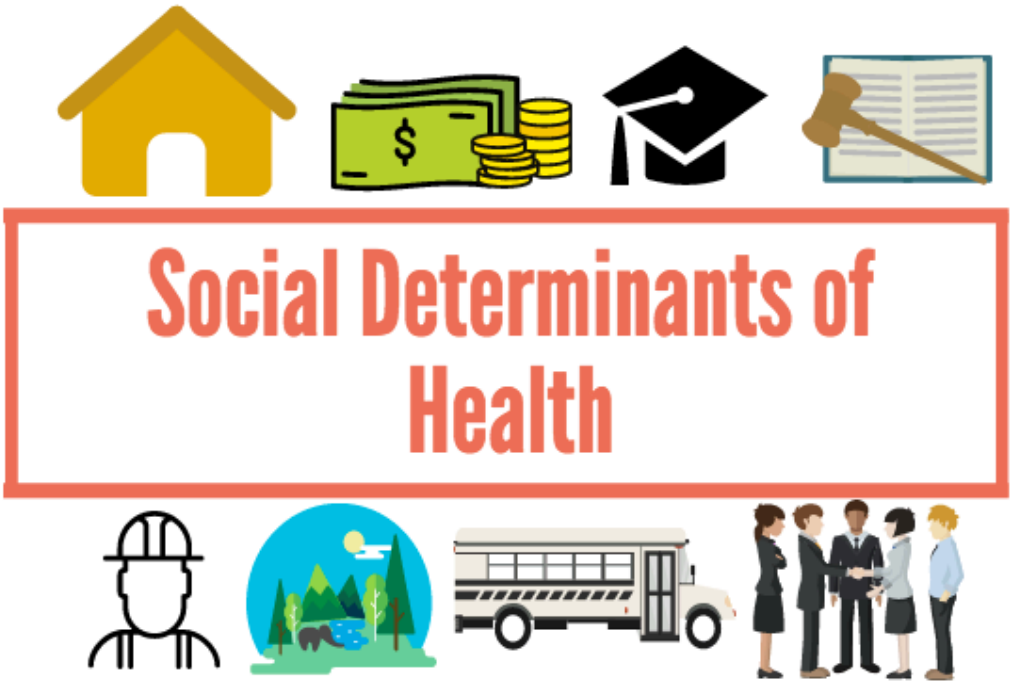

Prior to Implementation – Important considerations of *Social Determinants of Health* Screening Tools

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Evaluating Social Determinants of Health (SDOH) Screening Tools

There is growing recognition that the conditions in which people are born into, grow, work, live and age influence their health and wellbeing. Research demonstrates that addressing these conditions, hereafter called **social determinants of health (SDOH)**, is an important part of improving population health, as well as potentially decreasing healthcare costs. To that end, many are now advocating for screening for SDOH in order to identify and address individual social needs. This paper will provide a framework for reviewing SDOH screening tools.

Methods

A literature search was conducted using PubMed, JSTOR, and google. Additionally, the grey literature, internal sources and conference presentations were also reviewed. The literature search terms were "social determinants of health", "screening", "tools", "health equity", "social needs" and "health disparities" in various combinations. The search yielded 32 manuscripts that were relevant to SDOH screening tools. The following analysis is based on the literature review in addition to internal and external sources of data.

Purpose of SDOH screening

Determining the purpose of screening for SDOH is an important first step in evaluating a screening tool. Not all tools are designed to meet all purposes. For instance, THRIVE (tool for health and resilience in vulnerable environments) was designed for the express purpose of answering the question, "What can communities do to improve health and safety and promote health equity?" (http://www.preventioninstitute/THRIVE). On the other hand, PRAPARE (protocol for responding to and assessing patients' assets, risks and experiences) was designed to be used by providers in a clinical setting in order to understand and address the needs of their specific patients. Understanding the purpose of each tool and the setting in which it was designed to be used is critical to ensuring fidelity when implementing the tool.

Settings for SDOH screening

All of the screening tools presented in the literature were developed to be used within a clinical practice. This likely reflects a shift in our understanding of disease and the role that social factors play, a shift in expectation of physicians to take a more active role in addressing those social factors, and a shift in public and private reimbursement models (Bachrach, 2014).

Considerations for screening in clinical practice

Yet, the main drivers for physicians' screening for SDOH are external to the physicians themselves. Many physicians feel ill-equipped to incorporate screening into their practice (Fierman AH 2016). Medical school and residency training has

historically focused on the etiology of disease and the treatment thereof. Though medical institutions are moving towards a more holistic educational narrative, our system is still many years away from the full integration of SDOH and clinical practice. Thus, physicians often face challenges with screening such as: who is qualified to score them, who administers them, how frequently should the tool be administered and at what point during the visit, scope, affordability and accessibility of screening tools, the time for screening administration, patient flow, and reimbursement for screening.

Physician concerns are an important consideration in selecting a tool. Therefore, tools should be weighted based on the ease at which they can be integrated into clinic workflow, coordination with current electronic data systems, such as electronic medical records, length of tool and time of administration, cost, ease of interpretation of tool results, and requirement of additional resources to implement the tool.

Ethical concerns and obligations of the provider

Another important physician concern is whether screening for SDOHs creates a legal and/or ethical obligation to ensure that patients receive "treatment" for identified social needs. Are physicians obligated to follow up with patients to ensure they received services? Tools that have easy follow up questions and guidance for providers on the frequency of screening and follow up will help to standardize SDOH screening and "treatment".

Sustainability

There are economic incentives for providers to identify and address SDOH, such as coordinated care organizations, enhanced reimbursement models, and shared savings programs (Bachrach 2014). However, many of those payment models yield higher payments only when costs are kept low and health outcomes are improved. The societal conditions and infrastructure that created health disparities have existed for many years. Thus, changing the negative impact of these societal conditions on health may also take many years, which can be challenging for providers (Schickedanz 2016). Thus, the sustainability of screening for SDOH has to be considered when implementing the use of a tool in clinical practice.

Choosing the right SDOH screening tool

Level of evidence

Randomized controlled trials (RCTs) are the evidentiary gold standard. However, there are only a few screening tools that have undergone RCTs (WE CARE and iScreen). Thus, the type of acceptable evidence must be broad as RCTs are often not practical with social experiments. (Braveman 2011). Factors such as whether the study design minimizes bias and maximizes internal validity, relevance to translation into practice, use of multiple sources of data, and sample size should all be additional considerations when RCTs are unavailable (Braveman 2011).

Domains/types of questions

Survey fatigue and burden on the patient are important considerations when deciding upon tool content. Therefore efforts should be made to reduce duplication of questions asked during other parts of an encounter with a healthcare provider. For instance, the WE CARE tool has questions related to employment, smoking, drug and alcohol use, and depression (Garg, 2015). This information is typically captured in the patient information sheet and/or during the history of present illness. Moreover, the American Academy of Pediatrics recommends physicians use the mnemonic, IHELLP, which covers income, housing, education, legal status, literacy and personal safety, as part of standard patient medical and social history taking. As physicians adopt these recommendations, the content of additional screening tools will need to be evaluated. Avoidance of duplication is essential to minimizing patient frustration and survey fatigue.

Actionable

Further, limiting the question domains to those that are actionable and evidence based can help to minimize length of tool while maximizing potential impact. Actionability of data will vary with the level of clinic resources and community partnerships, and thus existing tools may require modification to tailor to capacity of healthcare provider. Additionally, a review of investments in social services found that interventions addressing housing support, nutrition support, income support and care coordination had a significant positive effect on health outcomes, with housing support alone demonstrating improved health and reduced healthcare costs (Taylor, 2016). Yet, some healthcare providers may not have relationships with housing entities, and thus screening for housing instability may not be useful. Therefore, providers should consider their ability to address identified needs as well as evidence that addressing the need will influence health.

Sensitivity and specificity of questions

Ideally, each question on a SDOH tool should be validated and be both sensitive and specific for identifying the intended need. Thus far, food insecurity questions are the only questions that have been validated and are both specific (83%) and sensitive (97%) for identifying food insecurity (Hager, 2010). However, there are several sources for validated questions regarding housing (VA website), utility needs (Children's Health Watch site), and financial strain (Aldana, 1998). Additionally, there are other levels of evidence that may be acceptable. For instance, surveys that have been pre-tested by targeted populations for comprehension and validity, such as the PRAPARE tool.

Targeted population

Another important consideration is the intended screening population. Several of the existing tools have been designed for use in a pediatric population. For instance, Family fIRST is a tablet-based screening tool specifically designed for a school-based pediatric clinic (Cohen-Silver, 2016). Similarly, iScreen, another

electronic screening tool, was also developed for a pediatric setting (Gottlieb, 2014). On the other hand, the literature search did not provide evidence of a tool designed to identify and address the needs of the elderly. Thus, a tool may require modifications to address the unique needs of the elderly. Additionally, language, reading and comprehension level, and other cultural and community factors within a targeted population should be considered when selecting a SDOH tool. Depending, on the targeted population, the ability to customize the tool to a targeted population may be an important consideration.

Conclusion

There are many SDOH tools being used and/or piloted throughout the country. For instance, PRAPARE is taking the lead in an effort to create a national standardized protocol to identify and address SDOH in a clinical setting. However, there are several important factors to consider when adopting such a tool, such as the target population, ease of integration in clinical practice, actionabilty of questions and provider obligations. There is also a question of sustainability of SDOH screening in clinical practice. Additionally, it seems that healthcare clinics have been targeted as the ideal setting for SDOH screening, with little evidence that integration of SDOH screening in healthcare is superior to an alternative environment. Additional research is needed to analyze and evaluate each tool based on the parameters set forth above and to investigate alternative environments for SDOH screening.

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