



MAKING HEALTH CARE AFFORDABLE GRANT PROGRAM FINAL EVALUATION

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**FOUNDATION
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prepared by
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PHOTOS ON COVER (TOP TO BOTTOM):

- Mercy Medical Center
- Lynn Community Health Center
- Holyoke Health Center
- Community Healthlink, Inc.
- Brookline Community Mental Health Center (photo © David Binder)

PHOTOS IN REPORT:

- Community Healthlink, Inc. (pgs. 4 and 7)
- Lynn Community Health Center (pg. 6)
- Brookline Community Mental Health Center (photo © David Binder) (pg. 13)

EXECUTIVE SUMMARY

Under its *Making Health Care Affordable* grant program, the Blue Cross Blue Shield of Massachusetts Foundation (BCBSMA) awarded 12 grants for innovative health care delivery programs, designed to reduce health care costs and improve quality of care for low-income and vulnerable populations. This report describes the extent to which the grant program met its objectives, provides an analysis of factors associated with more efficient use of health care services and successful program implementation, and offers considerations related to generalizability and program replication. The evaluation is based on a thorough document review, grantee interviews, and an assessment of common performance measures.

Grantees' Initiatives. Four of the grantees (Brookline Community Mental Health Center, Community Healthlink, Holyoke Health Center, and Mercy Hospital/Mercy Health Care for the Homeless Program) developed and implemented intensive outpatient care management programs targeting medically and socially complex patients. Three other grantees (Brockton Neighborhood Health Center, Circle Home Health, and Greater Lawrence Family Health Center) also provided care management services but on a less intensive basis than the first group. Lynn Community Health Center and Cambridge Health Alliance implemented behavioral health integration models. The models of the remaining three grantees were unique: Boston Medical Center expanded its re-engineered discharge (RED) planning protocol to include screening and treatment for depression; Steppingstone, Inc., incorporated a primary care nurse manager into its residential substance use treatment program; and Judge Baker Children's Center implemented an evidence-based pediatric outpatient psychiatric delivery model.

Target Population Served and Services Provided to Enrollees. The total number of enrolled patients across all programs was 2,120. At least 82% of patients were low-income, the Foundation's population of interest. Grantees appropriately provided services at intensity levels consistent with their delivery models and target populations.

More Efficient Utilization of Health Care Services. Grantees tracked and reported overall emergency department (ED) and inpatient (IP) admissions for enrollees for 12 months before and 12 months after their respective dates of enrollment in the interventions. We concluded that in aggregate, the enrollees receiving services from grantee interventions experienced a statistically significant reduction in both ED and inpatient services, suggesting that the enrollees used health care services more efficiently after enrollment in the programs. To estimate cost savings, average costs of an ED visit and IP admission were applied from Massachusetts Medicaid data. The estimated savings across all grantees from more appropriate enrollee use of the health care system was \$2.1 million. Due to data limitations, it is not possible to draw conclusions about the impact of the actual interventions on changes in enrollee utilization patterns and estimated cost savings. However, many grantees did report statistically significant declines in ED and inpatient utilization for their enrollees, suggesting that the programs are promising; a more rigorous research design would yield more conclusive results.

Successful Implementation Factors. We identified themes that were associated with successful program implementation across all programs and by program model type. Overall, characteristics of programs that were well implemented included a talented project manager; strong executive leadership; appropriate staffing; consistency with organization’s mission and vision; commitment to sustainability and integration into existing operations; culture of quality improvement; support and integration of pre-existing staff; physician/clinical champion; formal, protected time for the initiative; strong internal project team cohesion and external partnerships; and project staff stability.

Common Barriers. Grantees experienced five common barriers: challenges associated with caring for a complex patient population; delivery system fragmentation and non-aligned incentives; organizational and staff resistance to change; physical infrastructure constraints; and electronic infrastructure limitations. The all-grantee learning community meetings provided an opportunity for grantees to brainstorm innovative ways to address, and in some instances overcome, some of these shared challenges.

Generalizability. The generalizability of each of the program models was evaluated against the following criteria: the level of disruption to the existing organization; specialized skills or training required to implement the model; and infrastructure requirements. Boston Medical Center, Brookline Community Mental Health Center, Community Healthlink, and Greater Lawrence Family Health Center were rated as “highly generalizable” using these criteria.

Conclusion. *Making Health Care Affordable* was the Foundation’s first grant program that aimed to demonstrate more efficient use of health care services and associated cost savings resulting from innovative health care delivery programs targeting low-income and vulnerable patient populations. While limitations exist in the quantitative data analysis, data on enrollee experience are promising and indicate the models that warrant further study. We also identified grantee characteristics associated with successful program implementation, as well as common barriers, to provide useful information to help community-based organizations inform their strategies or strengthen existing programs. Finally, we assessed the generalizability of grantee programs to better understand approaches that could be readily adapted by other community-based organizations and to inform the Foundation’s and other funders’ future grant-making strategies. The findings are informative and relevant to all stakeholders dedicated to ensuring that the needs of low-income and vulnerable patients are represented in the evolving health reform landscape and in the pursuit of the Triple Aim (improving population health, enhancing patient experience, and reducing costs).

I. INTRODUCTION

The BCBSMA Foundation secured Bailit Health Purchasing to conduct a final evaluation of its three-year *Making Health Care Affordable* (MHCA) grant program. This report describes to what extent the grant program met its objectives, provides an analysis of factors associated with successful program implementation, and offers considerations related to program generalizability.

A. PURPOSE OF THE *MAKING HEALTH CARE AFFORDABLE* GRANT

The Foundation funded the three-year *Making Health Care Affordable* grant program, beginning December 2011, for “initiatives that demonstrate substantive cost containment while maintaining or improving access and quality of care.” The goal of the grant was to support “the development, expansion, testing, and measurement of the impact of affordability strategies among Massachusetts health care organizations in order to ensure the sustainability of gains” made in access and coverage since the passage of Chapter 58 of the Acts of 2006. The Foundation recognized that moderating the growth in health care spending is critical to sustaining these gains.

The Foundation awarded 12 grants to a range of organizations including community health centers, community mental health centers, and tertiary-hospital-based programs. The grantees are listed in Table 1, below.

TABLE 1. 2011–2014 *MAKING HEALTH CARE AFFORDABLE* GRANTEE ORGANIZATIONS

GRANTEE ORGANIZATION	ABBREVIATION	LOCATION	TYPE OF INTERVENTION
Alliance Foundation for Community Health (a division of Cambridge Health Alliance)	CHA	Cambridge	Integrated behavioral health
Boston Medical Center	BMC	Boston	Discharge planning and outpatient depression treatment
Brockton Neighborhood Health Center	Brockton	Brockton	Outpatient care management
Brookline Community Mental Health Center	Brookline	Brookline	Intensive outpatient care management
VNA–Circle Home Health	VNA	Lowell	Outpatient care management
Community Healthlink	CHL	Worcester	Intensive outpatient care management
Greater Lawrence Family Health Center	Greater Lawrence	Lawrence	Outpatient care management
Holyoke Health Center	Holyoke	Holyoke	Intensive outpatient care management
Judge Baker Children’s Center	JBCC	Greater Boston	New behavioral health delivery model
Lynn Community Health Center	Lynn	Lynn	Integrated behavioral health
Mercy Hospital/Mercy Health Care for the Homeless Program	Mercy	Springfield	Intensive outpatient care management
Steppingstone	Steppingstone	Fall River	Care management in residential substance abuse treatment program

Four of the grantees (Brookline, CHL, Holyoke, and Mercy) developed and implemented intensive outpatient care management programs targeting medically and socially complex patients. Three other grantees (Brockton, VNA, and Greater Lawrence) also provided care management services but on a less intensive basis than the first group. Lynn and CHA also adopted models that included a care management component, but the principal intervention for each of these grantees was the integration of behavioral health services into the primary care setting. Of the remaining three grantees, Judge Baker Children's Center received funding to expand the adoption of an innovative evidence-based model for delivering outpatient psychiatric counseling to children; BMC received funding to expand its re-engineered discharge (RED) planning protocol to include screening and outpatient treatment for depression; and Steppingstone received funding to bring a nurse care manager into its residential substance use treatment program to provide primary care services within the behavioral health setting. See Appendix A for a summary of each grantee's program and how the Foundation's dollars were used, organized by type of intervention.



B. EVALUATION FRAMEWORK AND METHODOLOGY FOR DATA COLLECTION

The Foundation, in partnership with Bailit, established the following objectives for the evaluation of the MHCA grant program:

- **Objective 1:** Assess overall performance of the MHCA grant program.
- **Objective 2:** Assess grantee achievement of performance goals.
- **Objective 3:** Identify grantee characteristics associated with success factors and barriers.
- **Objective 4:** Answer specific policy questions:
 - a. Are the grantees serving the Foundation's target population?
 - b. Are the grantees providing expected services to enrollees?
 - c. Are the programs resulting in more efficient use of health care services?
 - d. Are the programs resulting in reduced health care costs?

In order to meet these objectives, we developed an evaluation framework consisting of three primary components:

- **Grantee interviews:** The interviews were conducted to address the policy and program issues posed in Objectives 1, 2, and 3. During the first few months of the grant, we conducted interviews by telephone with the grantees, which we used to understand their intervention models as initially conceived and to establish the baseline for the final implementation assessments. During the last five months of the grant period, we conducted onsite "implementation assessments," which involved interviews with the senior leaders, project managers, front-line

staff, and, at most sites, patient enrollees. We used an interview tool designed to understand programmatic strengths and weaknesses, facilitators and barriers to effective implementation, team dynamics, alignment with organizational goals, sustainability, and generalizability.

- **Review of grantee work plans:** All grantees were required to submit initial work plans during the first quarter of the grant period and then to update them quarterly. These updates were helpful in meeting Objectives 2 and 3.
- **Common measures:** In order to meet Objectives 1, 2, and 4, we partnered with John Snow, Inc. (JSI), to develop common quantitative measures. The goal was to create a limited data set that could measure experience across a very diverse set of grantees with distinct interventions and differing levels of evaluation capabilities and sophistication. The final list of common measures and their associated evaluation objective(s) are outlined in Appendix B.

II. SUMMARY OF GRANTEE INFORMATION AND SERVICES PROVIDED

A. CATEGORIZING GRANTEE INITIATIVES BY MODEL TYPE

To conduct quantitative analyses to evaluate these programs, we created grantee groups that allowed us to compare similar programs and to aggregate data from similar initiatives. The first group, “intensive care management,” includes four grantees: Brookline, CHL, Holyoke, and Mercy. In general, these grantees implemented intensive (on average more than 12 contacts per enrollee per quarter), individualized services that addressed physical health, behavioral health, and social service needs in outpatient/community settings. One hallmark of these initiatives is the effort made by the care management staff to create personal, trusting relationships with the enrollees in order to motivate them to make healthier lifestyle choices. Brookline employed nurse practitioners and care coordinators, CHL and Mercy used community health workers, and Holyoke used pharmacists and a community health worker. Each also defined its target population differently. Brookline focused on behavioral health patients with significant physical co-morbidities, CHL focused on high emergency department (ED) utilizers, Holyoke focused on poly-pharmacy patients, and Mercy focused on homeless persons. Despite these variations, all provided an intensive and broad range of support services.

The second group, “other care management,” is composed of grantees that provided outpatient care management services but on a less intensive basis than the first group. They are Brockton, VNA, and Greater Lawrence. These three grantees implemented between 1.7 and 5.3 contacts per enrollee per quarter. Brockton and Greater Lawrence focused on serving patients with high ED utilization. VNA focused on patients with complex and uncontrolled chronic conditions, such as diabetes and heart disease.

The third group created for the purpose of this analysis is “integrated behavioral health.” This cohort includes two grantees: Lynn, which implemented a co-location model for adults with

physical and behavioral health co-morbidities, and CHA, which piloted an integrated model within one pediatric practice focusing on high-risk children. While both models included a care management component, they are being grouped separately from the first two groups because the principal intervention focused on behavioral health and primary care integration.

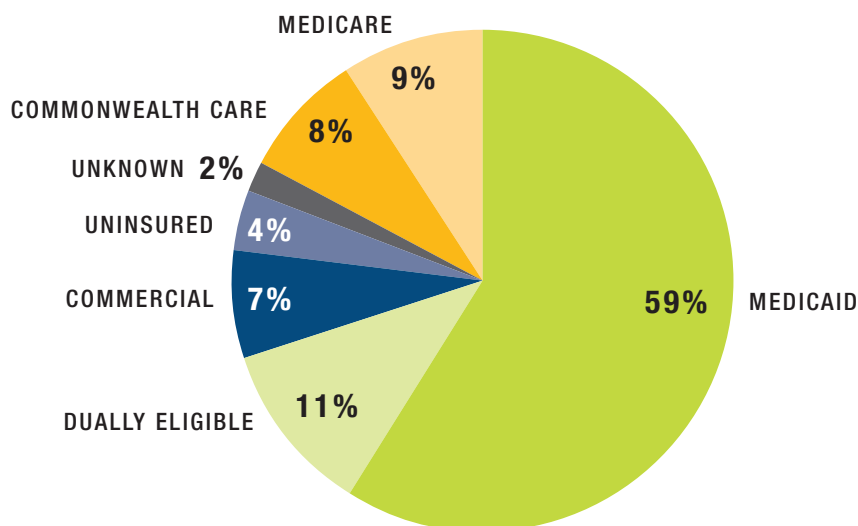


The remaining three grantees were excluded from the health care utilization and cost analysis entirely. Either BMC, JBCC, and Steppingstone were not able to submit utilization data due to unanticipated delays in program implementation or their data collection methodologies did not result in a meaningful pre/post-intervention comparison. However, demographic data from all of these grantees were included in the descriptive analysis provided in this section to the extent that they were available.

B. TARGET POPULATION SERVED

The grantees in aggregate provided services to a total of 2,120 enrollees. In response to the Foundation’s Objective 4 policy question a., “Are the grantees serving the Foundation’s target population?,” in general the individuals enrolled in the programs were low-income. Because it was not possible to obtain income information from the enrollees, insurance status was used as a surrogate measure. Enrollees with the insurance status of Medicaid, Commonwealth Care, Dually Eligible, or Uninsured were considered to be “low-income.” Applying this definition, at least 82% of all enrollees were low-income.

CHART 1: ENROLLEE DISTRIBUTION BY INSURANCE COVERAGE



C. SERVICES PROVIDED TO ENROLLEES

In response to the Foundation’s policy question b., “Are the grantees providing expected services to enrollees?” we found that in general, the grantees did provide the expected services to the enrollees. We examined data related to:

- whether the grantee achieved its enrollment target, and
- the number of contacts with the enrollees that the grantee program staff made during the measurement period.

Seven of the 11 grantees included in this analysis¹ reached or exceeded their enrollment goals, and another came within four percentage points of doing so. Although most of the grantees were very close to meeting, met, or exceeded their enrollment targets, many also reported that they struggled to achieve their goals. Grantees generally targeted people with complex physical and behavioral health co-morbidities, and commented that they underestimated the resources required, including time necessary to build sufficiently trusting relationships to promote enrollment in the MHCA initiative.

Second, we calculated the average number of contacts (discrete written or oral person-to-person communications) made quarterly with each enrollee, and examined whether the resulting average number was consistent with the type of intervention implemented. For example, enrollees in a program providing intensive care management services would be expected to receive a significant number of contacts quarterly, whereas enrollees in an integrated behavioral health model would be expected to receive more than a typical primary care practice provides but less than those enrolled in an intensive care management program. Those enrolled in a lower-intensity care management program would be expected to receive the fewest number of contacts. Table 2 on the following page details the average contacts by program within each cohort.

To provide context to better understand these contact rates, we examined 2010 data from the Centers for Disease Control and Prevention, which indicated that American adults visit their physicians and hospital outpatient or emergency departments four times a year,² for an average of 1.3 contacts a quarter. When each visit is treated as a contact for comparison purposes, it is clear that enrollees in the intensive care management programs experienced contacts at an average rate 10.3 times greater than the rate experienced by the average American adult. Those patients enrolled in an integrated behavioral health initiative experienced contacts at a rate approximately four times greater than that experienced by the



1 Judge Baker Children’s Center was excluded from the enrollment analysis because the grantee enrolled practices and not individuals.

2 See CDC FastStats available at <http://www.cdc.gov/nchs/fastats/physician-visits.htm>.

average American adult. This utilization pattern is consistent with expectations for the integrated behavioral health model, which focuses on proactive patient outreach initiatives and co-located behavioral health services and primary care services.

Those enrolled in the “other outpatient care management” initiatives had an average contact rate that was three times greater than the national average. The data collected suggest that overall, the grantees provided an appropriate number of substantive interactions with the vast majority of their enrollees.

TABLE 2. CONTACTS PER ELIGIBLE ENROLLEE PER QUARTER BY GRANTEE AND PROGRAM TYPE

GRANTEE	CONTACTS PER ELIGIBLE ENROLLEE PER QUARTER	TARGET POPULATION
INTENSIVE OUTPATIENT CARE MANAGEMENT		
Brookline Community Mental Health Center	13.4	Behavioral health patients with complex medical co-morbidities
Community Healthlink	12.9	High ED utilizers
Holyoke Health Center	13.0	Poly-pharmacy patients
Mercy Hospital/Mercy Health Care for the Homeless Program	11.7	High-ED-utilizing homeless clients
OTHER OUTPATIENT CARE MANAGEMENT PROGRAMS		
Brockton Neighborhood Health Center	3.1*	High-utilizing clients, excluding those with substance abuse issues
Greater Lawrence Family Health Center	1.7**	High ED utilizers
VNA Circle Home Health	5.3	Patients with uncontrolled chronic conditions (e.g., diabetes)
INTEGRATED BEHAVIOR HEALTH		
Alliance Foundation for Community Health (a division of Cambridge Health Alliance)	2.6	Pediatric patients with complex medical and behavioral health needs
Lynn Community Health Center	5.8	Patients receiving at least one behavioral health service during a specific time period
OTHER GRANTEES		
Boston Medical Center	3.9	Inpatients ready for discharge with a positive screen for depression
Judge Baker Children’s Center	N/A	Behavioral health practitioners
Steppingstone	12.5	Patients enrolled in a residential substance use treatment program

* Represents a combination of the contact rates for the patients who received only care coordination (generally limited to one or two conversations) and the patients who received intensive case management services.

** Physician office visits are not included, so total contacts are underrepresented.

III. ASSESSMENT OF GRANTEE PERFORMANCE AND ACHIEVEMENT OF GRANT GOALS

A. ABILITY OF GRANTEES TO ACHIEVE MORE EFFICIENT USE OF HEALTH CARE SERVICES

In response to the Foundation's policy question c., "Did the programs result in more efficient use of health care services?" we found that the data submitted indicated that patients who were enrolled in programs generally utilized health care services more efficiently.

1. Assessment of Change in ED and Inpatient Utilization

To answer this policy question, we used the change in overall inpatient and ED utilization rates as proxies for more efficient use of health care services. The grantees submitted utilization data for each enrollee who had received at least nine months of services. The grantees tracked and reported any ED or inpatient visit that occurred 12 months before the date of enrollment (the baseline period) and 12 months after the date of enrollment (the intervention period). To determine if there was a statistically significant change in utilization, we ran statistical tests and considered the change to be "real," or due to factors other than random chance if the p value was less than or equal to 5% ($p \leq 0.05$). This statistical test was run for each included grantee,³ by model type cohort, and in aggregate. Because of the data limitations discussed in the next section, the results, which are summarized in Table 3 on the next page, are de-identified in order to avoid inappropriately labeling a particular program as ineffective or unsuccessful when such conclusions are not warranted by the data.

2. Data Limitations

The conclusions drawn pertaining to utilization data are limited because:

- the absence of a control group makes it impossible to know whether utilization changes can be attributed to the interventions or to other factors,
- grantees reported utilization data only for individuals enrolled in their programs for at least nine months, posing likely selection bias,
- grantees used different approaches to data collection (e.g., claims data, hospital billing data, enrollee self-reported utilization), each with its own limitations,
- the numbers of enrollees in individual programs and in aggregate are small, and
- grantees implemented very different program models in unique organizations with distinct patient populations, making it difficult to generalize findings.

³ Boston Medical Center, Judge Baker, and Steppingstone were excluded from the statistical analysis.

As a result, it is difficult to assess the contributions that grantee interventions had on observed changes in enrollee ED visits and inpatient (IP) admissions. Additionally, it is inappropriate to directly compare the results of individual grantees or, on the basis of the quantitative data alone, to suggest that any one program model is superior to the others. In some cases, however, the magnitude of the observed changes in evaluation measures was so great (and in some cases even statistically significant) as to suggest promising models that warrant further study.

Table 3 summarizes the results of our analysis with the acknowledgment that it is impossible to know definitively whether the interventions were the cause of the changes in utilization levels.

TABLE 3: SIGNIFICANCE OF DECLINES IN ED VISITS AND IP ADMISSIONS BY GRANTEE, BY MODEL TYPE, AND IN AGGREGATE

GRANTEE	DECLINE IN OVERALL ED UTILIZATION IS STATISTICALLY SIGNIFICANT AT THE P<.05 LEVEL	DECLINE IN OVERALL IP UTILIZATION IS STATISTICALLY SIGNIFICANT AT THE P<.05 LEVEL	NUMBER OF ENROLLEES
INTENSIVE OUTPATIENT CARE MANAGEMENT PROGRAMS			
Grantee 1	Yes	No	72
Grantee 2	Yes	Yes	69
Grantee 3	Not available	No	97
Grantee 4	Yes	Yes	42
ALL INTENSIVE OUTPATIENT CARE MANAGEMENT ENROLLEES	Yes	Yes	280
ENROLLEES IN OTHER OUTPATIENT CARE MANAGEMENT PROGRAMS			
Grantee 5	Yes	Not available	ED: 100 IP: 0
Grantee 6	Yes	Yes	ED: 79 IP: 35*
Grantee 7	Yes	Yes	ED: 84** IP: 96
ALL OTHER OUTPATIENT CARE MANAGEMENT PROGRAMS REPORTING DATA	Yes	Yes	ED: 263 IP: 131
INTEGRATED BEHAVIOR HEALTH PROGRAMS			
Grantee 8	No	No	174
Grantee 9	Yes	No	12
ALL INTEGRATED BEHAVIORAL HEALTH PROGRAMS	No	No	186
ALL INCLUDED GRANTEES	Yes	Yes	ED: 729 IP: 597

* Grantee 6 submitted inpatient data for 35 of its 79 enrollees.

** Grantee 7 submitted ED data for 84 of its 96 enrollees.

This analysis led us to conclude that in aggregate, the enrollees receiving services from grantee interventions experienced a statistically significant reduction in use of both ED and IP services, suggesting that they used health care services more efficiently. In addition, seven of the nine grantees demonstrated statistically significant reductions in ED utilization for their enrollees during the intervention period, and four of the nine grantees demonstrated statistically significant reductions in IP admissions during the intervention period when compared with the baseline.

In examining the results of the statistical analysis by model cohort, enrollees receiving outpatient care management services (both intensive and other) used ED and IP services significantly less in the intervention period than they did in the baseline period. The two programs that implemented integrated behavioral health initiatives were not able to demonstrate a statistically significant reduction in utilization. Unlike many other grantees, Grantee 8 did not target patients with high utilization patterns, making it more difficult to demonstrate change in a 12-month period. Additionally, it was challenging to draw conclusions related to Grantee 9 because of its small enrollment size. As a result, no clear findings are possible regarding the efficiencies associated with integrated behavioral health models, and we recommend further study.

As previously discussed, data limitations make it impossible to draw conclusions about the impact of these interventions on reductions in enrollee ED and IP utilization. However, the fact that grantees were able to demonstrate statistically significant declines is nonetheless impressive and certainly indicative of promising programs. A more rigorous methodology and larger sample sizes would yield more conclusive results.

3. Spending Reductions

To address policy question d., “Are the programs resulting in reduced health care costs?,” the original intent had been to collect cost data from grantees for individual enrollees in order to calculate net savings. However, over the course of the grant program, it became apparent that the cost measure would be too challenging and burdensome for the grantees to collect and analyze. Therefore, the Foundation decided to eliminate this measure. The Foundation contracted with RAND Corporation to obtain cost data through the Massachusetts All-Payer Claims Database (APCD). This, too, proved infeasible because of issues pertaining to privacy and informed consent, the small sample size, and timeliness of the available data.

Therefore, approximate spending reductions were calculated by taking the average cost of an ED visit and an IP admission and comparing the total spending for services during the baseline and intervention periods.

To calculate spending reductions associated with declines in ED utilization, we used the average Massachusetts Medicaid billing rate for ED services during the first two months of the Hospital Fiscal Year 2015 (October and November 2014), which was \$353.00. We used the Medicaid rate because a total of 78% of the enrollees were covered by Medicaid (59%), were dually eligible (11%), or were enrolled in Commonwealth Care (8%). We multiplied the cost of an ED visit by the total number of ED visits pre- and post-enrollment, giving us a basis for calculating the difference in spending between the two time periods.

In aggregate, the grantees that submitted ED utilization data reduced spending by an estimated \$373,827. To compare relative spending reductions across grantees, we also normalized the savings reduction by calculating a per enrollee number. The reduced spending ranged from \$36.52 per enrollee at Grantee 8 to \$1,601.29 per enrollee at Grantee 2 (see Table 4).

The same methodology described above was used to calculate spending reductions for IP admissions. The IP analysis was based on the average Massachusetts Medicaid payment per hospital discharge, which was \$10,050 for October and November 2014. In aggregate, the grantees that

submitted inpatient hospital utilization data reduced spending by an estimated \$1,748,700. The reduced spending ranged from \$621.65 per enrollee at Grantee 3 to \$8,614.29 per enrollee at Grantee 6. Table 4, below, presents estimated spending reductions by grantee and in aggregate based on reported reductions in ED and IP utilization.

In answering the policy question about whether the initiatives resulted in decreased health care costs, the data limitations described above in relation to health care utilization must again be taken into consideration. While it is impossible to definitively conclude that the grantee interventions resulted in cost reductions, the results are still striking and quite promising. For future grant initiatives, the Foundation will consider having grantees calculate program-related costs to conclude whether the interventions generated savings in excess of the daily implementation expenses. In addition, a more rigorous evaluation methodology, including larger sample sizes and a control group, would allow for a stronger assessment of whether the interventions themselves generated actual cost savings and efficiencies.

TABLE 4: ESTIMATED SPENDING REDUCTIONS PER ENROLLEE GENERATED BY REDUCED ED AND IP UTILIZATION

GRANTEE	ESTIMATED SPENDING REDUCTIONS DUE TO REDUCED OVERALL ED UTILIZATION PER ENROLLEE / TOTAL	ESTIMATED SPENDING REDUCTIONS DUE TO REDUCED OVERALL IP UTILIZATION PER ENROLLEE / TOTAL	TOTAL ESTIMATED SPENDING REDUCTIONS FOR ED AND IP COMBINED
INTENSIVE OUTPATIENT CARE MANAGEMENT PROGRAMS			
Grantee 1	\$1,049 / \$75,542	\$1,396 / \$100,500	\$176,042
Grantee 2	\$1,601 / \$110,489	\$7,167 / \$492,450	\$602,939
Grantee 3	Not available	\$622 / \$56,770	\$56,770
Grantee 4	\$277 / \$11,649	\$5,982 / \$251,250	\$262,899
OTHER CARE MANAGEMENT PROGRAMS			
Grantee 5	\$871.91 / \$87,191	Not available	\$87,191
Grantee 6	\$902 / \$71,306	\$8,614 / \$301,500	\$372,806
Grantee 7	\$134 / \$11,296	\$4,397 / \$422,100	\$433,396
INTEGRATED BEHAVIORAL HEALTH			
Grantee 8	\$37 / \$6,354	\$581 / \$100,500	\$106,854
Grantee 9	\$294 / \$3,530	\$1675 / \$20,100	\$23,630
ESTIMATED SAVINGS FOR ALL GRANTEES REPORTING DATA	\$373,827	\$1,748,400	\$2,122,527

B. GRANTEE CHARACTERISTICS ASSOCIATED WITH SUCCESSFUL PROGRAM IMPLEMENTATION

In addition to exploring potential changes in the use of health care services and estimating spending reductions, a thorough implementation assessment of each grantee program was conducted and trends identified. The goals were to:

- understand whether the interventions were implemented as initially envisioned, and in cases where changes were made, to understand why they were made,

- understand whether the interventions were effectively implemented, including identifying indicators of effective implementation, as well as barriers, and
- determine whether the interventions are suitable for scaling and potential replication.

The implementation assessments were a combination of document review and in-person site visits. The site visits were conducted from June to September of 2014 using a semi-structured interview guide. Multiple team members and, for most grantees, patient representatives were interviewed to gain an in-depth and nuanced assessment of the qualitative aspects of the program.

We additionally developed a point system to systematically identify the grantees that excelled at effective program implementation. We identified 10 key variables associated with the quality of the program implementation. Grantees were awarded one to three points per variable. Additional details about the key variables and rating system can be found in Appendix C. Note that grantee utilization data and estimated cost savings were not considered in the assessment of effective program implementation. For instance, some grantees scored high on effective program implementation but may not have reported statistically significant declines in overall IP admissions and ED visits, and vice versa. The purposes, and therefore methodologies, of these two analyses are distinct and are presented to convey a more comprehensive picture of the findings.



photo © David Binder

Mercy, Lynn, Holyoke, CHL, and Brookline ranked the highest across all grantees for effective program implementation. Please see Appendix C for scores associated with each of these grantee organizations. It is important to note that this measurement system may convey more precision than appropriate. Some of the assessments are subjective, and it is likely that the skill of the interviewees at answering questions influenced evaluation of the assessment. Nevertheless, we believe that the resulting overall ranking of the grantees in terms of effectiveness is reasonable.

In assessing how well the programs were implemented, we also identified themes that emerged across the grantees' projects that distinguished those that were well implemented, overall and by type of grantee intervention, and we articulated the common barriers experienced by the grantees. By highlighting these themes, we aim to provide useful information to help community-based health care organizations strengthen their existing or future programs, and to inform other philanthropies in developing grant-making strategy and evaluation programming.

1. Facilitators of Successful Implementation—Overall

Drawing on the assessments of the grantees, the following chart describes the key characteristics of effective program implementation and gives examples:

PROGRAM CHARACTERISTIC	DESCRIPTION
TALENTED PROJECT MANAGER	Well-implemented programs had project managers who were passionate about their projects, were intimately familiar with the details, understood the relative strengths and weaknesses of their staffs, and had strong management skills. Additionally, effective project managers were incredibly persistent and resilient in the face of seemingly insurmountable barriers. The project director at Holyoke, for instance, had palpable passion, a clear vision, and strong commitment to quality improvement.
STRONG EXECUTIVE LEADERSHIP	A project that is supported by the top of the organization has the best chance to get the resources, time, and focus that it needs to thrive. The executive director at Lynn, for example, was aggressive in finding grant funding and supporting the program administratively by providing protected meeting time. Conversely, grantees with less involved leaders struggled to define, implement, and manage their programs.
APPROPRIATE STAFFING	It is critical to assign or hire people with the right skill sets to fill program roles, ideally from the outset. For example, CHA found it was very important to hire outreach workers who had personal experience either directly or through family members with the behavioral health system. This personal experience gave the outreach workers immediate credibility with the families they were trying to encourage to accept support.
CONSISTENCY WITH ORGANIZATION'S MISSION AND VISION	Several of the successful programs talked about the initiative as being a central component of the strategic vision of the organization. This type of alignment facilitates staff buy-in and helps the project team members easily understand the importance of a successful program. The leaders at both Brookline and Mercy spoke of their MHCA programs as essential to better achieving the mission of their respective organizations.
CULTURE OF QUALITY IMPROVEMENT	The staff of the well-implemented programs expected and embraced setbacks and developed processes to facilitate creative problem solving. Part of this quality improvement approach is the recognition that failures are opportunities to try something new. The programs that thrived had a process that they used to understand, assess, and share ideas about potential solutions to the problem and ultimately to implement a revised approach to the project. Lynn and Holyoke both used a Plan-Do-Study-Act (PDSA) process to closely monitor and assess implementation.
SUPPORT OF PRE-EXISTING STAFF	In the well-implemented programs, staff saw the intervention as making their work easier rather than more difficult. Instead of burdening existing staff with new roles and responsibilities, the effective organizations were careful to design the projects in ways that would enhance the existing programs. Nevertheless, when the projects involved bringing new staff into the organization, they often had to demonstrate their knowledge, skills, and value to the team before the existing staff were "sold."
PHYSICIAN/CLINICIAN CHAMPION	The physician/clinician champion helps to give the project credibility. The champion can provide validation to new staff roles, such as care manager, that existing staff may not fully understand. The clinician champion can also advocate for the initiative with the organization's leaders. CHA's physician champion was a pediatrician who headed up a clinic that wanted to bring behavioral health services into the practice. Without his interest and support, the initiative would not have been implemented.
FORMAL, PROTECTED TIME FOR INITIATIVE	The successful organizations gave the project team members sufficient dedicated time to work on the duties associated with the project as well as the overall implementation of the project. At Lynn, each primary care team held team meetings twice a week for 90 minutes to discuss both big-picture integration processes and specific patient care issues. The interviewees reported that the frequent meetings were essential to build trust and a common vocabulary so that the teams could work together effectively to treat the whole patient.
STRONG INTERNAL PROJECT TEAM COHESION AND EXTERNAL PARTNERS	Successful organizations were intentional about building strong relationships within the project team. A cohesive team understands and respects each person's role and values each member's input. Team cohesion also creates a sense of belonging that can reduce staff turnover. Furthermore, team solidarity can provide the nonclinical members of the team more credibility in the eyes of the patient. Successful organizations also focused on creating strong external partnerships that advanced their programs. These organizations realized that to deliver effective care they could not use the four corners of their organizations as boundaries to their work but had to connect with other key actors in the broader, external health care delivery system.
PROJECT STAFF STABILITY	In the context of a time-limited grant program, high employee attrition can create significant barriers. Programs with minimal turnover were less likely to experience delays in planning and development, inconsistent data collection, and failure to provide consistent services to enrollees.

2. Facilitators of Successful Implementation—By Program Model Type

Through the implementation assessment, not only did we identify factors for successful implementation across all programs, but we also identified key facilitators for effectiveness by program model type (i.e., care management models and integrated behavioral health models). Following are our findings.

a. CARE MANAGEMENT MODELS

Five characteristics of the role of the care manager appeared to be key for effective program implementation. These characteristics can guide other organizations looking to adopt a similar model or enhance existing services.

FACTORS RELATED TO EFFECTIVE INTENSIVE CARE MANAGEMENT	DESCRIPTION
A STRONG RELATIONSHIP WITH THE PATIENT	Care managers had the time that traditional health care workers generally do not have to build strong interpersonal relationships that promoted trust.
A “WHOLE PERSON” APPROACH TO CARE	Effective care managers worked with both the enrollee and the enrollee’s providers to understand the totality of his/her physical health, behavioral health, and social needs; develop a comprehensive care management plan; and implement the plan, modifying it as needed. This work included addressing nonmedical needs such as housing, food, and transportation.
THE NECESSARY SKILL SET	To be effective, a care manager must be a passionate relationship builder; have extraordinary patience; be skilled in communicating with clinicians; and have cultural competency related to patient demographics and diagnoses.
CLINICAL SUPERVISION	“Supervision” in the therapeutic context is not an oversight or managerial process but rather a consultative one in which the care manager has the opportunity to review his/her client cases with the supervisor, discuss the psychological impact on him/her, and plan potential next steps for working with the client. This provides essential emotional and professional support to the care manager and minimizes burn out.
BEING EMBEDDED WITHIN A LARGER CARE TEAM	Two grantees focused on adding a new care manager to a larger, established integrated health care team, which expanded the impact of the care manager. The program leadership ensured that the care managers were respected, full-fledged members of the team, and that they were given the opportunity to voice opinions on care planning.

b. INTEGRATED BEHAVIORAL HEALTH MODELS

Primary care and behavioral health integration is increasingly being recognized as a vital model for redesigning care to reduce costs, improve quality, and enhance the patient experience. Based on the interviews with Lynn and CHA, we identified seven key model components that are essential to successful program implementation.

KEY MODEL COMPONENTS FOR INTEGRATED BEHAVIORAL HEALTH CARE	DESCRIPTION
REGULAR CARE TEAM MEETINGS	Lynn instituted regular meetings throughout the week to jointly discuss patients and develop shared treatment plans; Lynn also noted the importance of informal conversations.
TIMELY WARM HAND-OFFS	Lynn created a staggered schedule for regular behavioral health provider sessions, so there is always a behavioral health provider available between appointments to participate in the warm hand-off process.
HIRING APPROPRIATE BEHAVIORAL HEALTH PROVIDERS	Both Lynn and CHA emphasized that behavioral health providers need to practice differently within an integrated context and many providers are not comfortable with this different role. For instance, behavioral health clinicians must be effective at providing short-term services.
INCLUDING A CARE MANAGER ON THE INTEGRATED CARE TEAM	Both programs attributed much of their effectiveness to having a care management/care coordinator function as part of the model. Lynn used RNs, and CHA used community health workers. Both types of staff were able to build trusting relationships with the patient and address holistic needs.
UNDERSTANDING THE DIFFERENT PROVIDER PERSPECTIVES	Both programs reported that developing a successful integrated model requires all the providers to understand and value the lens through which the others view the patients and assess their needs. Different providers must find commonalities and consensus on time frames, expectations, and vocabulary.
CO-LOCATING MEDICAL AND BEHAVIORAL HEALTH PROVIDERS WHENEVER POSSIBLE	While integration can exist without co-location and co-location can exist without true integration, co-location facilitates enhanced communication and co-management of patients.
USING BEHAVIORAL HEALTH PROVIDERS TO FACILITATE BEHAVIORAL HEALTH CHANGE IN THE MEDICAL CONTEXT	In addition to providing traditional counseling services, behavioral health providers can be used to help patients make lifestyle and other behavioral changes that will improve their physical health.

3. Common Barriers

The following section discusses the common barriers experienced by the grantees. Several of these barriers can be mitigated with appropriate planning and by adopting the 10 characteristics of well-implemented programs discussed above. Throughout the MHCA grant period, grantees received considerable assistance with identifying and overcoming barriers to implementation. This took the form of site visits, learning community and technical assistance sessions, and individual consultations by the Foundation staff and Bailit. During the implementation assessment, we identified five common barriers experienced by the grantees:

a. CHALLENGES ASSOCIATED WITH WORKING WITH A COMPLEX PATIENT POPULATION

The grantees generally worked with low-income high utilizers, most of whom experience numerous social conditions that negatively impact their health and create barriers to addressing health issues. BMC, Mercy, Brockton, CHL, and Greater Lawrence, for example, all reported working with patients who were overwhelmed by and struggling to meet basic needs such as food and housing. This made it very difficult for enrollees to focus on non-emergent health needs and appointments.

The grantees also reported challenges in maintaining consistent contact with the enrollees. As a result of unstable lifestyles, the enrollees often did not have long-term addresses or phone numbers, so following up after initial contacts was sometimes difficult. Moreover, many enrollees used cell phones with limited service plans, making them difficult to reach because of limited minutes and fear of costs related to overages.

b. DELIVERY SYSTEM FRAGMENTATION AND NON-ALIGNED INCENTIVES

The fragmentation within our current delivery system made it difficult for the grantees to build enduring partnerships with external organizations when incentives were misaligned. One grantee reported challenges in engaging with the local hospital's emergency department leadership because the hospital had no financial incentive under the current payment system to reduce emergency department utilization. The reimbursement system also challenges the sustainability of services like care management and outreach work because they are typically not billable. Arguably, the financial incentives for providing these types of services will start to grow as more providers are paid under population-based contracts that reward improved outcomes and reduced costs. However, the potentially positive impact of these new payment models was not yet being experienced by the grantees.

c. ORGANIZATIONAL AND STAFF RESISTANCE TO CHANGE

When an organization has been offering services in a particular manner for a long time, it is often very difficult to overcome its traditions. Several grantees spoke of the initial resistance by existing providers to new team members until they experienced the benefits that the new team members' services and perspectives added.

d. PHYSICAL INFRASTRUCTURE CONSTRAINTS

Space is a significant barrier to change when the initiative demands different working relationships and communication processes within the organization. For example, prior to fully implementing an integrated care model, primary care and behavioral health services were not co-located at Lynn. However, once the workspace was redesigned, staff found co-location to be hugely beneficial as it facilitated cross-specialty communication.

e. ELECTRONIC INFRASTRUCTURE CONSTRAINTS

The lack of interoperability of electronic medical records and the absence of a fully functioning statewide health information exchange posed significant barriers to program implementation. For instance, care management programs that were not embedded in a primary care practice, such as those of Brookline, CHL, and VNA, maintained their own care management system that was entirely internal to their agency. This required them to document their actions in their own systems and separately communicate with an enrollee's primary care provider. After a year of effort, Brookline obtained access to its partnering primary care practice's electronic medical records by successfully completing the affiliated hospital's credentialing process. These initiatives would have benefited from an electronic system that facilitated exchange of real-time information and shared access to a unified patient record.

C. GENERALIZABILITY AND CONSIDERATIONS FOR REPLICATION: GENERALIZABLE MODEL ELEMENTS

To identify which MHCA grantee programs—or components of programs—could be readily adopted by other organizations, we explored the potential for program replication. Because of data limitations, this assessment only examines generalizability and does not consider how impactful the models are in reducing costs.

In considering whether a model or components of a model are generalizable, four key factors were considered:

- level of disruption to the existing organization (e.g., adding a care manager to a care team versus restructuring the organization’s delivery of care systems to implement a co-located integrated behavioral health model),
- whether highly specialized skills or training was required to implement the model or model component and how readily available the skills/training was to staff (e.g., the need for training pharmacists or pharmacy students to provide medication-adherence counseling),
- whether specific infrastructure was needed to implement the model or model component (e.g., physical space for co-location or a shared electronic medical record), and
- whether there are cultural aspects that an organization must have to be successful (e.g., the high level of persistence and acceptance required of those working with people with dual diagnoses).

These factors were used to rate the grantees in terms of overall model generalizability. BMC, Brookline, CHL, and Greater Lawrence were rated as “highly generalizable.” The details of these ratings are described in Table 5 below.

TABLE 5. GRANTEE PROGRAM MODELS WITH “HIGH GENERALIZABILITY”

	RATING	RATIONALE
BOSTON MEDICAL CENTER	High	<ul style="list-style-type: none"> • Brings minimal disruption to organizations already implementing a re-engineered discharge program. • Requires new staff to make phone calls to patients that are depressed. • Requires training of staff to administer depression screening as part of the RED process.
BROOKLINE COMMUNITY MENTAL HEALTH CENTER	High	<ul style="list-style-type: none"> • Brings 1-2 new medical health staff into the behavioral health practice to provide new functions without asking the organization to fundamentally change practices. • Requires space for the new physical health staff. • Requires existing staff to refer patients to the new physical health staff. • Requires no specialized training for existing staff.
COMMUNITY HEALTHLINK	High	<ul style="list-style-type: none"> • ED must create processes to identify eligible patients and refer patients to program but does not need to fundamentally change its practices. • Once referral is made, CHL staff work independently with patients. • Culturally, the ED must be interested in reducing visits from high utilizers. • Some training required for existing ED staff to implement new processes.
GREATER LAWRENCE FAMILY HEALTH CENTER	High	<ul style="list-style-type: none"> • Brings 1-2 new staff (or staff with redefined roles) into health center to provide new functions without asking the organization to fundamentally change its practices. • Requires a connection with an ED that is willing to provide lists of high utilizers. • Requires no specialized training required for existing staff.

IV. CONCLUSION

The *Making Health Care Affordable* grant program produced encouraging results and provided the grantees with the opportunity to implement programs that will better address the needs of their patients in the era of payment and delivery system reform.

Because of data access limitations, the MHCA grant program did not yield evidence-based conclusions about which interventions were effective in meeting the goals of reducing costs and improving efficient utilization of the health care system. However, many grantees did report utilization changes for their enrollees across the baseline and intervention periods that were statistically significant; these models are promising and warrant further study.

The grant also surfaced lessons learned in the area of effective program implementation, both in terms of grantee characteristics associated with successful implementation and common barriers experienced by community-based health care providers that serve high-need, medically complex patients. We were also able to elucidate generalizable model elements and make recommendations for other organizations that wish to strengthen or adopt care management or behavioral health integration programs.

The experiences of the MHCA grantees and the lessons learned are timely and relevant for all stakeholders working to ensure that the needs of low-income and vulnerable populations are represented in payment and delivery system reforms. Safety net organizations must be highly innovative and adaptive to further the Triple Aim—better health, lower costs, and higher quality—for their most vulnerable patient populations.

APPENDIX A: SUMMARY OF GRANTEE INITIATIVES AND PLANS FOR CONTINUATION

The following is a summary of each grantee’s program, how the Foundation’s funding was used, and whether the initiative will be continued after the grant ends. The table is organized by type of grantee intervention.

GRANTEE	INITIATIVE SUMMARY	WILL INITIATIVE BE CONTINUED?
INTENSIVE OUTPATIENT CARE MANAGEMENT		
Brookline Community Mental Health Center (Brookline)	<p>Provided intensive care management services to increase engagement of patients with serious mental illness and multiple chronic physical conditions in managing their health care, and provided wellness interventions and disease management programs. This initiative brought physical health services into a mental health setting.</p> <p>Funds were used to hire case managers and care coordinators, and to fund professional and administrative support for the initiative.</p>	Yes, expanding to include additional collaborating PCP practices
Community Healthlink (CHL)	<p>Used community health worker resources to intervene with high utilizers of the ED, and direct them to more appropriate health care services with the goal of reduced utilization and costs and early identification of seriously mentally ill patients who can be directed into appropriate care.</p> <p>Funds were used to support two FTE community health workers and the project lead’s time to develop and implement the initiative.</p>	Yes, expanding to additional hospitals, using broader definition for eligible patients
Holyoke Health Center (Holyoke)	<p>Implemented a robust medication adherence program for high utilizers by providing patient counseling by pharmacy students; feedback reports to the patient’s PCP with medication recommendations, when appropriate; medication adherence tools for patients; and the inclusion of pharmacists in PCP visits and clinical conferences.</p> <p>Funds were used to hire a pharmacy resident, a community health worker, a data coordinator, as well as administrative staff time to manage the initiative.</p>	Yes, moving beyond pilot to scaling it up to full capacity
Mercy Hospital/ Health Care for the Homeless Clinic (Mercy)	<p>Enhanced the primary care team by adding community health workers to better engage homeless patients in their health care and connect them to necessary social services.</p> <p>Funds were used to hire two community health workers and to partially fund administrative costs associated with the initiative.</p>	Yes, using two case managers rather than just one, and one social services counselor

(continued)

GRANTEE	INITIATIVE SUMMARY	WILL INITIATIVE BE CONTINUED?
OTHER OUTPATIENT CARE MANAGEMENT		
Brockton Neighborhood Health Center (Brockton)	<p>Implemented intensive case management services for high risk patients with co-morbid mental health and physical health issues; provided care coordination for patients needing behavioral health services; and developed more robust relationships with other providers and social service agencies. These initiatives have been implemented within the context of the health center adopting a patient-centered medical home approach.</p> <p>Funds were used to hire a case manager and a care coordinator, and to cover some of the administrators' salaries.</p>	Partially
Greater Lawrence Family Health Center (Greater Lawrence)	<p>Provided telephonic care coordination services and additional PCP visits to high utilizers to curb cost and high utilization patterns of "super-utilizers" at the Holy Family's and Lawrence General's emergency departments.</p> <p>Funds were used to hire a care coordinator, as well as fund professional and administrative staff time to implement and oversee the initiative.</p>	Partially
VNA — Circle Home Health (VNA)	<p>Provided in-home care, coaching, and tele-monitoring to high-cost patients affected by chronic diseases to improve the quality of care and reduce emergency department and inpatient utilization.</p> <p>Funds were used to support RN time for the initiative, to contract for community health worker services from community organizations, and to hire a project manager.</p>	Partially, telehealth will continue
INTEGRATED BEHAVIOR HEALTH		
Alliance Foundation for Community Health (a division of Cambridge Health Alliance) (CHA)	<p>Phase I: Conducted a quantitative analysis using data from Network Health and CHA to better understand utilization and expenditures for children with mental illness.</p> <p>Phase II: Implemented an integrated model of primary care, behavioral health, and family support services for high-risk youth and their families to generate high quality, cost-effective care.</p> <p>Funds were used to hire the community health worker and support the time of the data analyst, program managers, and administrative support staff.</p>	Yes, implementing the integrated model in all CHA locations and services
Lynn Community Health Center (Lynn)	<p>Implemented a fully integrated behavioral health – physical health primary care model, including co-managed primary care teams, intensive care management support for high risk patients, and warm hand-offs among primary care and behavioral health team members.</p> <p>Funds were used to free up provider and administrative time to develop and implement the integrated team and meeting structure, develop a universal care plan, add embedded care management resources, implement behavioral health screening tools, and develop and implement patient education programs.</p>	Yes

(continued)

GRANTEE	INITIATIVE SUMMARY	WILL INITIATIVE BE CONTINUED?
OTHER GRANTEES		
Boston Medical Center (BMC)	<p>Implemented the Re-Engineered Discharge (RED) process to reduce hospital readmissions among patients with depression.</p> <p>Funds were used to help fund the project director, research principal, data analyst, and research assistants.</p>	Yes
Judge Baker Children's Center (JBCC)	<p>Implemented and brought to scale the Modular Approach to Therapy for Children (MATCH), an evidence-based treatment model to be used in outpatient clinics to treat children with multiple and complex behavioral conditions.</p> <p>Funds were used to support professional and administrative staff to implement the initiative, including a project director and a subject matter expert to train all participating practices.</p>	Yes
Steppingstone	<p>Provided intensive case management services to residents of an addiction recovery program and instituted an evidence-based chronic condition self-management program.</p> <p>Foundation funds were used to hire the nurse care manager and to free up time for staff to be trained on and to implement the evidence-based chronic condition self-management program.</p>	No

APPENDIX B: COMMON MEASURES AND ASSOCIATED EVALUATION OBJECTIVE

Common Measure	Objective
<ol style="list-style-type: none"> 1. Number of newly enrolled participants (“enrollees”) during the Quarter 2. Enrollee age 3. Enrollee gender 4. Enrollee ethnicity (Hispanic? yes/no) 5. Enrollee race 6. Enrollee insurance status 	Objective 4: Policy Question a: Are those served by the grantees among the population of concern for the Foundation?
<ol style="list-style-type: none"> 7. Total number of enrollees eligible to receive services during the measurement period 8. Total number of enrollees contacted at least once during the measurement period 9. Number of contacts by care team/ grantee program staff during measurement period 	Objective 4: Policy Question b: Are the grantees providing expected services to enrollees?
<ol style="list-style-type: none"> 10. Number of ED visits at baseline and at 12 months post enrollment 11. Number of inpatient admissions at baseline and at 12 months post enrollment 	Objective 4: Policy Question d: Are the programs resulting in reduced healthcare costs?
<ol style="list-style-type: none"> 12. Average cost of an ED visit and an IP admission 	Objective 4: Policy Question c: Are the programs resulting in more efficient use of health care services?

APPENDIX C: SUCCESSFUL PROGRAM IMPLEMENTATION CRITERIA

Through our on-site implementation assessments, we identified the following ten key characteristics of well-implemented programs and developed the following rating scales:

- **talented project manager:** talented project manager in place throughout the entire project = 3 points; moderately skilled project manager or strong project manager for a portion of the implementation = 2 points; weak project management = 1 point
- **strong executive leadership:** engaged and effective executive leadership = 3 points; moderately engaged or effective executives = 2 points; not engaged or not effective executives = 1 point
- **appropriate staffing:** sufficient staff resources with appropriate skill set in place throughout the initiative = 3 points; sufficient staff resources with appropriate skill set in place for most of the initiative = 2; sufficient staff resources with appropriate skill set in place for only a short duration of the initiative = 1 point
- **consistency with organizational mission:** project strongly linked = 3 points; project moderately linked = 2 points; project weakly linked = 1 point
- **culture of quality improvement:** organization uses formal QI process to address issues = 3 points; organization has routine opportunities for staff problem identification and problem solving, but not a formal QI process = 2 points; organization has ad hoc process for problem solving = 1 point
- **support of pre-existing staff:** strong staff support = 3 points; moderate staff support = 2 points; staff resistance = 1 point
- **physician/clinician champion:** strong champion = 3 points; moderately strong champion = 2 points; weak or absent champion = 1 point
- **protected time for project:** regular scheduled meetings = 3 points; informal, but consistent communications = 2 points; ad hoc communications = 1 point
- **strong project team relationships (internal and external):** project team strong across internal and external partners (if applicable) = 3 points; project team generally strong but has some challenges either internally or externally = 2 points; project team has significant challenges either internally or externally = 1 point
- **program staff stability:** no significant staff turnover = 3 points; staff turnover existed but did not have significant impact on the project = 2 points; staff turnover negatively impacted the implementation of the project = 1 point

The table on the next page provides the detailed results of this assessment.

ASSESSMENT OF GRANTEE CHARACTERISTICS ASSOCIATED WITH SUCCESSFUL PROGRAM IMPLEMENTATION

	TALENTED PROJECT MANAGER	STRONG EXECUTIVE LEADERSHIP	APPROPRIATE STAFFING	CONSISTENCY WITH ORGANIZATIONAL MISSION	CULTURE OF QUALITY IMPROVEMENT	SUPPORT OF PRE-EXISTING STAFF	PHYSICIAN/CLINICIAN CHAMPION	PROTECTED TIME FOR PROJECT	STRONG PROJECT TEAM RELATIONSHIPS	PROGRAM STAFF STABILITY	TOTAL
TOTAL POINTS	3	3	3	3	3	3	3	3	3	3	30
MERCY	3	3	3	3	2	3	3	3	3	3	29
LYNN COMMUNITY HEALTH CENTER	3	3	3	3	3	3	3	3	3	2	29
HOLYOKE HEALTH CENTER	3	3	3	3	3	2	2	3	3	2	27
COMMUNITY HEALTHLINK	3	3	3	3	2	2	2	3	3	3	27
BROOKLINE	3	3	2	3	3	3	2	3	3	1	26
BMC	3	3	2	3	2	2	3	2	2	3	25
CAMBRIDGE HEALTH ALLIANCE	3	1	3	2	2	3	3	3	3	2	25
STEPPINGSTONE	2	2	2	2	2	3	2	2	2	1	20
GREATER LAWRENCE	3	1	2	2	2	2	1	3	2	2	20
BROCKTON	2	2	3	3	1	3	1	2	1	1	19
CIRCLE HOME HEALTH	2	1	1	2	1	1	1	1	1	2	13