Transitioning Community Hospitals to Value-Based Care: Lessons From Massachusetts

CHRISTOPHER J. LOUIS, PHD, MHA; SARA S. BACHMAN, PHD, MS; DYLAN H. ROBY, PHD;
LAUREN MELBY, MBA, MPP; AND DAVID L. ROSENBLOOM, PHD

ABSTRACT

Enabling community hospitals to provide efficient and effective care and maintain competition on par with their academic medical center (AMC) counterparts remain challenges for most states. Advancing accountable care readiness adds to the complexity of these challenges. Community hospitals experience narrower operating margins and more limited access to large populations than their AMC counterparts, making the shift to value-based care difficult. Massachusetts has taken legislative action to ensure a statewide focus on reducing healthcare costs, which includes a nearly $120-million grant program supporting community hospital and system transformation toward a value-based environment. The Massachusetts Health Policy Commission's Community Hospital Acceleration, Revitalization and Transformation (CHART) investment program is the state's largest effort to date aimed at readying community hospitals for value-based care. In doing so, Massachusetts has created the largest state-driven, all-payer (payer-blind) readmission reduction initiative in the country. In this paper, we examine the design and evolution of CHART Phases 1 and 2 and offer insights for other states contemplating innovative approaches to bolstering community hospital participation in value-based care models.

The American Journal of Accountable Care. 2017;5(4):26-30

What are states doing to prepare community hospitals for value-based care models? For more than a decade, many US states have experienced widening of the healthcare price, resource, and performance gaps between academic medical centers (AMCs) and community hospitals. Scholars point to greater service intensity for the treatment of similar patients, graduate medical education costs, and research expenses as the primary drivers of these gaps.[1] Health system consolidation further exacerbates this issue as AMCs gain reimbursement negotiation clout through membership in large health systems.[2] AMCs and affiliated physician groups have benefitted most from these trends, achieving improved strategic positioning among larger population bases and financial prosperity compared with many of their community hospital counterparts. These competitive advantages were recently used as a vehicle to become early adopters of value-based payment (VBP), a strategy used by purchasers to facilitate cost-effective care delivery and improved quality, emphasizing a shift from fee-for-service to outcomes-based payment. Numerous payment and delivery system paradigms have been implemented since the inception of the Affordable Care Act, including bundled payments, accountable care organizations (ACOs), and integrated care systems that link primary care and behavioral health services, among others. This national trend presents an added challenge for community hospitals in maintaining pace with overall market competitiveness and innovation of AMCs. To combat these trends, some states, such as Massachusetts, have sought the help of policy makers in taking legislative action to promote community hospitals' efforts to shift to value-based care and alternative payment models (APMs).

Massachusetts has been nationally recognized for its progressive healthcare reform policies, including the 2006 healthcare reform law, Chapter 58, which established the Massachusetts health insurance exchange and offered many residents free or subsidized insurance. These policies helped the state achieve a 2007 uninsured rate of less than 6% among the nonelderly population, the lowest rate in the country.[3] In addition to increasing insurance coverage, this reform was associated with lower all-cause mortality.[4] Nevertheless, healthcare spending in Massachusetts continued to grow, outpacing the US economy. By 2009, the state had the highest per capita healthcare expenditures ($9278 vs national average of $6815) in the nation.[5] Massachusetts also compared poorly to the United States on Medicare readmissions, and approximately half of its emergency department (ED) visits were potentially avoidable.[6] The combination of increased prices at large systems and a shift toward utilization of AMCs (vs community hospitals) contributed to rising overall costs.[7] As Massachusetts residents increasingly sought inpatient care at branded higher-cost AMCs, community hospital revenue bases and operating margins deteriorated, and these lower-cost hospitals' ability to engage in strategic initiatives (such as investing in health information technology [IT] and employing physicians) suffered.

Based on these disparities in care settings, Massachusetts legislators sought further policy-level action to drive change. In 2012, the legislature passed Chapter 224, the state's landmark cost-containment law, which established a focus on "improving the quality of health care and reducing costs through increased transparency, efficiency and innovation."[8] Chapter 224 sought to promote new health reform strategies to limit healthcare spending growth to potential gross state product, or 3.6% annually, and move away from fee-for-service payments. Strategies within Chapter 224 include: 1) actively monitoring cost growth and markets, 2) the widespread adoption of APMs by public and private payers, 3) a focus on wellness and prevention, and 4) increased price transparency for consumers.[8] One of the new entities established by Chapter 224 to implement these strategies is the Health Policy Commission (HPC). An independent state agency, the HPC is governed by an 11-member Board of Commissioners composed of public and private sector leaders appointed by the governor, attorney general, and state auditor. The HPC's mission is to "advance a more transparent, accountable, and innovative health care system through independent policy leadership and programs" with the goal of "better health and better care at a lower cost across Massachusetts."[9] The HPC fosters a value-based marketplace through independent policy leadership, provider certification programs, and targeted investments.

Chapter 224 authorized the HPC to administer several investment programs, the largest of which is the Community Hospital Acceleration, Revitalization and Transformation (CHART) investment program. CHART is a phased investment program that reinvests nearly $120 million, initially funded by a 1-time assessment on large

Massachusetts health systems and commercial payers, into certain community hospitals to enhance delivery of efficient, effective care and prepare them to achieve success in a value-based environment.[10] In this paper, we examine the structure of the CHART investment program, offer insights from the design of CHART Phases 1 and 2, and provide lessons learned that can be redeployed by other states seeking to transform healthcare delivery among their community hospitals.

The CHART Investment Program

To support community hospitals in advancing value-based care readiness, CHART provides a roadmap to develop capacities and capabilities for innovative approaches to care delivery. The goals of the CHART program, as defined in Chapter 224, are to: 1) improve and enhance the ability of community hospitals to serve populations efficiently and effectively, 2) advance the adoption of health IT, 3) accelerate the ability to electronically exchange information with other providers in the community to ensure continuity of care, 4) support infrastructure investments necessary for the transition to APMs, 5) aid in the development of care practices and other operational standards necessary for certification as an ACO, and 6) improve the affordability and quality of care.[8]

To achieve these goals, the HPC structured the CHART program in multiple phases over several years to allow awardees to transition from short-term care delivery improvement initiatives to longer-term preparation for VBP. CHART Phase 1 ($9.2 million, 28 awardees, February 2014 to September 2014) focused on short-term, high-need initiatives to build capacity. CHART Phase 2 ($60 million, 25 awardees, September 2015 to February 2018), a 2-year program with staggered program start dates, aims to support the transformation of community hospitals in their delivery of efficient and effective care. To be considered eligible to receive CHART funding, hospitals must meet specific criteria established as part of Chapter 224. CHART-eligible acute care hospitals are: 1) nonprofit community hospitals, 2) nonteaching hospitals, and 3) relatively low priced.[7,11] At the time of CHART Phase 1 procurement, 31 of Massachusetts' 80 hospitals (3 have closed since 2013) satisfied the eligibility criteria.

CHART Phase 1: Foundational Investments for Transformation. Planning for CHART Phase 1 began in mid-2013, with the request for proposals (RFP) released in October 2013. This initial phase of foundational investments was targeted toward providing support for short-term infrastructure expenditures to facilitate hospital and system transformation. Phase 1 projects were grouped into 3 pathways: 1) rapid-cycle pilots aimed at improving quality or reducing costs, 2) capability and capacity building, and 3) planning for operational improvement geared toward hospital and system transformation.[12] As part of the application process, each hospital identified specific process, quality, and financial metrics that would be evaluated at regular intervals throughout Phase

1. Metrics varied based on the context of each project. HPC provided technical assistance (TA) in the form of implementation consultation and clinical expertise to each hospital awardee.

eAppendix Table 1 (eAppendices available at ajmc.com) provides a summary of the CHART Phase 1 hospital awards by funding amount. Approximately $9.2 million was awarded to 28 acute care community hospitals during Phase 1.[13] Award amounts ranged from a minimum of $65,000 (Beverly Hospital) to a maximum of $500,000 (Holyoke Medical Center). Hospital projects focused on a range of clinical and operational areas, including hospital utilization and care coordination (n = 18 projects; eg, inpatient and outpatient diabetes care coordination among patients with high utilization), technology enhancements (n = 16; eg, planning for health information exchange connectivity), behavioral health (n = 8; eg, improvements in behavioral health case management in the ED), and patient safety and education or process improvement (n = 7; eg, implementation of a high-risk intervention team that provides patient education, medication management, and discharge planning to patients with complex chronic illnesses). Many hospitals implemented more than 1 project as part of their CHART Phase 1 award.

CHART Phase 2: Driving System Transformation. Lessons from CHART Phase 1 informed the design and implementation of CHART Phase 2, which sought to build upon the Phase 1 foundation by transforming the healthcare delivery system and calling for a paradigm shift in the community hospitals' approach to care delivery. The HPC identified 3 outcomes-oriented aims for CHART Phase 2: 1) maximize appropriate hospital use, 2) enhance behavioral health care, and 3) improve processes to reduce waste and improve quality and safety.[14] The HPC released the CHART Phase 2 RFP in June 2014 and received 30 (out of a possible 31) prospectuses. Proposals were submitted in September 2014, awards were given the following month, and a robust yearlong iterative and collaborative implementation planning period began. As a result of this process, 25 projects (20 individual hospital projects and 5 multihospital projects) were ultimately approved and funded. CHART Phase 2 initiatives launched on a rolling basis beginning in September 2015, and by February 2016, all 25 awardees had initiated their 24-month Phase 2 projects.

eAppendix Table 2 provides a summary of each CHART Phase 2 award by hospital, project, primary project aim statement, and funding amount. In all, nearly $60 million was deployed to fund 25 programs, with funding amounts ranging from $900,000 (Baystate Franklin Medical Center, Baystate Noble Hospital, and Baystate Wing Hospital Joint Award) to $8 million (Southcoast Hospitals Group Joint Award).[15] Hospital projects ranged in focus, including high-risk care teams using integrated technology, services for behavioral health patients presenting in the ED, and the integration of services across multiple outpatient care settings. CHART Phase 2 program aims primarily focused on reducing 30-day readmission rates (n = 16) and reducing ED utilization (n = 11).[16]

CHART Phase 2 incorporated more emphasis on reporting and TA compared with Phase 1. In Phase 2, approximately 30 metrics were collected from each hospital awardee each month. Metrics reflect utilization (eg, readmission rates) and operational efficiency (eg, ED length of stay for behavioral health patients). TA was enhanced in Phase 2 to include at least monthly conversations between HPC program officers and hospital staff. These conversations were used as an ongoing vehicle for providing project updates (eg, staffing changes), identifying project risks, and helping awardees form strategies to overcome barriers. At the beginning of Phase 2, TA was focused on start-up implementation issues (eg, data collection and design, reporting, project organization, etc), but over time became more focused on the dissemination of best practices and learning across sites. Quarterly regional and biannual statewide meetings of hospital awardees led by HPC consultants and staff were held to share best practices and help address similar issues occurring at multiple hospitals. Clinically-trained expert consultants and HPC staff regularly visited each hospital site to discuss progress toward CHART Phase 2 aims and facilitate goal achievement.

Learning From the Design of CHART Phases 1 and 2

The HPC's CHART investment program is designed to transform care delivery at Massachusetts community hospitals (and in their surrounding communities), thereby preparing these organizations for VBP. In doing so, Massachusetts has created the largest state-driven combined all-payer (payer-blind) inpatient readmission and ED utilization reduction program in the country. Further, CHART is implemented "at-scale." Care is delivered to entire target populations, rather than subsets of those populations, through pilot programs. Given the CHART program's design and scale, thriving partnerships between state health policy makers, the HPC, hospital staff, and community partners are critical to program success.

Although the CHART investment program is not a one-size-fits-all program, other states can learn from Massachusetts and deploy elements of CHART. Drawing on lessons from CHART Phases 1 and 2, we offer recommendations for states considering how to transform care delivery in their community hospitals to promote VBP:

Use legislation to drive change. Massachusetts policy makers committed to changing the trajectory of healthcare spending through Chapter 224. Through action-oriented statutory language, Massachusetts instituted an annual maximum healthcare spending target, created the HPC to monitor progress against this benchmark and develop associated policies and programs, and levied an assessment on certain providers and insurers to support CHART.

Ensure appropriate funding levels. Funding levels for specific community hospital grants must be substantial enough to enable innovation. CHART Phase 1 increased capacity and capability through smaller investments; Phase 2 built on that momentum with larger, more broad-ranging transformational investments in specific hospital projects.

Engage in a collaborative implementation planning process. CHART Phase 2 awardees engaged with the HPC in a robust, iterative, yearlong implementation planning process to develop innovative and transformative projects. Thus, projects were more closely tailored to the local hospital context and specific population needs. This enhanced project quality and adaptability and aligned hospital and state goals.

Develop an ongoing measurement plan that informs program design, implementation, and adaptation. Funders and awardees should collaborate to develop a measurement plan that captures only measures that are salient to understanding program effectiveness and areas for process improvement. In CHART Phase 2, locally-derived data were used to drive program design. Throughout implementation, hospital awardees and HPC staff used key utilization, process, and outcomes data to drive real-time improvement and program adaptation.

Deploy ongoing flexible technical assistance to awardees throughout planning and implementation stages. In CHART Phase 2, TA occurred through regular meetings with HPC program officers, regional and statewide learning collaboratives, and special sessions with expert consultants. The HPC retained flexibility in the provision of TA, adapting based on cohort-wide and individual awardee needs and performance.

Involve clinical and nonclinical community partners from the beginning. Through their CHART programs, several hospitals have engaged in coalition building and created multistakeholder collaborative meetings that include community partners in regular hospital team meetings. Engaging key community partners (eg, police departments, skilled nursing facilities, detox centers) in implementation planning may improve the ability of awardees to more rapidly implement and integrate their projects.

Engage an external evaluator to assess program efficacy. The HPC has engaged an independent evaluator to perform a full-scale, mixed-methods evaluation of CHART Phase 2. Examining the perspectives of key stakeholders as well as broader trends in hospital and state data promotes a comprehensive view about whether specific hospital investments advance community hospitals' participation in VBP.

DISCUSSION

States seeking to transform low-cost community hospitals toward value-based care must find ways to incentivize participation in activities that reflect these new delivery models. One of the most notable efforts to transform care in states is the State Innovation Models initiative funded by the Center for Medicare and Medicaid Innovation. However, these federally funded projects are not specifically focused

on community hospitals and are interested primarily in Medicare and Medicaid patients.[17] Other state-driven programs focus on specific issues, such as reducing avoidable healthcare utilization (eg, readmissions). For example, the Texas Medical Center Grant Program in Collaborative Health Policy Research awards $750,000 annually to hospital-based projects aiming to benefit the health of Texans through improving care for at-risk populations and reducing hospital readmissions.[18] New York implemented the Value-Based Payment Quality Incentive Program in conjunction with its Delivery System Reform Incentive Payment (DSRIP) program to "transition financially distressed facilities [community hospitals] to VBP, improve their quality of care and as a result, achieve financial sustainability."[19] The design of the New York DSRIP program also includes some components similar to those of CHART Phases 1 and 2, such as project-based initiatives and community partner engagement.[20] However, no state-based investment program using non-federal funds has used such a robust and collaborative design as CHART. Thus, the innovative roadmap created by Massachusetts should be considered by policy makers when determining how best to design the specific path forward given their own state's context.

Although CHART targets community-based populations, it is also aligned with publicly sponsored reforms, such as Medicaid Section 1115 waivers. Massachusetts' new 1115 waiver, effective July 2017, authorizes $52.4 billion to be spent over 5 years and includes $1.8 billion in DSRIP investments to support providers in transitioning to ACOs and enhancing behavioral health care and long-term services and support.[21] The waiver also enables Massachusetts to implement its MassHealth (Medicaid) ACO program. In order to ensure programs are complementary to each other, the HPC actively works with other state agencies to be supportive of, but not duplicative of, these initiatives.

A broader question that looms for federal and state health policy makers is whether APMs and value-based care delivery models can be sustained at community hospitals in the long term. With challenges like narrower financial margins, reliance on public payers, fewer employed physicians, and older facilities compared with their AMC counterparts, community hospitals face substantial barriers to shifting to and sustaining APMs and accountable care models. These are relevant issues ripe for future research and inquiry. Nonetheless, Massachusetts seems to have acknowledged these challenges and continues to move forward despite the fact that a broader state and federal payment system shift to value-based care has not occurred as quickly as initially anticipated. Moreover, with federal health policy in flux, state-based efforts to innovate within their community hospital systems and transform care delivery for their most vulnerable and highest-need patients may be more important than ever.

REFERENCES

1. Newhouse JP. Accounting for teaching hospitals' higher costs and what to do about them. *Health Aff (Millwood)*. 2003;22(6):126-129. doi: 10.1377/hlthaff.22.6.126.

2. Cutler DM, Scott Morton F. Hospitals, market share, and consolidation. *JAMA*. 2013;310(18):1964-1970. doi: 10.1001/jama.2013.281675.

3. Massachusetts health reform: six years later. Kaiser Family Foundation website. kaiserfamilyfoundation.files.wordpress.com/2013/01/8311. pdf. Published May 2012. Accessed March 13, 2017.

4. Sommers BD, Long SK, Baicker K. Changes in mortality after Massachusetts health care reform: a quasi-experimental study. *Ann Intern Med*. 2014;160(9):585-593. doi: 10.7326/M13-2275.

5. National health expenditure data. CMS website. cms.gov/ NationalHealthExpendData. Updated May 5, 2014. Accessed March 13, 2017.

6. Massachusetts Division of Health Care Finance & Policy. Preventable/avoidable emergency department use in Massachusetts: fiscal years 2004 to 2008. State Library of Massachusetts website. archives.lib.state.ma.us/bitstream/handle/2452/50108/ocn663904300. pdf?sequence=5. Published July 2010. Accessed March 13, 2017.

7. Wallack SS, Thomas CP, Flieger SP, Altman SH. Massachusetts health care cost trends part 1: the Massachusetts health care system in context: costs, structure, and methods used by private insurers to pay providers. State Library of Massachusetts website. archives.lib. state.ma.us/bitstream/handle/2452/113728/ocn535576625.pdf?sequence=1. Published February 2010. Accessed March 17, 2017.

8. Mass Gen Laws ch 224, §38C.

9. Health Policy Commission. Massachusetts Executive Office for Administration and Finance website. mass.gov/anf/budget-taxesand-procurement/oversight-agencies/health-policy-commission. Accessed February 12, 2017.

10. Massachusetts Health Policy Commission. Community Hospital Acceleration, Revitalization, and Transformation (CHART) Phase 1 — hospital factbook. Massachusetts Executive Office for Administration and Finance website. mass.gov/anf/budgettaxes-and-procurement/oversight-agencies/health-policycommission/investment-programs/chart/chart-phase-1-factbook. pdf. Published June 2015. Accessed October 6, 2016.

11. Mass CMR ch 958, §5.

12. Massachusetts Health Policy Commission. The CHART Investment Program overview. Massachusetts Executive Office for Administration and Finance website. mass.gov/anf/budget-taxes-and-procurement/ oversight-agencies/health-policy-commission/investment-programs/ chart/. Updated 2017. Accessed October 7, 2016.

13. Massachusetts Health Policy Commission. Community Hospital Acceleration, Revitalization, & Transformation Investment Program – phase 1 investment: foundational activities to prime system transformation. Massachusetts Executive Office for Administration and Finance website. mass.gov/anf/docs/hpc/20131021-chart-phase-1rfp.pdf. Published October 23, 2013. Accessed February 12, 2017.

14. Massachusetts Health Policy Commission. CHART Phase 2: driving system transformation. Massachusetts Executive Office for Administration and Finance website. mass.gov/anf/budget-taxesand-procurement/oversight-agencies/health-policy-commission/investment-programs/chart/phase-2/chart-phase-2-rfp-v3-1.pdf. Published June 17, 2014. Updated August 6, 2014. Accessed February 12, 2017.

15. Massachusetts Health Policy Commission. CHART Phase 2 awardees. Massachusetts Executive Office for Administration and Finance website. mass.gov/anf/budget-taxes-and-procurement/oversight-agencies/health-policy-commission/investment-programs/chart/ phase-2/chart-phase-2-award-list.pdf. Accessed October 8, 2016.

16. Massachusetts Health Policy Commission. CHART Phase 2 implementation plans. Massachusetts Executive Office for Administration and Finance website. mass.gov/anf/budget-taxesand-procurement/oversight-agencies/health-policy-commission/ investment-programs/chart/chart-phase-2-implementation-plans. html. Updated May 9, 2017. Accessed November 6, 2017.

17. State Innovation Models initiative: general information. CMS website. innovation.cms.gov/initiatives/state-innovations/. Updated September 14, 2017. Accessed March 13, 2017.

18. Texas Medical Center Grant Program in Collaborative Health Policy Research. TMC Health Policy website. http://www.tmc.edu/ health-policy/programs/grant-program. Accessed December 12, 2016.

19. Value-Based Payment Quality Improvement Program (VBP QIP): frequently asked questions. New York Department of Health website. health. ny.gov/health_care/medicaid/redesign/dsrip/vbp_initiatives/docs/vbp_qip_ faqs.pdf. Published July 13, 2016. Accessed December 12, 2016.

20. Roby D, Louis CJ, Chau N, et al. Supporting transformation through delivery system reform incentive payment programs: lessons from New York state. *J Health Polit Policy Law*. In press.

21. MassHealth 1115 waiver approval - factsheet. Massachusetts Executive Office of Health and Human Services website. mass. gov/eohhs/docs/eohhs/healthcare-reform/masshealth-innovations/ ma-1115-waiver-factsheet.pdf. Published November 4, 2016. Accessed April 6, 2017.

eAppendix Table 1. CHART Phase 1 Hospital Awards by Funding Amount[a]

Hospital Name	Project Description	Funding Amount
Holyoke Medical Center	Supports the implementation of an electronic health record in the ED.	$500,000
Milford Regional Medical Center	Supports the piloting of transmission of discharge summaries to select community providers using Mass HIway, integration of process improvements to existing care transitions, reduction of avoidable re-hospitalizations programs.	$499,810
Baystate Mary Lane Hospital	Supports the expansion of telemedicine capacities to select inpatient and outpatient specialties, connects local providers to HIEs, and supports evaluation of post-acute services and capabilities in the region.	$499,600
Lowell General Hospital	Supports an operational pilot of HIE between the hospital and 1 primary care practice; implementation of HIE connections for 24 practices.	$497,900
Harrington Memorial Hospital	Supports local, non-hospital providers in joining the Mass HIway, redesigns the hospital's behavioral health information system, and develops a plan to integrate services.	$491,600
Athol Memorial Hospital	Supports piloting improvements to a school-based health center, improvements in behavioral health case management in the ED, facilitates EHR enhancement, and conducts a telepsychiatry feasibility study.	$484,128
Baystate Franklin Medical Center	Supports the expansion of telemedicine capacities to select inpatient and outpatient specialties; connects local providers to HIEs.	$476,400
Signature Healthcare Brockton Hospital	Supports an evaluation of the use of an evidence-based metric for a patient condition, implementation of a provider intelligence tool for community-based population health, and system transformation planning.	$432,237

HealthAlliance Hospital	Supports the enhancement of a patient navigation program to integrate comprehensive behavioral health services across settings and build capacity for HIE.	$410,000
Southcoast-Tobey Hospital	Supports a pilot for inpatient and outpatient diabetes care coordination among high-utilizers.	$400,100
Southcoast-Charlton Memorial Hospital	Supports the identification and management of high-risk patients; improves the use of clinical and claims data to enhance population health management.	$397,862
North Adams Regional Hospital	Supports co-location of behavioral health services at primary care practices in the local region.	$395,311
Melrose-Wakefield Hospital	Supports a pilot of revised care plans for patients in the ED with back pain to promote alternatives to opioid use, development of training criteria, and EHR enhancements.	$387,302
Southcoast-St. Luke's Hospital	Supports the reduction of behavioral health ED visits by creating asset mapping and linkages with community providers, develop protocols and evidence-based medication therapies, and support planning for a medication management clinic for behavioral health patients.	$385,395
Lawrence Memorial Hospital	Supports a pilot of revised care plans for patients in the ED with back pain to promote alternatives to opioid use, development of training criteria, and EHR enhancements.	$362,058
UMMHC-Wing Memorial hospital	Supports the achievement of Meaningful Use Stage 1 compliance.	$357,000
Noble Hospital	Supports the development of centralized scheduling hub to coordinate appointments across multiple hospital units; support planning for HIE connectivity.	$344,665
Anna Jaques Hospital	Supports training of managers and clinical leaders in change management; implements a tool used to facilitate communication with post-acute providers; and implements a tool used to support enhanced monitoring of care.	$333,500
Heywood Hospital	Supports the expansion of behavioral health navigation, evaluate the feasibility of a school-based health center,	$316,384

	connect a local medical group to the Mass HIway, and strategic planning for behavioral health services.	
Beth Israel Deaconess-Needham Hospital	Supports the identification of high-risk patients covered under risk contracts, expanded case management services and automated system for tracking adverse events.	$300,000
Addison Gilbert Hospital	Supports implementation of a High Risk Intervention Team that provides patient education, medication management, and discharge planning to patients with certain complex chronic illnesses.	$291,581
Winchester Hospital	Supports care management services and enhanced transitions to skilled nursing facilities with the goal of reducing re-hospitalizations.	$286,500
Beth Israel Deaconess-Milton Hospital	Increases access to language services for Vietnamese-speaking patients (including the use of health information technology, patient navigation, and signage and communication materials).	$261,200
Jordan Hospital	Supports the expansion of a case management program for medically-complex and chronically ill patients (focusing on dual-eligibles and end-stage renal disease).	$245,818
Mercy Medical Center	Supports the development of organizational capabilities, capacities, and culture change to sustain continuous quality and safety improvements.	$223,134
Emerson Hospital	Supports HIE across care settings.	$202,575
Lawrence General Hospital	Supports a needs assessment of care management software targeted toward clinical information flow between the hospital and community providers, and coordination of activities related to care transitions.	$100,000
Beverly Hospital	Supports the strategic and operational planning to reduce hospital utilization for cardiovascular issues and readmissions for certain patients.	$65,000

CHART indicates Community Hospital Acceleration, Revitalization and Transformation; ED, emergency department; EHR, electronic health record; HIE, health information exchange.

eAppendix Table 2. CHART Phase 2 Hospital Awards by Funding Amount

Hospital Name	Project Description[a]	Primary Project Aim Statement[b]	Funding Amount
Southcoast Hospitals Group (Charlton, Tobey, & St. Luke's) Joint Award[c]	Support a variety of population health management initiatives among several chronic and acute disease management activities, including BH.	1. Reduce 30-day readmissions by 20% for patients with ≥4 inpatient discharges in the past 12 months, by the end of the 24-month Measurement Period. 2. Reduce 30-day ED revisits by 20% for patients with ≥10 ED visits in the past 12 months, by the end of the 24-month Measurement Period.	$8,000,000
Addison Gilbert, Beverly, Winchester, & Lowell Joint Award[c]	Support mobile crisis and urgent care teams, integrate behavioral health services into EDs, and launch a BH public education campaign.	Reduce 30-day returns by 20% for patients with a personal history of recurrent acute care utilization, social complexity (substance use disorder, Medicaid, homeless, or Medicare <65 years), or a 30-day readmission by the end of the 24-month Measurement Period.	$4,800,000
Holyoke Medical Center	Support enhancement of the ED to support BH care and the creation of a care navigation team.	Reduce 30-day ED revisits by 25% for patients with a primary or secondary BH diagnosis. by the end of the 24-month Measurement Period.	$3,900,000
HealthAlliance Hospital	Support care coordination infrastructure to enhance BH care and reduce ED utilization and length of stay.	Reduce 30-day ED revisits by 15% for patients with a primary and/or secondary BH diagnosis by the end of the 24-month Measurement Period.	$3,800,000
Beth Israel Deaconess Hospital-Plymouth	Support the improvement of access to services for complex patient populations through (1) formation of a high-risk care team, (2) co-locating BH practitioners in ED and PCP offices,	1. Reduce returns by 10% for dual eligible patients by the end of the 24-month Measurement Period.	$3,700,000

	and (3) outreach teams for community education and outpatient substance use treatment.	2. Reduce ED revisits by 20% for patients with primary BH diagnoses by the end of the 24-month Measurement Period.	
Harrington Memorial Hospital	Support cross-continuum BH services through PCP-based screening and intervention, expansion of partial hospitalization, and creation of a new inpatient psychiatry unit.	Reduce 30-day ED revisits by 15% for adult patients with a primary or secondary BH diagnosis by the end of the 24-month Measurement Period.	$3,500,000
Signature Healthcare Brockton Hospital	Support a high-risk care team that integrates technologies to manage socially and medically complex patients.	1. Reduce 30-day readmissions by 20% for all admitted patients (excluding patients served by DSTI) by the end of the 24-month Measurement Period. 2. Reduce the length of stay by 15% in the ED's 3 PM -11 PM Express Care shift by the end of the 24-month Measurement Period.	$3,500,000
Berkshire Medical Center	Develop a "patient-centered medical neighborhood" and enhance BH care for the region.	Reduce 30-day returns by 20% for all inpatient and observation discharges of Northern Berkshire County residents by the end of the 24-month Measurement Period.	$3,000,000
Heywood Hospital & Athol Hospital Joint Award[c]	Support planning for increasing inpatient and outpatient BH services at a newly acquired property; support multidisciplinary BH initiatives, including ED and physician office care teams, school-based coordination and mental health counseling, and a shared directory of community and clinical resources.	Reduce 30-day ED revisits by 10% for patients with any BH diagnosis by the end of the 24-month Measurement Period.	$2,900,000
Beverly Hospital	Support a high-risk care team that integrates technologies to manage socially and medically complex patients.	Reduce 30-day returns by 20% for patients with a personal history of recurrent acute care utilization, social complexity (substance use	$2,500,000

		disorder, Medicaid, homeless, or Medicare <65 years), or a 30-day readmission by the end of the 24-month Measurement Period.	
Hallmark Health (Melrose-Wakefield & Lawrence) Joint Award[c]	Support the development and implementation of a "high-utilizer" multidisciplinary outreach team with a BH focus, particularly around pain management and opioid prevention, in community-based sites.	Reduce ED utilization by 20% for all ED HU patients by the end of the 24-month Measurement Period.	$2,500,000
Beth Israel Deaconess Hospital-Milton	Support the delivery of integrated emergency BH services through telepsychiatry, early assessment of BH patients, and advanced predictive analytics.	Reduce excess ED boarding by 40% for long-stay BH patients by the end of the 24-month Measurement Period.	$2,000,000
Baystate Franklin Medical Center	Support a high-risk care team that integrates technologies to manage socially and medically complex patients; award also funds cross-setting coordination of screening, intervention, and support for patients with complex BH conditions.	Reduce 30-day ED revisits by 25% for patients with ≥5 BH ED visits (primary or secondary) or ≥4 inpatient stays in the last year by the end of the 24-month Measurement Period.	$1,800,000
Lawrence General Hospital	Support a high-risk care team that integrates technologies to manage socially and medically complex patients.	Reduce 30-day readmissions by 20% for patients with social and/or medical complexity by the end of the 24-month Measurement Period.	$1,482,654
Mercy Medical Center	Support a high-risk care team that integrates technologies to manage socially and medically complex patients.	Reduce 30-day ED revisits by 20% for patients with a primary BH diagnosis by the end of the 24-month Measurement Period.	$1,300,000
Milford Regional Medical Center	Support a high-risk care team that integrates technologies to manage socially and medically complex patients.	Reduce 30-day readmissions by 25% for patients with ≥3 inpatient discharges in the last year by the end of the 24-month Measurement Period.	$1,300,000

Addison Gilbert Hospital	Support a high-risk care team that integrates technologies to manage socially and medically complex patients.	Reduce 30-day returns by 20% for patients with a personal history of recurrent acute care utilization, social complexity (substance use disorder, Medicaid, homeless, or Medicare <65 years), or a 30-day readmission by the end of the 24-month Measurement Period.	$1,269,057
Anna Jacques Hospital	Support a high-risk care team that integrates technologies to manage socially and medically complex patients.	Reduce 30-day readmissions by 20% for patients with high utilization of the hospital and ED by the end of the 24-month Measurement Period.	$1,200,000
Emerson Hospital	Support a high-risk care team that integrates technologies to manage socially and medically complex patients.	Reduce 30-day returns by 20% for all medical/surgical/BH patients with a high risk of readmission by the end of the 24-month Measurement Period.	$1,200,000
Marlborough Hospital	Support a high-risk care team that integrates technologies to manage socially and medically complex patients.	Reduce 30-day readmissions by 15% for patients with ≥ 4 discharges in the prior 12 months or patients with ≥ 10 ED visits and/or ≥ 5 BH ED visits in the prior 12 months by the end of the 24-month Measurement Period.	$1,200,000
Baystate Noble Hospital	Support a high-risk care team that integrates technologies to manage socially and medically complex patients.	Reduce 30-day readmissions by 25% for patients discharged to SNF and HU of the ED and/or hospital by the end of the 24-month Measurement Period.	$1,200,000
Baystate Wing Hospital	Support a high-risk care team that integrates technologies to manage socially and medically complex patients.	Reduce 30-day readmissions by 20% for patients with life-limiting conditions and/or BH diagnosis by the end of the 24-month Measurement Period.	$1,000,000

Lowell General Hospital	Support a high-risk care team that integrates technologies to manage socially and medically complex patients.	Reduce 30-day readmissions by 20% for patients with ≥4 inpatient discharges in the previous 12 months by the end of the 24-month Measurement Period.	$1,000,000
Winchester Hospital	Support a high-risk care team that integrates technologies to manage socially and medically complex patients.	1. Reduce 30-day readmissions by 20% for patients with high utilization by the end of the 24-month Measurement Period. 2. Reduce 30-day readmissions by 20% for all patients discharged to post-acute care by the end of the 24-month Measurement Period.	$1,000,000
Baystate Franklin, Baystate Mary Lane, & Baystate Wing Joint Award[c]	Support the enhancement of telehealth services across the system to maximize retention of patients in select service lines in community settings.	Reduce lower acuity (Severity 1 & 2) adult tertiary transfers for medically-focused neurosciences, adult medicine, and cardiovascular services by 20%, by the end of the 24-month Measurement Period.	$900,000