ISSUE BRIEF
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Using Community Partnerships to Integrate Health and Social Services for High-Need, High-Cost Patients

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ABSTRACT

ISSUE: Our health care and social services delivery systems are not well-equipped to effectively manage patients with multiple chronic diseases and complex social needs such as food, housing, or substance abuse services. Community-level efforts have emerged across the nation to integrate the activities of disparate social service organizations with local health care delivery systems. Evidence on the experiences and outcomes of these programs is emerging, and there is much to learn about their approaches and challenges.

GOAL: Profile and classify burgeoning initiatives, understand common challenges, and surface solutions to address those challenges.

METHODS: Mixed-methods approach, including literature search, surveys, semistructured interviews with program leaders, and consultation with expert panels.

FINDINGS AND CONCLUSIONS: We categorized cross-sector community partnerships in four dimensions. We also identified five common challenges: inadequate strategies to sustain cost-savings, improvement, and funding; lack of accurate and timely measurement of return on investment; lack of mechanisms to share potential savings between health care and social services providers; lack of expertise to integrate multiple data sources during health care or social services provision; and lack of a cross-sector workflow evidence base.

KEY TAKEAWAYS

- **Programs in communities across the nation are coordinating services between health care providers and social service organizations to help patients with housing, food insecurity, transportation, and other issues.**

- **These programs share challenges related to financial sustainability, measurement of health outcomes and cost-savings, and integrated information technology.**

- **Consensus is needed on the most appropriate payment models and ways to move away from fee-for-service.**

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BACKGROUND

Effectively managing patients with complex clinical and social needs requires thoughtful integration of health care and social services.[1] Research has shown that patients with multiple clinical and social needs consume a large share of health care services. Social services providers, though historically disconnected from the broader health system, play an important role in providing services for these patients.[2]

Recognizing the opportunity to better address health-related social needs, communities across the United States have begun experimenting with programs to connect health care providers with community-based organizations (CBOs) that address social needs. These needs include housing and food insecurity and assistance with utilities and transportation, among other issues.[3] These programs have been accelerated as a result of top-down reforms initiated by federal policy and demonstration projects and bottom-up innovations driven by community-led efforts.

In this brief, we survey the landscape of these programs, highlight common challenges, and propose solutions, using a mixed-methods approach that includes a literature search, interviews, and survey of selected programs. (See How We Conducted This Study.)

KEY FINDINGS, CHALLENGES, AND PROPOSED SOLUTIONS

We identified 301 cross-sector community partnerships across the country that met our criteria. Of these, we evaluated 64, using web surveys and in-depth interviews. We evaluated the relative advances of these programs in the four dimensions according to our framework (Exhibit 1, Appendix 4):

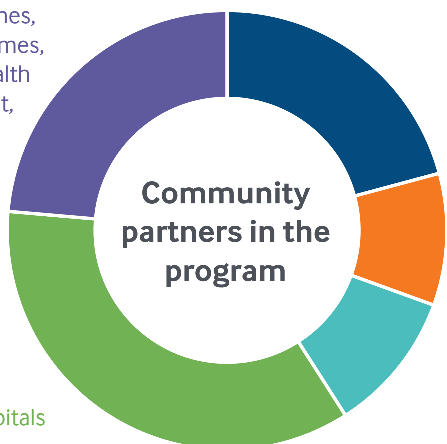
- coordination
- financial alignment
- data- and information-sharing
- metric reporting.

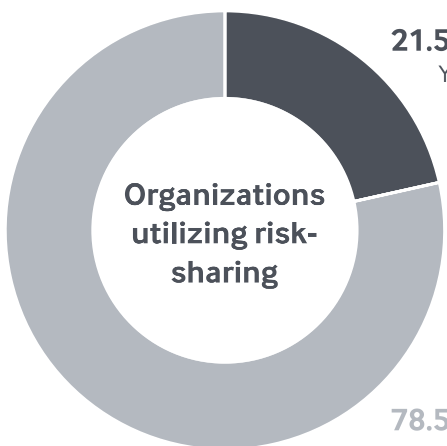
Based on results of cluster analysis of the survey and interview results, we identified significant variations among the programs in these four dimensions. Differences notwithstanding, all cross-sector community partnerships share many common features and face common challenges. Much emphasis was placed on including social services and nontraditional types of care and services in addressing the needs of at-risk patients and forming community partnerships. Most programs include participants from a diverse set of CBOs and a sizable minority (21.5%) includes some risk-sharing mechanism among participating organizations (Exhibit 2).

Exhibit 1. Four Dimensions Used in the Framework

DIMENSION	DESCRIPTION
Coordination	Maps the degree to which a program includes various components in the health care and social services delivery systems, such as health care providers, public health agencies, and community-based organizations that provide social services such as food assistance and shelter, and the degree to which participating organizations coordinate care delivery to enrollees. Examples of care coordination include referral tracking, transition coordination, and needs assessment.
Financial alignment	Maps the degree to which the financial payment incentives of the participating organizations are aligned to achieve the Institute for Healthcare Improvement's Triple Aim (i.e., improving patients' experience, improving population health, and reducing costs of care).
Data- and information-sharing	Maps the degree to which data- and information-sharing occurs among participating organizations.
Metric reporting	Maps the degree to which metrics are monitored and reported across participating organizations and their alignment toward the Triple Aim.

Exhibit 2. Cross-Sector Community Partnerships





Another important theme that emerged was using hospital utilization measures (e.g., emergency department use, preventable hospital admissions and readmissions, excess hospital stays) to assess program performance. A smaller set of organizations used other measures, like prescription drug use and high-cost imaging. Looking forward, organizations hoped to focus on patient outcomes and population-level indicators.

Among the most referenced theme in our study was the importance of integrated information technology, as well as the challenges in using such tools and improvements needed across technology platforms. All the organizations cited using IT in program operations, but most noted challenges and room for improvement within existing technology. We identified five common challenges that these programs face (Exhibit 3).

IMPLICATIONS AND CONCLUSION

Our findings suggest that there is an emerging and diverse group of programs formally coordinating services between independent health care and social service organizations. These programs differ in significant ways but have common challenges. In addition to proposing specific solutions (Exhibit 3), we developed a community playbook to address these challenges and to assist communities as they work to forge cross-sector partnerships.

To implement solutions, federal and local policymakers, philanthropic agencies and foundations, and local anchor hospitals must continue to provide support, funding, and expertise. For example, systemwide payment reforms around transitional care activities and population health are critical to sustain innovation, to facilitate peer learning, and to ultimately integrate successful elements of these innovations into policy and systemwide practices. Toward this end, the Center for Medicare and Medicaid Innovation has launched the Accountable Health Communities program.[4]

Our findings highlight the key role that payment reforms play in building a more integrated health care and social delivery system for complex patients. While there is broad agreement on the need for payment reform that replaces the current fee-for-service system, there is no consensus on the most appropriate payment model or how to move away from our current system.[5] Interviewees cited challenges including the lack of flexible payment models to properly incentivize and engage social services providers and the difficulty in sustaining programs beyond the initial funding period.

Exhibit 3. Common Challenges and Proposed Solutions

CHALLENGE	DESCRIPTION	PROPOSED SOLUTIONS
Sustainability	Many programs are grant funded and may not be sustainable after the grant funding is complete; cost-savings and improvement in outcomes may be difficult to sustain as there will be less room for improvement	Payment reform around transitional care activities and population health; coalition of CBOs establishing alignment with hospitals' strategic plans
Measuring outcomes and cost-savings	Many programs lack the infrastructure and know-how to define and measure the most relevant outcomes and to accurately estimate cost-savings	Establishing a common data dictionary and data set requirements across hospitals, health systems, community-based organizations with common methods for analysis; establishing a learning community to provide resources for members to acquire skills to implement
Shared savings	Limited mechanisms and knowledge of how to share savings	Identification of local philanthropies, foundations, and trusts that would provide funding to accelerate experimentation around financial partnerships; focus on areas where health systems are subject to potential financial penalties or incentives aligned with a CBO's specific core competency
Data and technology expertise	Many CBOs lack a technical platform, infrastructure, and know-how to integrate data from different sources, such as EMRs, claims data, and HIEs; many programs lack the infrastructure to consult multiple data sources during the provision of health care or social services leading to poor coordination	Utilize workflow case management systems at the CBO-level that could integrate with EMR systems; use hospitals' data and technology expertise to serve as anchors for community efforts
Cross-sector workflow evidence base	Programs struggle to define cross-sector, multiorganization, clinical, and social workflows	Demonstration grants provide critical support to experiment and establish this evidence base; national collaboratives, learning networks, and information clearinghouses can also help fill this gap

Note: For more detailed discussion on other potential challenges and solutions, please see the community playbook, available upon request at: http://www.pccipieces.org/health-care-and-social-service-provider-partnerships-for-complex-patients/.

At the same time, there is a wide diversity of the payment models powering the programs in our study and little agreement among the interviewees on what types of financial arrangements are needed.

Establishing an evidence base for cross-sector partnership will require continued funding and experimentation, as well as additional collaborative projects, learning networks, and information clearinghouses to disseminate the significant but often isolated work occurring across the country.

HOW WE CONDUCTED THIS STUDY

For this study, we used a mixed-methods approach. First, an extensive literature search, semistructured interviews, and email surveys of key informants (including community leaders, academic experts, national thought leaders, and policymakers) allowed us to identify a robust list of cross-sector community partnerships across the country. This also allowed us to produce a rubric, or framework, to assess the relative advances of a community effort, using four dimensions (available at: http://www.pccipieces.org/health-care-and-social-service-provider-partnerships-for-complex-patients/). After these steps, we focused on programs that target socially vulnerable, high-utilization, or medically complex populations, and which also demonstrate at least one of the following:

- formal financial arrangement between two or more distinct organizations or units within an organization in the health services sector that share similar funding streams and client delivery goals
- care coordination between the clinical sector and another sector
- risk-sharing among organizations outside the clinical sector.

We subsequently performed quantitative surveys of these programs and semistructured, in-depth interviews with key personnel from a stratified purposive sample of programs. After establishing the key challenges of these programs, we consulted with national experts and drew from our own local efforts to propose solutions to problems identified and to establish a playbook for communities to use going forward (available at: http://www.pccipieces.org/health-care-and-social-service-provider-partnerships-for-complex-patients/). For a more detailed description of the methods, see Appendix 1.

NOTES

[1] S. S. Wallack and C. P. Tompkins, "Realigning Incentives in Fee-for-Service Medicare," *Health Affairs,* July/Aug. 2003 22(4):59–70; K. Minich-Pourshadi, *Gainsharing, Shared Savings Examined* (HealthLeaders Media, Aug. 2012); A. J. Demetriou and J. A. Patterson, Jr., "ACO — Legal Structure, Governance, and Leadership," *ABA Health eSource* (American Bar Association Health Law Section, April 2011); and *ACO Update: Accountable Care at a Tipping Point* (Oliver Wyman, April 2014).

[2] L. A. Chwastiak, D. S. Davydow, C. L. McKibbin et al., "The Impact of Serious Mental Illness on the Risk of Rehospitalization Among Patients with Diabetes," *Psychosomatics,* March/April 2014 55(2):134–43; M. Rowland, J. Peterson-Besse, K. Dobbertin et al., "Health Outcome Disparities Among Subgroups of People with Disabilities: A Scoping Review," *Disability and Health Journal,* April 2014 7(2):136–50; E. K. Fry-Bowers, S. Maliski, M. A. Lewis et al., "The Association of Health Literacy, Social Support, Self-Efficacy and Interpersonal Interactions with Health Care Providers in Low-Income Latina Mothers," *Journal of Pediatric Nursing,* July/Aug. 2014 29(4):309–20; and E. L. Schiefelbein, J. A. Olson, and J. D. Moxham, "Patterns of Health Care Utilization Among Vulnerable Populations in Central Texas Using Data from a Regional Health Information Exchange," *Journal of Health Care for the Poor and Underserved,* Feb. 2014 25(1):37–51.

[3] Centers for Medicare and Medicaid Services, *Center for Medicare and Medicaid Innovation: Report to Congress* (CMS, Dec. 2014); and Centers for Medicare and Medicaid Services, *Accountable Health Communities Model* (CMS, n.d.).

[4] Centers for Medicare and Medicaid Services, *Accountable Health Communities Model* (CMS, n.d.).

[5] E. F. Taylor, T. Lake, J. Nysenbaum et al., *Coordinating Care in the Medical Neighborhood: Critical Components and Available Mechanisms,* White Paper 11-0064 (Agency for Healthcare Research and Quality, June 2011).

ABOUT THE AUTHORS

Ruben Amarasingham, M.D., M.B.A., is founder, president, and CEO of Pieces Technologies Inc., which builds and deploys clinical tools for health systems and community-based organizations. He served as president and CEO for the Parkland Center for Clinical Innovation (PCCI), a nonprofit research and development organization, until January 2017. Dr. Amarasingham is an expert in the development and evaluation of health information technology, the application of informatics in health care, and the use of innovative care models to reduce disparities, improve quality, and lower costs. His research agenda centers on the use of data collected in electronic health records to support health services research, predictive modeling, and health care systems innovation. Dr. Amarasingham received his medical degree from the University of Texas Southwestern Medical School, and received additional training in medical informatics, quality improvement, and operations and health services research as a Robert Wood Johnson Clinical Scholar at Johns Hopkins University.

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Appendix 1. Detailed Description of the Methods

DATA COLLECTION

A three-step mixed methods approach was employed in this study to collect a comprehensive list of innovation programs, to achieve in-depth understanding of these programs, and to provide a comprehensive map of these programs in geography and program characteristics. In step 1, an extensive literature search and a semistructured email survey of key informants (Appendix 2) led to identification of around 300 innovative programs across the country that met inclusion criteria. The programs must target socially vulnerable, high-utilizers, or medically complex populations, AND fulfill at least one of the following:

- program incorporates financial arrangement of two or more sectors (defined as distinct areas of health services that share similar funding streams and client delivery goals); a few of the health sectors we define include clinical services, behavioral services, and social, or human, services, OR
- program incorporates care coordination between the clinical sector and another sector, OR
- program involves risk-sharing among organizations (with involvement beyond the medical sector).

These programs often demonstrated novel care coordination mechanisms or community and partnership engagement that also serve to benefit our research. In step 2, a stratified purposive sample of 21 programs was chosen to conduct in-depth interviews. This sampling allowed some diversity in the sample and thus a broad range of programs was explored. Of the 16 programs invited to participate in the study, 14 agreed to be interviewed (Appendix 3). Semistructured, in-depth interviews based on a topic guide were used to allow for a detailed, flexible, and responsive exploration of programs' experiences. Interviews were recorded and transcribed verbatim with participant permission and lasted around 60 minutes. The topic guide included the following areas: organization and governance, including inception and timeline; measuring shared savings and/or description of the financial model; metrics, including assessment and accuracy; challenges, both past and future; technology, legal, privacy, and regulatory concerns; and other questions.

In step 3, based on the findings of the qualitative data, a quantitative survey was sent to all 301 programs identified to create a comprehensive picture of current innovations across the nation. In this survey, we adapted a framework developed by McGinnis and colleagues[a] and modified it using a Delphi method to develop a list of key domains to summarize the commonalities and differences among these diverse programs (Appendix 4).[b] A rubric with four dimensions was created based on the qualitative results, and was then refined and finalized through semistructured, in-depth interviews with domain experts. This finalized rubric was used in the survey questionnaire. Because of the difficulty of obtaining responses for a web survey, we scheduled structured phone interviews for a vast majority of the programs.

DATA ANALYSIS

We used a variation of content analysis to develop a coding scheme for performing a qualitative description of the themes discussed by interviewees. The final codebook included both inductive and deductive codes and was finalized after reaching consensus among the research team. We coded and analyzed the interview transcripts in NVivo software (NVivo qualitative data analysis software; QSR International Pty Ltd. Version 10, 2014), with analysis focusing on both overarching themes and specific areas for program innovations. The analysis focused on five key themes: payment reform arrangement, inclusion of community-based organizations, relationships among partner organizations, future plans and considerations, and challenges, but also allowed other themes to emerge from the data. Quantitative analysis of survey results was conducted using R 3.2.0.

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[a] T. McGinnis, M. Crawford, and S. A. Somers, *A State Policy Framework for Integrating Health and Social Services* (The Commonwealth Fund, July 2014).

[b] C. Okoli and S. D. Pawlowski, "The Delphi Method as a Research Tool: An Example, Design Considerations and Applications," *Information & Management,* Dec. 2004 42(1):15–29.

Appendix 2. Interview Questions and Key Informants

Questions asked:

- Are there any community-based organizations — defined as those that provide services to vulnerable populations, such as homeless shelters, food aid organizations, and community health centers — that are financially aligned, in any capacity, with a health care provider that you know of?
- Is there a group, that you are aware of, that is trying to incorporate community-based organizations into a health care financial arrangement? Or any project similar to ours?
- Is there anyone you know of that may have further insights into these questions?

CONTACT NAME	ORGANIZATION/HOSPITAL	TITLE (IF APPLICABLE/KNOWN)
Alan Baronoskie	PwC	
David Bates, M.D., M.Sc., Ph.D.	Brigham and Women's Hospital	Senior Vice President for Quality and Safety and Chief Quality Officer
Christina J. Bennett, J.D.	College of Public Health, University of Oklahoma	Assistant Professor
Sue Birch	Colorado Department of Health Care Policy and Financing	Executive Director
Hunt Blair	HHS Office of the National Coordinator for IT	
George Bo-Linn, M.D.	Alvarez & Marcel	
Amy Boutwell, M.D.	Collaborative Healthcare Strategies	Founder
Elizabeth Bradley	Yale University	
Rhonda Busek	Oregon Health Authority	Director of Medical Assistance Programs
Stephen Cha	CMS Center for Medicare and Medicaid Innovation	
Sandy Chang, M.D.	Yale University	
Glenn Cohen, J.D.	Harvard Law School	Assistant Professor of Law
Patrick Conway, M.D.	CMS Center for Medicare and Medicaid Innovation	
Anne De Biasi	Trust for America's Health	Director of Policy Development
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Martin Entwistle	Palo Alto Medical Foundation	
Gabriel Escobar, M.D.	Kaiser	
Lynn Etheredge	Independent Consultant	
Alexandra Gorman	North Texas Accountable Healthcare Partnership	
Laura Gottlieb	University of California, San Francisco	Assistant Professor
Robert Hanna	Nassau County Savings Initiative	Steering Committee Head
Brad Hirsch, M.D.	US Oncology	
Justin Hunt, M.D.	University of Arkansas	
Frederick Isasi	National Governors Association	
Laura Landy	Rippel Foundation	President, CEO
Brian Lee	Centers for Disease Control and Prevention	
Georgia Maheras	Vermont Health Care Innovation Project	Project Director
Rishi Manchanda, M.D., M.P.H.	University of California, San Francisco	Physician & Founder, HealthBegins
Deven McGraw	Manatt, Phelps, & Phillips, LLP	Partner in Healthcare Practice
Bobby Milstein	Rippel Foundation	Director, ReThink Health
Jennifer Nelson-Seals	Interfaith House, Chicago	Executive Director
Kathleen Nolan	National Association of Medcaid Directors	Director of State Policy & Programs
Ross Owen	Hennepin Health, MN	Deputy Director
Neil Powe, M.D.	University of California, San Francisco	
Rahul Rajkumar	CMS Center for Medicare and Medicaid Innovation	
Darshak Sanghavi	CMS Center for Medicare and Medicaid Innovation	
Jill Scigliano	United Way of Metropolitan Dallas	Chief Impact Officer
Martin J. Sepulveda	IBM Corporation	IBM Fellow and Vice President of Integrated Health Services
Bruce Siegel, M.D.	America's Essential Hospitals	
Prabhjot Singh	Columbia University	
Jeanene Smith	Oregon Office of Health Policy and Research	Director
Ron Stretcher	Criminal Justice (Dallas)	Director
Clare Tanner	Michigan Public Health Institute	Program Director
Paul Tarini	Robert Wood Johnson Foundation	

Appendix 3. List of Programs Interviewed

ORGANIZATION	NAME AND TITLE OF INTERVIEWEE	DATE INTERVIEWED
Camden Coalition of Healthcare Providers, NJ	Jared Susco, COO, & Matt Humowiecki, Legal Counsel	February 9, 2015
Colorado Department of Health Care Policy and Financing	Sue Birch, Executive Director	November 17, 2014
Hennepin Health, MN	Ross Own, Deputy Director	November 13, 2014
Interfaith House, Chicago, IL	Jennifer Nelson-Seals, Executive Director	November 17, 2014
Live Well San Diego, CA	Dale Fleming, Julianne Howell, Wilma Wooten, & Peter Shih	January 30, 2015
Medical Legal Partnerships	Ellen Lawton, Co-Principal Investigator	January 26, 2015
Michigan Public Health Institute	Clare Tanner, Program Director	November 20, 2014
Montefiore Medical Center, NY	Anne Meara, Associate VP, Network Management	March 20, 2015
Nassau County Savings Initiative, NY	Bob Hanna, Steering Committee Director	November 13, 2014
Oregon Health Authority	Rhonda Busek and Team, Director	November 14, 2014
Partnership for a Health Durham, NC	Mel Piper, Partnership Coordinator	January 27, 2015
Pueblo Triple Aim Coalition, CO	Matt Guy, Managing Director	February 2, 2015
Together 4 Health, Chicago, IL	Jill Misra, Interim CEO	March 17, 2015
Vermont Health Care Innovation Project	Georgia Maheras, Project Director	November 20, 2014

Appendix 4. Rubric for Mapping Cross-Sector Community Partnerships

The purpose of this rubric is to map the programs we identified across four different dimensions. We solicited input from several experts to internally validate the rubric, but it should not be used for other organizations or purposes.

The 1-to-5 scale is intended to signal degree of integration and alignment among participating organizations in a program's implementation. The scale is ordinal, not interval, and higher numbers in the scale do not imply or predict better performance or any outcomes measures and are not necessarily preferable to lower numbers.

For this purpose of this rubric we define sectors as distinct areas of health services that share similar funding streams and client delivery goals. A few of the health sectors we define include clinical services, behavioral services, and social, or human, services.

	COORDINATION	FINANCIAL ALIGNMENT	DATA- AND INFORMATION-SHARING	METRIC REPORTING
	Maps the degree to which a program includes various components in the health care and social services delivery systems, such as health care providers, public health agencies, and community-based organizations that provide social services such as food assistance and shelter, and the degree to which participating organizations coordinate care delivery to enrollees (examples of care coordination include referral tracking, transition coordination, and needs assessment)	*Maps the degree to which the financial payment incentives of the participating organizations are aligned to achieve the Institute for Healthcare Improvement's Triple Aim (i.e., improving patients' experience, improving population health, and reducing costs of care)*	*Maps the degree to which data- and information-sharing occurs among participating organizations*	*Maps the degree to which metrics are monitored and reported across participating organizations and their alignment toward the Triple Aim*
1	Program includes participating organizations in two sectors (including but not limited to clinical, behavioral, and social) but there is no integration and communication between participating organizations beyond simple referrals	No financial relationship among participating organizations beyond fee for services	No data or information-sharing between participating organizations	No metrics reported
2	Program includes participating organizations in two sectors, and are engaged in some early care coordination, which may include the use of case managers	The financial relationship among participating organizations is based on fee-for-services, but has an extra portion of payment based on the receiving organizations meeting some pre-defined quality measures (e.g., one-sided shared-savings model)	Data- and information-sharing within a single sector across multiple providers	Metric reporting based on utilization within a single sector
3	Program includes participating organizations in three or more sectors, which are engaged in some care coordination, and may include the use of case managers	The financial relationship between at least two participating organizations is based on some alternative payment arrangements, such as patient-centered medical homes or social impact bonds. (A social impact bond, also known as pay-for-success financing, pay-for-success bond, or a social-benefit bond is a contract with the public sector in which a commitment is made to pay for improved social outcomes that result in public sector savings.)	Sharing of data (such as monthly or quarterly discharge data) on a regular basis from multiple sectors	Regular report of metrics incorporating both utilization and quality measures within a single sector
4	Integrated health delivery through care coordination between participating organizations in three or more sectors that includes the use of referral tracking to coordinate and monitor patients as they move among organizations	The financial relationship among all participating organizations is some kind of population-based, risk-sharing payment system, such as partial capitation, or per-member per-month bundles	Data- and information-sharing with real-time updates that includes data from multiple sectors	Regular reporting of metrics incorporating both utilization and quality measures across multiple sectors
5	Integrated health delivery with participating organizations in three or more sectors and an increasing focus on long-term goals and creating a culture of health	Total financial alignment: all participating organizations under central budgetary control (although not single-payer)	Integrated data- and information-sharing across all providers with analytics and real-time data from multiple sectors	Regular reporting of metrics incorporating utilization and quality measures that includes a focus on prevention and wellness across multiple sectors

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