Patterns of Collaboration among Health Care and Social Services Providers in Communities with Lower Health Care Utilization and Costs

Amanda L. Brewster , Marie A. Brault, Annabel X. Tan, Leslie A. Curry, and Elizabeth H. Bradley

Objective. To understand how health care providers and social services providers coordinate their work in communities that achieve relatively low health care utilization and costs for older adults.

Study Setting. Sixteen Hospital Service Areas (HSAs) in the United States.

Study Design. We conducted a qualitative study of HSAs with performance in the top or bottom quartiles nationally across three key outcomes: ambulatory care sensitive hospitalizations, all-cause risk-standardized readmission rates, and average reimbursements per Medicare beneficiary. We selected 10 higher performing HSAs and six lower performing HSAs for inclusion in the study.

Data Collection. To understand patterns of collaboration in each community, we conducted site visits and in-depth interviews with a total of 245 representatives of health care organizations, social service agencies, and local government bodies.

Principal Findings. Organizations in higher performing communities regularly worked together to identify challenges faced by older adults in their areas and responded through collective action—in some cases, through relatively unstructured coalitions, and in other cases, through more hierarchical configurations. Further, hospitals in higher performing communities routinely matched patients with needed social services.

Conclusions. The collaborative approaches used by higher performing communities, if spread, may be able to improve outcomes elsewhere.

Key Words. Social determinants of health, coordination, older adults

Social determinants of health are critical for older adults with complex health needs, often described by policy makers as high-need, high-cost patients, a group estimated to constitute 5 percent of the population and account for 50 percent of health care spending (Blumenthal et al. 2016). Many studies have

demonstrated that unmet social needs such as unsafe housing, poor nutrition, lack of transportation, and isolation can exacerbate health problems (McGinnis, Williams-Russo, and Knickman 2002; Marmot et al. 2008; Coleman et al. 2009; Schoeni et al. 2010), and growing evidence suggests that social services can improve health and reduce the need for costly medical care (Bradley et al. 2016; Taylor et al. 2016; Wright et al. 2016). This accumulation of evidence, together with health policy reforms that sharpen incentives to limit health care utilization and costs, is motivating health care organizations to explore opportunities to address social as well as medical determinants of health (Sandberg et al. 2014; Alley et al. 2016; Frazee et al. 2016).

Over the last 25 years, a range of efforts (Kane et al. 1997; Leutz 1999) to integrate health care and social services in the care of older adults—most prominently the Program of All-inclusive Care for the Elderly (PACE) (Gross et al. 2004) and the National Long Term Care Demonstration (Carcagno and Kemper 1988; Kemper 1988)—have been undertaken. PACE in particular was shown to reduce health care utilization and costs but ultimately proved lacking in scalability as consumers preferred greater choice of providers than the model afforded. More recently, some models of care coordination have also demonstrated health care cost savings (Counsell et al. 2007; Sadowski et al. 2009; Basu et al. 2012), but because most studies have focused on specific intervention programs, evidence is lacking on how larger geographical communities with lower health care utilization and costs for older adults have achieved such performance. Based on extant literature, we anticipated that communities with lower health care utilization and costs for older adults may have more fully developed systems for health care and social services coordination and that strategies to realize effective coordination at the community level may be identifiable and replicable.

Accordingly, we sought to understand how health care providers and social services providers coordinate their work in communities that achieve relatively low health care utilization and costs, compared with communities that experience relatively higher health care utilization and costs for older adults. We used a qualitative study design to examine this question, selecting communities based on quantitative measures of utilization and cost

Address correspondence to Amanda L. Brewster, Ph.D., Yale School of Public Health, 2 Church Street South, Suite 409, New Haven, CT 06519; e-mail: amanda.brewster@yale.edu. Amanda L. Brewster, Ph.D., Marie A. Brault, Ph.D., Annabel X. Tan, M.P.H., and Leslie A. Curry, Ph.D., are with the Yale School of Public Health, New Haven, CT. Elizabeth H. Bradley, Ph.D., is with the Vassar College, Poughkeepsie, NY.

performance followed by in-depth interviews with 245 health care and social services providers from the communities to understand distinct patterns of interaction. Findings from this research may be useful to uncover coordination strategies that could be used more broadly to limit unnecessary health care utilization and costs for older adults.

METHODS

Study Design and Sample

To select communities for qualitative data collection, we used deviant case sampling (Marsh et al. 2004) to identify higher performing and lower performing communities according to their performance on three indicator outcomes expected to be sensitive to coordination among health care and social services: (1) the rate of hospitalizations for ambulatory care sensitive (ACS) conditions; (2) all-cause risk-standardized hospital readmission rates (RSRR); and (3) Medicare spending per beneficiary (adjusted for price, age, sex, and race). Communities were demarcated by Hospital Service Areas (HSAs). Higher performers needed to score in the best quartile on all three measures, and lower performers needed to score in the worst quartile on all three measures. We obtained Medicare data on 2010 ACS hospitalizations, 2009–2012 all-cause 30-day hospital RSRR, and 2010 total adjusted Medicare spending per enrollee.

Our sampling strategy aimed to ensure broad applicability of our findings to the U.S. population; therefore, we focused our sampling frame on HSAs in which at least 75 percent of the population was living in areas defined by the Census as urbanized or urban clusters. Furthermore, we excluded HSAs in the extreme quartiles of acute care hospital bed density and focused on medium-sized HSAs (between 60,000 and 300,000 population) to ensure we could reasonably identify representatives of the relevant health care and social services organizations. We stratified eligible communities by household income and drew a purposeful random sample of 16 HSAs: 10 higher performing HSAs and six lower performing HSAs, evenly split between above-median and below-median income. As is common for positive deviance methodology (Curry et al. 2011; Brewster et al. 2016), we included more HSAs from the higher performing group as we expected greater diversity in effective coordination approaches and therefore more sites needed to reach saturation of themes. We confirmed that the higher performing HSAs had slightly lower average Medicare mortality rates than

lower performing HSAs, suggesting that lower utilization and costs were not arising from higher mortality.

In each HSA, we undertook site visits and in-depth interviews with representatives of health care organizations, social services agencies, and local government bodies to characterize organizational structures and management strategies that influenced work among providers. In each community, potential study participants were identified through a two-phase process that entailed systematic web-based research to identify targeted types of organizations, followed by snowball sampling via e-mail and telephone until no further contacts could be identified (Patton 2002).

Data Collection and Analysis

Interviewers used a semistructured interview guide (Appendix SA2) with questions about how the participant's organization works with other organizations in the community, coalitions that facilitate work between organizations, availability of key services for older adults, and social and cultural factors that might influence care for older adults. Interviews were typically carried out in-person at the participant's place of employment and lasted approximately 1 hour. Interviews took place between September 2015 and September 2016. All interviews were audio-recorded and professionally transcribed.

We used the constant comparative method (Patton 2002) to conduct line-by-line review of transcripts and identify key themes. Two members of the research team worked collaboratively to develop the code sheet, which was refined as new concepts emerged from site visits. The code sheet stabilized after the sixth site visit. The final codes were reapplied to all interviews. Subsequently, three members of the research team independently coded transcripts with two analysts coding each transcript. Disagreement was resolved by negotiated consensus. We determined that theoretical saturation had been reached after site visits to 14 HSAs; we elected to visit the last 2 HSAs, as they were already scheduled and confirmed that saturation had been reached. We used *Atlas.ti* software to facilitate organization, coding, and retrieval of quotations.

RESULTS

Our 16 sample communities included representation from all Census regions (Table 1). A total of 245 individuals participated in in-depth interviews, for an average of 15 participants per site (range 8–27). Because snowball sampling

Table 1: Characteristics of Study Sites

<i>Site ID</i>	<i>Performance category</i>	<i>Income category</i>	<i>Census region</i>	<i>Interviewees</i>
1	Higher performing	High income	Northeast	11
2	Higher performing	High income	Northeast	18
3	Lower performing	High income	Northeast	12
4	Higher performing	High income	West	19
5	Higher performing	High income	Midwest	22
6	Higher performing	Low income	West	27
7	Lower performing	High income	Northeast	8
8	Higher performing	Low income	West	25
9	Lower performing	Low income	South	13
10	Lower performing	Low income	Midwest	13
11	Higher performing	Low income	West	10
12	Lower performing	Low income	Midwest	15
13	Higher performing	Low income	Midwest	10
14	Lower performing	High income	Northeast	13
15	Higher performing	Low income	West	13
16	Higher performing	High income	West	16

tended to yield more referrals in higher performing sites, these sites tended to have a greater number of interview participants. Interviewees were roughly balanced between health care and social services provider organizations, and about one-quarter of participants worked for local or state government agencies (Table 2).

Four prominent themes emerged from our data. First, higher and lower performing communities were characterized by distinct patterns of collaboration between health care and social services organizations. In higher performing communities, health care and social services organizations regularly worked together to identify challenges faced by older adults in their areas and to respond through collective action—that is, coordinated activities designed to achieve shared goals. In lower performing communities, relationships among health care and social services organizations did not generate collective action, although organizations did communicate regularly. Second, in higher performing communities, hospitals were more involved in partnerships, which addressed issues such as community planning, housing, cross-agency coordination, and intensive postdischarge case management. Third, the distinctive patterns of collaboration observed in higher performing communities appeared to grow from three antecedents shared by these communities: strong norms of association, neutral convening organizations, and local hospitals with sufficient financial stability to consider population health

Table 2: Organizational Affiliations of Interview Participants

	Interviewees (n)	Interviewees (%)
Hospital		
Case management, social work, administration	34	
Physicians, nurses, clinicians	14	
<i>Subtotal</i>	<i>48</i>	20
Other health care		
Outpatient providers	17	
Insurers	3	
Residential/home health care	15	
<i>Subtotal</i>	<i>35</i>	14
Government		
Area Agency on Aging (AAA)*	43	
Other county/municipal	14	
<i>Subtotal</i>	<i>57</i>	23
Social services		
Housing	18	
Income support	1	
Nutrition	9	
Legal services	13	
Transport	3	
Elder services (multiple services)	55	
Recreation	6	
<i>Subtotal</i>	<i>105</i>	43
Total	245	

*AAAs in some sites were nongovernmental organizations, but for simplicity, we have counted all AAA representatives together in this line, including NGO-based AAAs.

investments. Fourth, we identified alternative routes to higher performance that relied on individual-level resources such as personal social ties or financial assets rather than collaboration between sectors. These four themes are summarized in Table 3 and elaborated below, with illustrative quotes.

Distinct Patterns of Collaboration for Collective Action

In higher performing communities, organizations providing health care and social services to older adults regularly undertook in-depth work together to identify common challenges faced by older adults in their areas, and to try to improve the arrangement of services to better meet the population's needs. The configuration of collaborative work in higher performing communities varied from somewhat unstructured, in which coalitions brought key organizations together on more or less equal terms, to more hierarchical configurations in which certain influential organizations guided the behavior of others.

Table 3: Themes Distinguishing Higher and Lower Performing Communities

<i>Theme</i>	<i>Higher Performing Communities</i>	<i>Lower Performing Communities</i>
Patterns of collaboration among health care and social services	Collective action among health care and social services organizations to define and work toward shared goals	Communication and networking among organizations, but relatively little collective action
Hospital partnerships	Hospitals regularly involved in partnerships for: <ul style="list-style-type: none">• community needs assessment• housing placement• cross-agency problem solving• postdischarge case management	Hospitals less involved in partnering with outside agencies
Antecedents of collaboration	<ul style="list-style-type: none">• Strong norms of association• Neutral organizations to serve as conveners• Hospital stability permitted attention to population health	<ul style="list-style-type: none">• Intense competition among organizations• Absence of leading organizations seen as neutral• Hospital vulnerability preoccupied leadership
Individual-level resources	In two communities, extraordinary individual-level resources (personal social ties and wealth) substituted for coordination among providers	Absence of extraordinary individual-level resources

As an example of a more unstructured style of coordination, one higher performing community had for decades maintained a council of organizations that focused on lower-income adults who might be “falling through the cracks” (Site 8, therapist). The council brought together representatives of 40–50 organizations such as the Area Agency on Aging, health clinics, transportation agencies, hospitals, and others. The council not only served as a forum for information sharing and networking but was also a venue where organizations worked together to identify unmet needs in the community and jointly plan how to use the capacities of different organizations to address service gaps. A hospitalist physician who had participated in the council emphasized the problem-solving orientation of the council:

You have a huge collaboration that happens, and then they talk exclusively about this problem, how we're going to attack this problem, how we're going to accomplish what we need to accomplish. (Site 8, physician)

A more structured pattern of collaboration was evident in a different higher performing community, where particularly strong government entities for coordinating health care and social services had been established at the state and local levels. These leading government agencies mobilized a range of different providers to meet priority needs of older adults through designated financing and advanced systems of case management. These agencies took an active role in fostering organizations that met important community needs, as described by a manager in the county senior services agency:

A lot of the smaller social services agencies are non-profits, church, faith-based. They're on their own. They're not sophisticated. We managed the contracts when it started in the '80s and '90s. Really our philosophy was supporting the small organizations. . . . We were interested in them being successful. (Site 5, manager, senior services agency)

Another higher performing community provided an example of structured coordination that was driven not by government agencies, but rather by the local chapter of United Way and the Area Agency on Aging, which played complementary roles. The United Way used its stature as a major funder in the community to mediate conflicts among other organizations when those threatened to undermine shared goals, and also to cultivate management capacity in smaller organizations that performed important functions. The Area Agency on Aging took a deliberate role in cultivating interorganizational relationships, which was feasible as it was a smaller community. The AAA director, who was described as playing a unifying role by others in the community, described this intentional stewardship, saying:

I have developed lots of spider grams. . . . This is the indigent program, this is the county commission. You can see how many people are in partnership with you. . . . Sometimes you have to get a 14 by 17 sheet to enlarge it. It really shows you at a glance who you haven't contacted for a while and maybe they just need to be visited. (Site 11, AAA director)

Lower performing communities regularly held meetings where providers serving older adults came together to learn about new referral partners

and build personal relationships that could facilitate care for individual patients; however, the interorganizational networking in lower performing communities generally did not lead to collective action. One participant from a lower performing site described the regular meeting of service providers in that area as follows:

They have a roundtable where everybody goes around and says what they do . . . the roundtable's not so much about problem solving. It's more about talking about what you as an organization do. (Site 3, community services agency director)

In several lower performing communities, the venues for organizations to gather were dominated by skilled nursing facilities and home health care providers looking to market their services, which limited the opportunity for frank discussion of service gaps or opportunities for organizations to collectively address those gaps. A senior services agency manager illustrated the superficial character of networking meetings in one lower performing site by noting that they allowed marketing representatives, who were expected to record a certain number of outreach interactions, “to tick off all these people that they’ve seen and made contact with, while having a good time” (Site 12, manager, social services agency). Higher performing communities also had private sector providers with an imperative to market their services, and in some cases, these organizations actively participated in coalition activities. The factor that appeared to differentiate lower performing coalitions from higher performing coalitions was the relative weakness of leadership from mission-oriented anchor organizations that could orient collective work toward community needs.

Hospital Partnerships to Address Community Needs

Hospitals in higher performing communities tended to be more involved in partnerships aimed at community planning and matching individual patients with social services. These hospital partnerships included the following: (1) collaborative assessment and planning for community needs, (2) programs for discharging patients with unsafe housing situations directly to a housing agency, (3) regular cross-agency meetings to discuss specific patients with high service needs, and (4) intensive case management programs to follow patients with complex medical and social needs after discharge.

In several higher performing communities, multiple hospitals joined together and partnered with public health departments or insurance plans to

conduct community needs assessments, an exercise that nonprofit hospitals are required by law to perform but not necessarily coordinate with other agencies. Working together to define the community's needs led naturally to collaboratively planning for improvements, as described by one hospital representative:

Out of this community health assessment, came [a community plan]. There were several different areas identified in our county... there's ten different subgroups we're working on. We're not involved in, necessarily, all ten, but we're involved in quite a few of those. (Site 1, director, public health department)

A joint needs assessment was also conducted on behalf of multiple hospitals in one lower performing community, but this effort involved a third party conducting a needs assessment for over 20 hospitals in a large region. The involvement of so many hospitals over a large area with diverse needs may have made it challenging for individual hospitals to be deeply involved.

Partnerships to discharge patients with unsafe housing situations directly to a housing agency, with the cost borne by Medicaid or by the hospital directly, were seen regularly in higher performing but not lower performing communities. A housing agency administrator described one such program:

Our contract with the hospital and the local insurance company that handles Medicaid funding allows individuals to at least stay 30 days with us. We provide the housing... some food... case management... a community health worker that will take them to their appointments, make sure they get medications, and all that good stuff. (Site 6, Housing agency administrator)

Higher performing communities routinely held cross-agency meetings to discuss specific individuals with complex needs, bringing together hospitals with organizations such as social services, public services such as the fire department, and adult protective services. For example, in one higher performing community, the hospital held monthly cross-agency meetings to discuss a group of patients with high service needs, which they termed "frequent flyers." Any participating agency could nominate an individual to be included in the program and the partners had developed a method of updating one another on clients' statuses using a shared electronic spreadsheet. A hospital case manager described the program as follows:

We meet here at the hospital once a month. We invited everybody we thought would be interested, like our homeless programs... the jail, the forensic psychologist... public guardian... we were very successful right away with identifying patients who

would come in all the time, and then we could get them housing . . . we could get them guardianship, so they didn't end up on the streets again. . . . We have continuous meetings, and we bring new people in. (Site 15, hospital case manager)

Intensive, hospital-based case management programs to follow patients with complex medical and social needs after discharge were routinely present in higher performing communities. These programs went beyond standard postdischarge follow-up. For example, one hospital paid directly for home health care for patients who required it but did not have insurance. Another hospital offered a community-based care management program, staffed by nurse–social worker pairs. The director of this program explained how their efforts to stabilize clients' basic needs translated into health improvement, recounting an example of one client with diabetes:

We had a homeless fellow that was hitting the emergency room, I want to say 50 times he was there in less than six months. He had a foot wound and he was homeless. He kept losing his shoes and because of the wound the shoes were uncomfortable so he wouldn't wear them. We tried everything from a really huge shoe with gauze and wrap, and we were able to help him. The wound healed and we were able to reduce his constant visits to the ER, but there's very little that you can do from inside the walls of the hospital. (Site 4, director, hospital community outreach)

Lower performing communities did not display well-established partnerships between hospitals and social services. Programs for discharging to housing agencies were not reported in lower performing communities. Cross-agency communication about specific patients was less prominent in lower performing communities; some cited HIPPA regulations as a barrier, but higher performing communities had managed to accommodate privacy rules by seeking advice without mentioning patient names, or by establishing confidential settings where information could be shared. Some hospitals in lower performing communities had care transition programs geared toward reducing readmissions, but these efforts lacked the intensity of examples observed in high-performing communities, and some had been discontinued after grant funding expired.

Antecedents of Collaboration among Social Services and Health Care

The distinctive patterns of collaboration observed in higher performing communities appeared to grow from three common antecedents occurring together, including strong norms of association, the presence of organizations in neutral convening roles, and local hospitals with sufficient financial stability

to consider population health investments. Although financing levers such as Medicaid and Medicare reforms and state-level efforts to streamline health care and long-term care for older adults had contributed to collaboration in some higher performing communities, other higher performers had evolved relatively advanced collaboration among health care and social services in the absence of such financial arrangements.

Norms of association refer to more than friendly attitudes and professed good relationships, which were seen in lower performing communities as well. Rather, it refers to a tendency, when a problem is identified in the community, for people to take joint responsibility for trying to solve it together. Norms of association that promoted collaborative work between health care and social services in higher performing sites were apparent through consistent emphasis placed on working together in those communities. Interviewees described a shared expectation, built on historical experience and transmitted to newcomers, that professionals in the health and social services sectors would take joint responsibility for solving problems that affect the population. As one example, the director of an aging outreach center in one higher performing site described how new entrants to the community became embedded in an established culture of collaboration:

I moved out [to this area] knowing no one. . . . The entire community really embraced me with welcoming arms and has asked me to participate in the things that they're doing, just as I have asked them to participate in what we are working on. Maybe I'm an optimist and I'm naïve, but I really feel like there's a strong sense of collaboration in this community; we don't make as much progress as quickly as we would like, but we're definitely moving in good directions collectively. (Site 15, director, aging outreach center)

In another higher performing community, the director of a nonprofit organization attributed the strong relationships among organizations in part to cross-pollination of staff members:

There's no getting away from [the hospital] needing to be really connected with lots of social services. . . . All those things happen really well because of the relationships [among staff members of different organizations]. Our community's small and when jobs are open, health care and social services folks move to another organization that often partners with the last. (Site 11, director, community funder)

Norms of association were not as prominent among organizations in lower performing communities and in certain places were notably absent. Interviewees in lower performing communities regularly mentioned warm

interpersonal relationships with colleagues in other organizations, but these relationships were not institutionalized and seldom led to collaborative action beyond referrals. In some lower performing sites, intense competition tended to undermine attempts to coordinate priorities across organization or even undertake joint work on behalf of individual patients. As the leader of a senior services agency in one such community commented:

There's just a mindset that we're too territorial. That I have my little bucket of dollars here, and my own little board, and my own little territory. . . . Especially for non-profits, I think you're constantly begging, fighting for the dollar. Therefore, you're now just trying to survive yourselves. (Site 9, leader, senior services agency)

The presence of influential organizations that were seen as neutral helped to overcome concerns about competition in higher performing communities. For example, one higher performing community, in which the county established a roundtable of top leaders from health care and social services, was described as being uniquely positioned to foster this collaboration because of the perceived neutrality of county entities. The clinical director of a mental health organization explained:

[Our county] is unique in that the county doesn't operate any services . . . the county can really be an overseer and force people to work together because they've got no skin in the game. (Site 1, clinical director, mental health organization)

Hospitals in higher performing communities had generally attained a degree of financial stability and resource slack, which permitted the hospitals to look outward and participate in community planning and partnerships with social services. In higher performing communities, hospitals commonly assumed some of the expenses of social services provision directly; this was more difficult for hospitals in precarious financial situations. In some lower performing communities, it was apparent that the hospitals' financial vulnerability precluded strategic efforts to engage with social services providers. A leader of one of these hospitals described the challenge as follows:

When you have that tiny little bit of money, you try and do the best you can with it. . . . If we don't replace the CAT scanner, we're not going to be able to do CAT scans. The extra stuff that doesn't have any monetary value, even though it has tremendous human value, doesn't get done. . . . We're the hospital equivalent of a parent who's trying to decide whether they should pay for rent or food for the kids or extra school things. As a business, that's sort of what it feels like. (Site 3, hospital CMO)

Alternative Routes to High Performance through Individual-Level Resources

The pattern of higher performing sites displaying robust collaboration between health care and social services organizations was apparent generally across our study sites, but two high-performing communities displayed less notable collaboration, highlighting alternative routes for supporting older adults with complex needs. One of these high-performing communities had extraordinarily high levels of support for older adults through extended families and religious organizations, which appeared to help individuals with complex needs to receive the coordinated social and medical support that they required, substituting for public services. The nutrition coordinator of one social services agency described the environment:

The church is very good at reaching out to their neighbors, checking on people, can we sit with your spouse while you go grocery shopping. There's a lot of community support for people. Particularly for people with children, particularly old people. (Site 16, nutrition coordinator, social services agency)

The other high-performing community that did not display especially in-depth coordination among health care and social services providers was the highest income community in our sample and in the top 1 percent of income nationally. Within this community, most older adults—even those with complex medical and social needs—were likely able to pay privately for care coordination and in-home support services, making the coordination between public or charitable services and health care less important to outcomes.

DISCUSSION

Our findings that coordination among health care and social services organizations in higher and lower performing communities exhibited distinct patterns bolsters evidence (McGinnis, Williams-Russo, and Knickman 2002; Bradley et al. 2016) that both of these sectors, as well as the interaction between them, are important for efforts to improve health and limit health care costs. Furthermore, our results suggest that capacity of the system may be more than merely the sum of its parts.

These findings have implications for policy, suggesting that Accountable Health Communities (AHCs), which have been introduced by the Centers for Medicaid and Medicare Services (CMS) to address health-related social needs, are likely to have the greatest impact if they can motivate collaboration

among health care and social services organizations to reconfigure services, as we observed in our higher performing communities. In higher performing communities, organizations did not merely refer patients to each other; they leveraged their unique capacities to identify unmet community needs and improve services—for example, a bus company adjusting bus schedules to accommodate programs at a senior center. Collaboration to identify, prioritize, and solve problems at the community level may be encouraged by the alignment model of AHCs (Alley et al. 2016), in which communities have a backbone organization to collect and share data among partner organizations in order to develop comprehensive solutions.

We found that hospital programs for directing high-risk patients to social services in higher performing communities routinely involved the hospital (or an insurer) paying for those services. At this point, however, payment incentives have been inadequate to motivate widespread hospital investment in such programs. Insurance coverage for nonmedical services and contracts with greater risk sharing could help, along with more evidence that the up-front investments required to build these partnerships pay off.

Our results should be interpreted in light of the limitations of our methods. First, the criteria used to select higher and lower performing communities are likely to be influenced by a wide range of factors beyond coordination among health care and social services, including demographics, provider supply, and geography. We took this into account by examining differences across above-median and below-median income strata in our sample, excluding communities with especially high or low hospital bed supply, and collecting qualitative data on how community characteristics affected health of older adults. Still, differences in coordination patterns were evident. Second, our sample included only 16 communities, selected to provide rich information rather than to be representative of the entire United States. This means that relationships identified in our research would not necessarily generalize to a wider range of sites, but our qualitative findings could form the basis for hypotheses to be tested in quantitative designs. In particular, future work might test the hypothesis that communities in which the network of health care and social services organizations exhibits greater density of ties, increased centralization, and greater centrality of certain leading organizations (e.g., AAAs, hospitals, or local government agencies) experience lower health care utilization and costs. Additionally, research could test whether partnerships between AAAs and hospitals are linked to lower health care utilization and costs. Third, we only collected data from provider agencies, not patients or clients, whose perceptions of care coordination may differ from providers. While

patient perspectives are important, given our focus on the management of relationships at the organizational level, we believe that providers are best positioned to report on relevant information.

In conclusion, our results suggest that structures and norms which foster collective action among health care and social service agencies serving older adults, and partnerships by which hospitals match complex patients to social services are likely to be important to improving outcomes for high-cost, high-need individuals. Higher performing communities in our sample had addressed the same problems—achieving collective action among health care and social services organizations, and matching vulnerable hospital patients with social services—although they had evolved somewhat different solutions. One-size-fits-all interventions may have trouble promoting coordination between health care and social services, but incentivizing thoughtful, local, attention to these problems may lead to improvement.

ACKNOWLEDGMENTS

Joint Acknowledgment/Disclosure Statement: This research was funded by grants from the Commonwealth Fund and the Weldon and Catherine Donaghue Foundation for Medical Research. The authors also wish to thank Marcia Muligan for project management support and Chloe Yee for research assistance.

Disclosures: None.

Disclaimer: None.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the supporting information tab for this article:

Appendix SA1: Author Matrix.

Appendix SA2: Discussion Guide.