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**MassHealth Section 1115(a)
Demonstration Waiver 2014-2017
Interim Evaluation Report**

Prepared by:

Deborah Gurewich, PhD
Linda Cabral, MM

*As a requirement of all states that submit an 1115 Demonstration request to the Centers for Medicare and Medicaid Services, the state must provide an interim evaluation report of the currently approved 1115 waiver (October 2014 – June 2017). As demonstrated in the report, data collection is ongoing but results from this timeframe are limited. We anticipate having additional results available in 2017.

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Appendix A: DSTI Hospital Project Selection

Section 1: Introduction

The Centers for Medicare and Medicaid Services (CMS) authorizes Medicaid Research and Demonstration Waivers under Section 1115(a) of the Social Security Act. Medicaid Waivers allow states to test new approaches, expand existing delivery systems, and modify payment methods while maintaining “budget neutrality”, meaning that federal Medicaid expenditures will not exceed those spent without the waiver. The Commonwealth of Massachusetts (the Commonwealth) received its first 1115 Waiver in July 1997.

CMS approved the most recent extension of the Commonwealth’s Section 1115 Demonstration Waiver (Waiver) to cover the period October 30, 2014 through June 30, 2019, with financing only available through June 30, 2017. During this period, the Commonwealth will continue its health care reform efforts which are design to advance four established goals:

- Goal 1. Maintain near universal coverage for all residents of the Commonwealth;
- Goal 2. Continue the redirection of spending from uncompensated care to insurance coverage;
- Goal 3. Implement delivery system reforms that promote care coordination, person-centered care planning, wellness, chronic disease management, successful care transitions, integration of services, and measurable health outcome improvements; and
- Goal 4. Advance payment reforms that will give incentives to providers to focus on quality, rather than volume, by introducing and supporting alternative payment structures that create and share savings throughout the system while holding providers accountable for quality care.

While the 1115 Waiver authorizes a number of programs and services, four initiatives are being evaluated to understand how they advance the Waiver goals. Table 1 indicates how these initiatives align with each of the Waiver goals:

1. Monitoring of Population-Level Measures (PLM);
2. Express Lane Eligibility (ELE) program;
3. Delivery System Transformation Initiative (DSTI);
4. Infrastructure and Capacity Building (ICB) grants to hospitals and health centers.

The Commonwealth’s Executive Office of Health and Human Services (EOHHS) contracted with the University of Massachusetts Medical School’s (UMMS) Center for Health Policy and Research (CHPR) to design and implement the overall evaluation of the currently authorized Waiver. The time period for the evaluation is October 30, 2014 through June 30, 2017, which aligns with the authorization of the Safety Net Care Pool, which includes the DSTI and ICB programs. EOHHS is submitting a new five-year Waiver proposal to begin on July 1, 2017, which will require a new evaluation design to examine the newly authorized initiatives. Accordingly, this Interim Evaluation Report describes our proposed timeline for gathering data and completing an evaluation for the period October 2014 through June 2017. We also report on select preliminary findings, though preliminary findings to-date are limited.

Table 1. Waiver Initiatives and Goals

Initiatives	Waiver Goals			
	Near Universal Health Coverage	Redirection of Spending	Delivery System Reforms	Payment Reforms
Continued Monitoring of Population Level Measures	X	X	X	
Express Lane Eligibility	X			
Delivery System Transformation Initiatives			X	X
Infrastructure and Capacity Building Grants			X	X

In the sections that follow, for each of the four 1115 Waiver initiatives, we describe the evaluation design, report any preliminary findings to date, and describe our proposed timeline for interim and final data collection, analysis and reporting. We also include a brief description of each initiative itself.

Section 2: Continued Monitoring of Population Level Measures

Background

Examination of population-level measures (PLMs) provides trend data on the potential effect of Waiver initiatives over time. Table 2 details the seven specific PLMs we will examine, the associated Waiver goals, and data sources. The seven measures align with domains of focus identified within STC 90 as evaluation domains of focus. We will report on the PLMs twice during the evaluation period, as described below. The objectives established for the PLMs include:

- Decreasing the number of uninsured;
- Increasing Waiver eligibles with ESI coverage;
- Tracking enrollment in the Commonwealth Care Program through February 2015;
- Reducing uncompensated care and supplemental payments to hospitals;
- Reducing the number of individuals accessing the HSN; and
- Increasing the availability of access to primary care providers.

Table 2: Population Level Measures (PLM) by Waiver Goal and Data Sources

PLM	Waiver Goal	Data Source(s)
1. Number of uninsured in the Commonwealth [yearly]	Near universal health coverage	National Health Interview Survey (NHIS); MA Department of Public Health's Behavioral Risk Factor Surveillance Survey (BRFSS); Center for Health Information and Analysis (CHIA)'s MA Health Insurance Survey (MHIS)
2. Number of Waiver eligibles with employer sponsored coverage (ESI) [monthly]	Near universal health coverage	Premium Assistance and Enhanced Coordination of Benefits unit, UMMS Center for Healthcare Financing
3. Enrollment in Commonwealth Care Program (CommCare)* [monthly]	Near universal health coverage	Monthly Health Connector Summary Reports from Board Meetings
4. Uncompensated care and supplemental payments to hospitals – i.e., Health Safety Net (HSN) and safety net supplemental payments (SNCP) payments to hospitals [yearly]	Redirection of spending	EOHHS HSN and 1115 Waiver Special Terms and Conditions, Attachment E: Safety Net Care Pool Payments
5. Number of individuals accessing the Health Safety Net (HSN) Trust Fund [yearly]	Redirection of spending	EOHHS Health Safety Net
6. Availability of access to primary care providers [yearly]	Delivery system reforms	National Health Interview Survey (NHIS); MA Department of Public Health's Behavioral Risk Factor Surveillance Survey (BRFSS); CHIA's MA Health Insurance Survey
7. Number of individuals with incomes between 133 and 300 percent of FPL that take up QHP coverage with assistance of the Health Connector subsidy program [yearly]	Near universal health coverage	Health Connector summary reports of Qualified Health Plan coverage

* Program ended February 2015

Methods

Data Sources, Study Population and Comparison Group

Data collection will involve requesting and securing datasets or operational statistics from a variety of state agencies including the Massachusetts Center for Health Information and Analysis (CHIA), MassHealth (MH), and the Commonwealth Health Insurance Connector Authority (Health Connector). For PLMs 1 and 6, the study population consists of all Massachusetts residents.

Demonstration eligible residents who had or have access to ESI are the population enumerated for PLMs 2 and 3. Safety net hospitals and community health centers are counted for PLM 4. Uninsured individuals receiving health care covered by the HSN are enumerated for PLM 5. Demonstration eligibles with incomes between 133 and 300 percent of poverty are enumerated for PLM 7. There is no comparison group for this study as its purpose is to develop population level measures for EOHHS to continue monitoring its progress towards Demonstration Goals 1, 2 and 3.

Data Analysis

We will use descriptive analysis of existing measures to examine changes in PLMs. We will provide EOHHS with summary statistics for each PLM for each of two evaluation sub-periods (which we define as October 30, 2014 to December 31, 2015 and January 1, 2016 to June 30, 2017). Some data sources contain monthly capture of various activities (e.g., the number of demonstration eligible accessing Employer Sponsored Insurance), while other data is only available on an annual basis. The reporting of the data in tables and graphs will reflect the detail of time (monthly vs yearly) as data is available. Changes in these statistics over time may be assessed as reflected in the manner in which data is captured by the various sources.

Findings

There are no findings to date. We anticipate completing the final evaluation report for the PLMs by December 31, 2017. We anticipate this report will cover the Waiver period October 2014 to June 2017, though the precise dates will be dependent on data availability.

Section 3: Express Lane Eligibility Program

Background

Express Lane Eligibility (ELE) is a streamlined Medicaid application and renewal process, authorized by the Children's Health Insurance Program Reauthorization Act of 2009 (CHIPRA), intended to increase eligible children's enrollment and retention in Medicaid and CHIP. The 1115 demonstration authorizes MassHealth to create an ELE renewal process for MassHealth children and their parents/caregivers who also receive Supplemental Nutrition Assistance Program (SNAP) benefits administered by the Division of Transitional Assistance (DTA).

Findings from UMMS' evaluation of the ELE program during the first year after implementation (September, 24, 2012 to August 27, 2013) suggested that ELE may have increased retention in MassHealth and reduced churn for households and individuals participating in the program. The objective of the current evaluation is to continue to assess the ELE program's impact on member re-determination and re-enrollment during the period October 30, 2014 through June 30, 2017.

Specific evaluation aims are to:

- Describe the adult and child populations who used Express Lane Eligibility procedures for MassHealth renewal during each evaluation year, including demographic characteristics such as gender, age and the adults' status as parents or caretakers.
- Determine progress in completing eligibility re-determination for families. During each evaluation year, compare MassHealth re-enrollment among ELE members relative to a comparison group.

- Determine the progress of the program over time in redetermination for member subgroups, both those who were and were not affected by changes in ELE eligibility requirements.

Methods

We will use a retrospective, quasi-experimental design to examine changes in MassHealth enrollment among households who received the streamlined MassHealth renewal (ELE) compared with those who underwent traditional MassHealth annual renewal (non-ELE). We also will examine changes on the individual level as a secondary inquiry. The key outcome measure will be loss of MassHealth eligibility during the 90 days following the annual review date. We anticipate completing the data collection and analysis in phases: By June, 30, 2016, we will conduct an interim analysis based on data representing ELE program period October 30, 2014 to December 31, 2015 (though the precise time period will depend on data availability); by December, 31 2017, we will update and finalize the analysis with data from the estimated time period January 1, 2016 to June 30, 2017 (again, the precise time period will be dependent on data availability).

Data Sources

We will obtain data for the analysis from the MassHealth eligibility determination system (MA-21) maintained by the Massachusetts Executive Office of Health and Human Services. Data from September 24, 2012 (start of ELE) through June 30, 2017 will be used for the analysis. If available, data from one year prior to ELE implementation (September 2011-August 2012) will also be obtained. Medicaid ID Number, Household ID Number, and Person ID Number will be used to identify individuals who comprised a household and Annual Review Code will be utilized to identify inclusion in ELE. Other variables will include demographic characteristics, household size, MA-21 aid categories, and date and reason for loss of MassHealth eligibility.

Study Population

ELE households will be identified based on:

- Annual Review Codes¹ consisting of SNH or SNT;
- Receipt of active SNAP benefits;
- Receipt of active Medicaid benefits concurrently; and
- Having children under the age of 19 years

Non-ELE households will be identified using the following criteria:

- Receipt of active Medicaid benefits;
- Gross income at or below 150% federal poverty level;
- Having children under the age of 19;
- No active benefits from SNAP; and
- No Annual Review Codes consisting of SNH or SNT.

Individuals will be excluded from the study population if there is an 'XX' code in the Aid Category field and 'no coverage' in the Type of Coverage field, or if there is a 'blank' in the Aid Category field and 'no coverage' for Type of Coverage¹⁰ field in the MA-21 database. In addition, for

¹ Annual review codes indicate different population streams that are selected for the annual renewal process. SNH is an Express Lane review for families receiving food stamps who fall under Health Care Reform (HCR) rules. SNT is an Express Lane review for families receiving food stamps who fall under Traditional (non-HCR) rules.

households in the ELE group and households in the non-ELE group that have multiple review dates, we will use the first review date only.

Comparison Group and Variables

We will address differences in observed characteristics between ELE and non-ELE households by examining the feasibility of using propensity scores (Rosenbaum and Rubin, 1983, 1984; Rubin, 1997) to match each ELE household to one non-ELE comparison household. The same approach was used to match on the individual level. In the prior analysis, a relatively large percent of ELE households and individuals had propensity scores that could not be matched; too large a group to omit without potentially introducing significant bias into the analysis. Consequently, the final analysis was conducted with all ELE and non-ELE households and individuals. In order to obtain the most appropriate comparison group possible, we will explore alternative methods of propensity score matching using nearest neighbor or interval matching strategies. If we encounter the same problem as in the prior analysis, we will adjust for several demographic characteristics including age, gender, race, ethnicity, primary language spoken, disability, and household size. The outcome measure will be loss of MassHealth eligibility during the 90 days following the annual review date. We hypothesize that the ELE renewal group will be associated with a lower risk of loss of MassHealth eligibility, even after controlling for demographic characteristics.

Data Analysis

For each evaluation period we will compare demographic characteristics, disability, and household size between the two groups using t-tests for continuous variables and chi-square tests for categorical variables. Although the primary analysis will focus on the household-level, we will conduct a second analysis at the individual level. Kaplan-Meier estimates will be calculated for loss of MassHealth eligibility during the 90 days following the annual review date. This analysis will identify the unadjusted effect of ELE renewal on loss of MassHealth eligibility. We will use multivariable models to control for demographic characteristics, disability, and household size. In both the univariate and multivariate analyses, separate models will be estimated for households and individuals. These analyses will test whether households (or individuals depending on the analysis) who were in the ELE group had different risks associated with loss of MassHealth eligibility compared to those in the non-ELE group.

Multivariable models will also be used to evaluate trends in enrollment over time in member subgroups, both those who were and were not affected by ELE eligibility changes, relative to comparison group members. We will compare the percentage, on a quarterly basis, who lost enrollment, from the one year prior to the first evaluation period through August 2016 controlling for demographic characteristics. Member subgroups will include families with children \leq 133% of FPL, children in families $>133\%$ - 150% of FPL, and childless adults \leq 133% FPL. Re-enrollment trends in additional subgroups may also be evaluated. All statistical analysis will be performed using SAS.

Findings

There are no findings to date. We anticipate completing the final evaluation report for the ELE initiative by December 31, 2017. We estimate the final evaluation report will cover the ELE program period October 30, 2014 to June 30, 2017 (though the precise dates will be dependent on data availability).

Section 4: Delivery System Transformation Initiative

Background

The Delivery System Transformation Initiative (DSTI) offers performance-based incentive payments to seven participating safety-net hospital organizations (see Table 3 for a list of participating hospitals). The incentive payments encourage and reward these hospital systems for making investments in healthcare delivery initiatives and demonstrating achievement on various metrics. Individual hospital DSTI plans must include at least two projects from two of the three categories listed below and one project from the remaining category, selected from a menu of prescribed options within the three categories established in the DSTI Master Plan.

- **Category 1: Development of a Fully Integrated Delivery System**

Category 1 projects employ the concepts of the patient-centered medical home (PCMH) model to increase delivery system efficiency and capacity. Example projects include: investments in communication systems to improve data exchange with medical home sites; integration of physical and behavioral health care; development of integrated care networks across the care continuum, and; investment in patient care redesign such as patient navigators.

- **Category 2: Health Outcomes and Quality**

Category 2 projects include the development, implementation, and expansions of innovative care models that have potential to make significant and demonstrated improvements in patient experience, cost, and care management. Examples projects include: implementation of enterprise wide care management initiatives; improvement of care transitions and coordination across care settings; adoption of process improvement methodologies to improve safety, quality, and efficiency, and; alternative care settings for non-emergency room care.

- **Category 3: Ability to Respond to Statewide Transformation to Value-Based Purchasing and to Accept Alternatives to Fee-For-Service Payments that Promote System Sustainability**

Category 3 projects enhance safety net hospital capacity and core building blocks deemed essential to preparations for payment reform and alternative payment models. Example projects include: enhancement of performance improvement and reporting capabilities; development of risk stratification functionalities, and; development of systems to support integrated care networks.

DSTI also includes a fourth category, which consists of population-focused improvement measures related to Category 1 through 3 projects (e.g., avoidable ED use). DSTI hospitals are required to select a sub-set of Category 4a measures that align with their specific improvement projects; they are additionally required to report on nine Common Improvement Measures (referred to Category 4b measures). Collectively, the purpose of Category 4a and 4b measures is to assess whether system changes and investments adopted under Categories 1-3 affect care delivery performance. DSTI hospitals are required to report their hospital-specific measures (Category 4a) and the core set of common measures (Category 4b) twice per year.

Incentive payments are distributed contingent on whether a hospital meets the metrics it defined for each project specified in its approved DSTI plan. Hospital DSTI Semi-Annual Reports for Payment and Summary Reports for Payment to MassHealth describe and document progress

made toward each project milestone and metric, along with requests for incentive payments. These reports are the basis for authorizing payment.

Whereas in the previous Waiver demonstration period, the DSTI program focused primarily on project implementation activities, this next phase of the DSTI shifts the focus increasingly toward measuring and linking payments to improvements in health outcomes and quality. Specific evaluation aims are:

1. To assess whether participating hospitals are able to show improvements on measures within Category 4 related to the goals of the three-part aim as discussed in STC 49(e)(4) and pursuant to STC 52;
2. To determine whether some participating hospitals performed better than others in terms of improving measures within Category 4 overall and with respect to specific measures;
3. To understand what factors and conditions explain the success of especially high performing participating hospital systems.

Methods

We will use a mixed methods approach. Quantitative methods will be used to assess population-based outcome performance variation within and across the DSTI hospitals (and in comparison to State-wide trends for select measures). One key population-based outcome measure for this analysis will be derived from MassHealth claims and will assess 30-day readmissions. This analysis will be conducted by the Lewin Group. UMMS will complement Lewin's claims analysis with a descriptive and comparative review of the remaining Common Improvement Measures (Category 4b). Qualitative methods will be used to understand the organizational conditions associated with relatively greater improvement in key population-based outcome measures. Using case study methodology, our inquiry will focus on the organizational conditions (including DSTI project features, accomplishments, and implementation strategies) that appear to influence a hospital's overall performance and performance improvement.

Data Sources

For the quantitative phase, data sources will include MassHealth claims (for the 30-day readmissions analysis conducted by the Lewin Group) and the DSTI Semi-Annual Reports for Payment (for the remaining Category 4b measures). For the qualitative phase, data sources will include the DSTI Semi-Annual Reports for Payment (which includes detail on operational accomplishments) and key informant interviews with representative staff at select DSTI hospitals.

Study Population and Comparison Group

For the quantitative analysis of 30-day readmissions, the Lewin Group will examine the readmission rates of the seven DSTI hospitals and compare it to the statewide average.

For the qualitative phase, the study population will include the seven DSTI hospitals and a purposeful sample of key informants at select sites. All DSTI hospitals will be included in our analysis of the projects adopted, reported accomplishments and metrics (based on their semi-annual reports), and payments received. Additionally, we will conduct site visits at up to four of the seven hospitals for a more in-depth analysis. These four will represent a mix of "performance" - ideally, two hospitals that performed especially well as measured by improvements in key outcome measures, and one or two that performed less well. By studying hospitals identified as performing especially well, in-depth case studies will be used to understand the factors that lead

to effective delivery system transformation. By additionally studying lower performing hospitals (“controls”), we will be able to better isolate the factors that appear to most influence performance and to identify barriers to health system transformation.

Study Variables

The outcome measures of focus will be the 9 Common Improvement Measures (4B Measures). The “explanatory” measures are organizational in nature and fall into three main groups: 1) characteristics of the DSTI projects (these measures will characterize the specific projects and project elements planned within each hospital and the degree to which they were implemented as planned); characteristics of the organization (these measures will describe the hospital units and staff involved, and additional organizational resources brought to bear in implementing the DSTI projects), and; 3) characteristics of the environment (these measures will describe factors external to the hospital such as characteristics of the community being served, partnering provider organizations, and DSTI incentive payments received).

Data Analysis

Data analysis will involve several steps. The Lewin Group will conduct the quantitative analysis of 30-day readmissions. The Lewin Group will use the specifications from the National Quality Forum (NQF) to determine 30-day all-cause readmission rates. The standardized readmission rates will be calculated for the seven participating hospitals to compare their performance to the entire Massachusetts Medicaid population. The Lewin Group developed a risk adjustment methodology using the member’s DxCG risk score to assign a member to an acuity group to stratify readmission rates. They used the risk scores and counts of conditions from the DxCGs in the MassHealth risk score file to assign an individual to an acuity group for risk adjustment. The number of conditions, severity of those conditions, as well as age and sex were then used to calculate the individuals relative risk compared to the average. Expected readmissions rates were calculated on a statewide basis for all Medicaid members by Acuity level, and the observed readmission rate for each of the DSTI hospitals were computed for the same Acuity groups.

For the qualitative analysis, we will initially develop a typology of DSTI projects and outcomes, and examine whether particular projects, projects elements, and incentive payment amounts are associated with particular kinds of outcome improvements (as defined by Category 4 measures). Further, using findings from the Lewin Group’s analysis of 30-day readmissions, we will select up to four hospitals for more in-depth qualitative analysis. Site visits and key informant interviews will be used to gather detailed information about project implementation. Content coding of the interviews and cross-site analysis will be used to generate propositions about how intervention features influence outcomes (e.g., milestone achievement and reduced 30-day readmissions) under DSTI.

Findings

In November 2015, DSTI hospitals submitted their combined semi-annual/year end reports for Demonstration Year 18 (July 1, 2014-June 30, 2015) of the DSTI program under Massachusetts’ 1115 Medicaid Waiver. In these reports, each hospital outlined accomplishments across selected projects, reported on associated project metrics, and reported on population-based measures. Under DSTI, participating hospitals are required to implement a minimum of five and a maximum of nine projects (selected among a total of 24 different projects across Categories 1, 2 and 3), including one required project (Project 3.8: Participate in Learning Collaborative). Of the seven hospitals, two are implementing 6 projects and the remaining five are implementing 7 projects.

Among the more frequently selected projects were those related to improving care transitions (selected by 5 of the 7 hospitals); integrating physical health and behavioral health (also selected by 5 hospitals), and; care management interventions for patients with chronic diseases (selected by 4 hospitals). Less common projects were those related to expanding or enhancing the delivery of care provided through the patient-centered medical home (selected by one 1 hospital), implementing global or risk-based payments (selected by 1 hospital), and; developing an integrated acute and post-acute network across the continuum of care (selected by 1 hospital). See Appendix A for selected projects by hospital.

Within each project, hospitals have latitude about the specific project elements they select to implement and therefore the associated metrics they will report. The number of metrics that hospitals selected to report on in this reporting period ranged from 42-62. Only Category 4B metrics are common across all sites, with the exception for one Category 4b measure (Alcohol Use Screening), which is only applicable to hospitals with inpatient psychiatric services. For this reporting period, all hospitals achieved 100% of their required metrics, allowing them to receive the full incentive payment for the period (see Table 4).

Table 4. DSTI Semi-Annual/Year End DY18/SFY15 Report for Payment

	BMC	Carney	CHA	Holyoke	Lawrence	Mercy	Signature
# of Category 1 Projects metrics reported	9	10	8	12	10	3	6
# of Category 2 Projects metrics reported	17	8	16	19	12	14	16
# of Category 3 Projects metrics reported	12	6	13	14	12	12	11
# of Category 4A Projects metrics reported	5	10	8	9	9	8	7
# of Category 4B Projects metrics reported	7	8	8	8	7	8	8
Total # of metrics reported	50	42	53	62	50	45	48
Total # of metrics achieved	50	42	53	62	50	45	48
Percent metrics achieved	100%	100%	100%	100%	100%	100%	100%

Baseline 30-day all-cause readmission rates were calculated by the Lewin Group and are listed below (see Table 5).

Table 5. Baseline 30-day All-Cause Readmission Rates

Hospital	Observed Rate	Expected Rate	OE Ratio
Boston Medical Center	12.24%	11.77%	1.040
Cambridge Health Alliance	13.78%	11.20%	1.230
Holyoke Medical Center	11.74%	12.04%	0.975
Lawrence General Hospital	10.23%	10.96%	0.934
Mercy Medical Center	9.96%	11.30%	0.882
Signature Healthcare Brockton Hospital	12.64%	10.97%	1.152
Steward Carney Hospital	12.75%	11.69%	1.091
Overall State Rate	11.9%	11.9%	1.00

We will complete the final evaluation report for DSTI in December 2017.

Section 5: Infrastructure and Capacity Building Grants

Background

The Infrastructure and Capacity Building (ICB) grant program provides funding to eligible MassHealth participating Hospitals and Community Health Centers (CHCs) to support the development and implementation of health care infrastructure and capacity-building projects. Through these projects, the Executive Office of Health and Human Services (EOHHS) aims to invest in provider readiness for alternate payment methodologies. The program also supports EOHHS' efforts to improve overall health care delivery performance. In December 2015, EOHHS awarded \$20 million in ICB funding to 48 hospitals and CHCs. The initial award contract is for approximately six months (beginning at Contract execution on or about December 20, 2015 and ending on or about June 20, 2016) and may be extended at the discretion of EOHHS in an increment through December 31, 2016. The overall goals for the FY15 ICB grants are to:

- Encourage delivery system integration through forming Teams of providers across the care continuum;
- Improve cross-continuum information exchange and clinical integration;
- Improve provider readiness and capabilities for population management;
- Improve provider readiness for operating under Alternative Payment Methodologies (APMs) for the MassHealth population; and
- Advance the specific objectives of each of the Projects a given awardee proposes to implement.

With respect to the last goal (advancing the objectives of specific project), in order to qualify for ICB funding, applicants choose to implement one or more projects selected from five project areas. Each project area is further defined by one or more specific projects and in some cases, select projects are further defined by sub-projects. Awardees can tailor projects to meet their specific needs by choosing multiple sub-projects that, in combination reach one overall Project goal. The five project areas are:

1. Enhanced Data Integration, Clinical Informatics, and Population-Based Analytics:
2. Shared Governance and Enhanced Organizational Integration:
3. Enhanced Clinical Integration:
4. Outreach and Enrollment:
5. Catalyst grants for integration.

The objective of the evaluation is to assess the impact of the ICB grants that allow participating providers to advance the Commonwealth's goals related to delivery system integration, provider readiness and capabilities for population management and, provider readiness and capabilities for operating under alternate payment methodologies. Specific evaluation aims are to:

- Describe the portfolio of projects funded in FY15 in terms of awardee type, funding amount, project and sub-project type(s), and other key characteristics;
- Assess variation among awardees in terms of performance under the grant initiative and specifically in terms of meeting the goals and deliverables of their respective Projects;
- Determine the organizational factors that facilitate effective Project implementation and by extension advance the Commonwealth's goals under the ICB grant program.

Methods

Our ICB evaluation will use a descriptive research design; specifically, we will use case study design and qualitative methods to characterize ICB Grant Projects, assess ICB Grant awardees' performance, and determine the factors associated with especially effective awardee initiatives.

Data sources and study population

Data sources will include ICB awardees initial proposals for funding, final work plans, budgets, and final reports, which will include the status of completed deliverables by the end of the contract. Final reports are due from all grantees by June 2016 unless a grantee is granted an extension in which case the final report could be due any time between July and December 2016. In addition to these secondary data sources, the evaluation will also rely on key informant interviews with representatives of the ICB grant program and select hospital and CHC awardees. With respect to study population, the FY15 ICB grant program includes 48 providers (a combination of hospitals and CHCs operating across the Commonwealth). The study population for the ICB program is these providers and the MassHealth populations they serve.

Comparison group

We will view the ICB success from the perspective of improvements and accomplishments over the contract period for each participating provider. We will also compare and contrast participating providers within the ICB program in order to pinpoint factors that promote effective implementation of funded improvements and transformations under the ICB grant initiative. Given that the ICB awardees represent large numbers of eligible CHCs and hospitals in the State, it is difficult to identify an appropriate comparison group of non-ICB providers; it is also difficult to identify an appropriate common outcome measure given the diversity of ICB Projects and Sub-projects and given that "outcome measures" in this instance are organizational in nature. However, by comparing awardees *within* the ICB grant, we can learn a great deal about the conditions that facilitate provider adoption of integrated health care delivery systems and related structures to support readiness for APMs.

Study variables

Our approach for evaluating the ICB grant program will be guided by implementation frameworks. These frameworks generally understand organizational adoption of innovations as driven by characteristics of the innovation being adopted, characteristics of the organization adopting the innovation, and characteristics of the environment in which the organization operates. If we consider the ICB Projects as a form of innovation, this implementation framework provides a useful lens for gathering data and understanding program performance. Accordingly, evaluation measures will include the following:

- a. **Performance measures**: Performance measures will include both process and outcome measures. Process measures will include an awardee's documentation of Project activities (qualitative and quantitative) as measured against expected Project activities; outcome measures will include an awardee's completed deliverables as measured against expected deliverables, and reported measures of success.
- b. **Innovation characteristics**: Innovation characteristics refer to the characteristics of the specific Project(s) a given awardee proposed to implement including the funding amount associated with the Project(s), the specific goals of the Project(s), and proposed work plan for implementing and completing the project.

- c. Organizational characteristics: These factors include characteristics of the individual providers participating in the ICB grant program including patient population; structure (e.g., stand-alone, part of network); readiness to implement proposed Project(s); staffing resources devoted to implementing Project(s), and; capacity for sustainability. Organizational factors also include features of the delivery system in which a provider operates, which can also influence Project implementation and success.

Study approach and analysis plan

To address evaluation aims one and two, we will describe and array the 48 providers participating in the FY15 ICB funding along key study variables related to performance, innovation being adopted (i.e., specific Projects and Sub-projects), and key awardee organizational characteristics. We will rely on secondary data sources for this work including awardee’s proposals for funding and final reports. We will use this analysis to characterize the program overall in terms of the type of projects being adopted and by what kinds of providers and with what kinds success. To address evaluation aim three, we will assess whether themes emerge with respect to the conditions associated with performance variation (i.e., are some project types more likely to succeed than others; are certain provider characteristics associated with more successful completion of proposed projects, etc.). We plan to complement this analysis with more in-depth case studies of select provider sites. In collaboration with ICB grants staff, we will select an estimated 4 to 6 especially high performing provider sites (defined as provider that performed especially in terms of meeting their project goals and related deliverables) and conduct key informant interviews with representative staff at these sites. Data analysis will focus on cross-site themes related to provider decision-making for selecting and implementing projects, and lessons learned about the factors that facilitate and impede their work in this area.

Findings

The ICB grant program funded a total of 80 projects across the 48 participating providers. The initial contracts are expected to run for six months (January 1, 2016 to June 30, 2016) and may be extended at the direction of EOHHS in any time increments through December 2016. Participating providers represent a mix of hospitals (19) and community health centers (29). Across the categories of projects, the ICB grant program funded a total of 38 projects related to enhanced clinical integration; 26 projects related to enhanced data integration; 13 projects related to outreach and enrollment; 2 projects related to shared governance and enhanced clinical integration, and; 1 catalyst grant for integration (See Table 5).

Table 6: Infrastructure and Capacity Building (ICB) Grant Projects

ICB Category	Number of projects funded
Enhanced Data Integration, Clinical Informatics, and Population-Based Analytics	26
Shared Governance and Enhanced Organizational Integration	2
Enhanced Clinical Integration	38
Outreach and Enrollment	13
Catalyst grants for integration	1

We will produce a final evaluation report for the ICB grant initiative in June 2017.

Section 6: Conclusions

Massachusetts continues to advance the goals of the 1115 Waiver by implementing four initiatives during the current Waiver extension period (October 2014 to June 2019). These initiatives include continued monitoring of population level measures (PLM); the express lane eligibility program (ELE); the delivery system transformation initiative (DSTI), and; the infrastructure and capacity building grants (ICB). To-date, data from the DSTI and ICB initiatives suggest that these initiatives are rolling-out as scheduled with all seven DSTI hospitals meeting 100% of their reporting requirements in DY18 and with EOHHS successfully funding 48 providers to implement various infrastructure and capacity building projects. In the coming months, the evaluation of these efforts for the period October 2014 to June 2017 will produce a final evaluation in June 2017 (for ICB) and December 2017 (for PLM, ELE and DSTI). In the meantime, EOHHS plans to submit a new five-year Waiver proposal with a start date on July 1, 2017, which we anticipate will require a new evaluation design for the period July 2017 to June 2022.

Appendix A

Project Selection by DSTI Hospitals, DY 18/SFY 15							
Project Number/Name	BMC	Carney	CHA	Holyoke	Lawrence	Mercy	Signature
1.1 - Patient Centered Medical Home			x				
1.2 - Integrate Physical and Behavioral Health	x	x		x		x	x
1.3 - Establish Health Data Exchange Capability to Facilitate Integrated Patient Care					x		
1.4 - Practice Support Center				x			
1.5 - Implement Patient Navigation Services		x					
1.6 - Develop Integrated Acute and Post-Acute Network Across the Continuum of Care					x		
2.1 - Implement Care Management Interventions for Patients with Chronic Diseases	x		x	x			x
2.2 - Implement Improvements in Care Transitions		x	x	x	x	x	
2.3 - Develop or Expand Projects to Re-Engineer Discharge Processes	x						
2.4 - Implement Primary Care Based System of Complex Care Management for High Risk Population(s)	x						x
2.5 - Implement Process Improvements to Improve Safety Quality and Efficiency		x				x	
2.6 - Provide an Alternative Care Setting for Patients who Seek Non-Emergency Care						x	
2.7 - Reduce Variations in Care for Patients with High Risk Conditions	x			x			
2.8 - Clinical Pharmacy Program to Transform Medication Safety and Quality					x		
2.9 - Medication Safety at Transitions of Care							x
3.1 - Develop Risk Stratification Capabilities for Patient Populations and Alternative Payment Models							x
3.2 - Design and Implement a Hospital-Based 360 Degree Patient Care Program							x
3.3 - Develop Governance, Administrative, and Operational Capacities to Accept Global Payments/Alternative Payment	x				x		
3.4 - Develop an Integrated Care Organization to Enhance Capacity and Respond to Alternative Payment Systems					x	x	
3.5 - Develop Administrative, Organizational, and Clinical Capacities to Manage Care for Patients			x			x	
3.6 - Establish an Enterprise-Wide Strategy for Information Management and Business Intelligence				x			
3.7 - Implement Global /Risk-Based Payments		x					
3.8 - Participate in a Learning Collaborative	x	x	x	x	x	x	x
3.9 - Population Health Management Capabilities			x				
TOTAL	7	6	6	7	7	7	7