Team develops EHR-based social needs screener to improve patient outcomes

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Boston Medical Center (BMC) has implemented a social determinants of health screener for primary care patients in order to better identify and address patients' unmet social needs. Clinician researchers developed the electronic health record-based (EHR) model, THRIVE, which facilitates an automatic print out of referral information for resources based at the hospital and in the community when the patient asks for help with a need they have identified in the screener. The hospital's work, published in *Medical Care*, demonstrates an innovative systematic model that can help clinicians better address the social needs of patients to improve their overall health.

It is widely documented that social determinants of health, including housing and food insecurity and education, can lead to poor health outcomes, unnecessary emergency room visits and increased risk of chronic disease. For those living in socioeconomically disadvantaged communities in the US, this rings even more true.

For this observational study, the researchers developed a one-page screener, available in six languages, for patients to fill out in the waiting room prior to their appointment. Patients were asked to answer questions related to eight social determinants of health domains: homelessness and housing insecurity, food insecurity, inability to afford medications, lack of transportation to medical appointments, utilities, caregiving, unemployment and educational aspirations. It also asked patients if they wanted assistance with any of the needs they had identified on THRIVE screening tool.

Responses are then entered into the patient's EHR by a medical assistant. When a patient requests assistance with an unmet need, referral guides are automatically printed with information about resources available to them both at BMC and in the community. The EHR also prompts the provider to address any issues raised by the patient in the screener during the visit.

For the study period, which took place between Aug. 2017 and January 2018, clinics screened 70 percent of all new patients (1,696) in those utilizing THRIVE. Twenty-six percent of patients responded positively to one or more social needs. Employment (12 percent), food insecurity (11 percent) and problems affording medications (11 percent) were the most prevalent needs among screened patients. Additionally, each of the positive screen results are linked to an ICD-10 visit diagnosis code, allowing for more accurate data reporting and insight into the issues most impacting patients.

"The ability to successfully incorporate this critical information into the electronic medical record is a true game changer when it comes to addressing the whole patient," said Pablo Buitron de la Vega, MD, MSc, a physician in general internal medicine and the study's lead author. "As a physician, this information is vital to the health and well-being of my patients and their families. Now that I am aware of these issues, I can better treat them by connecting them with resources that will help them thrive."

Policies at the federal and state levels are changing to provide incentives for health systems to better address these unmet yet critical needs of patients. The Center for Medicare and Medicaid Services is investing in identifying ways to screen for social determinants of health in clinical settings. In Massachusetts, BMC entered into an Accountable Care Organization last year with the goal of providing high quality care while also reducing healthcare costs.

"This data-driven approach is a novel way to address health care inequity while also addressing the rising costs of health care, including Medicaid," said Nancy Kressin, Ph.D., a professor of medicine at BU School of Medicine and the study's senior author. "We believe that THRIVE can help change the delivery of care at BMC, within our ACO, and that its scalability can have positive impacts on health care delivery at the national level."

BMC is now screening all patients with THRIVE in all ambulatory primary care clinics, including family medicine, pediatrics, obstetrics and gynecology, and general internal medicine. To date, BMC has screened more than 57,000 patients—28 percent report having at least one need and 19 percent request help with at least one need. Housing, food and education are the most prevalent health-related social needs of our patients.

"This data is so critical as it helps us better allocate resources and strategically partner with community programs that can best support our patients' needs," added Stephanie Losi, MS, senior manager of mission program development at BMC and co-lead of THRIVE.

More information: Pablo Buitron de la Vega et al, Implementing an EHR-based Screening and Referral System to Address Social Determinants of Health in Primary Care, *Medical Care* (2019). DOI: 10.1097/MLR.0000000000001029

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