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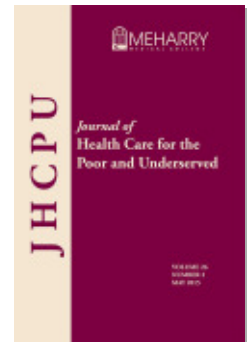
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Making the Social Determinants of Health a Routine Part of Medical Care

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Background

The impact of social and economic factors on health and disease has been well documented.^{1,2} Broadly defined, socioeconomic determinants are the conditions in which people live: where they are born, grow up, work, and age. These conditions affect a person's health and vulnerability to disease, and very often vary by wealth, social status and gender. While all health practitioners have the potential to address socioeconomic status as a contributor to suboptimal health status, providers working in underserved communities are keenly familiar with the imperative to address the social determinants of health for their patients.

Though the ethical and clinical imperatives to address these issues is appreciated by many, screening for conditions takes time, and the reality of limited time often competes with the urgency of a clinic visit or other evidence-based interventions delivered by the health care team at the time of an encounter. Therefore, screening for socioeconomic determinants of health, like many other routine clinical care tasks, must be as brief and evidence-based as possible, and shared by all members of the health care team.³ The use of technology via clinical decision support systems (CDSS) to help the team remember to perform routine tasks has been shown to improve screening for many conditions,⁴ and their use can also assist with screening for socioeconomic determinants of health. Finally, as is the case for any condition that is screened, a *bona fide* intervention should be available to address a positive screen. Using these overarching principles of thorough and efficient team-based care, a comprehensive system to screen for several socioeconomic determinants was implemented for an entire health center population.

This ACU Column focuses on Norwalk Community Health Center's (NCHC's) adoption of diagnostic screening tools to detect relevant information in the fields of housing, intimate partner violence, alcohol misuse, illicit substance misuse, tobacco use, sexual activity, and mental health/ depression. By screening every patient with evidence-based, validated screening tools, NCHC reaffirms the importance of detecting social factors that determine risk for illnesses and can have profound influence on treatment.

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Potential Barrier to Screening: Time

As in many office-based settings, a typical patient visit at NCHC can sometimes feel disjointed and hurried, as much has to be accomplished within a short time. Our solution was to find evidence-based screening tools (with a preference for tools validated in a multi-lingual, underserved setting) that could be administered by a medical assistant when a patient initially engages in an office visit. Positive responses would then lead to appropriate physician-directed intervention, significantly decreasing the burden on providers to perform screening. The barrier of limited time was further addressed by a change in workflow, based on team care principles.⁵ Significant changes in the electronic medical record (EMR) template design allowed screening roles to be better defined, whereby screening tools were put into the medical assistant section of the form (Figure 1). This clear demarcation within the EMR was critical in ensuring a complete and streamlined office visit that checked on relevant socioeconomic characteristics.

Screening Tools

The screening tools used are all evidence-based, most of them validated in underserved settings and in multiple languages. The choice of tools reflected the need to maximize efficiency, sensitivity, and specificity. The tools used for most of the screenings are described below.

Housing. The housing screen was the one for which we could not locate a validated methodology. We worked with staff and our Medical-Legal Partnership (MLP) attorney partners, who have experience in advocating for clients with substandard housing, to create a screening tool that was brief and likely more sensitive than specific. This screening tool is made up of two components—an initial yes-or-no question (“Is your health or families’ health affected by conditions at home?”), followed by a checklist (“Check all conditions that exist in the patient’s home: bug infestation, mold, lead paint/pipes, inadequate heat, non-functioning oven/store, no or non-working smoke detectors, water leaks”) (Figure 1). A positive response to either item leads to the patient being referred to a social worker who connects the patient to the legal services offered pro bono via the MLP. Several studies have confirmed that substandard housing is directly linked to substantial health risks for children’s health, development, and educational outcomes, in addition to contributing to adults’ ill health via stress, mental health problems, obesity, and diabetes.^{6,7} This screen is appropriately short but manages to cover a range of factors influencing health and safety within homes.

Domestic violence. The Hurt, Insult, Threaten, and Screen (HITS) screening tool was used to screen for intimate partner violence (IPV), defined as the physical, sexual, or emotional abuse between intimate partners. This is a four-item screening tool that asks patients to describe the frequency with which patients encounter violence from their partners (“How often does your partner: Physically hurt you, Insult or talk down to you, Threaten you with harm, Scream or curse at you,” on a scale of Never, Rarely, Sometimes, Fairly often, Frequently). This screening has a sensitivity of 30–100% and a specificity of 86–99%, and has been repeatedly validated in family care and under-

Smoking Status: Last Value & Date: Current every day smoker (12/03/2)

Total Pack Years: Last Value & Date: 0 (10/08/2014 11:27:26 AM)

Counseled to quit/cut back: yes no Last Value & Date: yes (12/03/2014 5:42:22 PM)

Smoking Cessation Assistance: yes no Last Value & Date: yes (12/01/2014 3:04:10 PM)

Referral to Stop Smoking Clinic: yes no Last Value & Date: yes (12/01/2014 3:04:10 PM)

HITS Tool for Intimate Partner Violence Screening

Please read each of the following activities and fill in circle that best indicates the frequency with which you partner acts in the way depicted.

How often does your partner: Last Value & Date: 4 (12/01/2014 3:04:10 PM)

Physically hurt you:

Insult or talk down to you:

Threaten you with harm:

Scream or curse at you:

Score:

Each item is scored from 1-5. Thus, scores for this inventory range from 4-20. A score of greater than 10 is considered positive.

Discussed the clinical implications of positive screening.

Housing Last Value & Date: yes (12/01/2014 3:04:10 PM)

Is your health or families' health affected by conditions at home? (i.e. mold caused by water leak makes asthma worse): yes no

Last Value & Date:

Check all conditions that exist in the patient's home:

- bug infestation
- mold
- lead paint/pipes
- inadequate heat
- non-functioning oven/stove
- no or non-working smoke detectors
- water leaks

If positive, call social worker for referral.

PHQ-2 Patient Questionnaire

Over the last 2 weeks, how often have you been bothered by any of the following problems

1. Have you often been bothered by feeling down, depressed, or hopeless? Yes No

Last Value & Date:

2. Have you often been bothered by little interest or pleasure in doing things? Yes No

If either answer to the PHQ-2 Patient Questionnaire is Yes, then click this button to complete the PHQ-9

Last Value & Date:

Discussed the clinical implications of positive screening.

Alcohol Use

How many times in the past year have you had X or more drinks in a day? (5 for male / 4 for female)

Discussed the clinical implications of positive screening. Last Value & Date: 2 (12/03/2014 9:15:46 AM)

A positive response (1 or more times) indicates risky alcohol use.

Illicit Drug Use Last Value & Date: inhalants, sedatives (12/03/20) Last Value & Date: 1 (12/03/2014 9:15:46 AM)

- none
- amphetamines
- cocaine
- cannabis
- hallucinogens
- inhalants
- opioids
- sedatives
- steroids
- benzos

How many times in the past year have you used an illegal drug or used a prescription medication for non-medical reasons? (for instance because of the experience or feeling it caused)

A positive response (1 or more times) indicates risky drug use.

Discussed the clinical implications of positive screening.

Figure 1. Screening tool (sample page).

served settings.^{8,9} Both physical and mental IPV are widely recognized as significant sources of adverse health conditions. According to the American Psychiatric Association, more than one in three women and one in four men have experienced IPV at some point in their lives.¹⁰

Risky alcohol use. A one-question validated screener (“How many times in the

past year have you had X or more drinks in a day?”, where X is five for men and four for women) was used to detect risky alcohol use, where a positive response is defined as greater than one. This screener has been validated in primary care settings, with a sensitivity of 81.8–87.9% and a specificity of 66.8–79.3% for the detection of current alcohol use disorders or unhealthy alcohol use.¹¹ The single-question screen is helpful (given the brevity of a clinical visit) and effective in identifying individuals in need of intervention. Like the screen for drug use, this screen targets patients at risk for alcohol abuse and aims to improve patient outcomes through motivational interviewing techniques and referral to treatment.

Risky drug use. A one-question validated screen (“How many times in the past year have you used an illegal drug or used a prescription medication for non-medical reasons?”) was used to detect risky drug use, where a positive response was defined as one or more times. This screen has been repeatedly validated in primary care and underserved settings, with a sensitivity of 92.9–100% and a specificity of 73.5–94.1% for the detection of current drug use disorder or current drug use.¹² Previously, risky drug use was under-recognized at NCHC, with no way to collect data about drug use in the patient population. While patients who have already established addictions and treatment plans are sometimes beyond the level of intervention available in a primary care setting, the identification of non-dependent, at-risk users prompts provider interventions, such as motivational interviewing or referral to treatment to ideally prevent progression of risky use along the continuum towards addiction.

Mental health: Depression. The Patient Health Questionnaires 2 and 9 (PHQ 2/9) were used to screen for depression. The PHQ 2 is made up of two questions; positive responses to one or both prompts the EMR to present an additional seven questions. A total score is then used to determine the degree of depression, giving the provider a quick sense of the nature of the patient’s depression. The PHQ 2 has a sensitivity of 61–86% and a specificity of 78–92%, depending on the score a patient receives.¹³ The use of these screens improves the recognition rate of depression and facilitates diagnosis and treatment. This screening has been used extensively in primary care.

Implementation

Norwalk Community Health Center’s Team Care Form (Figure 1) was implemented in two variations. One form was created for medical assistants (MAs), and a second was created for primary care providers. In agreement with others,⁵ we have found that shifting responsibility in screening from the provider to the MA generates both a quantitative and qualitative improvement in the delivery of routine, preventive patient care.

When creating the Team Care Form, state and federal measures provided an initial framework. This list included screening for illicit and unsafe substance use, sexual activity, weight screening, and mental health screening measures. A team of health center thought and opinion leaders including both providers (physicians, nurse practitioners, and certified nurse midwives) and MAs were asked to modify the list with pertinent social factors that affect their patients. As a result, both housing status and domestic violence came to be assessed. Both the MAs and providers helped to create the actual

layout of the form and made sure to include the last date each screening question was asked. This simple addition helped to ensure not only that all questions were asked each year but also allowed for easy measurement of patient trends over time.

Training was then completed in two phases. First, MAs and providers were trained on their respective forms. Next, both MAs and providers were brought together by department in order to ensure a smooth workflow. To maintain high levels of competence with workflow created by the Team Care Form, meetings involving MAs, providers, members of the Quality Improvement (QI) department, administration, and our EMR team were held periodically after the initial trainings. Follow-up monthly department QI meetings offered a forum for discussion, revision, department completion rates, and continuing education. Because of the approaches used to design the Team Care Form and due to the inclusion of all members of the care team, there was minimal to no resistance to implementing this change.

The final version of the Team Care Form workflow assigned questions such as smoking status, housing, PHQ-2/PHQ-9, alcohol use, and drug use to the MA form (as seen in Figure 1) while it assigned questions regarding lifestyle management (such as weight and lifestyle management, and sexual activity) to the provider. This split in responsibility not only ensures that often under-diagnosed issues such as alcohol abuse, drug abuse, and domestic violence will be screened for but also has the added benefit of shortening the office visit by pre-screening the patient, allowing the provider to give a more focused and relevant examination. The questions asked on the Team Care Form also reframe the traditional exam to forefront social factors that were beyond the scope of a routine office appointment previously.

The Team Care Form also presents the added benefit of data collection. By having the form integrated into the health centers existing EMR all responses can then be recorded and tracked as discrete data points. The benefits generated by this dataset are two-fold. First, quality improvement measures can be quantified by the health center thereby providing a metric that can track the quality of care that the health center provides. Second, many of these data measures are required by state and local agencies. Accurately recording this data enables health centers to qualify for potential funding opportunities, which may ultimately yield augmented care delivery and further improved health care for the patient population.

The Team Care Form emphasizes that all who come into contact with the patient are in fact responsible for that patient's care. This simple concept was paramount in both the creation and implementation of the form. The form was created by a team of both MAs and providers thus giving both groups a share of the responsibility in patient care. The final workflow was also shared. The nature of patient visits was also changed by the Team Care Form. By refocusing on social co-morbidities, patients at NCHC were able to be connected with other resources in the community. Through tracking of social factors, a more effective patient care model was established and upstream health factors are now better and more comprehensively addressed. The final results of including social determinants of health as a part of routine office visits has been improved data collection, improved screening for social determinants of health, improved teamwork, more efficient patient visits, and overall improved patient care.

Conclusion

Social determinants affect the health and the overall well-being of all people, and for that reason their assessment as a routine part of medical care should be the norm. We have demonstrated one way to do this efficiently in a team-based fashion using technology to implement a shared clinical workflow. Other health care facilities can use similar methodologies to implement this at their institutions and offices. Beyond improved and more comprehensive patient care, secondary improvement in shared responsibility for patient outcomes and improved teamwork can be realized.

Figure 1. Team Care Form (Medical Assistant version, adult patient) with tobacco screening, alcohol screening, drug screening, domestic violence screening, unsafe housing screening, and mental health screening.

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