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PERSPECTIVE

Evaluating the Accountable Health Communities Demonstration Project

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Despite substantial evidence documenting the social patterning of disease, relatively little information is available on how the health care system can best intervene on social determinants to impact individual and population health. Announced in January 2016, the Centers for Medicare and Medicaid Innovation's (CMMI) Accountable Health Communities (AHC) initiative provides an important opportunity to improve the evidence base around integrated social and medical care delivery. To maximize learning from this large-scale demonstration, comprehensive evaluation efforts should focus on effectiveness and implementation research by supporting local, regional, and national studies across a range of outcomes. Findings from this demonstration could transform how, when, and which patients' health-related social needs are addressed within the health care delivery system. Such findings would strongly complement other initiatives to address social factors outside of health care.

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A substantial body of evidence links social circumstances to health and longevity.¹⁻³ Mortality estimates associated with social factors are comparable in magnitude to those associated with myocardial infarction, cerebrovascular disease, or lung cancer.⁴⁻⁶ At the same time, there is national concern about the expense and deficiencies of traditional health care services.⁷ Together, these forces are fueling interest in addressing social determinants of health (SDH) within the health care delivery system. While recognizing that work to improve social conditions occurs outside of health care settings,⁵ health professional organizations have recommended better integration of medical and social care delivery systems as one part of a comprehensive strategy to identify and address SDH.⁸⁻¹⁰

Clinical delivery systems are increasingly experimenting with ways to address SDH in the clinical delivery system.¹¹⁻

¹³ However, little research has examined whether these efforts improve individual and population health, decrease avoidable utilization, and/or improve revenue under value-based payment systems.^{11,12} To respond to the disconnect between this growing interest in addressing SDH in the health care setting and gaps in effectiveness evidence, in January of 2016, the Centers for Medicare and Medicaid Services Innovation (CMMI) announced an initiative to test a new model of care that includes health-based social needs screening and resource navigation for Medicare and Medicaid beneficiaries.¹⁴ The financial investment in the CMMI Accountable Health Communities (AHC) initiative totals \$157 million over 5 years and presents an important opportunity to fill evidence gaps.

In this article, we outline the CMMI AHC demonstration project and anticipated CMMI evaluation outcomes metrics. We then provide a rationale for examining a wider range of effectiveness and implementation outcomes and highlight opportunities and challenges facing this broader research agenda. This article emerged from a meeting of 25 affiliates (complete list included in the Acknowledgements section) of the Social Interventions Research and Evaluation Network (SIREN), a national collaborative convened to catalyze and strengthen research on social screening and interventions in health care delivery settings. Supported by the Robert Wood Johnson Foundation and Kaiser Permanente, SIREN includes researchers and practitioners from health services, public health, social and behavioral determinants of health, and philanthropy. In the meeting, participants discussed existing evidence and gaps regarding the impact of health care-based interventions addressing social needs and opportunities for evaluation embedded in the new AHC demonstration.

EVALUATION OPPORTUNITIES

The AHC initiative will include social interventions in 44 sites involving over 3 million patients annually. Impact evaluations, whether supported through CMMI or externally, can take advantage of the sophisticated and rigorous research designs, metrics, and data sharing requirements outlined in the original funding announcement.¹⁵ There are three funded program tracks that involve varying degrees of resource navigation

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and support. Two of the three tiers require randomization of participants, and the third track requires a matched controlled design (see Table 1, Accountable Health Communities Program Tracks). In the announcement, CMMI provides a step-by-step guide to help health care systems prioritize activities necessary to develop systems for screening, referral, and navigation services, including building a community resource inventory, hiring screening and referral specialists, and training in-person navigators. CMMI also defines five core social needs domains (housing, food security, transportation, interpersonal violence, and utilities) that must be included in grantees' screening and intervention programs. Sites are required to use standardized social screening items for these domains that will be developed by a national Technical Expert Panel (TEP). The TEP convened in the summer of 2016 and is comprised of 22 participants with expertise in health-related social needs and referral systems. Participants included physicians, nurses, psychologists, social workers, epidemiologists, and others drawn from medical centers, health care plans, non-profit organizations, and academic institutions.

CMMI also will require that Medicaid and Medicare claims data be shared with AHC evaluators. Together, these requirements set the stage for enabling evaluation of the health care utilization impacts of addressing social needs. CMMI has reported publicly that model performance metrics will include total cost of care and health care utilization—including emergency department visits, inpatient admissions, readmission, and utilization of outpatient services. Though provider and beneficiary experiences are referred to as performance outcomes, CMMI has not yet defined specific metrics for these domains nor specified direct health outcomes. Evaluation findings should inform whether additional resources should be invested in these innovative interventions. Beyond CMMI's commitment to program evaluation, SIREN researchers saw other opportunities to maximize learning through CMMI-funded analyses and/or supplementary local, regional, or national evaluation efforts. Below we highlight recommendations for both effectiveness and implementation research that may help inform evaluation planning.

Table 1 Accountable Health Communities Program Tracks

Track no. (anticipated number of awards)*	Primary focus	Intervention characteristics	Number of screened beneficiaries/year	Total award amount/awardee	Evaluation design
Awareness (12)	Community resource information disseminated to Medicaid and Medicare beneficiaries with unmet social needs to increase awareness of social services	Universal social screening for all Medicare and Medicaid beneficiaries and community resource referrals	53,000 [†]	\$1.17M	Both high- and low-risk [‡] patients with unmet social needs are randomized into awareness (community resource referrals) versus comparison (control) groups
Assistance (12)	Community service navigation services available to assist high-risk beneficiaries with social needs	Universal social screening for all Medicare and Medicaid beneficiaries, community resource referrals, and intensive navigation services	75,000 [†]	\$2.57M	All patients with unmet social needs receive community resource referrals; high-risk patients are randomized into assistance (community service navigation) versus awareness (control) groups
Alignment (20)	Encourage partner [§] alignment to ensure service availability for beneficiaries	Universal social screening for all Medicare and Medicaid beneficiaries; community resource referrals, navigation services and community-level integration activities. Partner alignment depends on quality improvement approaches, including advisory board and data sharing, focused on ensuring social services are available based on population needs	75,000 [†] and at least 51% of community-dwelling Medicare and Medicaid beneficiaries	\$4.51M	High-risk [‡] patients with unmet social needs receive community resource navigation services; low-risk patients with unmet social needs receive community resources referrals. Matched comparison groups and communities will be assigned

*Community-based organizations, health care provider practices, hospitals and health systems, institutions of higher education, local government entities, tribal organizations and for-profit and not-for-profit local and national entities that have the capacity to develop and maintain a referral network with clinical delivery sites and community service providers. Applicants can be either a consortium of collaborators or a single bridge organization that will form a consortium if awarded funds. (See Accountable Health Communities Model. Centers for Medicare and Medicaid Innovation. Available at <https://innovation.cms.gov/initiatives/AHCM>. Accessed October 20, 2016)

[†]In Year 1, grantees only need to screen half this number of Medicare or Medicaid beneficiaries

[‡]In the AHC model, to be considered "high risk," a community-dwelling beneficiary must have a health-related social need and self-report two or more ED visits in the 12-month period prior to initial social screening

[§]Required partners in any AHC Track 3 consortium include the state Medicaid agency, participating clinical delivery sites, participating community service providers, local government, and participating local payers such as Medicaid-managed care organizations and Medicare Advantage plans

Effectiveness Research

Evidence is sparse on whether addressing SDH in the context of health care settings significantly impacts individual or population health. Answers to this question should help guide future investments. The guaranteed availability of claims and utilization data to researchers assessing AHCs is a major step towards enabling effective evaluation of health outcomes. Despite this, barriers remain to studying the causal chain between screening for social needs and a resulting health or utilization outcome. The pathway involves many mediating steps, each of which takes time to achieve, along with potential unmeasured confounders. Previous research into the mechanisms linking health and social factors suggests that a 5-year funding window is too short to see many of the end outcomes of interest reflected in claims and utilization data¹⁶ and may result in false-negative findings.

In addition to an expanded evaluation timeframe, several strategies can be used to diminish the likelihood of false-negative results. One is to incorporate proximal mediating factors that are sensitive to changes in social conditions and are known to be along the pathway to better health outcomes. For example, outcomes that capture patient perspectives such as satisfaction with care and connectedness to practices are related to health care quality and increasingly relevant to health care systems in an era of consumerism in the health care industry.^{17,18} Other mediators involve key operational processes (e.g., patient referrals, successful connections to social resources, and tracking resolution of identified social needs). Better standardization of these process measures would help discern how the content and dose of social interventions influence health outcomes. This could also provide a clearer understanding of the “active ingredients” in social programs for different groups of patients. These process measures can be used for comparative effectiveness studies and in decisions about targeting scarce resources towards groups that may need more tailored intervention approaches.

The evaluation strategy will also need to account for the different mechanisms through which social determinants affect health.¹⁶ Some social determinants are directly tied to health outcomes, such as the detrimental effect of poor housing conditions on asthma. The impact of ameliorating those factors should be detectable using indicators such as health care utilization and missed workdays. Other social conditions have been linked to later health through prolonged exposure to adversity-induced “toxic stress.” In these cases it will be more informative to use outcomes such as biomarkers of inflammatory and stress pathways, which are known to impact downstream health and can serve as markers of future morbidity.^{19–21} In relation to the AHC evaluation, it would be too costly to collect such data across 44 sites, but funding high-quality, local studies would markedly expand the knowledge produced by this large-scale demonstration. Stronger evidence documenting the impacts on biological markers could inform existing risk stratification tools and better target social interventions.

Although the primary evaluation thrust should be on the impact of social interventions on patient outcomes, the additional opportunity to understand impacts on health care providers should not be overlooked. Low provider-perceived capacity to address social needs is linked with higher provider burnout.²² Provider burnout and subsequent turnover, which together carry a high cost and quality burden,^{23,24} are particularly relevant to health care systems caring for vulnerable populations. We note that it is possible that the addition of social needs screening and interventions may not alleviate burnout and could further overwhelm health care providers serving Medicaid and Medicare beneficiaries. If so, it could increase emotional exhaustion or otherwise negatively affect professional burnout domains. The CMMI demonstration sites could add to our understanding of how increased capacity to address social needs, and the related workload, affects both provider and clinic-level outcomes (e.g., burnout, workforce retention).

Implementation Research

In addition to outcomes research, there is the potential to advance implementation science in this area. Such work examines the translation and scaling of effective programs to “real-world” settings, thus improving our understanding of why and how interventions work.²⁵ Implementation research in this case should enable the adoption and sustainability of similar interventions in both initial CMMI grantee sites and other settings.

Implementation research should help address questions around sustainability and dissemination that will arise in the later stages of the grant period. CMMI has not clearly articulated future plans for maintaining these new community resource inventories (or the technology required to maintain them) or for supporting screening specialists and navigators when the program’s 5-year funding term ends. Though the funding opportunity announcement requires state Medicaid agencies to confirm their “willingness to ensure alignment with existing Medicaid policy...to achieve scalability and sustainability if the model is successful,” recent findings from interviews with Medicaid-managed care organizations (MMCO) suggest that many state regulations instead limit MMCO support of SDH interventions.²⁶ Health policy-focused implementation research across states involved in these demonstrations will maximize future sustainability and dissemination strategies.

Implementation research will also need to examine potential unintended consequences,²⁷ including the collateral impacts of routine social screening and referrals services from health care on community agencies, not just on the health care delivery system. Since the AHC interventions ultimately depend on a robust social service delivery system, understanding the interplay between health care-based and community-based programs in various communities should be considered an essential component of sustainability research.

CONCLUSIONS

CMMI has created the largest demonstration to date to examine the impact of health care-based interventions addressing social needs. It is an appropriately ambitious “moonshot” to fill gaps in evidence about the roles health care institutions can play in screening for and addressing social determinants that affect health. Findings from this set of studies could transform how, when, and for which patients social needs are addressed and help advance health care disparities intervention research by strengthening the evidence base about both positive and negative effects of social screening and intervention activities.

CMMI is doing its part to ensure we learn together from this investment by designing the grants program to facilitate comparisons within and across tracks. But as a non-research agency, CMMI can only do a portion of the research and evaluation needed to fill the existing evidence gaps in this field. Consistent with its mission, CMMI will contract with program evaluators to examine claims and utilization data over the next 5 years. To increase the payoff of this investment, other funding will need to be directed towards smaller-scale evaluations that are focused on key effectiveness and implementation questions.

It is more likely that research funders will support the kinds of studies noted above if CMMI clearly articulates the evaluation goals for AHC, describing what CMMI will study directly and what other research is needed. This assessment could form the basis for CMMI to encourage other government agencies (including the National Institutes of Health and the Agency for Health Care Quality and Research) and health care-focused philanthropic organizations to leverage the CMMI investment by dedicating research dollars to studying these programs. Even greater payoff might be obtained if CMMI supported a learning network across grantees and researchers to encourage local or regional research efforts and to assure that relevant learning is shared across sites.

CMMI is to be lauded for taking this major step in stimulating innovation and evaluation. Their efforts, especially if expanded by complementary and synergistic research, have the potential to transition previously scattered and understudied programs to address SDH into sustainable key components of the health care delivery system.

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