-risk patients at 18 outpatient clinics also found similar results regarding child maltreatment risk and the patient/provider comfort level. This tool is promising, especially in fast-paced settings due to its ability to limit clinical disruptions and improve the quality of patient/provider communication. However, as with any intervention, the quality of screening drops off over time, suggesting the need for booster sessions to reinforce the practice. Additionally, this tool is translated into many languages which is important for settings that treat diverse patient populations. Lastly, many domains are characterized by low sensitivity scores; however, the survey ends by asking families whether they would like help with any one issue.

Accessing the Tool

All information can be found on the website: <https://www.seekwellbeing.org/>



ADDITIONAL TOOLS/INTERVENTIONS

The following list of tools/interventions have been implemented but are either not relevant to all pediatric patients or do not have extensive accompanying studies. This list is not exhaustive. Other tools like the Psychosocial Assessment Test¹⁵¹, which assesses psychosocial risk in patients with specific diagnoses, such as cancer have also been developed but are not discussed.

Accountable Health Communities^{83, 152, 153}

This program, as previously described, is administered by CMS with the intent to address SDH. It includes a 10-item screener which was developed by a panel of experts who selected and adapted from over 200 questions from 50 different tools. It includes information on utility needs, housing, transportation, food security, and IPV. Overall, this is a highly concise, easy to use instrument, but is more so directed at addressing the health of a general respondent rather than a child.

Bright Futures Pediatric Intake/Family Psychosocial Screen¹⁰⁸

This is a slightly longer survey (~10 minutes) with questions involving Parental depression, parental substance abuse, IPV, parental history of child abuse, family relocation history, and social support. While all of these questions are adapted from individual SDH gold-standard instruments, some of them may be difficult to address such as relocation history or parental history of child abuse. This survey uses multiple response-types which diminishes simplicity and ease of interpretability.

The tool can be found here: https://www.brightfutures.org/mentalhealth/pdf/professionals/ped_intake_form.pdf

MASQ¹⁴³

The Medical-legal Advocacy Screening Questionnaire was designed to refer patients to a legal clinic in Boston, MA by way of a medical-legal partnership. The 10-question survey is short with Likert-type response items, translated into English and Spanish, and written at a 7th grade reading level. Domains covered include housing, financial stability, dignity & safety, and access to social services. In a study conducted with moderately low-income patients at 5 MA clinics, the survey was validated by comparing detection rates to the question “Do you feel that this family needs a referral?” Specificity and sensitivity were moderate to high, especially with detection of at least 2 needs.

PRAPARE¹⁵⁴

The Protocol for Responding to and Assessing Patient’s Assets, Risks, and Experiences (PRAPARE) is a widely used tool, although not specific to pediatrics. The base survey covers background, housing & utility needs, income, work status, insurance, transportation, and emotional health, with optional questions available pertaining to incarceration status, immigration status, and IPV. It is short, translated into Spanish, and compatible with EPIC. Many of the questions are directed at respondents without application to the effect on children and the survey includes questions (e.g. farmworker and veteran status) that may be unnecessary for a pediatric intervention. That being said, this tool is available free of charge and intensive implementation trainings are available.

For more information: <http://www.nachc.org/research-and-data/prapare/>

Health Leads¹²³

Health Leads has not published a specific standardized tool use, although its toolkit provides recommendations for customizing or developing one for different settings. Health Leads surveys generally ask very simple questions, and include small graphics to prime respondents to the questions. Their responses have a yes/no format and are usually framed in such a way that respondents can answer based on their desire for help with the issue. One such survey template is available in the toolkit, while others have been developed for different institutions.^{124, 127} Consultants, webinars, and other resources are available for a fee to assist with tool development and program implementation.

For more information: <https://healthleadsusa.org/>

The Online Advocate/Help Steps^{100, 107, 155}

This is an extremely comprehensive online screening tool with required responses and conditional branching. It covers 25 social domains with 90-166 questions adapted or included from various validated tools, is available in English and Spanish, and takes up to 20 minutes to complete. Upon completion, the algorithm is able to print referrals to local Boston resources depending on patients' demonstrated and requested needs, and proximity to their home address. This tool standardizes the referral process, and has been shown to help patients address their priority problems, demonstrating the advantage of a computer-based referral system which could be adapted to different locations. Although the tool is well received by patients^{100, 107} the administration time is long, and may not be feasible in high-volume settings. However, patients do have the option of jumping straight to the referral portion by skipping the screening. Lastly, updating the resource list can be tedious and requires constant interaction with community partners – in this case, 1,700 of them.¹⁵⁶

Child HeLP^{113, 120, 121}

The Cincinnati Child Health-Law Partnership is a medical-legal partnership launched in urban primary care settings. The intervention included a 2-week resident training curriculum,¹¹³ after which, residents referred patients to Child HeLP for legal services. A multi-disciplinary team reviews the case, and assesses its legal merit and required expertise before being assigned to other staff.¹²¹ The research team also developed a screening tool covering the domains of public benefits, housing, parental depression, IPV, and legal needs, based on consultation with physicians, social workers, and legal advocates.¹²⁰



COMMON COMPREHENSIVE SCREENERS CHEAT SHEET

TOOL	DEVELOPER	COMPREHENSIVE- NESS	VALIDATION DETAILS	LENGTH
WE CARE	Arvin Garg and colleagues	10 social domains	Adapted from Bright Futures Pediatric Intake Form; test-retest reliability = 0.92; COSMIN Score = 0.81	10 questions
IHELP	Jeffrey Colvin and colleagues	5 social domains	Adapted from IHELLP; specificity = 0.96, sensitivity = 0.63	N/A
ISCREEN	Laura Gottlieb and colleagues	8 social domains	Adapted from MASQ and other validated screening tools	23 multi-part questions
SEEK	Howard Dubowitz and colleagues	6 social domains	Each domain tested its respective gold standard screening tool, all of which were characterized by moderate to high specificity and moderate to very low sensitivity	15 questions
Accountable Health Communities	Centers for Medicare and Medicaid Services	5 social domains	Developed by a panel of experts who selected and adapted questions from a pool of 50 screening tools	10 questions
Pediatric Intake	Keith Kemper and Kelly Kelleher	6 social domains	All questions were adapted from previously validated screening items	7 sections
MASQ	David Keller and colleagues	4 social domains	The survey was validated by comparing detection rates to the question “Do you feel that this family needs a referral?” Specificity and sensitivity were moderate to high, especially with detection of at least 2 needs.	10 questions
PRAPARE	National Association of Community Health Centers in collaboration with other organizations	11 social domains (4 optional)	N/A	21 questions (4 optional)

Table 2 presents basic characteristics of 8 different global screening tools.

COMMON COMPREHENSIVE SCREENERS CHEAT SHEET

ADMINISTRATION TIME	LANGUAGES	READING LEVEL	RESPONSE TYPE	COST
<5 minutes	English, Spanish	3rd grade	Yes/No	Permission Required
30 minutes	Dependent on provider	N/A	Oral	Permission Required
10 minutes	English, Spanish	5th grade	Likert-Scale	Permission Required
3 minutes	English, Spanish, Chinese, Vietnamese	4th grade	Yes/No	One time payment plus additional costs and training fees
2 minutes	English	N/A	Likert-Scale	Permission Required
10 minutes	English, Spanish	N/A	Varied	None
2 minutes	English, Spanish	7th grade	Likert-Scale	Permission Required
5 minutes	English, Spanish	N/A	Varied	None

Table 2 presents basic characteristics of 8 different global screening tools.

RECOMMENDATIONS

SDH screening involves significant coordination among various government agencies, healthcare networks, and community resources. Consequently, these stakeholders should take care to create an environment that facilitates the screening process, perhaps by structuring provider incentives or coordinating resources that can assist families in need. Given the recognized importance of SDH screening it is, the following have been recommended to ensure successful implementation.

Policy Recommendations

1. Innovative funding mechanisms should be established at the state and national level for comprehensive screening to take place in clinical care settings, much the way providers who screen for maternal depression screening are entitled to reimbursement by many state Medicaid agencies.¹⁵² Providing intergenerational family services to correct for parental behaviors, such as smoking cessation, should be considered preventative child health strategies, and thus billable under their Medicaid ID.
2. Innovative funding mechanisms should be implemented for promoting care coordination and eventually, health neighborhoods as a way to improve population health outcomes and decrease costs.
3. Innovative funding mechanisms, such as alternative payment models,⁸⁴ should be implemented to cover preventive, non-medical interventions.
4. Professional guidelines for general practitioners should be modified to codify SDH screening. Residency requirements in selective fields should also include training in addressing SDH.
5. In line with recommendations from the American Academy of Pediatricians,⁸¹ clinical care settings should make an effort to institutionalize pediatric screening, regardless of reimbursement model.
6. The ICD-10, which is used for EHR documentation, provides an expanded set of codes to record characteristics. Nevertheless, many social determinants still lack applicable codes, are double coded, or are too general to be interpreted.¹⁵⁷ Thus, the ICD-10 should be reformed to correct these discrepancies and fully account for a wide range of SDH.

Community Level Recommendations

1. Clinical care settings should work toward the establishment of a “patient centered medical home”, which includes collaboration and integration with community resources to address special needs of the child.⁸¹ Care settings might go further in establishing “health neighborhoods” which involve care coordination and co-location of services (like medical-legal partnerships or access to the Supplemental Nutrition Assistance Program at Women, Infants, and Children sites) at the point of care.¹¹⁸
2. Clinical care settings should work with community partners and social workers to develop comprehensive community resource lists replete with contact, eligibility, services, and other information. These databases should be easy to maintain, access, and edit and may resemble that used by the Online Advocate/Health Steps intervention or the FRB from the WE CARE studies.^{93, 100} These databases may be disseminated throughout the community for easy access by residents, and should prioritize evidence-based resources.
3. Clinical care settings and community resources should work to establish a feedback mechanism to report on the quality and quantity of referrals. Care settings should tailor their referral process to accommodate the capacity constraints of the resources their patients utilize.

Clinical Care Setting Recommendations

1. Clinical care settings should adapt their electronic health records to include data on patient’s social needs. Screening accompanied with standardized data collection may help providers assess patients’ progress over time and serves to acknowledge the importance of SDH. Eventually, community referrals might be placed via EHR.
2. Clinical care settings should invest in training providers to appropriately address social needs. These trainings might include shadowing, “field trips”, video lectures, presentations, or other methods to promote competence.
3. After deciding to screen, clinical care settings should carefully decide the model and type of assessment to employ given their capabilities. Settings should initially assess the most common needs within their patient population; those findings should help guide decisions regarding the comprehensiveness of the tool. In some cases, it may be most appropriate to screen for only 1 or 2 items, while other settings may prefer global instruments.



4. Providers should screen for all patients, regardless of their perceived social status.
5. Providers should take great care to empathize and explain the importance of SDH on children's health. Referrals or additional steps should only be taken after consultation with the families. Providers should also acknowledge the families' strengths when reinforcing positive behavior.
6. When possible, clinical care setting should encourage team-based interventions that draw on expertise from a variety of professionals including social workers, legal advocates, physicians and nurses.



FUTURE RESEARCH

1. Despite increased attention surrounding SDH screening, there are still many research areas which have not been fully addressed.
2. Psychosocial needs screening has been recognized as a facet of preventive medicine. Detection and resolution of social needs early in life should intuitively reduce healthcare utilization by way of preventing chronic diseases stemming from economic misfortune and directly from SDH. However, research has not analyzed the specific financial benefit of standardized screening and accompanying social needs resolution.
3. Best practices for evaluating patient outcomes have not been established. Currently, studies use a wide range of metrics to assess the efficacy of their screening processes, but no standardized metrics that measure benefits accrued by patients have been adopted.
4. Research has not evaluated the relative effects SDH discussion initiated by different types of providers (residents, social workers, undergraduates) has on patient receptivity, engagement, and willingness to follow through on advice.
5. Although some evidence suggests that a screening mechanism has improved some physical health symptoms in adults, few comprehensive studies have examined the short term impact of screening on pediatric health. Demonstrating the immediate effect of pediatric screening may entice health professionals to implement standardized assessment mechanisms in their clinical care settings.

FINAL REMARKS

Social determinants of health play a major role in defining a person's health trajectory. Thus, further attention to these issues is warranted, especially in clinical settings and among low-income patients. Social needs screening functions as the first step to addressing these disparities. That being said, individual clinical care settings ought to deliberately weigh a host of considerations before deciding upon a model and tool to adopt. Clinical care settings should realistically assess their ability to screen patients and follow-up with them about resource referrals. Additionally, settings need to ensure that they have the capability to address every need that could potentially be identified by their questionnaires. For that reason, some settings may decide to use validated gold-standard instruments and screen for only 1 or 2 needs that can reliably be addressed instead.

The AAP has recommended a periodic social needs assessment for all patients. However, it will be up to individual institutions to determine when and how often that occurs. Regardless of frequency, it is important to keep documented history of social history, ideally in the medical record. That way providers can track social history over the course of time, and monitor whether intervention components have improved families' unmet needs. Relatedly, settings should take care to not measure success solely based on screening frequency, or even referral frequency. Instead, institutions should leverage their relationships with community resources to make sure that patients actually engage resources and their referrals. Institutions will need to devote a reasonable amount of follow-up to make sure families receive the support they need.

Overall, screening is a very important step, but one that will take time to fully implement. Clinical care settings should be prepared to commit time and personnel to the process, but ultimately feel comforted by the support they will provide to their vulnerable populations.



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