



A Summary Report

PAYING FOR POPULATION HEALTH: Case Studies of the Health System's Role in Addressing Social Determinants of Health

With support from the Robert Wood Johnson Foundation, AcademyHealth launched the Payment Reform for Population Health initiative in 2016 to explore improving community-wide health through the transformation of the health care payment system. As part of their efforts to identify the opportunities and challenges associated with linking payment reform to population health, AcademyHealth requested development of four case studies of sites where health systems were actively involved in addressing social determinants of health (SDOH) including housing, employment, education, food security, transportation, healthy behaviors, and neighborhood and built environment. With these criteria, the case study sites were selected in Burlington, VT; Muskegon, MI; Cincinnati, OH; and Greenville, SC having respectively developed interventions focused on medically complex homeless individuals, people with chronic diseases, pregnant women and their newborns, and uninsured individuals with multiple chronic conditions. Each of the following case studies includes a detailed description of the intervention, outlines enabling factors, and provides considerations for the future. To learn more about the Payment Reform for Population Health initiative, visit www.academyhealth.org/p4ph

Why and How Sites Address Social Determinants

In every site, local hospitals and affiliated health care systems worked with community partners using evidence-based strategies to address SDOH. The impetus was similar across settings:

- substantial negative health status and health care outcomes of the targeted patient panel and community populations;
- care delivery challenges and cost exposures for the health systems; and
- expectations and pressures from collaborating partners, including local and state governmental entities.

Funding for these interventions varied considerably but in all circumstances included some component of hospital community benefits plus various philanthropic and government demonstration grants and program support. One site also leveraged private capital investment dollars. Only one setting had revenue from premium dollars directly reallocated to their investment in SDOH, but all sites considered current and future performance-based health care payment expectations to be informing their strategies. Ultimately, regardless of the source of funding, these sites, like many health systems around the country, are working to understand which efforts “outside of the clinic walls”

are likely to stabilize patients, improve healthcare engagement and health outcomes, and potentially reduce costs.

The richness of the story of these sites is reflected both in shared characteristics and challenges and in the inherently local and unique pressures and processes the health care systems faced in moving outside the health care sector and upstream. The settings are very diverse in terms of the insured status of the surrounding populations, the complexity of the healthcare marketplace, the local and state-wide experience of care delivery and financing transformation, and the availability and connectedness of community-based social and economic support services. All sites demonstrated these histories of innovation that were essential to their progress, including:

- Experience in building collective and cross-sector approaches to change-making;
- Commitments to evaluating interventions and building or using available relevant data and analytic capacity;
- Engagement in care-delivery transformation that encouraged providers and health system to consider preventive and non-medical interventions; and
- Involvement with performance and risk-based health care contracting.

What Factors Contribute to Innovation?

Prior investment by government and philanthropy: Many characteristics of the hospital systems and their collaborators shaped the appetite and capacity for innovation. However, it is particularly worth noting the extent to which all these sites had been the beneficiaries of multiple philanthropic and governmental investments in both community-clinical partnership development and integrated care delivery innovation over the last two decades. The role these kinds of investments play in shaping readiness for addressing social determinants of health may be under-appreciated and worthy of further examination. Sites specifically identified the benefits of cross-sector training and support in collective impact strategies; the value of learning collaboratives and other joint quality improvement processes; and the contributions of shared data development, analysis and utilization approaches. Additionally, previous experience of success in integrated care models prepared both clinical and human service providers to extend trust and confidence to one another in subsequent endeavors.

Health system dominance: Three of these sites are the sole or dominant health system in their region. The implications of market share for healthcare industry investment in population health strategies has been noted in other studies¹. Competitive markets have been seen as limiting the extent to which healthcare organizations experience either the recognition or the patient outcome and cost improvements that could be associated with their upstream funding. Additionally, in a crowded market, these entities don't necessarily experience the same kind of focused pressure from community members and governmental entities that is the reality for health systems that dominate a market in the Muskegon, Burlington, and Greenville sites. Nonetheless, researchers have also noted the potential for some hospitals to seek to differentiate themselves in a crowded market through some of their community investments. The implications of market share are deserving of additional analysis regarding the challenges and opportunities it presents for clinical-community collaborations addressing social determinants of health. For Cincinnati, the only site in this study with multiple health systems in play, the issues of competition are substantial and the efforts to align priorities and investments can be challenging. Yet, the evolution of The Health Collaborative, a Cincinnati health system data management, quality improvement, and analytic entity, into a facilitator of community-wide health planning is presenting new opportunities for the area. Their recent receipt of a Centers

for Medicare and Medicaid Services (CMS) Accountable Health Communities grant is likely to provide an important resource for future cross-system and cross-sector population health work.

Other multi-site factors: Many other factors shaped an environment of opportunity for each of the projects these sites pursued. Some are well-reflected in population health literature and are not extensively reviewed here, including strategically located champions in the health system and the mission-driven orientation of their enterprises². Others have been less well-explored or are novel. For instance, in each of these settings, state agencies provided pivotal financing, regulatory, and/ or programmatic incentives. In three of the sites, close alignment between philanthropic and governmental investments were crucial. Three sites had a lead community partner or backbone organization that facilitated cross-sector work. Two settings, Muskegon and Cincinnati, used a well-developed, standardized and nationally recognized intervention strategy, the HUB Pathways care coordination model.

State Agency SDOH Innovation Incentives

Vermont: Aligned cross-sector care management and housing development and subsidy financing including targeted use of excess hospital revenue through Green Mountain Board.

South Carolina: Leveraged hospital participation in HOP program through commitment of ongoing DSH payments and enhanced Medicaid rates financed through discretionary funds.

Michigan & Ohio: Promotion of Pathways HUB models through MI state Center for Medicaid and Medicare Innovation (CMMI) & State Innovation Model (SIM) strategies and through OH state Medicaid low birth weight (LBW) demonstration grant.

Ohio & South Carolina: State certification & Medicaid payment of CHWs.

South Carolina: Long term state investment in University-based Medicaid innovation analytics & technical assistance (TA).

Ohio: State-led primary care delivery & payment transformation effort.

Community-specific factors: Aligning healthcare financing and delivery interests with meaningful strategies for addressing SDOH is still in early development, especially when the lens for analysis is the relationship of these efforts to performance-based healthcare payments. As a result, singular features of each site's motivations or resources as identified in these case study communities are worth noting. These singular characteristics have both the potential to explain how a strategy was uniquely able to proceed and the ability to highlight arenas that may be able to inform development elsewhere. For instance, the supported housing effort in Burlington relied upon an unusual local resource: the availability of under-utilized or closing vacation motels. Cincinnati's use of Medicaid managed care payments for its Pathways HUB community health workers (CHWs) is unique in the country. The Health Project in Muskegon, now a wholly owned subsidiary of the hospital system, MercyHealth, has nonetheless been able to continue to function effectively in its pre-acquisition role as the facilitator of community-hospital relationships and investments. And Greenville Health System has been able to build an "Accountable Care Organization (ACO) for the uninsured" because of the unique policy and financing role the South Carolina Medicaid program undertook in the absence of Medicaid coverage expansion. While unique, these strategies all reflect creative use of diverse resources and public and private authorities in the service of collective action; many lessons can be learned from understanding these strategies.

Lessons Learned

Each of the case studies provides a summary of a discrete effort by local health systems to address SDOH of community members already in care or likely to present to their hospitals or other clinical settings. Although employing different strategies, these sites share an over-arching, clinical goal for their SDOH investments: reducing avoidable acute care use while improving patient engagement with – and positive outcomes from – appropriate and effective preventive care. This study found that, even when incorporating SDOH services, the health system is still focused on patient-level outcomes that are closely connected to clinical care. However, those efforts are a step forward in aligning the interests between health care and social and human services. This insight suggests such interventions are a starting point for future actions that incorporate SDOH services into performance-based payment models. Making that intersection work well was the subject of a number of findings across the sites.

- SDOH screenings are necessary to identify priority needs and populations where interventions are likely to impact health outcomes of interest.
 - What information is collected, who conducts these assessments, and where and how SDOH patient data are stored, shared, and used in care planning are important arenas of work that are still evolving and are sometimes in contention.
- Targeting and adjusting the focus, amount and duration of non-clinical support provided is critical for efficient use of health system-based investments and limited human services capacity. As patient's health goals are realized, projects seek to move them toward reliance on less intensive and more broadly available community supports. An important role of effective community-clinical collaborations is the stabilization of patients who can then successfully engage in available non-medical service systems. For example, the Health Project in Muskegon closely monitors client's progress through their pathways, facilitating transitions as participants improve so that resources for those at greatest need can be maintained. Their evaluation activities include trying to better characterize the optimal tenure in HUB-related non-clinical services. Both healthcare and human service entities noted that supporting successful transitions to less intensive services can be difficult because of the multiple chronic social and economic needs that many patients have and because of the expectations they develop with the experience of broader support.
- Care delivery processes must be re-organized to successfully incorporate and address SDOH.
 - **Culture Change:** Some settings are working on broad-scale culture change and provider training. They also seek to integrate new, and sometimes external, non-medical personnel and processes in clinical workflow. All clinical sites are challenged by the wariness some providers and administrators have about working with community members with the most complex needs. Many have little experience with patients' diverse social, behavioral, and economic circumstances, and they often face difficulties dealing with the Medicaid and discretionary payment structures these individuals rely upon.
 - **Diversity in Care Delivery and Coordination Efforts:** The sites providing care and coordination as well as the clinical and non-clinical personnel involved are increasingly diverse: interventions by community health workers, paramedics, care managers, and social service

providers occur in homes, shelters, welfare offices, churches and other community sites. This diversity of personnel and settings creates opportunities and challenges for clinical-community partners.

- **Varying Expectations/Priorities among Collaborating Partners:** Collaborating partners can have varying expectations when linking non-medical services to clinical care delivery, outcomes, and, potentially, payment. These varying expectations can result in differential strategies, which can facilitate or hinder these intervention efforts. On the one hand, shared expectations can shape important integration efforts like those underway in Muskegon to link the medical and HUB Pathways data connections. On the other hand, conflicting expectations can fuel concerns in the clinical settings about the relative effectiveness of “building” versus “buying” non-medical supports, a question being faced in Greenville and Cincinnati.
- Building adequate cross-institution and cross-sector service delivery, communication and care coordination strategies is crucial and difficult.
 - Each site undertook multiple efforts to align medical and non-medical care. They established diverse client identification, referral and care delivery protocols; created joint client-level care planning and coordination mechanisms; supported clinical-community learning collaboratives and other cross-training; and conducted project-focused review and re-direction. Historical institutional relationships, funding requirements, and the existence of an integrator or backbone organization shape those approaches across all sites. Particular service delivery requirements also can influence how communication and care planning evolve. As Burlington built supportive housing options for medically complex homeless individuals, the housing agency had to align clinical support and care management functions with property management concerns.
 - Health care providers found it difficult to establish referral mechanisms for their patients who, in turn, experienced difficulty finding routes into and through non-medical services. While human service settings seek to create a low threshold for client access, they also need to target their resources. Three sites are working to integrate 211 requests and referrals into their medical systems as one mechanism to appropriately triage non-medical needs.
 - Clinical and community collaborators found it particularly difficult to share time-sensitive information effectively. In Cincinnati, the Health Collaborative notifies the Health Care Access Now (HCAN) HUB Pathway service of emergency department (ED) visits and admissions that occur with their clients, enabling HCAN CHWs to link to the shared client and facilitate community care alternatives or transitions. This kind of health system-based notification process for critical human service providers is very under-developed nationally.
- Measuring what matters is a major investment and an ongoing challenge in every setting, especially when health care organizations look to identify returns on their investments. The issues are diverse.
 - Aligning discrete grant and governmental funding-related data collection and reporting obligations is burdensome.
 - Multi-sector partners have differential outcomes of interest. For example:
 - Measuring the health-related impacts of non-medical service provision challenges all organizations.
 - Health care organizations often seek near-term changes in utilization, costs, and outcomes that are unlikely to align with the longer-term trajectory of most community-focused interventions focused on SDOH.
 - There are significant barriers to adequately accounting for financial inputs across sectors and appreciating their relative contributions to meaningful healthcare utilization, cost, and health outcome changes.
- Overcoming uncertainty about reliable and sustainable financial resources to address SDOH is critical. That uncertainty burdens the relationships and strategy development of community and clinical partners.
 - Even as they jointly discover interventions that “work” through creative financing, demonstration grants, state initiatives, and community benefits, the search for permanent funding can be elusive, especially as it is tied to insurer payments, value-based or otherwise. This may reflect the still early stages of value and performance based strategies.
 - Some health settings consider components of their community benefit commitments to be part of operating budgets, potentially assuring a more reliable fiscal platform for certain SDOH efforts.
 - All sites have aspirations toward new or improved state Medicaid payments for their upstream efforts, yet their expectations for commercial payer participation is limited.

Strategies for Future Development

This study reflects multiple histories and enabling forces that have shaped health system engagement with the social determinants of health of their patient and community populations. Their experiences and their challenges suggest areas that are worthy of further investigation.

- Improve understanding of the role of philanthropic and governmental investments in shaping cross-sector population health strategy development and financing.
 - All of the case study sites have benefited from numerous grant and other financing that built local approaches to collective decision-making and joint action. These kinds of developmental opportunities may be important to creating a collaborative community-clinical platform for successfully addressing social determinants of health.
- Better describe how the experience of clinical care delivery transformation creates an understanding of—and openness to—healthcare system investment in efforts that address SDOH, including those undertaken in collaboration with community partners.
 - The fact that the care delivery transformation process may provide important opportunities for building health care system commitments to intervening in SDOH was an unexpected finding. The application of the Institute for Healthcare Improvement’s (IHI) learning community model to community engagement in Cincinnati provides a particular example of extending more typical clinical quality improvement approaches to clinical-community collaboration.
- Continue to improve the analysis of hospital and health system financial commitments to addressing social determinants of health.
 - Most of these healthcare systems made their investments initially using external grants. All invested some community benefits. Some moved project resources into operating budgets. In every case, hospital leadership indicated that the differentiation of the source of their investments is not necessarily the lens that administrators use. They are looking for opportunities that can make a difference, ultimately, in their patients’ well-being – and in their bottom line. The quest to better understand hospital and health system decision-making processes regarding upstream investments – and their likely relationship to evolving value-based purchasing – requires ongoing review.
- Further examine the differential effectiveness of consumer SDOH assessment mechanisms that were represented across these sites and are evolving elsewhere.
 - These assessments not only define “pathways” for patient support and problem remediation but also provide information relevant for informing medical care plans, targeting non-medical service interventions, and better developing cost and quality outcome assessments. Combined with patient activation assessments, as in South Carolina, they may also provide meaningful mechanisms for assessing at both the individual and population level.
- Describe the characteristics and effectiveness of evolving community health worker (CHW) structures.
 - From the nationally certified Pathways programs in Muskegon and Cincinnati to the grass-roots PASOs promotores in Greenville, the diversity, location, focus, training, structure and strategy of CHW-related efforts in addressing social determinants of health continues to expand. These characteristics are likely to be associated with differential utility and impact and are important to better appreciate as systems seek to incorporate CHW capacity within payment mechanisms.
- Better characterize meaningful health outcomes and mechanisms for assessing the total cost of interventions that address SDOH.
 - Health systems continue to experiment with diverse upstream strategies that hold the promise of improving patient and community health outcomes. They, and their community partners, struggle to identify health outcomes that can be reasonably associated with specific non-medical interventions and can provide a basis for collaborative efforts and mutual accountability; this challenge becomes greater as investments move further upstream. Scaling and replicating promising strategies requires being able to efficiently and accurately characterize the total cost of SDOH efforts, especially when they cross sectors and rely upon multiple revenue streams.
- Characterize the implications of hospital market dominance in shaping opportunities for hospitals and community partners in building population health strategies.
 - Hospital markets clearly mattered in the investment calculus of the healthcare settings in this report. The implications for health system engagement in population health efforts – and for the strategies of their community partners – have been discussed elsewhere and continue to be deserving of further exploration.
- Create a compendium of state government-based strategies that are catalyzing community-clinical responses to population health and the underlying social determinants.
 - All of the sites in this study had state actors that contributed substantially to shaping the environment for population health investments. South Carolina represents a potentially useful model for other states with considerable un-insurance and limited or no Medicaid expansion.

Conclusion

This study represents a selective and time-limited look at four settings where hospital systems and other partners are actively addressing the social determinants of health of their populations. The intent was to focus on non-medical interventions that might reflect the impact of increasing value and performance based purchasing. As a result, the cases describe efforts that are more closely tied to near-term hospital cost and delivery system impact than broader community health development strategies also underway. Nonetheless, even as the needs of patients currently or likely to present to these health care settings drove the hospital investment calculus, there are clearly important benefits that accrue to improving community health more broadly: they are building capacity in housing and social services arenas, facilitating community-clinical pathways for care, and improving the healthcare access and outcomes of target populations. All sites did see their efforts as responsive to current and emerging performance incentives they face. They believe they are preparing for a future where upstream preventive and non-medical efforts are part of their obligation even as they are uncertain about the scope of—and the financing for—those roles.

In every case, the sites represent engaged, action-oriented, cross-sector learning communities that reflect the impact of two decades of considerable philanthropic and governmental investment in collaborative approaches to improving

population health. Their histories of innovation have shaped readiness for change and likewise reflect the converging impact of medical care delivery transformation, community collaborations and pressures, and evolving value-based payment expectations. Their efforts are vital but still works in progress. In particular, the extent to which—and when—alternative healthcare payments are going to actively stimulate upstream investments is still revealing itself.

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