

How Are Payment Reforms Addressing Social Determinants of Health? Policy Implications and Next Steps

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Policy Points

- Health care value-based payment reforms that fail to target nonmedical needs may be less effective in improving population health, advancing health equity, and lowering health care costs.
- Value-based payment models can provide the financial flexibility and accountability that allow health care organizations to more easily address social determinants of health at the population level.
- Major challenges include the need for more evidence on implementation and model design, data collection and sharing, building cross-sector partnerships, appropriately adjusting for social risks, and building organizational competencies.

ABSTRACT

The movement toward value-based care provides a significant opportunity to address social determinants of health (SDoH) while improving value and quality of care. Value-based care can allow greater flexibility in terms of what services are delivered while providing accountability for long-term sustainability and population health improvements. Although federal, state, and commercial payers are launching innovative new payment models addressing SDoH, questions remain regarding best practices for implementation, impact on cost and outcomes, and ability to scale and spread across different contexts under current policies. This issue brief summarizes the current landscape of payment reform initiatives addressing SDoH, drawing on results from a systematic review of peer-reviewed and gray literature supplemented with scans of state health policies and proposed payment reform models. It also discusses challenges and opportunities related to implementation – data collection and sharing, social risk factor adjustment (statistical methods for accounting for adverse social conditions associated with poor health), cross-sector partnerships, and organizational competencies – as well as policy implications and next steps so that states and payers can use value-based payment to encourage and promote addressing social needs.

BACKGROUND

Social determinants of health (SDoH), such as nutrition, transportation, and housing, substantially impact health and well-being.^{1,2} Accordingly, health care value-based payment (VBP) reforms that fail to address these nonmedical needs may be less effective in improving population health, advancing health equity, and lowering health care costs.^{3,4} However, extending payment reforms to include both health care and human services introduces operational challenges, regulatory barriers, and coordination limitations from the fragmented and siloed nature of these sectors.

The movement toward value-based care provides a significant opportunity to address SDoH,⁵ as the existing fee-for-service reimbursement model only pays for specific

clinical services, has led to a fragmented health care system, and is inflexible to cross-sector collaboration. In contrast, VBP structures can provide greater flexibility with broader accountability for health outcomes and costs. VBP models can improve SDoH through multiple mechanisms: their financial flexibility may allow health care delivery organizations to fund coordinators or other coordination mechanisms with social service providers; health care delivery organizations could pay for SDoH services out of shared savings, bundled payments, or global payments; or VBP models may pay directly for SDoH services or benefits depending on the payer's policies. The funding stream from VBP can be especially important given limited budgets and financing for social services and public health infrastructure.⁶⁻⁹

While social drivers have been shown to clearly affect people's health and health care utilization, the evidence on the impact of certain SDoH interventions, although often positive, remains nascent. Moreover, the evidence often depends on the implementation and population contexts.¹⁰⁻¹⁶ For example, several SDoH interventions have shown reductions in unnecessary utilization and spending for higher risk, high-cost patients, especially people with multiple chronic medical conditions and social needs (e.g., those with severe mental illness, chronic homelessness) who frequently use emergency department care.^{3,10,15-19} Cost reduction, and corresponding return on investment, evidence is strong (based on randomized trials) when health care and community-based organizations work together on housing or nutrition interventions. As one example, a medical respite pilot program in Durham, North Carolina, that provides housing services to homeless patients led to a 37% decrease in hospital admissions, 70% decrease in inpatient days, and 49% decrease in health care costs.¹⁰ Evidence is moderate (based on nonrandomized trials, difference-in-difference studies, and cost-benefit analyses) for non-emergency medical transportation programs.¹⁵

However, there are still major limitations to current evidence. First, for practical reasons evidence often is generated through less rigorous study designs, which makes it harder to conclusively rule out confounding factors. Second, most studies to date primarily focused on process measures (such as number of patients screened for, referred to, and connected with a social service

intervention program) as opposed to outcomes (health, utilization, or cost).¹⁶ Third, while evidence is strong for certain social interventions in some populations as noted above, the evidence is limited (either very few studies done, less rigorous methods, or mixed findings) — though growing — for other social interventions, such as home modifications; certain care management programs for high-risk and complex patients; and legal, financial, and social support counseling.¹⁵ Finally, much of the evidence looked at time-limited interventions as opposed to sustained and broader system changes (such as those VBP reforms encourage), although research is slowly emerging from more sustainable system-level reforms like Medicaid accountable care organizations (ACOs).^{6,9,12,13,20-22}

Given the launch of new innovative payment models from federal, state, and commercial payers that address SDoH, there is a strong need to improve our understanding of best practice implementation, impact on cost and outcomes, and ability to scale and spread across different contexts.

Key Takeaways

- VBP models — especially those with more advanced payment structures or with direct links to addressing social needs — can provide financial flexibility and accountability, which allows health care organizations to more easily address SDoH at the population level.
- VBP can be an important financing mechanism for social drivers of health services, which have chronic resource constraints.
- There is relatively strong evidence that when health care and community-based organizations work together on housing or nutrition interventions (and moderate evidence for non-emergency medical transportation), they can reduce costs and generate return on investment. However, for other types of social needs interventions, there is limited (though often positive) evidence on cost impacts. Overall, evidence is often in specific subpopulations and from time-limited interventions — and more evidence is needed for SDoH interventions in VBP models.

Landscape of VBP Models Addressing SDoH

Significant and expansive new payment models targeting SDoH are emerging, such as North Carolina's Healthy Opportunities Pilots and Massachusetts's Moving Massachusetts Upstream (MassUP) Investment Program.^{23,24} To summarize the current landscape of VBP models addressing SDoH, we systematically reviewed peer-reviewed journal articles and gray literature, supplemented with scans of state health policies posted on state-based websites and payment reform models proposed to the Physician-Focused Payment Model Technical Advisory Committee (see Appendix Figure). We then focused on VBP models in which payment is specifically tied to addressing SDoH, where payment flexibility is explicitly allowed for social services, or where payment is tied to performance on quality measures related to SDoH.

How Do Different Payers Address SDoH through VBP?

For all types of coverage, VBP programs provide flexibility to address SDoH (for example, using VBP savings from an ACO or bundle to support SDoH programs) – but different payers have stronger or weaker structural avenues through which to pay for SDoH.

Traditional Medicare generally cannot pay for services that are “not reasonable and necessary” in the diagnosis or treatment of illness or injury or to improve functioning (42 U.S. Code § 1395y).

The Center for Medicare and Medicaid Innovation (CMMI) housed within the Centers for Medicare & Medicaid Services (CMS) has used, and is currently using, its legal authority to test modified payment approaches for Medicare and Medicaid. For example, the Accountable Health Communities model is testing linking Medicare and Medicaid beneficiaries to community services, with funding for screening for social needs, referral to community-based organizations (CBOs), and help with navigation (and alignment) through social and community services.²⁵ In addition, some states received State Innovation Model (SIM) award funding to test addressing SDoH.^{26,27} For example, Michigan used SIM funding to develop Community Health Innovation Regions to build linkages between clinical and community resources,²⁸ and

Washington State supported nine regional Accountable Communities of Health, comprising clinicians, community-based organizations, and social services.²⁹

Medicare Advantage (MA) plans can, through the CHRONIC Care Act and related regulations, offer new SDoH supplemental benefits that traditional Medicare cannot pay for, which can include food, pest control, indoor air quality equipment, structural home modifications, and others. The CHRONIC Care Act allowed for a greater range of “health-related” supplemental benefits that could be offered; it also provided flexibility for supplemental benefits that could be targeted to particular groups that would benefit from them. Plans have further flexibility to target benefits to people with specific chronic conditions as long as the benefits have a reasonable expectation of improving or maintaining health and function. The rollout of these new benefits is ongoing, and a limited number of plans are offering such benefits to-date.³⁰

Commercial plans have great flexibility as to what can be covered but are limited based on what counts as medical expenses to meet their minimum medical loss ratio. They also have to provide actuarially sound products and face competition on premiums in their market – so they are often interested in new and innovative ways to improve value.³¹ Both MA plans and commercial insurers have experimented extensively with transportation benefits – 34% of MA plans cover such services.³² In general, there is limited public information on the details of many initiatives operated through commercial insurers.

State Medicaid programs have more structural avenues and infrastructure to build from to cover social supports. These mechanisms include state plan amendments (e.g., the case management benefit can be used to connect people to existing social service programs) and waivers (e.g., home modifications or long-term care services and supports through home and community-based services 1915 waivers or new care models through 1115 demonstration waivers).³³⁻³⁶ **Table 1** provides a summary of some commonly used Medicaid mechanisms and innovative examples.

Table 1. Innovative Value-Based Payment Medicaid Mechanisms States Have Used to Address Social Determinants of Health

Type of Mechanism	Mechanism Description	State Examples Addressing SDoH through This Mechanism
Section 1115 waivers	States have used Section 1115 waivers to modify the services Medicaid offers, change the way Medicaid is paid for, and pilot new approaches to care.	<p>North Carolina received a Section 1115 waiver to start the Healthy Opportunities Pilots, which will use Medicaid dollars to provide specified SDoH services, reimbursed on a set fee schedule. The state also developed NCCARE360 for bidirectional referrals between CBOs/social services and health service organizations.^{31,37-43}</p> <p>New York's Delivery System Reform Incentive Payment (DSRIP) Program funded 25 "Performing Provider Systems," comprising public hospitals and the safety-net providers (including CBOs) that were responsible for creating and implementing SDoH-focused projects. Each of the Performing Provider Systems received performance-based funding and distributed funds to partner organizations to meet its goals. New York also funded programs to reduce the burden of housing-related illness and injury.^{6,3-39,44,45}</p>
Medicaid Managed Care Organization (MCO) contracts	Most states (40 + DC) utilize Medicaid Managed Care Organizations (MCOs), where MCOs receive capitated payments to deliver Medicaid benefits. In MCO contracts, states can require a certain percentage of payments to providers flow through VBP models. In addition to traditional Medicaid flexibility, MCOs can pay for SDoH screenings or referrals, can pay for some nontraditional services via the "in-lieu-of" and "value-added services" provisions of managed care regulations, and can classify some non-clinical services as quality improvement under their clinical services side of the medical loss ratio (and support other services through their administrative expenses flexibility). ^{31,46}	<p>New York requires VBP contracting goals for MCOs, and the state ties financial incentives to meeting goals. MCOs contract with providers on three different "levels" of VBP payments; all VBP Level 2 and 3 contracts must implement at least one SDoH intervention and contract with at least one CBO. For example, SDoH interventions approved to date include medically tailored meal deliveries and home modifications to reduce exposures that worsen asthma.^{6,37-39,44,45}</p> <p>North Carolina is implementing Medicaid Managed Care as part of its Section 1115 waiver. The state will require MCOs to take on progressively higher levels of VBP arrangements and require MCOs in up to three areas of the state to participate in the Healthy Opportunity Pilots, described above.^{31,37-43}</p> <p>Massachusetts's MCOs are paid on an adjusted reimbursement model, based on neighborhood stress scores. MCOs are able to use diagnostic codes for social risk factors such as housing stability, substance use, and disability status.^{6,38,39,47-49}</p>
Medicaid Accountable Care Organizations (ACOs) and ACO-like entities	In ACOs, groups of providers or health systems take on responsibility for their patient population's total cost and quality of care. Providers in ACOs can receive a percentage of savings if they spend less than their set benchmark, and sometime bear downside risk if costs exceed the benchmark. Similar entities can be implemented through 1115 waivers, Medicaid MCOs, or state plan amendments (depending on scope).	<p>In Massachusetts, Medicaid ACOs receive capitated, per-member-per-month payment to offer behavioral health, social needs screening, and medical care. ACOs are required to partner with CBOs and may provide health-related nutrition and housing supports to at-risk enrollees or connect them with CBOs to do so.^{6,38,39,47-49}</p> <p>In Rhode Island, Medicaid Accountable Entities (similar to ACOs) contract with MCOs to provide services to their enrollees. Accountable Entity participants must demonstrate capacity to screen and address three areas of social need and are able to receive infrastructure incentive funds, 10% of which must be spent on CBO partnerships in the first year.^{6,38,39,50,51}</p> <p>Oregon created Coordinated Care Organizations (CCOs), which can provide "health-related services" for their enrollees, such as food and housing supports. CCOs have health equity requirements built into their contracts; those participating in CCO 2.0 agreements are required to spend part of their annual surplus on addressing health inequities and specific domains of social determinants of health and equity.^{6,38,39,47,52-56}</p>

For highlighted programs, the state offered specific guidance on the required SDoH intervention or directed a specific pool of funding toward addressing SDoH. Other states are likely doing related work through local or commercial initiatives, but these programs are difficult to identify.

Geographic Reach of SDoH Innovation through VBP

To get a sense of the reach and prevalence of VBP involvement in SDoH, we analyzed statewide initiatives with VBP models for SDoH. All initiatives involved their state Medicaid programs, and some also involved other payers. We chose to focus on Medicaid programs since publicly funded SDoH initiatives are required to be publicly reported. In our analysis, we found 18 states and DC have taken at least foundational steps toward statewide VBP initiatives that directly address SDoH needs. (We did not include states that only require identifying SDoH needs such as those that only screen for social needs or provide referrals to social services.) Of the states identified for integrating SDoH in their VBP effort, most did not explicitly require or provide financial resources for the SDoH services or the SDoH services were optional. For example, one state's Health Homes model was evaluated on social outcomes (such as housing stability),⁵⁷ but there were no direct payment mechanisms for Medicaid MCOs or clinicians to provide SDoH services. We found five states explicitly required addressing SDoH within payment reform or directed a specific pool of funding toward SDoH.

In short, the key takeaway from our analysis is that VBP programs with SDoH components are still in early development. There is substantial activity to identify populations with social needs, but many states have not launched formal programs that support interventions to address social needs for that identified population.

For Medicaid's managed care side, a recent survey of such plans found that all reported they offered some type of program aimed at SDoH. The most common populations were people who were housing insecure or homeless, people who were pregnant, and adults with serious mental illness, with the most common interventions including screening members for social needs, maintaining databases of community or social service resources, identifying and coordinating with CBOs to link members to needed services, and providing guided referrals to needed services.⁵⁸

One important geographic consideration is that SDoH VBP programs are more likely to be implemented in urban regions, which have a larger number of CBOs and more public transportation that helps with access to SDoH services.³⁰

Key Takeaways

- States are generally in earlier phases of incorporating SDoH into their VBP and are currently focused on foundational elements like screening for SDoH, providing referrals to social services or other organizations, and building partnerships with CBOs to help provide services.
- A small number of states and payers have rolled out more advanced VBP models, with nutrition, housing, and transportation the most frequently incorporated SDoH services.

MODEL DESIGN, IMPLEMENTATION, AND POLICY CONSIDERATIONS FOR PAYERS AND PROVIDERS

How Do Payers Design VBP Models to Address SDoH?

Many VBP model structures have been used to date to address SDoH.

As detailed in the previous section, payers have used a variety of VBP models to implement SDoH services. Some models used capitation and global budget approaches,^{38,48,49} while others used ACOs with shared savings to reinvest in social services.^{50,59} More advanced VBP models, such as population-based payments or models with shared savings and downside risk, tend to allow greater flexibility to spend resources on social services than more incremental approaches – and have greater accountability for outcomes that encourage more substantial practice change. Generally, Medicaid provides the most regulatory avenues and flexibility for SDoH,³⁶ but several avenues exist for Medicare and commercial payers.

Savings produced through improved SDoH may not follow a payer's standard timeline for savings.

SDoH interventions can have high overhead investments and require longer time periods to ramp up and implement. Moreover, it may be many years before improvements in SDoH are reflected in improvements in a person's health and their health care utilization. This is in contrast to the actuarial time frames used in assessing

savings for VBP, where savings are often assessed on an annual basis. As a result, those SDoH interventions that are most effective for VBP programs are often those that demonstrate short-term savings (in addition to longer-term results).

Moreover, the US health system is traditionally very expensive and may not be the best vehicle to address all social needs. VBP programs should therefore be limited to those social services where there is a clear health care connection and the health care system adds to (and does not conflict with) other SDoH initiatives.

Key Takeaways

- SDoH can be addressed under many payment models, (including ACOs, bundles, global budgets, and others) although more advanced models tend to allow for more flexibility to cover social services.
- The savings time frame for SDoH may not match the normal time frame for savings in VBP models, meaning that sustainable models focus on SDoH interventions with potential for short-term savings.

WHAT DO PAYERS AND PROVIDERS NEED TO DO TO SUCCESSFULLY IMPLEMENT SDOH UNDER VBP?

Data Collection and Data Sharing

Most VBP models start by funding screening for unmet social needs. However, screening practices and tools are not standardized, which makes data exchange among health care organizations and between the health care and social service sectors challenging. For example, a recent survey of Medicaid managed care plans found that plans reported using multiple SDoH screening tools, with half noting they used an internally developed or adapted tool.⁵⁸ Without smooth data exchange, health care organizations are limited in their ability to refer people for interventions that address identified social needs.

To overcome these data integration obstacles, VBP model designers and implementers can leverage one of the nationwide efforts to compare and standardize existing screening tools.

- The Social Interventions Research & Evaluation Network at the University of California, San Francisco has produced a toolkit comparing several publicly available social health screening tools.⁶⁰
- The Health Leads Screening Toolkit is built around guidelines from the Institute of Medicine and CMS and includes details on how it should be used in comparison with other widely used surveys.⁶¹
- The CMMI Accountable Health Communities screening tool is used by organizations participating in the Accountable Health Communities model and is designed as an entry-point tool.⁶²
- The PRAPARE assessment tool, maintained by the National Association of Community Health Centers, works in conjunction with core questions from the Accountable Health Communities tool but assesses a more expansive core set of SDoH measures.^{63,64}

After data are collected through screening tools, systems are needed for storing and exchanging data between health care, social services, and CBOs. For example, Vermont's all-payer ACO model used its all-payer claims database and the Vermont Health Information Exchange as well as a dashboard tool showing medical and nonmedical indicators collected during encounters.⁶⁵ Colorado recently proposed a two-phase social-health information exchange. In phase I of the rollout of Colorado's exchange, organizations developed standardized screening protocols, built a statewide community resource directory, and made the directory publicly available. Phase II consists of linking existing information systems, developing referral and feedback loops, and storing SDoH screenings in a patient data management system.⁶⁶ Similar initiatives are also underway in states such as Indiana and Nebraska.^{67,68} North Carolina has launched NCCARE360 to provide a common channel for making referrals for social and community-based services, which facilitates two-way communication between health care and social services.⁴⁰

To succeed with VBP models, it is important for initiatives to be able to identify those people who will need future services and intervene early. For example, Washington State Medicaid developed the Predictive Risk Intelligence System (PRISM) decision-support tool, which identifies the most medically and socially complex patients by integrating payment, administrative, and

assessment data across the medical, social service, behavioral health, and long-term care sectors.^{49,69,70} Health care delivery organizations generally cannot access non-medical data sources (and may not have access to claims unless provided by the payer). Payers and state partners can support SDoH efforts by providing, with appropriate privacy protections, lists of people who could benefit from various social service interventions.

There are multiple legal and regulatory hurdles to data collection and exchange, with differing regulatory requirements for the health and social service sectors (e.g., Health Insurance Portability and Accountability Act [HIPAA] and Family Educational Rights and Privacy Act [FERPA]). While these regulations are important for protecting patient privacy, they make it difficult for providers to share key data. More clarification is needed to address these ambiguities, as many of these statutes were not written to account for disclosure of patient information across service sectors.

Tools for Implementation: Data Collection and Sharing	
Challenges	<ul style="list-style-type: none"> Screening and referral tools are not standardized across programs and clinicians. Legal and regulatory obstacles present challenges for data exchange, especially as health and social service sectors are governed by different privacy laws.
Strategies	<ul style="list-style-type: none"> Identify and use one of the existing standardized screening tools. Standardize SDoH data collection and maintain a robust data exchange infrastructure.

Social Risk Factor Adjustment for VBP Models

Most VBP models use risk adjustment to ensure clinicians are fairly compared to one another based on quality of care provided (as opposed to one having worse quality measure scores because they have sicker patients).⁷¹ Traditional risk adjustment focuses on medical complexity, such as Hierarchical Condition Category (HCC) scores. There are some challenges with these models – for example, HCC scores often underestimate medical complexity for frail older adults⁷² and can be upcoded to influence VBP performance if not

thoughtfully implemented⁷³ – but HCC scores have been largely accepted in the field.

As VBP models increasingly address SDoH, social risk factor adjustment may be needed to capture differences in need according to social risk factors (such as differences in education, income, employment, social support, and community resources).⁷¹ However, social risk adjustment remains controversial.⁷⁴ Some argue that such methods tacitly allow for lower quality care for marginalized populations. Others argue that social risk factor adjustment can prevent clinicians from being penalized for serving more medically and socially complex patients,⁷⁵ noting that clinicians serving more homogeneous, resource-rich areas generally perform better than safety-net facilities under current VBP models.⁷⁶⁻⁸³ Success will depend on operationalizing social risk factor adjustment so that it compares clinicians' performance and patient outcomes attributable to differences in quality of care.

Beyond the conceptual debate, there are practical problems in operationalizing social risk adjustment with existing data and methods.⁸⁴ For example, CMS will add a Complex Patient Bonus, starting in 2021, to the Merit-based Incentive Payment System, which would add bonus points to clinicians' performance score based on serving a greater number of dual-eligible patients.⁸⁵ However, a recent study estimating the adjustment's impact for 2021 raises concerns that it will only have a small effect on bonus achievement and no effect on reducing penalties for clinicians serving more dual-eligible patients.⁸⁶

In general, simpler risk adjustment algorithms, such as adjusting for the percentage of dual-eligible beneficiaries, have not been shown to accurately adjust for social risk between different populations. However, risk adjustment algorithms are limited by available data and the difficulty in capturing social risk.^{55,87,88} Moreover, there are debates about which types of measures should be adjusted. Some recent reports suggested that social risk adjustment in VBP programs should be limited to patient experience and resource use metrics, as opposed to process or outcome measures.^{71,87}

For an example of a new approach to social risk adjustment, the Massachusetts Medicaid Managed Care Model utilizes a neighborhood stress score to risk-adjust

payments based on area-level metrics such as education, employment, and income levels. The algorithm has proven successful in predicting costs, though little work has been done to understand its impact on outcomes and cost reduction.⁸⁹ Similarly, there are other approaches that have shown promise in research studies, such as a Categorical Adjustment Index or Health Equity Summary Score for Medicare Advantage plans, a Distressed Community Index Area-Deprivation Index, and the Minnesota Complexity Assessment Model.⁸⁹⁻⁹⁵

As a first step, several groups stratify measures by sociodemographic characteristics to provide meaningful information that health care delivery organizations can use to target improvement efforts and understand varying need. For example, California’s Insurance Exchange requires plans to collect and report quality data stratified by socioeconomic factors like gender, race, and ethnicity, while also implementing disparities reduction targets within various subpopulations.⁹⁶

There are ongoing efforts to better adjust for social risk, with recent reports by the Assistant Secretary for Planning and Evaluation^{71,87} and a new multi-stakeholder technical expert panel on social and functional status-related risk by the National Quality Forum.⁹⁷ These efforts, if successful, could help prevent the inadvertent worsening of health and access disparities that can stem from health care payment and delivery models incorporating SDoH interventions.

Tools for Implementation: Adjusting VBP for Social Risk Factors	
Challenges	
<ul style="list-style-type: none"> When providers are financially responsible for SDoH or social service provision, VBP models may need to be adjusted based on a population’s social risk factors. Social risk adjustment remains conceptually controversial, and there are challenges in operationalizing it (in terms of data and methods). 	
Strategies	
<ul style="list-style-type: none"> Stratify measures by available sociodemographic characteristics to identify potential areas of disparities (while ongoing efforts continue to address operational challenges). 	

Building Cross-Sector Partnerships

The health system is newly “sitting at the table” of the population health and social needs sectors — and bringing a significant amount of dollars. Social service and CBOs might be interested in those dollars due to chronic underfunding, but this creates new power dynamics that complicate opportunities for partnership between the two sectors. For VBP to be successful in addressing SDoH, it truly needs to be a partnership, given that health care should not re-create the standing social service infrastructure.

Health care organizations and the social service sector have differing histories, processes, and cultures⁷ and use different languages — or may even use the same term to refer to different concepts. There’s a further concern that health sector efforts may “crowd out” community residents not covered by a particular health care organization.⁷ Finally, health systems may struggle to partner with smaller or more resource-constrained CBOs that are less able to provide the data and evidence that health system financial leaders need to buy into the program.

Successful partnerships have often begun by acknowledging the tensions highlighted above and encourage active, two-way conversations with all partners that acknowledge power balances.^{7,9,52,69,98-100} Health systems may consider using their influence to approach local payers and community leaders to help diversify streams of funding and resources and to champion successful partnership.^{9,100} Some partnerships have used a neutral third party to establish the details of these partnerships.⁹ CBOs face high degrees of financial insolvency, with many reporting negative operating margins in recent years.⁸ Accordingly, CBOs will require support to carry out this work — perhaps even upfront capital or advanced savings for infrastructure building, as seen in many existing VBP models.¹⁰¹ Educational and capacity-building opportunities for health and social service sector partners to build human capital (knowledge, skill-building, programmatic content, budgeting, etc.) *together* encourage sustainability of these collaborations.¹⁰⁰

Tools for Implementation: Building Cross-Sector Partnerships
Challenges
<ul style="list-style-type: none"> Health and social service sectors have different power dynamics, cultures, histories, processes, and language, which can make cross-sector partnerships difficult.
Strategies
<ul style="list-style-type: none"> Start building the partnership early, before services need to be delivered, and establish regular communication channels that acknowledge tensions and power imbalances. Build infrastructure and human capital together to ensure a sustainable collaboration. Consider upfront capital for CBO partners to build infrastructure.

Tool for Implementation: Creating Organizational Competencies
Challenges
<ul style="list-style-type: none"> Many health care organizations need support to build the organizational competencies they need to succeed under VBP, especially VBP focused on SDoH.
Strategies
<ul style="list-style-type: none"> Provide upfront capital and technical assistance to help health care delivery organizations build needed competencies.

Organizational Competencies

Clinicians and health care delivery organizations have variable experience with VBP models. Some will require additional support to be successful in VBP, especially smaller, rural, safety net, or otherwise resource-constrained organizations. Many of these organizations will require upfront financial support and technical assistance to develop the competencies needed to be successful in any VBP, especially models incorporating SDoH.

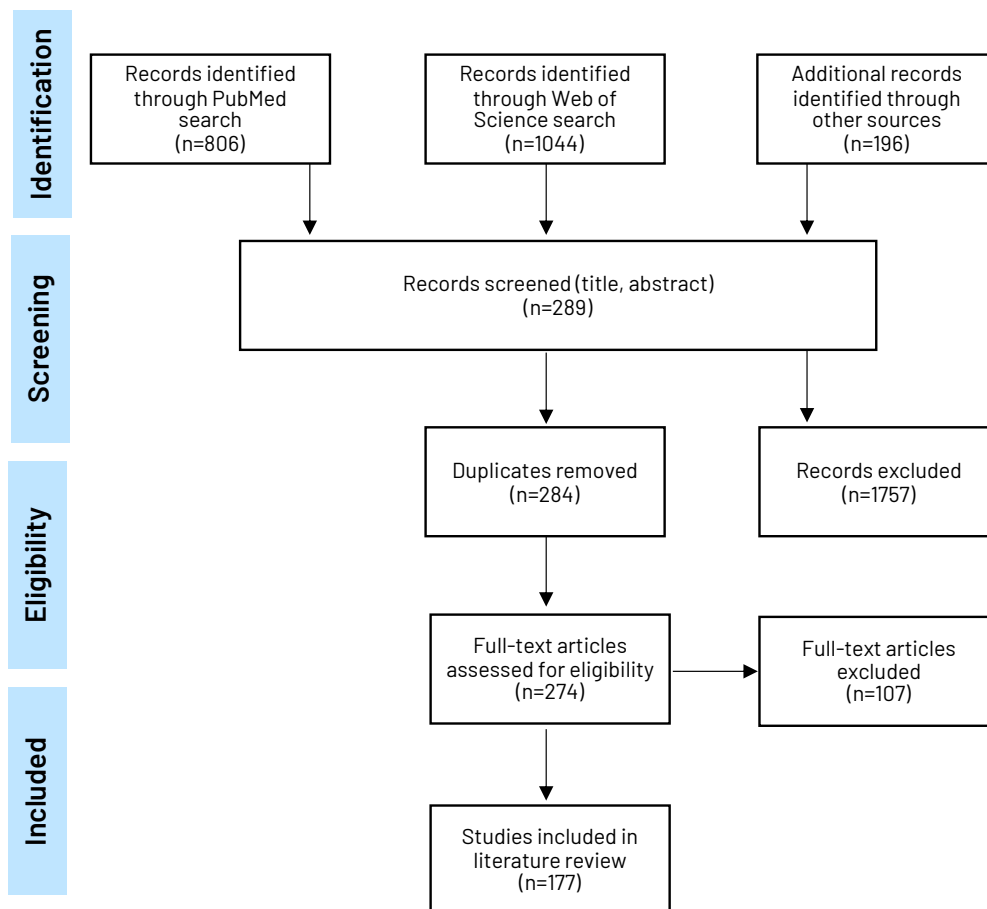
States can play a critical role in facilitating the transition to VBP. For example, the Massachusetts Health Policy Commission’s Community Hospital Acceleration, Revitalization, & Transformation investment program provides community hospitals with funding, technical assistance, and other capabilities to prepare them to participate and succeed in VBP models.³ Other states such as New York also offer technical assistance to clinicians during the transition to VBP models, including health information technology support and training on contracting and billing for behavioral health clinicians.^{102,103} Similarly, CMS’ ACO Investment Model provided upfront capital that organizations could use to transition into an ACO, and they repaid those investments with their later shared savings. More recently, CMS launched the Community Health Access and Rural Transformation Model, which includes an ACO Transformation Track to help rural health care delivery organizations transition to become an ACO.

CONCLUSIONS

Payment models incorporating SDoH are a nascent but emerging area. These models have the potential to generate effective and sustainable innovations that reduce health disparities and improve patient well-being. While there is substantial activity of health care organizations to identify populations with social needs, more evidence is needed to show how best to address social needs through VBP models and how this affects spending and outcomes¹⁰⁴ across different communities and health care settings.¹⁰⁵ These VBP models can be a useful tool, along with other reforms, to improve SDoH and health across the US population.

APPENDIX: HOW THIS STUDY WAS CONDUCTED

This issue brief draws on multiple sources of information. First, we worked with a Duke University librarian to design terminology to capture relevant journal articles from peer-reviewed literature databases as well as to capture relevant gray literature from internet searches. We supplemented these searches with scans of state health policies posted online and payment reform models proposed to the Physician-Focused Payment Model Technical Advisory Committee to capture other relevant ongoing or proposed work. That process is summarized in the figure below. We used this information to summarize the current landscape of payment reform initiatives addressing SDoH. Then, we drew themes from the literature review on challenges and opportunities related to implementation, which coalesced around four major areas: data collection and sharing, social risk factor adjustment, cross-sector partnerships, and organizational competencies. We discuss these themes, as well as policy implications and next steps so that states and payers can use VBP to encourage and promote addressing social needs.



Notes

1. Magnan S. Social Determinants of Health 101 for Health Care: Five Plus Five. *NAM Perspect*. Published online October 9, 2017. doi:10.31478/201710c
2. Carman K, Chandra A, Weiland S, Miller C, Tait M. 2018 National Survey of Health Attitudes. RWJF. Published January 1, 2019. Accessed October 1, 2020. <https://www.rwjf.org/en/library/research/2019/01/2018-national-survey-of-health-attitudes.html>
3. Malseptic GG, Melby LH, Connolly KA. Complex Care Models to Achieve Accountable Care Readiness: Lessons from Two Community Hospitals. *HealthcJ Deliv Sci Innov*. 2018;6(1):74-78. doi:10.1016/j.hjdsi.2017.05.006
4. Glenton C, Colvin CJ, Carlsen B, et al. Barriers and Facilitators to the Implementation of Lay Health Worker Programmes to Improve Access to Maternal and Child Health: Qualitative Evidence Synthesis. *Cochrane Database Syst Rev*. 2013;(10):CD010414. doi:10.1002/14651858.CD010414.pub2
5. Starfield B, Gervas J, Mangin D. Clinical Care and Health Disparities. In: Fielding JE, ed. *Annu Rev Public Health*. 2012;33:89-106. doi:10.1146/annurev-publhealth-031811-124528
6. Tobin-Tyler E, Ahmad B. *Marrying Value-Based Payment and the Social Determinants of Health Through Medicaid ACOs: Implications for Policy and Practice*. Milbank Memorial Fund; 2020:1-24. Accessed June 8, 2020. https://www.milbank.org/wp-content/uploads/2020/05/Medicaid-ACOs-and-SDOH.ver5_.pdf
7. Tanenbaum SJ. Can Payment Reform Be Social Reform? The Lure and Liabilities of the “Triple Aim.” *J Health Polit Policy Law*. 2017;42(1):53-71. doi:10.1215/03616878-3702770
8. Moore K. Social Determinants of Health: Addressing Barriers Through Screening, Referrals, and Care Coordination. *NC Med J*. 2019;80(5):306-311. doi:10.18043/ncm.80.5.306
9. Taylor LA, Berchuck CM, Barnett KG. A Strategic Tension for Hospitals Moving Upstream: Cede Control but Maintain Accountability. *Prev Med*. 2018;112:207-208. doi:10.1016/j.ypmed.2018.04.028
10. Biederman DJ, Gamble J, Wilson S, Douglas C, Feigal J. Health Care Utilization Following a Homeless Medical Respite Pilot Program. *Public Health Nurs Boston Mass*. 2019;36(3):296-302. doi:10.1111/phn.12589
11. Juillard C, Smith R, Anaya N, Garcia A, Kahn JG, Dicker RA. Saving Lives and Saving Money: Hospital-based Violence Intervention Is Cost-Effective. *J Trauma Acute Care Surg*. 2015;78(2):252-257; discussion 257-258. doi:10.1097/TA.0000000000000527
12. Vickery KD, Shippee ND, Guzman-Corrales LM, et al. Changes in Quality of Life among Enrollees in Hennepin Health: A Medicaid Expansion ACO. *Med Care Res Rev*. 2020;77(1):60-73. doi:10.1177/1077558718769457
13. Vickery KD, Shippee ND, Menk J, et al. Integrated, Accountable Care for Medicaid Expansion Enrollees: A Comparative Evaluation of Hennepin Health. *Med Care Res Rev*. 2020;77(1):46-59. doi:10.1177/1077558718769481
14. Berkowitz SA, Meigs JB, DeWalt D, et al. Material Need Insecurities, Control of Diabetes Mellitus, and Use of Health Care Resources: Results of the Measuring Economic Insecurity in Diabetes Study. *JAMA Intern Med*. 2015;175(2):257-265. doi:10.1001/jamainternmed.2014.6888
15. Tsega M, Lewis C, McCarthy D, Shah T, Coutts K. *Review of Evidence for Health-Related Social Needs Interventions*. The Commonwealth Fund; 2019:1-27. https://www.commonwealthfund.org/sites/default/files/2019-07/COMBINED_ROI_EVIDENCE_REVIEW_7.15.19.pdf
16. Gottlieb LM, Wing H, Adler NE. A Systematic Review of Interventions on Patients’ Social and Economic Needs. *Am J Prev Med*. 2017;53(5):719-729. doi:10.1016/j.amepre.2017.05.011

17. Murphy SME, Hough DE, Sylvia ML, et al. Going Beyond Clinical Care to Reduce Health Care Spending: Findings from the J-CHIP Community-Based Population Health Management Program Evaluation. *Med Care*. 2018;56(7):603-609. doi:10.1097/MLR.0000000000000934
18. Basu A, Kee R, Buchanan D, Sadowski LS. Comparative Cost Analysis of Housing and Case Management Program for Chronically Ill Homeless Adults Compared to Usual Care. *Health Serv Res*. 2012;47(1 Pt 2):523-543. doi:10.1111/j.1475-6773.2011.01350.x
19. Finkelstein A, Zhou A, Taubman S, Doyle J. Healthcare Hotspotting – A Randomized Controlled Trial. *N Engl J Med*. 2020;382(2):152-162. doi:10.1056/NEJMsa1906848
20. Rutledge RI, Romaine MA, Hersey CL, Parish WJ, Kissam SM, Lloyd JT. Medicaid Accountable Care Organizations in Four States: Implementation and Early Impacts. *Milbank Q*. 2019;97(2):583-619. doi:10.1111/1468-0009.12386
21. Matulis R. Prioritizing Social Determinants of Health in Medicaid ACO Programs: A Conversation with Two Pioneering States – CHCS Blog. Published online May 2, 2018. Accessed August 17, 2020. <https://www.chcs.org/prioritizing-social-determinants-health-medicare-aco-programs-conversation-two-pioneering-states/>
22. Tang MH, Sengupta N, Longo S, Zuckerman B. Behavioral Health Integration in a Medicaid Accountable Care Organization: Management Lessons from a Health Center. *J Health Care Poor Underserved*. 2019;30(4):1252-1258.
23. Verma S. CMS Approves North Carolina’s Innovative Medicaid Demonstration to Help Improve Health Outcomes. Health Affairs Blog. Published October 24, 2018. Accessed October 2, 2020. <https://www.healthaffairs.org/doi/10.1377/hblog20181024.406020/full/>
24. Massachusetts Health Policy Commission. HPC’s New Investment Opportunity: MassUP. Published online January 9, 2020. Accessed December 18, 2020. <https://www.mass.gov/doc/massup-webinar-slides/download>
25. Centers for Medicare & Medicaid Services. Accountable Health Communities Model. Published November 6, 2020. Accessed November 12, 2020. <https://innovation.cms.gov/innovation-models/ahcm>
26. State Innovation Models Initiative: Model Test Awards Round Two. CMS. Published September 25, 2020. Accessed October 1, 2020. <https://innovation.cms.gov/innovation-models/state-innovations-model-testing-round-two>
27. State Innovation Models Initiative: Model Test Awards Round One. CMS. Published June 16, 2020. Accessed October 1, 2020. <https://innovation.cms.gov/innovation-models/state-innovations-model-testing>
28. Welcome to the MDHHS State Innovation Model – Home. Accessed August 28, 2020. <https://michirlearning.org/>
29. Accountable Communities of Health. Published online December 2016. Accessed October 1, 2020. https://www.hca.wa.gov/assets/program/ach_faqs.pdf
30. Crook H, Olson A, Alexander M, et al. Improving Serious Illness Care in Medicare Advantage: New Regulatory Flexibility for Supplemental Benefits. Published online December 2019. Accessed August 28, 2020. https://healthpolicy.duke.edu/sites/default/files/2020-07/MA_SupplementalBenefits_2019.pdf
31. Roiland R, Singletary E, Saunders RS, et al. *Alternative Payment Models to Support Child Health & Development: How to Design and Implement New Models*. Robert J. Margolis, MD, Center for Health Policy, Duke University; 2020. https://healthpolicy.duke.edu/sites/default/files/2020-06/apms_for_kids_final.pdf
32. Freed M, Damico A, Neuman T. A Dozen Facts about Medicare Advantage in 2020. KFF. Published April 22, 2020. Accessed October 2, 2020. <https://www.kff.org/medicare/issue-brief/a-dozen-facts-about-medicare-advantage-in-2020/>
33. Manatt, Phelps & Phillips, LLP. *Medicaid’s Role in Addressing Social Determinants of Health*. Robert Wood Johnson Foundation; 2019:3. Accessed November 12, 2020. https://www.rwjf.org/content/dam/farm/reports/issue_briefs/2019/rwjf452222

34. American Hospital Association. *Medicaid Financing for Interventions That Address Social Determinants of Health*. American Hospital Association. Accessed November 12, 2020. <https://www.aha.org/system/files/2019-01/medicaid-financing-interventions-that-address-social-determinants-of-health.pdf>
35. Katch H. *Medicaid Can Partner With Housing Providers and Others to Address Enrollees' Social Needs*. Center on Budget and Policy Priorities; 2020:13. Accessed November 12, 2020. <https://www.cbpp.org/sites/default/files/atoms/files/1-17-20health.pdf>
36. Centers for Medicare & Medicaid Services. *Opportunities in Medicaid and CHIP to Address Social Determinants of Health (SDOH)*. Published January 7, 2021. Accessed January 29, 2021. <https://www.medicaid.gov/federal-policy-guidance/downloads/sho21001.pdf>
37. Daniel-Robinson L, Moore JE. *Innovation and Opportunities to Address Social Determinants of Health in Medicaid Managed Care*. Institute for Medicaid Innovation; 2019:1-24. Accessed June 1, 2020. https://www.medicaidinnovation.org/_images/content/2019-IMI-Social_Determinants_of_Health_in_Medicaid-Report.pdf
38. Change Healthcare. *Value-Based Care in America: State-by-State*. Change Healthcare; 2019:1-68. https://www.pccpc.org/sites/default/files/resources/%7Ba7b8bcb8-0b4c-4c46-b453-2fc58cefb9ba%7D_Change_Healthcare_Value-Based_Care_in_America_State-by-State_Report.pdf
39. Crumley D, Lloyd J, Pucciarello M, Stapelfield B. *Addressing Social Determinants of Health via Medicaid Managed Care Contracts and Section 1115 Demonstrations*. Published online December 2018. Accessed October 2, 2020. <https://www.chcs.org/media/Addressing-SDOH-Medicaid-Contracts-1115-Demonstrations-121118.pdf>
40. Crook H, Whitaker R, Azalea K, Heiser S, McClellan M. North Carolina's Health Care Transformation to Value: Progress to Date & Further Steps Needed. *NC Med J*. 2020;81(3):191-194.
41. Cantor J, Tobey R, Giron N, Kirui T. Medicaid Managed Care Plans Have an Opportunity to Play a Key Role in Recovery. *Health Affairs Blog*. Published June 29, 2020. Accessed July 15, 2020. <https://www.healthaffairs.org/doi/10.1377/hblog20200626.418552/full/>.
42. Frazee TK, Brewster AL, Lewis VA, Beidler LB, Murray GF, Colla CH. Prevalence of Screening for Food Insecurity, Housing Instability, Utility Needs, Transportation Needs, and Interpersonal Violence by US Physician Practices and Hospitals. *JAMA Netw Open*. 2019;2(9):e1911514. doi:10.1001/jamanetworkopen.2019.11514
43. North Carolina Department of Health and Human Services. *North Carolina's Healthy Opportunities Pilots: A Review of Proposed Design for Interested Stakeholders*. Published online February 15, 2019. https://files.nc.gov/ncdhhs/documents/Healthy-Opportunities-Pilot_Policy-Paper_2_15_19.pdf
44. Spillman BC, Leopold J, Allen EH, Blumenthal P. *Housing and Delivery System Reform Collaborations: Issue Brief*. ASPE. Published February 14, 2019. Accessed October 1, 2020. <https://aspe.hhs.gov/basic-report/housing-and-delivery-system-reform-collaborations-issue-brief>
45. New York Medicaid Redesign Team. *A Path toward Value Based Payment: Annual Update*. Published online November 2017. Accessed July 31, 2020. https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/vbp_library/docs/2017-11_final_vbp_roadmap.pdf
46. Machledt D. *Addressing the Social Determinants of Health through Medicaid Managed Care*. The Commonwealth Fund; 2017. Accessed October 1, 2020. https://www.commonwealthfund.org/sites/default/files/documents/___media_files_publications_issue_brief_2017_nov_machledt_social_determinants_medicaid_managed_care_ib_v2.pdf
47. Huelskoetter T. *Evaluating State Innovations to Reduce Health Care Costs*. Published online April 6, 2018. Center for American Progress. Accessed June 3, 2020. <https://www.americanprogress.org/issues/healthcare/reports/2018/04/06/448912/evaluating-state-innovations-reduce-health-care-costs/>

48. Huffstetler AN, Phillips RL. Payment Structures That Support Social Care Integration with Clinical Care: Social Deprivation Indices and Novel Payment Models. *Am J Prev Med.* 2019;57(6):S82–S88. doi:10.1016/j.amepre.2019.07.011
49. McGinnis T, Crumley D, Chang DI. *Implementing Social Determinants of Health Interventions in Medicaid Managed Care: How to Leverage Existing Authorities and Shift to Value-Based Purchasing.* The Nemours Foundation; 2018:1–12. Accessed June 5, 2020. https://www.academyhealth.org/sites/default/files/implementing_sdo_h_medicai_d_managed_care_may2018.pdf
50. Higgins E. Q&A: How Rhode Island Tackles Social Determinants of Health through Its Accountable Entity Model. NASHP. Published November 27, 2018. Accessed October 2, 2020. <https://www.nashp.org/qa-how-rhode-island-tackles-social-determinants-of-health-through-its-accountable-entity-model/>
51. Rhode Island Executive Office of Health and Human Services (EOHHS) Accountable Entity (AE) Health Status Measure. Published online October 24, 2017. Accessed October 2, 2020. http://www.eohhs.ri.gov/Portals/0/Uploads/Documents/AE/AE_SDOH_Measure_Draft_102417.pdf
52. Artiga S, Hinton E. *Beyond Health Care: The Role of Social Determinants in Promoting Health and Health Equity.* Kaiser Family Foundation; 2018:1–13. Accessed June 1, 2020. <https://www.kff.org/disparities-policy/issue-brief/beyond-health-care-the-role-of-social-determinants-in-promoting-health-and-health-equity/>
53. Spillman BC, Leopold J, Allen EH, Blumenthal P. Housing and Delivery System Reform Collaborations: Issue Brief. Published online February 2019. ASPE. Accessed June 8, 2020. <https://aspe.hhs.gov/pdf-report/housing-and-delivery-system-reform-collaborations-issue-brief>
54. Hernández-Cancio S, Albritton E, Fishman E, Tripoli S, Callow A. *A Framework for Advancing Health Equity and Value: Policy Options for Reducing Health Inequities by Transforming Health Care Delivery and Payment Systems.* Families USA; 2018:1–60. https://familiesusa.org/wp-content/uploads/2018/06/FamiliesUSA_Policy-Options_Report.pdf
55. Conrad DA, Grembowski D, Hernandez SE, Lau B, Marcus-Smith M. Emerging Lessons from Regional and State Innovation in Value-Based Payment Reform: Balancing Collaboration and Disruptive Innovation. *Milbank Q.* 2014;92(3):568–623. doi:10.1111/1468-0009.12078
56. Oregon Health Authority. Supporting Health for All through REinvestment: the SHARE Initiative. Published December 15, 2020. Accessed January 29, 2021. <https://www.oregon.gov/oha/HPA/dsi-tc/Documents/SHARE-Initiative-Guidance-Document.pdf>
57. Integrated Health Homes Town Halls. Published online February 2020. Accessed October 2, 2020. <https://www.illinois.gov/hfs/SiteCollectionDocuments/IntegratedHealthHomePresentationTownHallsFINAL.pdf>
58. Moore JE, Adams C, Bakst C, DePriest K, Kolenic GE. *Medicaid Access & Coverage in 2019.* Institute for Medicaid Innovation; 2020:74. Accessed December 23, 2020. https://www.medicaidinnovation.org/_images/content/2020-IMI-Medicaid_MCO_Survey-Report.pdf
59. Casalino LP, Erb N, Joshi MS, Shortell SM. Accountable Care Organizations and Population Health Organizations. *J Health Polit Policy Law.* 2015;40(4):821–837. doi:10.1215/03616878-3150074
60. Social Needs Screening Tool Comparison Table. SIREN. Published September 2020. Accessed October 1, 2020. <https://sirenetwork.ucsf.edu/SocialNeedsScreeningToolComparisonTable>
61. The Health Leads Screening Toolkit. Health Leads. Published September 17, 2018. Accessed October 1, 2020. <https://healthleadsusa.org/resources/the-health-leads-screening-toolkit/>
62. Billioux A, Verlander K, Anthony S, et al. Standardized Screening for Health-Related Social Needs in Clinical Settings: The Accountable Health Communities Screening Tool. *NAM Perspect.* 2017;7(5). doi:10.31478/201705b

63. PRAPARE Implementation and Action Toolkit. Published online March 2019. Accessed October 1, 2020. https://www.nachc.org/wp-content/uploads/2019/04/NACHC_PRAPARE_Full-Toolkit.pdf
64. About the PRAPARE Assessment Tool. NACHC. Accessed October 1, 2020. <https://www.nachc.org/research-and-data/prapare/about-the-prapare-assessment-tool/>
65. Grembowski D, Marcus-Smith M. The 10 Conditions That Increased Vermont's Readiness to Implement Statewide Health System Transformation. *Popul Health Manag.* 2018;21(3):180-187. doi:10.1089/pop.2017.0061
66. Office of eHealth Innovation (OeHI). *Social Health Information Exchange: Connecting Health Care with Services That Address the Social Determinants of Health.* State of Colorado; 2018:1-10. Accessed August 17, 2020. https://www.colorado.gov/pacific/sites/default/files/atoms/files/SDoH%20White%20Paper_August%202018_0.pdf
67. Jason C. IN Health Information Exchange to Incorporate SDOH Data. EHRIntelligence. Published April 23, 2020. Accessed August 17, 2020. <https://ehrintelligence.com/news/in-health-information-exchange-to-incorporate-sdoh-data>
68. Jason C. NE Health Information Exchange to Implement SDOH Data. EHRIntelligence. Published June 17, 2020. Accessed August 17, 2020. <https://ehrintelligence.com/news/ne-health-information-exchange-to-implement-sdoh-data>
69. Cheng SM, Catallo C. Conceptual Framework: Factors Enabling Collaborative Healthcare and Social Services Integration. *J Integr Care.* Published online April 21, 2020. doi:10.1108/JICA-11-2019-0048
70. Court BJ, Mancuso D, Zhu C, Krupski A. Predictive Risk Intelligence System (Prism): A Decision-Support Tool for Coordinating Care for Complex Medicaid Clients. In: *Comprehensive Care Coordination for Chronically Ill Adults.* John Wiley & Sons, Ltd; 2011:349-359. doi:10.1002/9781118785775.ch20
71. Office of the Assistant Secretary for Planning and Evaluation. *Report to Congress: Social Risk Factors and Performance under Medicare's Value-Based Purchasing Programs.* United States Department of Health and Human Services; 2016:1-374. Accessed August 18, 2020. <https://aspe.hhs.gov/system/files/pdf/253971/ASPESESRTCfull.pdf>
72. Bleser WK, Saunders RS, Winfield L, et al. ACO Serious Illness Care: Survey and Case Studies Depict Current Challenges and Future Opportunities. *Health Aff (Millwood).* 2019;38(6):1011-1020. doi:10.1377/hlthaff.2019.00013
73. Bleser WK, Saunders RS, Muhlestein DB, McClellan M. Why Do Accountable Care Organizations Leave the Medicare Shared Savings Program? *Health Aff (Millwood).* 2019;38(5):794-803. doi:10.1377/hlthaff.2018.05097
74. National Quality Forum. *Risk Adjustment for Socioeconomic Status or Other Sociodemographic Factors.* National Quality Forum; 2014. Accessed October 13, 2020. <http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=77474>
75. Anell A, Dackehag M, Dietrichson J. Does Risk-Adjusted Payment Influence Primary Care Providers' Decision on Where to Set Up Practices? *BMC Health Serv Res.* 2018;18:179. doi:10.1186/s12913-018-2983-3
76. Blustein J, Borden WB, Valentine M. Hospital Performance, the Local Economy, and the Local Workforce: Findings from a US National Longitudinal Study. *PLoS Med.* 2010;7(6):e1000297. doi:10.1371/journal.pmed.1000297
77. Gu Q, Koenig L, Faerberg J, Steinberg CR, Vaz C, Wheatley MP. The Medicare Hospital Readmissions Reduction Program: Potential Unintended Consequences for Hospitals Serving Vulnerable Populations. *Health Serv Res.* 2014;49(3):818-837. doi:10.1111/1475-6773.12150
78. Sen AP, Chen LM, Wong Samson L, Epstein AM, Joynt Maddox KE. Performance in the Medicare Shared Savings Program by Accountable Care Organizations Disproportionately Serving Dual and Disabled Populations. *Med Care.* 2018;56(9):805-811. doi:10.1097/MLR.0000000000000968

79. Erickson SM, Outland B, Joy S, et al. Envisioning a Better US Health Care System for All: Health Care Delivery and Payment System Reforms. *Ann Intern Med.* 2020;172(2):S33-U63. doi:10.7326/M19-2407
80. National Academies of Sciences, Engineering, and Medicine. *Accounting for Social Risk Factors in Medicare Payment: Identifying Social Risk Factors.* National Academies Press (US); 2016. Accessed June 2, 2020. <https://www.ncbi.nlm.nih.gov/books/NBK338757/>
81. Shakir M, Armstrong K, Wasfy JH. Could Pay-for-Performance Worsen Health Disparities? *J Gen Intern Med.* 2018;33(4):567-569. doi:10.1007/s11606-017-4243-3
82. Roberts ET, Mellor JM, McInerney M, Sabik LM. State Variation in the Characteristics of Medicare-Medicaid Dual Enrollees: Implications for Risk Adjustment. *Health Serv Res.* 2019;54(6):1233-1245. doi:10.1111/1475-6773.13205
83. Hamadi H, Apatu E, Loh C-PA, Farah H, Walker K, Spaulding A. Does Level of Minority Presence and Hospital Reimbursement Policy Influence Hospital Referral Region Health Rankings in the United States. *Int J Health Plann Manage.* 2019;34(1):E354-E368. doi:10.1002/hpm.2654
84. National Quality Forum. *Evaluation of the NQF Trial Period for Risk Adjustment for Social Risk Factors.* National Quality Forum; 2017. Accessed October 13, 2020. <http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=85635>
85. 2019 Merit-Based Incentive Payment System Complex Patient Bonus Fact Sheet. Accessed October 1, 2020. <https://qpp-cm-prod-content.s3.amazonaws.com/uploads/0/2019%20Complex%20Patient%20Bonus%20Fact%20Sheet.pdf>
86. Johnston KJ, Hockenberry JM, Wadhera RK, Joynt Maddox KE. Clinicians with High Socially At-Risk Caseloads Received Reduced Merit-Based Incentive Payment System Scores. *Health Aff (Millwood).* 2020;39(9):1504-1512. doi:10.1377/hlthaff.2020.00350
87. Office of the Assistant Secretary for Planning and Evaluation. *Report to Congress: Social Risk Factors and Performance in Medicare's Value-Based Purchasing Program.* United States Department of Health and Human Services; 2020:1-289. Accessed August 18, 2020. <https://aspe.hhs.gov/system/files/pdf/263676/Second-IMPACT-SES-Report-to-Congress.pdf>
88. Gottlieb LM, Alderwick H. Integrating Social and Medical Care: Could It Worsen Health and Increase Inequity? *Ann Fam Med.* 2019;17(1):77-81. doi:10.1370/afm.2339
89. Ash AS, Mick EO, Ellis RP, Kiefe CI, Allison JJ, Clark MA. Social Determinants of Health in Managed Care Payment Formulas. *JAMA Intern Med.* 2017;177(10):1424-1430. doi:10.1001/jamainternmed.2017.3317
90. Mehaffey JH, Hawkins RB, Charles EJ, et al. Socioeconomic "Distressed Communities Index" Improves Surgical Risk-Adjustment. *Ann Surg.* 2020;271(3):470-474. doi:10.1097/SLA.0000000000002997
91. Sapra KJ, Yang W, Walczak NB, Cha SS. Identifying High-Cost Medicare Beneficiaries: Impact of Neighborhood Socioeconomic Disadvantage. *Popul Health Manag.* 2020;23(1):12-19. doi:10.1089/pop.2019.0016
92. George A, Sachdev N, Hoff J, et al. Development, Value, and Implications of a Comprehensive Primary Care Payment Calculator for Family Medicine: Report from Family Medicine for America's Health Payment Tactic Team. *Fam Med.* 2019;51(2):185-192. doi:10.22454/FamMed.2019.286478
93. Hoff J. *Comprehensive Primary Care Payment Background Report.* Family Medicine for America's Health; 2017:3-41. https://www.aafp.org/dam/AAFP/documents/about_us/initiatives/calculator/fmah19-cpcp-background.pdf
94. Sorbero ME, Paddock SM, Damberg CL, et al. Adjusting Medicare Advantage Star Ratings for Socioeconomic Status and Disability. *Am J Manag Care.* 2018;24(9):E285-E291.

- ⁹⁵. Agniel D, Martino SC, Burkhart Q, et al. Incentivizing Excellent Care to At-Risk Groups with a Health Equity Summary Score. *J Gen Intern Med*. Published online November 2019. doi:10.1007/s11606-019-05473-x
- ⁹⁶. Attachment 7 to Covered California 2017 Individual Market QHP Issuer Contract: Quality, Network Management, Delivery System Standards and Improvement Strategy. <https://hbex.coveredca.com/insurance-companies/PDFs/Att-7-QHP-Update-for-2018.pdf>
- ⁹⁷. Best Practices for Developing and Testing Risk Adjustment Models Technical Expert Panel - Call for Nominations. Accessed October 1, 2020. <http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=93617>
- ⁹⁸. Byhoff E, Taylor LA. Massachusetts Community-Based Organization Perspectives on Medicaid Redesign. *Am J Prev Med*. 2019;57(6):S74-S81. doi:10.1016/j.amepre.2019.07.017
- ⁹⁹. Petchel S, Gelmon S, Goldberg B. The Organizational Risks of Cross-Sector Partnerships: A Comparison of Health and Human Services Perspectives. *Health Aff (Millwood)*. 2020;39(4):574-581. doi:10.1377/hlthaff.2019.01553
- ¹⁰⁰. Hearld LR, Bleser WK, Alexander JA, Wolf LJ. A Systematic Review of the Literature on the Sustainability of Community Health Collaboratives. *Med Care Res Rev MCRR*. 2016;73(2):127-181. doi:10.1177/1077558715607162
- ¹⁰¹. Trombley MJ, Fout B, Brodsky S, McWilliams JM, Nyweide DJ, Morefield B. Early Effects of an Accountable Care Organization Model for Underserved Areas. *N Engl J Med*. 2019;381(6):543-551. doi:10.1056/NEJMsa1816660
- ¹⁰². Value Based Payment Readiness for Behavioral Health Providers. New York State. Accessed October 2, 2020. <https://omh.ny.gov/omhweb/bho/bh-vbp.html>
- ¹⁰³. Technical Assistance. New York State. Accessed October 2, 2020. https://www.health.ny.gov/health_care/medicaid/redesign/behavioral_health/technical_assist/index.htm
- ¹⁰⁴. Thornton RLJ, Glover CM, Cene CW, Glik DC, Henderson JA, Williams DR. Evaluating Strategies for Reducing Health Disparities by Addressing the Social Determinants of Health. *Health Aff (Millwood)*. 2016;35(8):1416-1423. doi:10.1377/hlthaff.2015.1357
- ¹⁰⁵. Gottlieb L, Colvin JD, Fleegler E, Hessler D, Garg A, Adler N. Evaluating the Accountable Health Communities Demonstration Project. *J Gen Intern Med*. 2017;32(3):345-349. doi:10.1007/s11606-016-3920-y

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Dr. Bleser has previously received consulting fees from Merck on vaccine litigation unrelated to this work and serves as board vice president (uncompensated) for Shepherd's Clinic, a clinic providing free health care to the uninsured in Baltimore, Maryland. Dr. Saunders has a consulting agreement with Yale-New Haven Health System for development of measures and development of quality measurement strategies for CMMI Alternative Payment Models under CMS Contract Number 75FCMC18D0042/Task Order Number 75FCMC19F0003, "Quality Measure Development and Analytic Support," Option Year 1. The Duke-Margolis Center for Health Policy values academic freedom and research independence, and its policies on research independence and conflict of interest are available at <https://healthpolicy.duke.edu/research-independence-and-conflict-interest>.

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