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1115
DEMONSTRATIONS

DSRIP

Premium Assistance

Beneficiary Engagement/ Premiums

MLTSS

Medicaid 1115 Demonstration Evaluation Design Plan

Final Report • May 15, 2015

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CONTENTS

TABLES

FIGURES

I. INTRODUCTION

In September 2014, the Centers for Medicare & Medicaid Services (CMS) contracted with Mathematica Policy Research and its partners, Truven Health Analytics and the Center for Health Care Strategies, to conduct a national, cross-state evaluation of several different types of Medicaid section 1115 demonstration waivers. This contract, which is projected to be ongoing through federal fiscal year 2019, will both track the general performance of the demonstrations of interest and evaluate demonstration impacts and outcomes. Results of the evaluation will be presented in a series of periodic rapid-cycle reports, as well as interim and final evaluation reports. The work will also include detailed assessments of data sources and state-led monitoring, evaluation, and diffusion or replication activities. This report lays out the general design and approach of the evaluation of these demonstrations.

A. Background

Medicaid section 1115 demonstration waivers offer states wide flexibility to test new approaches to administering Medicaid programs that depart from existing federal rules yet are consistent with the overall goals of the program. Because long-standing policy requires that section 1115 demonstrations be budget neutral, the demonstrations allow the federal government to support state innovation with limited risk to federal funding. Section 1115 demonstrations offer myriad design choices for states to test, ranging from provider payment reforms, expanded coverage or cost sharing, and implementation of behavioral incentives, to delivery system reforms such as managed care. Though state approaches to section 1115 demonstrations vary, many demonstrations share the common goals of controlling costs while improving access and quality. Evaluating the degree to which each of four demonstration types achieve these and other goals, such as system transformation, as well as the links between program characteristics and program results is critical to CMS because the experiences and results will provide the federal government and states with evidence to inform policy at all levels and to improve future section 1115 demonstrations.

Types of section 1115 demonstrations. Every section 1115 demonstration is different and reflects the unique characteristics and goals of the state. The national evaluation of these demonstrations will focus on four broad categories or types of demonstrations, and each demonstration type will be evaluated separately. These four types are testing new ground for Medicaid policy reform by implementing new approaches to provider payment, providing beneficiary coverage, incentivizing appropriate beneficiary care-seeking behaviors, and restructuring the system of care for vulnerable low-income people. Specifically, this evaluation will focus on demonstrations that (1) create delivery system reform incentive payment (DSRIP) programs, (2) establish alternative ways to provide coverage to newly eligible adults (premium assistance), (3) engage beneficiaries in their care and change their care-seeking behaviors, or (4) expand managed care to serve people who are frail or disabled (managed long-term services and supports [MLTSS]).

1. **DSRIP** demonstrations support incentive payments to providers who engage in reforms that improve access, patient care, and population health and reduce per capita costs. Providers, broadly defined, agree to engage in improvement projects that align with the reform

objectives of the state. The largest DSRIP demonstrations are in California, Massachusetts, New Jersey, New York, Oregon, and Texas.

2. **Premium assistance** demonstrations allow states to use a market-based approach to covering adults. States have for many years offered premium assistance programs, most of which subsidize the purchase of employer-sponsored insurance (ESI), through section 1115 demonstration waivers and other authorities. However, CMS has approved section 1115 demonstrations in Arkansas and Iowa, and recently in New Hampshire, which make premium assistance mandatory for newly eligible adults. These new demonstrations are intended to support the purchase of a standardized, affordable set of benefits through qualified health plans (QHPs) in state Marketplaces, allowing states to create private coverage opportunities for many more people than were enrolled in previous premium assistance programs.
3. **Beneficiary engagement/premiums** demonstration programs test alternative ways of providing adult coverage by using incentives to encourage personal responsibility and healthy behaviors that may include premium payments by low-income beneficiaries. Previous healthy behavior incentives for Medicaid populations have aimed to improve health outcomes by providing direct financial awards or offering “enhanced” benefits to beneficiaries who seek preventive care and make behavior changes such as quitting smoking, losing weight, and seeking health screenings. Current demonstrations in Iowa, Michigan, and Indiana allow beneficiaries at certain income levels to have cost-sharing requirements or monthly premium payments waived or reduced if they adopt certain healthy behaviors.

4. **MLTSS** demonstration programs aim to promote person-centered home and community-based rather than institutional care for people who are frail or have disabilities, to both increase the quality of care and control costs. In MLTSS programs, states contract with managed care organizations (MCOs) to cover long-term services and supports (LTSS) and pay for these services using predetermined per-member-per-month (PMPM) capitation payments. Because of the higher cost of institutional services, the capitated payment arrangement may encourage the MCOs to favor less costly community placement. Section 1115 demonstration waivers are one of several vehicles states use to authorize MLTSS; several states used other federal authorities to develop MLTSS programs but turned to a section 1115 demonstration to expand benefits or eligibility, or to consolidate the administration of their programs.

Table I.1 presents state activity regarding section 1115 demonstration waiver applications and approvals as of the end of January 2015. However, because this information is constantly changing, a part of our work will be to stay abreast of the landscape of section 1115 demonstrations and their objectives, and adjust our models and assumptions to reflect program realities.

Table I.1. State section 1115 demonstration programs and other similar initiatives

State	Type 1: DSRIP	Type 2: premium assistance		Type 3: beneficiary engagement/premiums		Type 4: MLTSS		Other health reform initiatives				
	1115 demon-stration	1115 demon-stration	Existing program(s)[a]	1115 demon-stration	Existing programs[b]	1115 demon-stration	Other authority[c]	SIM[d]	ACA Medicaid expansion[e]	Financial alignment demon-stration[f]	Medicaid Health Home[g]	Money Follows the Person[h]
Alabama			A[i]								A	A
Alaska			A[i]									
Arizona			A[j]			A		P	A			
Arkansas		A		A				A	A		P	A
California	A		A[i]		A[k]	A		P	A	A	P	A
Colorado			A[i, j, l]					A	A	A		A
Connecticut					A[k]			A	A	P	P	A
Delaware						A		A	A		P	A
District of Columbia									A		P	A
Florida	A[m]		A[j]		A[n]		A					
Georgia			A[i]									A
Hawaii					A[k]	A		P	A	P	P	A
Idaho			A[j]		A[o]			A			A	A
Illinois			A[i]				A	P	A	A	P	A
Indiana				A					A			A
Iowa		A	A[i, p]	A				A	A		A	A
Kansas	A		A[i]			A					A	A
Kentucky			A[i]		A[o, u]			P	A		P	A
Louisiana			A[i]				P					A
Maine			A[i]					A			A	A
Maryland								P	A		A	A
Massachusetts	A		A[i, j, p, q]			A	A	A	A	A	P	A
Michigan				A			A	A	A	A	A	A
Minnesota			A[i, p]		A[k]		A	A	A	A	P	A
Mississippi												A

Table I.1 (continued)

State	Type 1: DSRIP	Type 2: premium assistance		Type 3: beneficiary engagement/premiums		Type 4: MLTSS		Other health reform initiatives				
	1115 demon-stration	1115 demon-stration	Existing program(s)[a]	1115 demon-stration	Existing programs[b]	1115 demon-stration	Other authority[c]	SIM[d]	ACA Medicaid expansion[e]	Financial alignment demon-stration[f]	Medicaid Health Home[g]	Money Follows the Person[h]
Missouri			A[i]								A	A
Montana			A[i]		A[k]			P				A
Nebraska			A[i]				P					A
Nevada			A[i, j]		A[k]			P	A			A
New Hampshire		A	A[i]		A[k]		A	P	A			A
New Jersey	A		A[i, j, p]			A		P	A		A	A
New Mexico	A[m]				A[n]	A		P	A		P	
New York	A		A[j]		A[k]	A		A	A	A	A	A
North Carolina							A				A	A
North Dakota			A[i, l, p]						A			A
Ohio							A	A	A	A	A	A
Oklahoma			A[j]					P		P	P	A
Oregon	A[m]		A[i, j]					A	A		A	A
Pennsylvania			A[i]				A	P	A			A
Rhode Island			A[i]			A		A	A	P	A	A
South Carolina			A[i, l]				A			A	P	A
South Dakota			A[r]								A	A
Tennessee						A		A			P	A
Texas	A		A[i]		A[k]	A		P[s]		A		A
Utah			A[i, j, p]					P				
Vermont			A[j]			A[t]		A	A		A	A
Virginia			A[i, j]				A	P		A	P	A
Washington			A[i, l, p]					A	A	A	A	A
West Virginia					A[o, u]			P	A		P	A
Wisconsin			A[j]	A	A[k]		A	P			A	A
Wyoming			A[i]								P	

Table I.1 (continued)

[a] Data are from 2009, available in a 2010 GAO report: http://www.gao.gov/assets/100/96518.pdf. This report notes that CHIPRA also provides authority for premium assistance, but at the time of GAO research, no state had implemented premium assistance under CHIPRA.

[b] All programs listed incentivize healthy behaviors rather than applying premiums not connected to behavior incentives. Not every program listed is statewide, though many are.

[c] Includes 1915(b)/(c) waivers, 1932(a) state plan amendments, section 1115(A) duals demonstrations, and other authorities. Information was derived from multiple sources, including the (1) NASUAD MLTSS Tracker: http://www.nasuad.org/initiatives/tracking-state-activity/state-medicaid-integration-tracker; (2) 2012 Truven Report: http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Delivery-Systems/Downloads/MLTSSP_White_paper_combined.pdf; (3) HMA Weekly Roundup: http://www.healthmanagement.com/publications/hma-weekly-roundup/; (4) Medicaid.gov Demonstrations & Waivers; and (5) state websites. As of this report, duals demonstrations were approved in California, Illinois, Massachusetts, Michigan, New York, Ohio, South Carolina, Texas, and Virginia.

[d] "A" indicates that the state has received a SIM award for model testing. "P" indicates that the state has received a SIM award for model pre-testing or model design. For more information about whether the award occurred in round 1 or 2, see: http://innovation.cms.gov/initiatives/state-innovations/.

[e] "A" indicates that the state was implementing an expansion. See: http://kff.org/health-reform/state-indicator/state-activity-around-expanding-medicaid-under-the-affordable-care-act/.

[f] "A" indicates that the state met the standards and conditions for the financial alignment initiative and developed a memorandum of understanding to establish parameters. "P" indicates that the state has an active proposal. See: http://www.cms.gov/Medicare-Medicaid-Coordination/Medicare-and-Medicaid-Coordination/Medicare-Medicaid-Coordination-Office/FinancialAlignmentInitiative/StateProposals.html.

[g] "A" indicates that the state has established a health homes program. "P" indicates that the state plans to implement a health homes program during FY 2015. Sources include: http://www.medicaid.gov/state-resource-center/medicaid-state-technical-assistance/health-homes-technical-assistance/approved-health-home-state-plan-amendments.html and http://files.kff.org/attachment/medicaid-in-an-era-of-health-delivery-system-reform-results-from-a-50-state-medicaid-budget-survey-for-state-fiscal-years-2014-and-2015-report.

[h] http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Long-Term-Services-and-Supports/Balancing/Money-Follows-the-Person.html.

[i] Section 1906 of the SSA (allows states to use Medicaid funds to purchase group plan coverage for eligible individuals; usually referred to as Health Insurance Premium Payment programs).

[j] Section 1115 demonstration (includes Health Insurance Flexibility and Accountability waivers).

[k] Authorized by section 4108 of the Affordable Care Act; CMS grant program (Medicaid Incentives for the Prevention of Chronic Disease).

[l] Section 1902(a)(10)(F) of the SSA (allows use of Medicaid funds to pay for COBRA continuation coverage).

[m] Florida, New Mexico, and Oregon operate initiatives that share key elements of DSRIP demonstrations.

[n] Section 1115 demonstration.

[o] Authorized under the Deficit Reduction Act and enacted through a State Plan Amendment.

[p] Section 1905(a) of the SSA (allows states to use Medicaid funds for premiums for certain Medicaid-eligible individuals).

[q] Section 2105(c)(3) of the SSA (allows states to provide coverage to CHIP-eligible children and their families by subsidizing premiums for group health plan and non-group coverage).

[r] 1903(a)(7) of the SSA (allows for federal funding for proper and efficient administration of states' Medicaid programs).

[s] Texas received a model design award in round one and did not receive an award in round two.

[t] Vermont provides capitated funds to a state agency (Department of Vermont Health Access) which "manages" care on behalf of beneficiaries.

[u] Program closed.

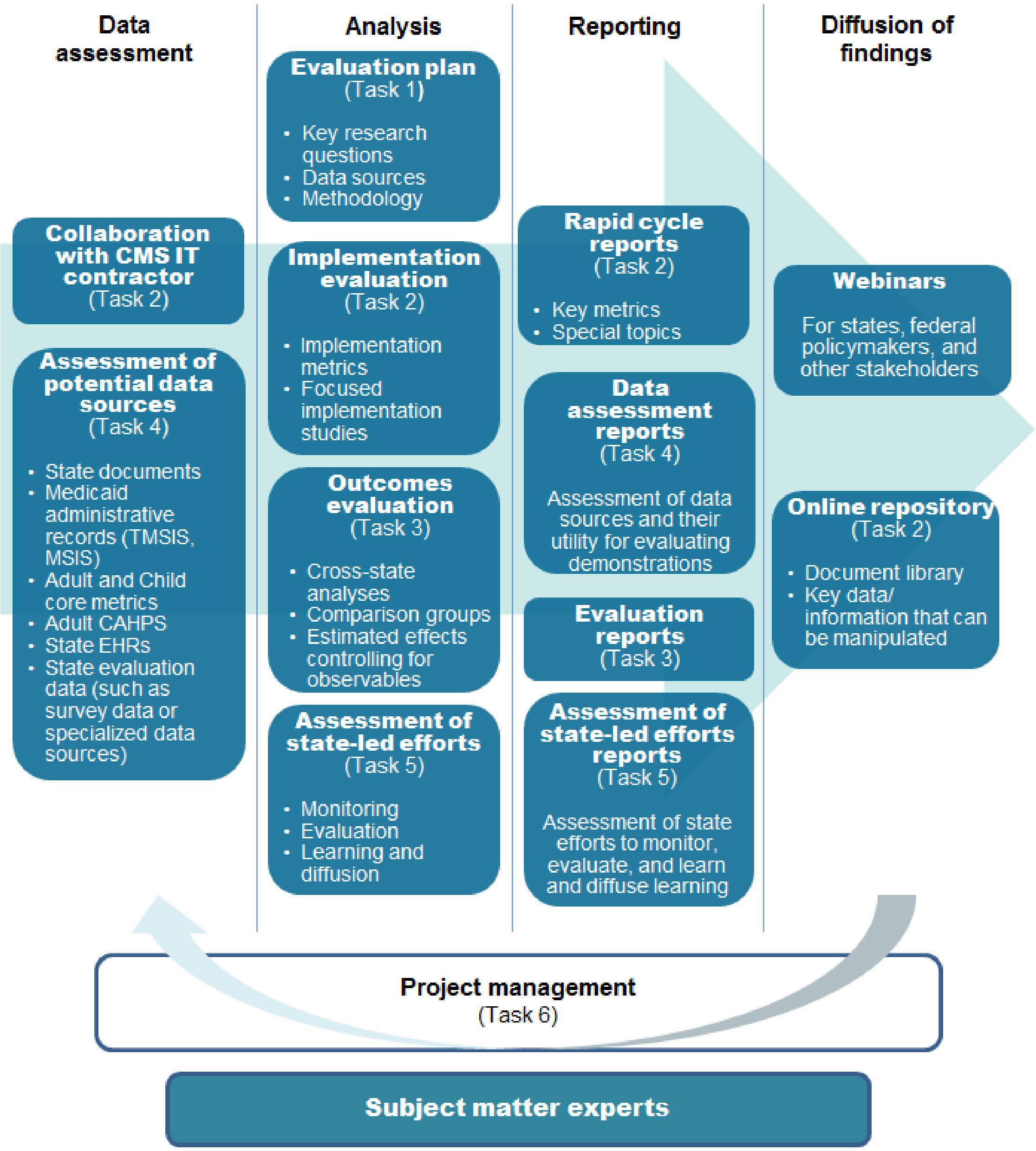
A = Approved section 1115 demonstration or existing program under other authorities, unless otherwise noted, as of July 2015; P = Proposed section 1115 demonstration, unless otherwise noted, as of July 2015.

ACA = Affordable Care Act; DSRIP = Delivery System Reform Incentive Payments; MLTSS = Managed Long-Term Services and Supports.

B. Overview of the basic evaluation design

To evaluate the four different types of section 1115 demonstration programs, we envision four main phases of work: (1) data assessment and collection, (2) analysis, (3) reporting, and (4) diffusion. The last phase will include both the dissemination of project results to CMS and the states but also the development of recommendations to CMS on how data and state-led monitoring, evaluation, and learning systems can be strengthened (Figure I.1). The first key task—development of the evaluation design plan—appears at the top of Figure I.1. This plan will specify the key research questions the evaluation will address for each demonstration type, as well as the primary data sources and methodologies that will be used. This plan will guide decision making at all levels of the study and drive the content of the reporting tasks.

Figure I.1. Project vision



This report is the evaluation plan. Other items, such as the assessment of potential data sources (task 4) and state-led efforts (task 5) will be described in other, companion reports that will be forthcoming. We expect that this plan will be a living document during the first several years of the study as stakeholders provide feedback on the initial set of research questions and the different demonstration programs unfold and mature. In addition, because context matters, we anticipate that the plan may be altered as the policy landscape changes. Nevertheless, we expect that the focus of the overall evaluation will remain on understanding the outcomes of these demonstration programs in terms of how they alter the delivery system for low-income populations and whether they change access to care, the quality of care, or health outcomes of targeted populations while constraining the costs of care. Essentially, the evaluation will seek to determine whether these demonstration programs have improved the efficiency and effectiveness of the health care system for vulnerable, low-income people.

This version of the evaluation plan focuses heavily on the research questions that will guide the work. It does not include fully developed methodological plans for addressing each question, though for each question we propose a general approach. We elected not to develop a full methodological approach for each question because the next step is to determine the feasibility of using key data sources for the proposed research. Several of the key data sources are new sources that have recently been developed or were being developed at the same time this plan was being written. The next step will be to determine whether these new data sources (as well as more established data sources) are relatively complete, have the required level of detail, and are of the quality necessary for the analyses we propose. These data assessments will help us determine the feasibility of addressing all the research questions proposed and decide how we tailor our methodological approach. In addition, if we learn that we have to devote more project resources than we had initially planned to obtaining data from the states, we will be more limited in our ability to address all the research questions proposed in this plan.[1]

The detailed questions described in the following chapters are unique to each demonstration type. Consequently, the discussion of research questions, relevant outcome measures, data sources, and methodological approaches are organized by demonstration type. Essentially, this evaluation plan combines four plans, one for each type of demonstration. However, each evaluation plan has the same two key features: one is the flexible nature of the analyses, and the other is how we will track and monitor implementation of the demonstrations.

The first key feature of each evaluation plan is a general, flexible approach. State participation in any given section 1115 demonstration program is a deliberate choice based on an array of factors unique to the state. In addition, program features are unique to each state, and implementation of each demonstration program is staggered. Our general approach must accommodate a high level of variability across states and to the extent possible, must track outcomes before and after implementation to exploit the staggered implementation of the demonstrations. Whenever possible, the evaluation will compare the change over time among demonstration states to changes that occurred in comparison states. Because this general

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[1] The data assessment work plan was in its initial stages of development when the evaluation design plan was written. It is anticipated that the work plan would be complete in the summer of 2015. Given the nature of the plan and the new data sources that need to be assessed, the actual data assessment will probably not be completed until early or mid-calendar year 2016.

approach may not work for every research question, it will be altered and tailored to specific research questions and specific data as needed.

The second key feature of each evaluation plan is the approach to tracking implementation of the demonstrations (task 2). Every evaluation needs to understand how the demonstration is implemented and operating in practice. We will track demonstration implementation in two ways: (1) through data metrics that capture the current status of the demonstration and can be used to monitor progress, and (2) through focused qualitative research on key implementation topics. This component of the evaluation will be reported in the semiannual rapid-cycle reports that are part of the reporting phase illustrated in Figure I.1. These rapid-cycle reports will include two components: (1) a data report similar to a dashboard that can be manipulated by stakeholders, and (2) a narrative report focused on a current implementation topic of interest to stakeholders. This two-part design allows us to report and track, on a semiannual basis, key metrics for each demonstration type, while also reporting in some depth on a range of implementation issues.

Another feature of the plan, which is common to many program evaluations, is how the implementation analyses will be incorporated into the impact and outcome analyses (task 3). We anticipate that this incorporation will occur in at least three different ways. First, we will use what we learn from the implementation analyses to help us interpret the findings from the impact analyses. Second, the implementation analyses is likely to inform methodological decisions relating to subgroup analyses or the selection and construction of outcome measures. For example, if a demonstration excludes Medicare-Medicaid enrollees by design, then our analyses should exclude that group as well. Third, we anticipate that the implementation analyses will reveal key program features that may be correlated with outcomes and should be controlled for when estimating demonstration impacts. Because exact examples of how this incorporation will occur in practice was not known at the time this plan was written, the individual evaluation plans that appear in the following chapters do not always emphasize this point.

Key challenges for the evaluation. Like all program evaluations, the national evaluation of the section 1115 demonstrations will face several important challenges that will make it difficult to identify the effects of these programs. Most of these issues arise in relationship to uncontrollable contextual factors, data availability and acquisition, measurement, or methodology.

Contextual factors. The demonstration effects will be influenced by a variety of external and internal confounders that will make it difficult to attribute changes in health outcomes to the demonstrations of interest. A number of health reform initiatives are taking place outside the section 1115 demonstrations—including the State Innovation Models (SIM), financial alignment demonstrations for Medicare-Medicaid enrollees, Accountable Care Organizations, Medicaid Health Homes, and Money Follows the Person demonstrations—and many states are pursuing one or more of these initiatives in addition to their section 1115 demonstration(s). The health care system is also highly dynamic, and factors outside the demonstration design (for example, provider participation and practice patterns) could influence health outcomes. Moreover, many demonstrations also allow beneficiaries to self-select into the program, and a nonrandom design could create fundamental differences in the populations who enroll in the demonstrations.

The evaluation will mitigate these factors in a number of different ways, including using controls for implementation and timing of other health reform initiatives when estimating demonstration outcomes. We will also explore the feasibility of using more complex estimation techniques designed to capture multiple interventions, such as Bayesian hierarchical multivariate meta-regression models. In addition, careful selection of comparison states will be critical. When feasible, the comparison states will include two categories, one that did not implement health reform initiatives similar to those of the demonstration states, and another that did. This type of approach will improve our ability to tease out the influence of the other health reform initiative on the outcome of interest.

Data availability. Creating the proposed outcomes measures will be highly dependent on the usability of our proposed data sources. Many of our proposed measures rely on administrative data from the national Medicaid data systems, such as the Medicaid Statistical Information System (MSIS) and the forthcoming new version of MSIS known as Transformed MSIS (TMSIS). Because these national uniform data systems rely on data submissions from the states, the quality and completeness can vary widely across states and time. As of last report from CMS, the infrastructure for TMSIS was ready to receive state data in April 2015. However, states are in different stages of readiness to submit data using TMSIS specifications, and many states have not continued to provide adequate MSIS data in anticipation of the conversion. This latter issue means that we will have three different categories of Medicaid enrollment and claims records: (1) MSIS records before states began the process of transitioning to TMSIS; (2) MSIS records during the period when states are transitioning to TMSIS, which may not be of the same quality as earlier MSIS data; and (3) TMSIS data. Based on Mathematica's experience validating the MSIS data since 1999, we also anticipate that the quality of TMSIS data will change and improve over time.

The evaluation will have two main approaches to mitigating the issues relating to Medicaid enrollment and claims records. The first is to obtain these data directly from the states. This approach has worked for other studies, but it requires considerable resources to execute, partly because we would need to establish a data use agreement with each state. If we have to pursue this alternative, it will mean fewer resources for conducting analytical work, and it may limit the number and range of research questions the evaluation can address. The second approach is to obtain other data, such as the adult, child, and health home core measure set data and the adult Medicaid Consumer Assessment of Healthcare Providers and Systems (CAHPS) data from CMS. These data also have issues. The core measure sets are measures aggregated to the state level, which makes them challenging to use because of attribution issues. However, they may provide useful information for benchmarking purposes if they are of sufficient quality. The adult Medicaid CAHPS data will be available at the individual level, but it is not clear that demonstration participants will be identifiable in the data and whether the survey will be repeated in later years for pre/post comparisons. The evaluation could also rely on other survey data (for example, the more general CAHPS data and the Behavioral Risk Factor Surveillance System [BRFSS]). These sources may also sample individuals or aggregate results using a population that does not align with our study population, thereby diluting the strength of our findings. While we will make every attempt to obtain uniform national data from CMS, we may have to obtain data directly from the states for some research questions if national data cannot be used. For example, there are health status and outcome questions that will necessitate the use of clinical data from either electronic health records (EHRs) or chart reviews. There are well-documented problems with EHR penetration among safety net providers, particularly at the community level. In addition, data-sharing agreements may not be in place, though they are necessary to complete some chart review collections.[2]

C. Research questions and their selection

This report focuses heavily on the research questions that will drive the evaluation and the analyses of demonstration outcomes. Mathematica began the process of developing these questions by proposing an initial set of research questions to CMS subject matter experts. A series of meetings with the experts, which began in November 2014 and concluded in January 2015, was used to refine the list of research questions for each demonstration type. As a result, the research questions became more extensive and more detailed. After these meetings, the feedback was fully incorporated into the evaluation plan, and the evaluation team then presented the initial research questions to state Medicaid agencies (March 5 and 12, 2015) and to small groups of consumer advocates (March 9 and 30, 2015) and other researchers (March 27and April 24, 2015). Additional feedback received from these stakeholders were incorporated whenever possible.

Prioritization of research questions. The list of research questions for each demonstration type is long and may become longer or be modified as programs mature and policy concerns progress. At the time this report was submitted, it was unclear whether the evaluation team would have the resources necessary to address every question presented in this plan. Hence, an additional step of identifying the priority research questions that must be addressed versus those that can be addressed if resources allow will have to occur before analyses of demonstration outcomes begin. This priority-setting exercise will be done in collaboration with CMS subject matter experts.

D. Purpose and organization of the evaluation plan

This report presents our proposed approach to evaluating four categories of section 1115 demonstration programs. First, it describes primary research questions, key data sources, outcomes measures, and our initial thoughts for different analytical approaches for each of the four section 1115 demonstration types: DSRIP (Chapter II), premium assistance and beneficiary engagement/premiums (Chapter III), and MLTSS (Chapter IV).

The last two chapters discuss how the results of the evaluations will be reported. Chapter V discusses the timing and content of the rapid-cycle reports, which will include options for the "dashboard" component of the rapid-cycle reports as well as topics for an issue brief component. The concluding Chapter VI describes the interim and final evaluation reports that will be produced during calendar years 2017 and 2019.

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[2] Chart reviews may include some additional privacy issues that will need to be addressed, and some organizations may require an institutional review board assessment of the study protocol.

II. DELIVERY SYSTEM REFORM INCENTIVE PAYMENT DEMONSTRATIONS

A. Introduction

DSRIP demonstrations support incentive payments to safety net hospitals and other providers, such as physicians, willing to embrace reforms that improve patient care and population health and reduce per capita costs. The evaluation will include the larger DSRIP demonstration states (listed in Table II.1).

Table II.1. DSRIP demonstration states and number of participating providers included in evaluation

DSRIP demonstration states	Number of participating lead organizations
New York	25 performing provider systems[a]
Massachusetts	7 public and private acute care hospitals with a disproportionately high share of Medicaid and uninsured patients
New Jersey	55 acute care hospitals
Oregon[b]	16 coordinated care organizations
Texas	20 regional health partnerships
California	21 public hospitals

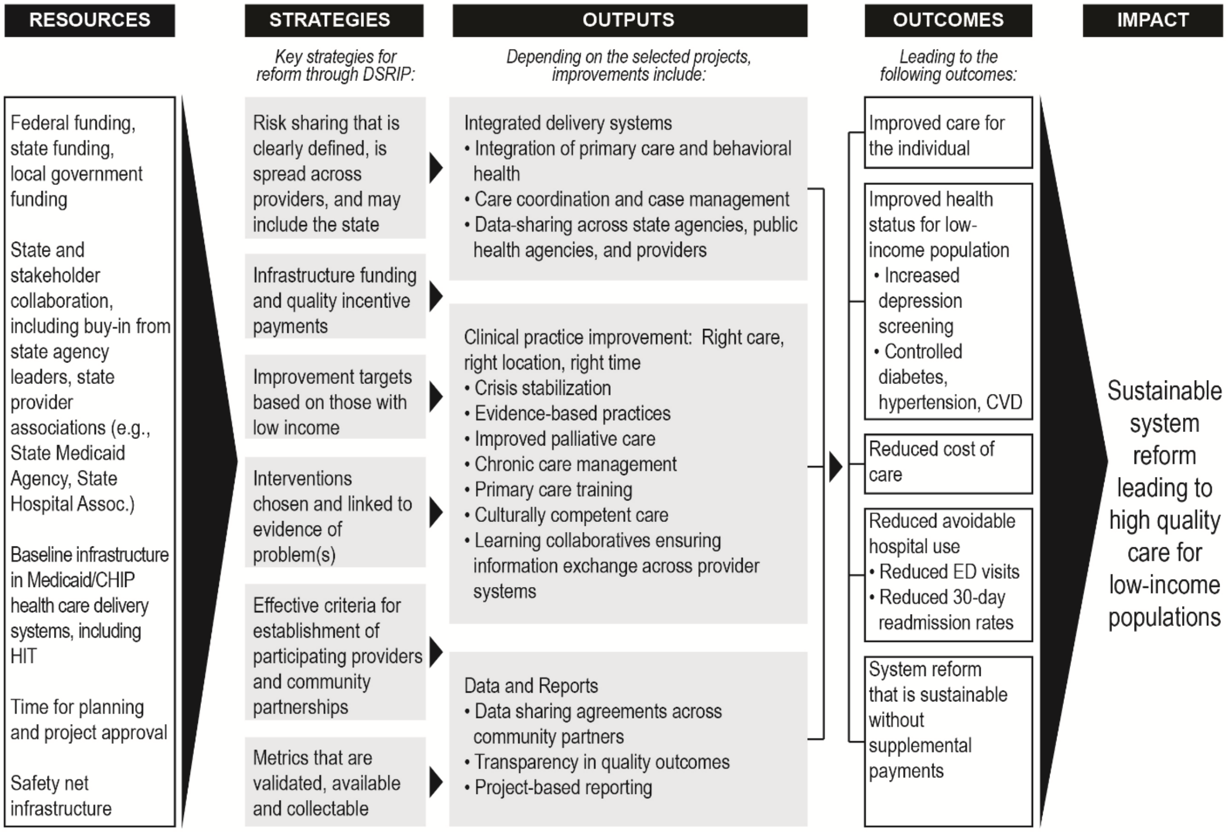
[a] As of February 2015, information may change as the demonstration becomes more mature.

[b] While Oregon’s section 1115 demonstration is technically not a DSRIP demonstration and does not include funding for projects, participating health plans and hospitals must meet reporting and benchmark requirements on clinical outcome measures.

DSRIP = delivery system reform incentive payment.

The demonstrations encompass complex coalitions with lead entities and associated providers that apply to conduct improvement projects aligned with the safety net reform objectives of the state. Specifically, DSRIP demonstrations are designed to further the evolution of infrastructure-related changes and delivery system transformation to improve care for Medicaid beneficiaries or the uninsured. The lead entities and associated providers participating in DSRIP aim to improve quality of care and population health by promoting the integration of care across settings to improve the individual experience of care, establishing procedures to reduce avoidable hospital use, and creating sustainable change. DSRIP demonstration programs can be large and complex, but all follow an overall logic represented in Figure II.1 below.

Figure II.1. Delivery system reform incentive payment demonstration logic model.



Note: Regarding the Strategies column: Validated metrics may not always be available or readily collected. Therefore, states and providers may define their own metrics for the purposes of monitoring and evaluating progress toward milestone achievement.

CHIP = Children's Health Insurance Program; CVD = cardiovascular disease; DSRIP = delivery system reform incentive payment; ED = emergency department; HIT = health information technology.

B. Primary research questions

We worked with CMS subject matter experts in DSRIP to establish a set of research questions for the implementation and impact evaluations of the DSRIP demonstrations. The overarching research question for DSRIP is as follows:

> What is the impact of the DSRIP demonstration funding paid to provider systems to transform the delivery system, increase clinical quality, improve population health, drive value-based payment, and reduce per capita costs?

This overarching question has six domains for which there are additional sub-research questions: (1) delivery system transformation, (2) clinical quality, (3) population health, (4) value-based payment, (5) per capita cost reduction, and (6) program characteristics and outcomes. The first five domains correspond to goals of DSRIP and will be the focus areas for the impact evaluation. The sixth domain—program characteristics and outcomes—will be addressed through the impact evaluation and the rapid-cycle reports, which are the report format for the analyses of implementation. The sixth domain aims to understand how program features influence achievement of program goals, for example, milestone achievement. Questions about return on investment are included in this domain because state-specific incentive payment amounts will be compared against achievements in one key outcome of interest across DSRIP states: reductions in preventable hospitalization. Table II.2 presents the proposed design, including research questions; proposed outcome measures or indicators; potential data sources; and our preliminary ideas for analytical approaches.

The overall analytic approach for the evaluation will entail two primary comparisons: (1) comparisons of outcomes in DSRIP states with each other, and (2) comparisons of outcomes in DSRIP states to non-DSRIP states. The evaluation is structured in this manner because there is great variability among the DSRIP demonstration states in their program design, and comparisons of the DSRIP states to each other will provide insights into the program characteristics that are associated with achieving the desired outcomes. The evaluation can exploit these differences in program features to explore the relationship between certain program features and outcomes. Meanwhile, comparisons of the DSRIP states to non-DSRIP states are intended to provide insights into how DSRIP as a lever for change compares to other delivery system and payment reform initiatives. Because DSRIP demonstrations focus on enhancing the infrastructure of safety net providers and improving clinical quality and population health for low-income populations, we intend whenever possible to look at all outcomes in relationship to the low-income population including both Medicaid and the uninsured; however, we recognize the challenges with finding data sources that extend to the whole population.

The implementation evaluation will consist of ongoing monitoring and inclusion of special topics, compiled and reported twice yearly to CMS. We will use the results of this ongoing examination of the program implementation and design to further refine the comparison groups, data sources, and measures for the impact evaluation. Through the implementation analysis, we will develop a typology of DSRIP programs, explore key aspects of implementation such as contextual factors in states' environments, and use our learnings from the implementation analysis to generate hypotheses for the impact evaluation. As part of the typology, we will map state-defined categories of improvement, projects, milestones, and metrics to commonly defined categories of improvement and project categories, creating a large crosswalk of state projects used in the evaluation. This can help us to identify common metrics for monitoring progress that could be used in the impact evaluation. It will also help us to characterize the DSRIP programs in terms of their orientations and mechanisms for change.

Questions related to sustainability of the delivery system and payment reforms achieved through DSRIP are embedded in domains 1, 4, and 6. The rationale for inclusion in these domains is that indicators of delivery system transformation and payment reform are proxy indicators or outputs for longer-term outcomes, such as clinical quality and health population improvements. The evaluation period, however, is not long enough to measure these longer-term outcomes. Similarly, characterization of how DSRIP program features and implementation processes align with best practices for sustainable change through the data collection and analyses planned for domain 6 can provide important insights regarding sustainability. For example, if there is evidence that the delivery system transformation and the implementation components, such as formal partnerships among coordinating providers, are in place, then we can make some presumptions about the sustainability of the reforms achieved through DSRIP.

Table II.2. DSRIP evaluation design: research questions, outcome measures/indicators, potential data sources, and draft analytical approach

Research question	Proposed outcome measures or indicators	Potential data sources[a]	Draft analytical approach[b]
Domain 1: Delivery system transformation – How have DSRIP demonstrations transformed the delivery system for low-income populations?			
a. Have DSRIP programs led to increased availability and use of primary care services?	• Ratio of inpatient service use to outpatient primary care services use • Ratio of ED service use to outpatient primary care services use • Primary care services utilization • Identification as having a personal physician or usual source of care • Rates of receiving care as soon as needed	• CAHPS • HCUP • NHIS • TMSIS, MSIS	• Difference-in-differences estimates of changes in utilization in TMSIS/MSIS and HCUP, and rates of having a personal physician/usual source of care and getting care as soon as needed in CAHPS and NHIS, comparing DSRIP states to each other and to non-DSRIP states as appropriate • Descriptive trend analyses and documentation of changes in outcomes of care as soon as needed
b. Have DSRIP programs led to increased availability and use of behavioral health services?	• Community-based behavioral health service utilization among Medicaid beneficiaries and the uninsured • Medicaid spending on behavioral health care	• HCUP • TMSIS, MSIS • CAHPS • Medicaid adult core measure set	• Difference-in-differences estimates of community-based behavioral health service utilization and Medicaid spending on behavioral health, comparing DSRIP states to each other and to non-DSRIP states as appropriate • Descriptive trend analyses and documentation of changes in outcomes
c. Has there been enhanced care coordination under DSRIP?	• Readmission within 30 days • Use of care models among providers • Appropriate hand-offs among providers • Volume of electronic transmittals among providers • Provider up to date about care received from other providers • Percentage of providers in state that are certified patient-centered medical homes and/or participate in Medicaid health home demonstrations	• CAHPS • EHR data from participating providers in demonstration states • NHIS • State reporting on participation in Medicaid health home demonstrations and penetration of patient-centered medical homes • TMSIS, MSIS • Medicaid adult core measure set	• Difference-in-differences estimates comparing DSRIP states to each other and to non-DSRIP states as appropriate • Descriptive trend analyses and documentation of changes in outcomes
d. Have DSRIP programs moved Medicaid beneficiaries to the community from institutional settings?	• Ratio of hospital discharge plans that prescribe home and community-based care versus post-acute settings	• EHR data from participating providers in demonstration states • HCUP • TMSIS, MSIS	• Difference-in-differences estimates comparing DSRIP states to each other and to non-DSRIP states as appropriate • Descriptive and trend analyses and documentation of changes

Table II.2 (continued)

Research question	Proposed outcome measures or indicators	Potential data sources[a]	Draft analytical approach[b]
e. To what extent is there evidence of sustainability of delivery system transformation (if any)?	• Examination of delivery system transformation observed vis-à-vis indicators of delivery system transformation from the literature (as available) • Examination of implementation-related evidence-based features that promote sustainability	• CAHPS • EHR data from participating providers in demonstration states • NHIS • State reporting on participation in Medicaid health home demonstrations and penetration of patient-centered medical homes • TMSIS, MSIS • Medicaid adult core measure set • Literature (peer reviewed and grey) • State and provider level reporting and documentation	• Qualitative comparison of state program features and best practices in the literature within DSRIP states; comparison of features across DSRIP states
Domain 2: Have DSRIP programs led to an increase in clinical quality for low-income populations?			
a. Have DSRIP programs led to increased quality of care among Medicaid and uninsured populations?[c]	• Comprehensive diabetes care provision • Cardiovascular disease care provision • Receipt of well-care visits • Behavioral health care screening • Receipt of health risk assessments • Receipt of immunizations • Medication adherence • Initiation of alcohol or drug treatment • Patient-reported improvements in mental health and well-being • Pain management • Changes in patient-reported receipt of needed care	• CAHPS • EHR data from participating providers in states • Medicaid child and adult core quality measures (including behavioral health quality measures) reported on by the states • NHIS (for quality measures and patient-reported improvements for the uninsured) • State data reports submitted to CMS as part of their DSRIP documentation • TMSIS, MSIS	• Difference-in-differences estimates of rates of quality outcomes in TMSIS/MSIS, provider EHR data, and quality measure reporting, comparing DSRIP states to each other and to non-DSRIP states as appropriate • Difference-in-differences estimates of changes in outcomes, comparing DSRIP states to each other and to non-DSRIP states as appropriate • Descriptive trend analyses and documentation of changes in outcomes
b. Have there been decreases in avoidable hospital use?	• Rates of hospital admissions for diabetes short-term complications, COPD and asthma, and heart failure • Ratio of ED visits to potentially avoidable hospital admissions • Ratio of ED visits to potentially avoidable hospital admissions for those with serious mental illness	• HCUP • Medicaid child and adult core quality measures (including behavioral health quality measures) reported on by the states • TMSIS, MSIS	• Difference-in-differences estimates of changes in outcomes, comparing DSRIP states to each other and to non-DSRIP states as appropriate • Descriptive trend analyses and documentation of changes in outcomes

Table II.2 (continued)

Research question	Proposed outcome measures or indicators	Potential data sources[a]	Draft analytical approach[b]
Domain 3: Have DSRIP programs improved population health outcomes for high-risk, low-income populations?			
c. Have DSRIP programs improved population health outcomes for groups targeted by the states?	• Controlled diabetes, hypertension, CVD, asthma • Obesity rates • Rates of pre-term birth, infant mortality, maternal mortality • Self-reported health status • Percentage of premature death • Percentage of adults with a regular health care provider • Percentage of adults binge drinking during the last month • Age-adjusted suicide death rate	• BRFSS • CAHPS • EHR data from participating providers in the demonstration states • HCUP • NHIS • State reporting on milestone achievement on metrics related to population health improvements as part of their DSRIP documentation • TMSIS, MSIS • Vital statistics	• Difference-in-differences estimates of changes in outcomes, comparing DSRIP states to each other and to non-DSRIP states as appropriate • Descriptive trend analyses and documentation of changes in outcomes
Domain 4: Have DSRIP programs increased value-based payment among providers serving Medicaid and the uninsured?			
a. Have DSRIP programs been effective in moving toward payment for performance among safety net providers?	• Percentage of milestones met for outcomes achievement compared to volume of incentive payments paid that were tied to those outcomes	• State reporting on milestone achievement and incentive payment dispersion as part of their DSRIP documentation	• Descriptive analysis comparing milestone achievement vis-à-vis dispersion of incentive payments tied to those achievements, comparing DSRIP demonstration states to each other
b. Are DSRIP programs associated with increased use of capitated payments in Medicaid (which inherently require more effective population management) and decreased use of supplemental payments?	• Percentage change in utilization of capitated payments for the Medicaid and uninsured population • Percentage change in amount of supplemental payments to providers serving the Medicaid and uninsured populations.	• TMSIS, MSIS • MBES	• Descriptive analysis examining changes in capitated payments for the Medicaid and uninsured population, comparing the DSRIP demonstration states to each other and DSRIP and non-DSRIP states • Descriptive trend analysis
c. To what extent have DSRIP programs led to sustainable payment reform (if any)?	• Change in penetration of outcomes-based payment programs among DSRIP providers.	• KII • MBES	• Descriptive trend analysis
Domain 5: Have DSRIP programs resulted in reduced Medicaid per capita costs?			
a. Have DSRIP programs reduced Medicaid per capita costs?	• Average cost per beneficiary per month (inclusive of all supplemental payments) • ED and inpatient claims	• Aggregate expenditure data that states provide on the CMS 64 forms • TMSIS, MSIS	• Difference-in-differences estimates of changes in outcomes, comparing DSRIP states to non-DSRIP states as appropriate • Descriptive trend analyses and documentation of changes in outcomes

Table II.2 (continued)

Research question	Proposed outcome measures or indicators	Potential data sources[a]	Draft analytical approach[b]
Domain 6: Program characteristics and outcomes – What are the best uses of supplemental funds paid to provider systems to transform the delivery system, increase clinical quality, improve population health, and drive value-based payment?			
1. How do differences in program features affect milestone achievement?			
a. How does the method of project valuation affect achievement of outcomes?	• State-defined milestones met by participating providers to earn incentives at state level	• State special terms and conditions on valuation methodology; state reporting of milestone achievement and incentive payment dispersion as part of their DSRIP documentation	• Examination of valuation methods and state-defined milestone achievement in each DSRIP state; comparison among DSRIP states regarding methods used and milestone achievement
b. How does the distribution of risks and incentives affect achievement of outcomes?	• State-defined milestones met by participating providers to earn incentives at state level	• State special terms and conditions on risk sharing and incentive payment eligibility and requirements • State reporting of milestone achievement and incentive payment dispersion as part of their DSRIP documentation	• Description of program design regarding distribution of incentives and risks and state-defined milestone achievement in each DSRIP state to understand the relationship between how incentives and risks are distributed within a state and the milestones achieved by the state participating providers; comparison among DSRIP demonstrations states
2. To what extent is there evidence that the delivery system transformations enacted under DSRIP, if any, can be sustained absent the use of supplemental or incentive payments?			
a. To what extend have DSRIP programs incorporated aspects of sustainability into their program design?	• Examination of program features vis-à-vis evidence-based features that promote sustainability • Characterization of the distribution of incentives and risks across participating providers and the state in the context of sustainability • Examination of the nature of the relationships among performing provider entities, e.g., data-sharing agreements, distribution of incentives to performing providers beyond lead entity, distribution of risks, and indicators of the likely longevity of relationships after DSRIP and movement toward alternative care models (e.g., patient-centered medical homes)	• Qualitative data from key-informant interviews about the inclusion or absence of program features that promote sustainability • Literature review • State DSRIP strategies menu and metrics documentation; individual provider/project documentation	• Qualitative comparison of state program features and best practices in the literature within DSRIP states; comparison of features across DSRIP states

Table II.2 (continued)

Research question	Proposed outcome measures or indicators	Potential data sources[a]	Draft analytical approach[b]
b. To what extent are there indications of rapid-cycle improvement and ongoing learning occurring in the DSRIP states?	• Examination of program features related to rapid-cycle improvement, e.g., learning collaboratives and information sharing; improvement project continuation, modification, or discontinuation and rationale for changes/evidence of midcourse adjustments; use of short-term indicators of system change or process improvement	• Qualitative data from key-informant interviews about processes in place to facilitate rapid-cycle improvement and ongoing learning • State midpoint evaluations, state monitoring reporting; individual provider/project documentation	• Qualitative assessment of evidence of processes and tools to facilitate rapid-cycle improvement and ongoing learning within DSRIP states; comparisons of processes and tools across DSRIP states
3. Return on Investment (ROI) – What is the per capita investment in DSRIP compared to the per capita valuation of impacts?[d,e]			
a. How does the investment in incentive payments in DSRIP compare to the value of the preventable hospitalization outcomes achieved?	• Average Medicaid cost per beneficiary per month of DSRIP • Costs attributed to avoidable ED and inpatient claims for the low-income population • Rate of avoidable ED and readmission within 30 days • Costs attributed to avoidable inpatient psychiatric care • Rate of inpatient behavioral health services	• Aggregate expenditure data that states provide on the CMS 64 forms • EHR data from participating providers in the demonstration states • HCUP • Medicaid child and adult core measures (including behavioral health quality measures) • NHIS • States' reporting of incentive payment dispersion as part of their DSRIP documentation • TMSIS, MSIS	• Comparison of per capita investment to per capita costs of outcomes within each DSRIP state and among the DSRIP states
b. What is the ROI on the infrastructure investment?	• Indicators/metrics listed under domain 1 regarding delivery system transformation	• CAHPS • EHR data from participating providers in demonstration states • NHIS • States' reporting of incentive payment dispersion as part of their DSRIP documentation • States' reporting on participation in Medicaid health home demonstrations and penetration of patient-centered medical homes • TMSIS, MSIS	• Comparison of investment levels and outcomes achieved in terms of delivery system transformation within each DSRIP state and among the DSRIP states

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[a] We will solidify data sources for each research question after we have completed a detailed assessment of available data sources, which is scheduled for option year 1.

[b] We are still in the preliminary stages of developing an analytical approach for each research question. Whenever possible, we will develop estimates of program effects using a difference-in-differences approach that controls for observable differences among treatment and comparison states before the intervention began. For some questions this approach may not be feasible, if the data sources do not provide information in the pre-intervention period or obtaining data from comparison states would strain project resources.

Table II.2 (continued)

[c] We are in the process of developing higher-level, common categories for projects within each major category of targeted improvement across state DSRIP programs. After finalizing the list of projects, their milestones, and metrics, we may refine the list of outcome measures or indicators in any of the domains including Domain 2 (clinical quality). We could also compare these outcomes for states with projects focused on those specific improvements to states that lack projects with a focus on the outcomes of interest

[d] An ROI analysis was recently presented by CMS, and we have just begun thinking about possibilities in this area. The initial request, to look at DSRIP ROI versus other transformation strategies such as accountable care organizations, will not be possible as it would require ROI analyses of the other models, which is beyond our work specifications. However, we are exploring what may be possible, and we will finalize a plan after we have a better sense for the types of outcomes DSRIP programs are affecting.

[e] We are currently investigating different ways of framing DSRIP to enhance the potential of an ROI analysis. For this analysis, we will need to identify outcomes that are being affected by DSRIP and that can be valued and compared against the DSRIP investment (preventable hospitalization for example).

BRFSS = Behavioral Risk Factor Surveillance System; CAHPS = Consumer Assessment of Healthcare Providers and Systems; CMS = Centers for Medicare & Medicaid Services; COPD = chronic obstructive pulmonary disease; CVD = cardiovascular disease; DSRIP = delivery system reform incentive payment; ED = emergency department; EHR = electronic health record; HCUP = Healthcare Cost and Utilization Project; MSIS = Medicaid Statistical Information System; NHIS = National Health Interview Survey; ROI = return on investment; TMSIS = Transformed Medicaid Statistical Information System.

C. Outcome measures and key data sources

To examine the impact of DSRIP programs on low-income populations, we selected several commonly used outcome measures within each domain. We propose to use a variety of data sources but expect that the majority of outcomes will be measured with claims data. The primary data sources for assessing utilization and costs will be MSIS and—when we need to measure outcomes before calendar year 2015—and TMSIS for 2015 (the first year of TMSIS data) and later. These national uniform data systems include individual-level enrollment and claims-level data for all Medicaid beneficiaries. For outcomes specific to the uninsured population, we will likely use additional administrative data, such as from the Healthcare Cost and Utilization Project (HCUP) databases. We have proposed additional outcomes that are not claims-based. For these measures, we may look to nationally representative survey data, including (1) the National Health Interview Survey (NHIS), which monitors the health of the nation over a broad range of topics; (2) BRFSS, which monitors state-level prevalence of behavioral risk factors associated with premature morbidity and mortality; or (3) CAHPS, which asks consumers and patients to report on their experiences with care. Additional data may consist of the core sets of children's and adults' health care quality measures (data voluntarily reported annually by states to CMS) that can be used to assess the quality of care provided to children and adults enrolled in Medicaid and CHIP. When appropriate, we will also explore the feasibility of obtaining EHR data from providers. Where these data are obtainable, we will use them to evaluate changes in service utilization and health outcomes.

Domain 1: delivery system transformation. The primary measures for this domain are indicators of changes in care patterns. While we proposed a wide range of indicators across the domain (Table II.2), we would examine primarily changes in the accessibility and use of primary care and community-based behavioral health services among the Medicaid and uninsured populations. Metrics of delivery system transformation are not yet well developed, and we anticipate having to incorporate or develop additional indicators. For example, in the DSRIP meeting of subject matter experts on January 6, 2015, CMS staff proposed several potential indicators of delivery system transformation (such as use of care models among providers), reflected in Table II.2 that Mathematica will explore further and, if viable, will ultimately develop these indicators. To explore potential indicators of effective care coordination, information exchange, and enhanced access to care, Mathematica will also convene a number of internal experts involved in evaluating delivery system transformation initiatives. As the literature grows in this area, we may work with CMS to propose additional strategies for measuring change in this domain.

Domain 2: clinical quality improvement. For this domain, we propose to examine several primary outcome measures as indicators of whether low-income patients are getting the right care, at the right time, in the right setting. These primary indicators include measures of chronic disease management and avoidable hospitalizations, based on analysis of claims data. To assess improvements in the delivery of care to Medicaid enrollees, we would like, if possible, to supplement these indicators with other significant outcomes, such as timely access to care (based on CAHPS and NHIS data) and receipt of primary care well visits (based on claims information). Secondary outcome measures in this domain would come from the states reporting on the Medicaid adult and child core set of health care quality measures and NHIS questions addressing receipt of appropriate care services for chronic conditions, such as cardiovascular disease.

Domain 3: population health improvement. Because one goal of DSRIP is to improve the health of low-income populations, the DSRIP states require, through a variety of mechanisms, that participating providers (or provider coalitions) take responsibility for population health improvement. We propose two primary sets of outcome measures to assess such improvement: (1) a range of changes in chronic disease risk factors and management, and (2) change in premature mortality among the Medicaid and uninsured populations. Secondary outcomes that we would like to include in the analysis are, for example, infant mortality and change in self-reported health status.

Data sources for use in analyzing outcomes in the population health domain (in addition to claims) may include BRFSS, CAHPS, HCUP, and NHIS. We will use BRFSS to assess changes in prevalence of various chronic conditions and health risks at the state level. CAHPS and NHIS will provide the indicators of self-reported health status and having a regular care provider. HCUP may be used to assess trends in utilization of hospital-based services for low-income people, and TMSIS/MSIS may be used to measure trends in hospital-based service utilization among Medicaid beneficiaries; however, HCUP may be the sole source of these indicators if we cannot obtain all the TMSIS/MSIS data needed to assess changes in utilization and costs of inpatient services. Finally, to assess state-level changes in other population health indicators, such as premature birth or infant mortality, we propose to use vital statistics, obtained either directly from the evaluation states' departments of vital records or from the National Vital Statistics System administered by the Centers for Disease Control and Prevention.

Domain 4: value-based payment. Pay for performance is a key tenet of the DSRIP program: the demonstration structure rewards outcomes over volume and encourages shared risks and rewards. CMS expects that the emphasis on value-based payment be one of the sustainable features of DSRIP demonstrations. To assess the effectiveness of the DSRIP program to drive value-based payment, we propose to analyze changes in the use of capitation for the DSRIP population as well as the use of non-1115 supplemental payments over the course of the demonstration within DSRIP states. We will compare use of supplemental payments and movement toward use of capitation in non-DSRIP states. Initially, we will use capitation payment as a readiness indicator for value-based payment reform, as it inherently includes elements of population management. However, we would also like to look at the change in penetration of outcomes-based payment models within DSRIP providers coupled with qualitative data from key-informant interviews assessing causality. As an input to the analysis, we will examine the share of total incentive payments made in a given DSRIP state that are tied to achievement of state-defined outcome achievements (as opposed to reporting, infrastructure, or process milestones).

Domain 5: reduced per capita costs. CMS expects that delivery system reforms under DSRIP will reduce per capita cost of care. The primary outcome for this domain will be average per capita costs for attributed individuals. Secondarily, we may break apart the total cost measure and look at specific domains, such as inpatient care, where we would expect cost impacts to be more pronounced.

Administrative data from TMSIS/MSIS and HCUP would be the most straightforward source of information for most aspects of per capita cost among the Medicaid and uninsured populations. However, if the Medicaid population served by the DSRIP program is primarily in managed care and the state pays a PMPM capitated payment to the health plans, we might have to use the aggregate expenditure information that states provide on the CMS 64 forms and derive the number of member months using Medicaid enrollment data from TMSIS/MSIS, depending on the time period.

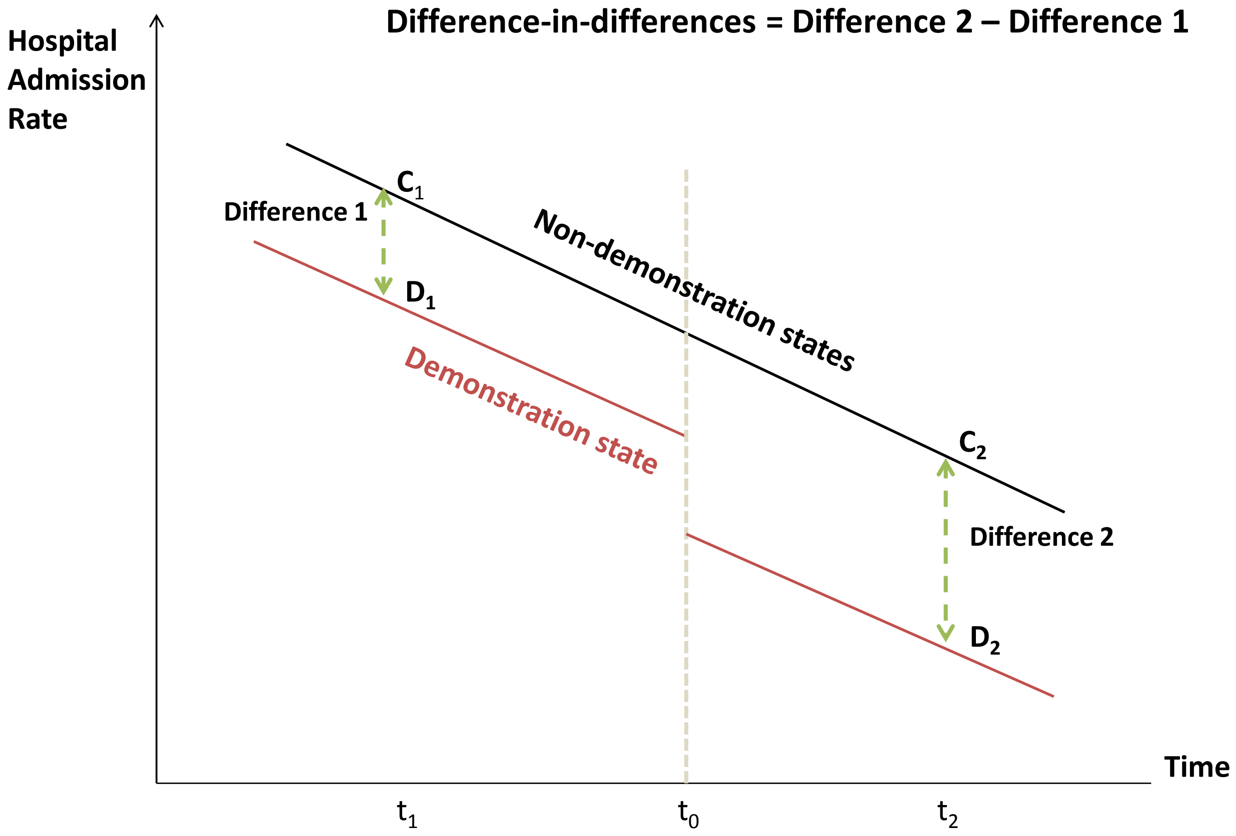
Domain 6: program design and impacts. This last domain, which is limited to the DSRIP demonstrations states, has two foci. The first is monitoring key program design features and outcomes. The content for this domain will become the material for the rapid-cycle reports discussed in depth in Chapter V. To understand the role of various design elements and contextual factors, such as concurrent initiatives, on DSRIP program implementation, we plan to review documents such as state evaluation reports and state progress reports submitted to CMS, and conduct key-informant interviews with state program officials, participating providers, and others involved in designing, implementing, and evaluating state DSRIP programs. For most of the special-issue topics proposed in Chapter V, state documentation for DSRIP and key-informant interviews will serve as primary sources of data.

The second focus of this domain is on sustainability, though we have also addressed issues of sustainability in domains 1 (delivery system transformation) and 4 (value-based payment). Pertinent to this domain, we propose to examine the literature for best practices in terms of program design that promote sustainability. In particular, we will look at the nature of the distribution of risks and incentives within states, the nature of the relationships established among participating providers, and other program features that could affect sustainability. In addition, we will look for indications of rapid-cycle improvement and ongoing learning within states, such as changes in improvement projects, uses of learning collaboratives and mechanisms for information sharing, and other potential indicators. The data sources for this focus will be document review and key-informant interviews.

D. Estimating impacts and comparison group methodologies

The analytic approaches for each research question are still in the preliminary stages of development. When we compare outcomes for people in demonstration states to those in non-demonstration states, we plan to use a difference-in-differences model to test the causal effects of DSRIP programs. This econometric technique controls for time trends in the outcomes of interest by comparing across two groups over the study time period. In this case, the model relies on measures of the outcome variables before and after implementation of the intervention for both the DSRIP demonstration and the non-demonstration comparison states. We will explore selecting a subset of non-demonstration states for comparison, such as those with large Medicaid populations (e.g., Ohio, Pennsylvania, and Wisconsin), being mindful of the other initiatives taking place in those states. Another option to consider is the “synthetic control” method that would combine several states to arrive at a weighted average that is comparable to the average for a particular demonstration state (see, for example, Abadie et al. 2010). If one of the states beginning a DSRIP demonstration this year or next (a later adopter) is a particularly appealing match to an early adopter (such as California or Texas), we could also implement a simple difference-in-differences approach, comparing differences between the two states in the periods before and after implementation by the late adopter. We present a simplified example of the overall approach in Figure II.2.

Figure II.2. Example of difference-in-differences estimation model



Given the prevalence in the last decade of programs aimed at reducing hospital admissions, it is likely that Medicaid hospital admission rates were decreasing in all states before the DSRIP demonstration began (in this example, t_1 is the pre-demonstration period, t_0 is the start of the demonstration, and t_2 is the demonstration period). Further, it is possible that states that sought a DSRIP demonstration were more aggressively pursuing ways to decrease their rates and had already experienced lower admission rates than other states (Difference 1 or $D_1 – C_1$). In a difference-in-differences model, we use pre/post data for Medicaid hospital admission rates in the non-demonstration states to estimate the continuing decrease that we assume would have occurred in the demonstration state in the absence of the demonstration. So, rather than conclude that the effect of the DSRIP demonstration on admission rates was the observed decrease ($D_2 – D_1$), we subtract the decline predicted by the existing trend in other states ($C_2 – C_1$) to provide a better estimate of what the true effect is likely to be.

When comparing only across states that have implemented DSRIP programs, we will use variants of this basic difference-in-differences model to evaluate the demonstrations. For example, to investigate whether DSRIP demonstrations have been effective at transforming care at the state level, such as reducing emergency department (ED) visits among adults, one approach would be to use an interrupted time-series design, comparing annual state-level counts of ED visits (controlling for population size) across demonstration states. Using these annual state-level counts of ED visits, we would then designate the three years before implementation of each demonstration as the pre-demonstration period for each demonstration state and use these data to estimate counts of ED visits in the post-demonstration period in absence of the intervention. Trends in ED visits demonstrated in each state would then be compared to the estimated trends in absence of DSRIP programs. This approach also allows us to account for staggered implementation of waivers. For example, California's DSRIP began in 2010, whereas the demonstration in New York is just beginning in 2015. Additional sensitivity analyses will be conducted to better understand when we might expect demonstration projects to have an effect on the outcome. For example, implementation of the demonstrations may have an immediate, constant effect on ED visits; a delayed, constant effect; an immediate, gradual effect; or a delayed gradual effect. We will construct separate models to test each of these assumptions about the timing of the effects of implementation.

The models described above include several assumptions that must be tested. The difference-in-differences model assumes that trends in the outcome of interest in treatment and comparison groups in the pre-period would continue if the intervention had not been implemented. While we cannot determine whether trends in the outcome of interest would be the same during the post-period, if initial investigation of the data suggests that important differences in trends between DSRIP demonstration and comparison states existed during the three-year pre-period, we will explore using an interrupted time series model. In addition, because the dose of the intervention may vary across states, the example provided above that described measuring outcomes at the state level might be not meaningful, as using aggregate state measures might dilute our ability to detect the effect when the treated population is relatively small or cannot be adequately captured in our data (for example, because we may not have data on the uninsured). In these cases, a better approach would be to measure the outcome of interest among Medicaid beneficiaries living in the catchment areas of the DSRIP-participation hospitals and then compare the pre/post demonstration differences to those of beneficiaries living in catchment areas for nonparticipating hospitals in the demonstration states.

E. Key challenges for the evaluation of DSRIP demonstrations

The evaluation of DSRIP demonstrations will have some challenges beyond those faced by the overall evaluation of the section 1115 demonstrations as described in Chapter I. While attribution of outcomes achieved may be difficult for each of the four demonstration types, it will be a particularly important challenge for the DSRIP demonstrations given the complexity of the current environmental context and myriad initiatives addressing delivery system reform. We will address this challenge by exploring Bayesian methods to improve our ability to isolate outcomes. We also intend to run sensitivity analyses. For example, as a way to allay concerns regarding attributing effects to DSRIP that might really be effects of a concurrent ACO implementation, we will exclude dually eligible people who might be experiencing the impacts of the Medicare ACO program on individual outcome measures.

Identifying comparison groups will also be particularly challenging for the DSRIP evaluation design. The uniqueness of states makes them hard to categorize as appropriate for comparison. Many states have implemented reforms similar to DSRIP, under other vehicles or initiatives, and they may or may not make good comparisons for purposes of this evaluation. Many other factors could also prove critical to comparison group selection, including managed care penetration, past use of supplemental payments to providers, and provider buy-in to incentive based payment reform. We will make sure to fully explore the possibility of developing synthetic comparison groups that select comparison beneficiaries based on specific characteristics such as the type of county where they reside and propensity score matching approaches as approaches to mitigating some of this issue.

Furthermore, there are some anticipated challenges related to identifying the number of Medicaid beneficiaries that are affected by DSRIP in each state. For example, the states' attribution methodologies (methods for assigning beneficiaries to the participating provider entities) varies across the demonstration states, and even within a state. For example, the New York DSRIP demonstration will use different methods for attribution for the purposes of evaluating clinical quality outcomes versus for project valuation. We will need to reflect the different approaches in the evaluation work; however, in many of the proposed data sources, we will be limited in our ability to restrict analyses to beneficiaries attributed to participating providers and will make assessments for the broader Medicaid and uninsured populations.

III. PREMIUM ASSISTANCE AND BENEFICIARY ENGAGEMENT/PREMIUMS DEMONSTRATIONS

A. Introduction

In contrast to the DSRIP and MLTSS demonstrations, premium assistance demonstrations aim to enroll beneficiaries in commercial coverage while beneficiary engagement/premiums demonstrations aim to engagement beneficiaries in their health care and possibly change their behavior by requiring monthly premium payments or co-payments at the point of service delivery or incentivizing healthy behaviors. Incentives in this context include reducing the monthly premium payment or co-payment requirements, or in-kind rewards such as gift cards. This section discusses the evaluation plan for states that aim to change behavior by enrolling beneficiaries in commercial coverage available through the Marketplace, by incentivizing healthy behaviors, and/or by introducing financial incentives. Two demonstration states are pursuing just one of these strategies (New Hampshire and Wisconsin), most are pursuing two (Arkansas, Indiana, and Michigan), and one is pursuing all three (Iowa) (Table III.1).[3] Key demonstration design features for states that provide Medicaid-supported enrollment in QHPs and those with healthy behavior incentives are summarized in tables III.2 and III.3, respectively.[4]

Table III.1. Research domains for premium assistance and beneficiary engagement/premiums demonstrations

State	Domain 1: Medicaid-supported QHP enrollment (Table III.4)	Domain 2: beneficiary premiums and other mandatory financial contributions (Table III.5)	Domain 3: healthy behavior incentives (Table III.6)
Iowa	✓	✓	✓
Arkansas	✓	✓	
Indiana		✓	✓
Michigan		✓	✓
New Hampshire	✓		
Wisconsin		✓	

QHP = qualified health plan.

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[3] At the time this report was written, New Hampshire had just received approval for a premium assistance demonstration to support enrollment in QHPs.

[4] Throughout this document, we use the terms “qualified health plan” and “QHP” to denote the plans in which Medicaid premium assistance beneficiaries enroll. These premium assistance QHPs are technically off-Marketplace products that are exact duplicates of Marketplace QHPs, except for their higher actuarial value (94 or 100 percent). Medicaid beneficiaries cannot buy regular QHPs in the Marketplace, and consumers who are not Medicaid beneficiaries may not apply tax credits to obtain the QHP look-alikes available through the Medicaid premium assistance program.

B. Primary research questions

Research questions about Medicaid-supported enrollment in QHPs (Table III.4), Domain 1, will help CMS and state officials understand the advantages and challenges of expanding Medicaid by enabling enrollment in QHPs offered via the federally facilitated marketplace (FFM), as opposed to expanding Medicaid coverage directly. These questions ask how premium assistance states compare to other Medicaid expansion states in terms of (1) access and health outcomes; (2) total Medicaid spending, especially given premium variability over time with QHPs; and (3) take-up rates for newly eligible adult populations. In exploring each of these overarching topics, we will explore several subordinate research questions. For example, in investigating how access and health outcomes compare across states that pursued Medicaid expansion via QHPs and those that expanded Medicaid directly (Table III.4, Question #1), we will explore whether beneficiaries in QHPs access care at comparable rates (1.a), provider participation rates in premium assistance plans (1.b), the level of unmet need for medical care (1.c), and the potential for continuity of coverage across Medicaid and Marketplace plans (1.d).

Domain 2 questions will explore the effect of premiums and other mandatory financial contributions on take-up and continuity of coverage for states that are authorized to require such contributions for beneficiaries with incomes below 150 percent FPL (Table III.5). Unless a state’s demonstration protocol explicitly links premium amounts to completion of particular incentivized behaviors, premium payments should not affect the perceived price or accessibility of specific health care services for enrolled beneficiaries. The primary concern with premium payments is that they create barriers to initial and continued enrollment: premiums may deter low-income people who are otherwise eligible from enrolling in Medicaid, and among those who successfully enroll, premium payments may discourage continuous enrollment. The research questions for this domain focus on exploring the extent to which these negative outcomes occur.

Research questions related to healthy behavior incentives (Table III.6), Domain 3, explore the mechanisms and effectiveness of these programs. The current section 1115 demonstrations relating to beneficiary engagement/premiums target a larger population of Medicaid enrollees than most prior behavior incentive programs. The current programs also allow for changes to the cost-sharing and benefit designs of the state Medicaid programs, using financial incentives to encourage appropriate use of health care services among Medicaid enrollees and requiring premium payments, or other financial contributions, from households with incomes below 150 percent of FPL. These elements of the demonstrations lend themselves to a new set of questions regarding the outcomes each demonstration seeks to affect. We will focus on evaluating (1) the variation and the effect of states’ beneficiary education strategies, which become even more important as the incentive structure increases in complexity; (2) which incentives are most likely to affect beneficiary behavior in desired ways, without impairing access to needed care; and (3) the administrative costs that states incur in establishing these programs. In exploring each of these overarching topics, we will explore several subordinate research questions. For example, in investigating which incentives affect behavior as desired (Table III.6, Question #2), we will explore which yield the greatest relative gains in preventive care (2.a), which yield the greatest relative gains in management and care of chronic conditions (2.b), and which yield the greatest reductions in disincentivized care (2.c).

Beneficiary engagement/premiums programs vary across states in several respects. One of the main ways in which these programs vary is the degree to which they link behavior incentives and required financial contributions. For example, in Michigan, beneficiaries are required to make premium contributions beginning in their seventh month of enrollment, unless they complete specified services; this design feature makes the incentive timely relative to beneficiary behavior (Table III.3). In contrast, in Indiana, beneficiaries who complete specific health services can roll over dollars remaining in their state- and beneficiary-funded health savings account (POWER account), offsetting contributions that would otherwise be required in the second year of enrollment. However, to allow time for claims adjudication from services obtained during the first year of enrollment, beneficiaries do not experience reduced payments until part way through the second year of enrollment, which makes the benefit relatively loosely linked to their behaviors. How strongly healthy behavior incentives and financial contributions are linked may also depend on the beneficiary's household income, which has the effect of establishing several different program designs within the same state. For example, in Iowa there are no penalties for beneficiaries with incomes at or below 100 percent FPL who fail to complete incentivized behaviors or to make premium payments; however, those with incomes between 101 and 133 percent FPL can be disenrolled for failure to make premium payments beginning in the second year of enrollment. Our team will take advantage of this variation across states, and across population groups within a state, to try to tease apart the effects of behavior incentives and financial contribution requirements on beneficiary behaviors and health outcomes.

Table III.2. Selected characteristics of Medicaid-supported QHP enrollment demonstrations

Program features	Arkansas[a]	Iowa	New Hampshire
Eligibility	Adults aged 19 through 64 with income at or below 133% FPL, not medically frail	Adults aged 19 through 64 with income above 100% FPL up to and including 133% FPL, not medically frail or eligible for cost-effective ESI	Adults aged 19 through 64 with income at or below 133% FPL, not medically frail or enrolled in cost-effective ESI
Health account	Independence Accounts used to collect monthly contributions and to assist with cost-sharing payments	None	None
Wrap-around benefits	NEMT EPSDT Family planning services	EPSDT Family Planning Services Dental Wellness Plan Encounter payment wrap for certain providers	NEMT EPSDT Family planning services Limited adult dental Limited adult vision
Waived Medicaid benefits	None	NEMT	None
Beneficiary premium	Yes, for beneficiaries with incomes from 100% FPL up to 133% FPL	Yes, for beneficiaries from 100% to 133% FPL (waived in first year); waived if complete healthy behaviors during first year	None

Table III.2 (continued)

Program features	Arkansas[a]	Iowa	New Hampshire
Cost sharing	From 100% to 133% FPL, co-payments and co-insurance ranging from $10 to $25; amounts can be higher for above 100% FPL if beneficiary does not make monthly premium contributions	$8 copayment for inappropriate emergency department use	No demonstration-specific cost sharing; all cost sharing consistent with approved state plan
Incentives	Following 6 or more premium contributions to the Independence Account, funds roll over for future premium offsets for QHP, ESI, or Medicare; point-of-service cost-sharing decreased with premium payments	Monthly premium waived if complete healthy behavior incentives	None
Penalties for failure to pay[b]	None	Those from 101% to 133% can be disenrolled for non-payment but can reenroll without a waiting period.	None

[a] Arkansas announced in June 2015 that it will not apply cost-sharing requirements, including monthly contributions or co-payments, to beneficiaries with incomes below 100% FPL. Arkansas obtained section 1115 waiver authority, through an amendment approved on December 31, 2014, to apply cost-sharing requirements to Medicaid beneficiaries with incomes starting at 50% FPL.

[b] States that disenroll beneficiaries for failure to make required financial contributions allow exemptions to disenrollment and lock-out conditions for beneficiaries meeting certain hardship criteria.

FPL = federal poverty line; ESI = employer-sponsored insurance; NEMT = non-emergency medical transportation; EPSDT = early periodic screening, diagnosis, and treatment; QHP = qualified health plan.

Table III.3. Selected characteristics of beneficiary engagement/premiums demonstrations

Program Features	Indiana	Iowa	Michigan
Start of required monthly contributions	Immediately (no enrollment until first monthly payment to POWER account—the state and beneficiary funded health savings account)[a]	After first 12 months of enrollment	After first 6 months of enrollments
Incentivized health behaviors[b]	Seek specified preventive care services, including annual wellness exams	Complete a health risk assessment and obtain wellness exams, among other services	Complete a health risk assessment and agree to maintain healthy behaviors
Incentives based on above behaviors	Reduced POWER account payments	Waive all premium contributions that would otherwise be required after 12 months	Cost-sharing/ contributions reduced from the level that would otherwise be required after 6 months, or gift cards
Delay between behaviors and incentives	Benefits accrue during year 2 of enrollment (timing subject to final claims adjudication)	Premiums waived beginning in month 13 of enrollment	Incentives provided within first enrollment year; exact timing dependent on type of reward
Penalties for failure to pay[c]	Beneficiaries at or below 100% FPL who fail to pay for 60 days receive fewer benefits (HIP Basic). Those between 101% and 133% who fail to pay are disenrolled and locked out for 6 months.	No penalties for those at or below 100% FPL; those from 101% to 133% can be disenrolled for non-payment but can reenroll without a waiting period.	No

[a] Indiana does not consider monthly contributions to POWER accounts to be equivalent to premiums, primarily because beneficiaries are refunded their POWER account balances upon disenrollment from Medicaid. For this reason, we frequently refer to “premiums and other mandatory financial contributions” in this report.

[b] State protocols for specific incentivized health behaviors remain to be determined, and states are initially requiring only health risk assessments and/or wellness exams. The original Healthy Indiana Program included a set of age- and gender-specific preventive health care services that enrollees were incentivized to obtain. To the extent that states move in that direction, specifying incentives for a greater range and number of healthy behaviors, we will have a greater opportunity to exploit variation across states to identify the effects of incentive structures on receipt of preventive and chronic care services.

[c] States that disenroll beneficiaries for failure to make required financial contributions allow exemptions to disenrollment and lock-out conditions for beneficiaries meeting certain hardship criteria.

HIP = Healthy Indiana Plan; FPL = federal poverty line; POWER = Personal Wellness and Responsibility; TBD = to be determined.

Table III.4. Evaluation design for Domain 1 research questions on Medicaid-supported enrollment in qualified health plans: research questions, outcome measures/indicators, potential data sources, and draft analytical approach

Research question[a]	Proposed outcome measures or indicators	Potential data sources[b]	Draft analytical approach[c]
1. How do states supporting QHP enrollment for newly eligible beneficiaries compare to Medicaid expansion states in terms of access and health outcomes?			
a. Are beneficiaries enrolled in QHPs able to access care at similar or better rates, compared to beneficiaries enrolled in Medicaid?	Percentage: • Receiving any physician visit within 2 and 6 months of enrollment • Receiving a prescription within 2 and 6 months of enrollment • Receiving wrap-around services that are standard benefits in Medicaid expansion states Average: • PMPM use of physician services • PMPM use of prescriptions • PMPM use of wrap-around services	• TMSIS, MSIS	• Descriptive regression framework: examine relative use of services, controlling for observable beneficiary characteristics, comparing premium assistance states (and populations within premium assistance states) and Medicaid expansion states • Descriptive analysis of whether there is differential receipt of care by gender, income, disability, and other individual characteristics
b. Does provider participation improve under premium assistance?	• Number of providers of different types contracted to provide services to Medicaid population • Percentage of providers taking new patients • Percentage of providers caring for more than one or two Medicaid patients	• QHP and state MCO contracts outlining access standards • State reports on provider participation • Provider file in TMSIS	• Descriptive statistics • Pre/post analysis of provider participation, if state collected information on provider participation prior to demonstration
c. What is the unmet need for medical care?	Percentage: • Self-reporting they have personal doctor/health care provider • Self-reporting unmet medical need due to cost • Self-reported length of time since last routine doctor visit	• BRFSS • CAHPS	• Descriptive statistics using national survey data to allow cross-state comparison of trends over time; and state-level survey data if available. • Difference-in-differences model comparing to states with historically low Medicaid income thresholds that also rely on federally facilitated marketplaces (FFMs)

Table III.4 (continued)

Research question[a]	Proposed outcome measures or indicators	Potential data sources[b]	Draft analytical approach[c]
d. Is there continuity of coverage between Medicaid and Marketplace coverage?	• Counts of beneficiaries moving directly from Medicaid to Marketplace coverage with the same health plan, and the reverse. Patterns of issuer participation in Marketplace and Medicaid premium assistance program (which Marketplace plans are Medicaid premium assistance plans?).	• TMSIS, MSIS, or state enrollment data • Marketplace and Medicaid data on plan participation	• Descriptive statistics on length of coverage; gaps in coverage; length of gaps • Descriptive statistics on proportion of transitioning beneficiaries with potential to remain enrolled with same health plan
2. How do states supporting QHP enrollment compare to Medicaid expansion states in terms of total spending, especially given premium variability over time with QHPs?			
a. How do premium assistance states compare to Medicaid expansion states in terms of per-beneficiary spending on direct medical services and capitation payments?	• Total spending per beneficiary per month on direct medical expenditures and premium payments to QHPs	• State reports on costs • TMSIS, MSIS	• Descriptive statistics • Difference-in-differences model comparing to states with historically low Medicaid income thresholds that also rely on FFMs
b. How do premium assistance states compare in terms of states' administrative costs?	Growth in total administrative costs: • From 2013 to 2014 (initial infrastructure expansion costs) • From 2014 going forward	• State reports on costs • CMS 64 expenditure data	• Descriptive statistics • Comparison of trends to states with historically low Medicaid income thresholds that also rely on FFMs
3. How do states supporting QHP enrollment compare to Medicaid expansion states in terms of take-up rates?			
a. Does the take-up rate among likely eligible individuals suggest that premium assistance (i.e., enrollment in QHPs) is more attractive to beneficiaries than traditional Medicaid?	Rates of: • Enrollment by key demographic characteristics • Uninsurance among newly eligible Medicaid populations	• TMSIS, MSIS or state enrollment files • ACS	• Descriptive statistics, including analysis of whether there is differential participation by gender, income, disability, and other individual characteristics • Difference-in-differences model comparing to states with historically low Medicaid income thresholds that also rely on FFMs
b. Are there patterns in the timing of Medicaid beneficiary enrollment that may be related to the Marketplace open enrollment period, even though Medicaid beneficiaries are not subject to open enrollment periods?	• Counts of monthly enrollment	• TMSIS, MSIS, or state enrollment data	• Descriptive statistics • Regression model, with indicators for open enrollment months, comparing to states with historically low Medicaid income thresholds that also rely on FFMs

[a] Questions in this table are numbered by priority, according to the first premium assistance subject matter expert meeting held on December 11, 2014.

Table III.4 (continued)

[b] We will solidify data sources for each research question after we have completed a detailed assessment of available data sources, which is scheduled for option year 1.

[c] We are still in the preliminary stages of developing an analytical approach for each research question. Whenever possible, we will develop estimates of program effects using a difference-in-differences approach that controls for observable differences among treatment and comparison states before the intervention began. For some questions this approach may not be feasible, if the data sources do not provide information in the pre-intervention period or obtaining data from comparison states would strain project resources.

ACS = American Community Survey; BRFSS = Behavioral Risk Factor Surveillance System; CAHPS = Consumer Assessment of Healthcare Providers and Systems; CMS = Centers for Medicare & Medicaid Services; MCO = managed care organization; MSIS = Medicaid Statistical Information System; QHP = qualified health plan; TMSIS = transformed Medicaid Statistical Information System.

Table III.5. Evaluation design for Domain 2 research questions on beneficiary engagement/premium incentive structures and other financial contributions: research questions, outcome measures/indicators, potential data sources, and draft analytical approach

Research question	Proposed outcome measures	Potential data sources[a]	Draft analytical approach[b]
1. To what extent do requirements for premiums act as a disincentive to enrollment?			
a. How does requirement to make premium payments to complete enrollment, as compared to following an initial period of enrollment, affect take-up of coverage?	Proportion of likely eligible population enrolled in coverage	• ACS • TMSIS, MSIS or state enrollment data	• Difference-in-differences model exploiting variation across states in premium rules, grouping states by whether they require up-front versus delayed premium payments • Descriptive analysis of whether there is differential take-up of coverage by gender, income, disability, and other individual characteristics
b. How do the premium amounts affect take-up of coverage?	Proportion of likely eligible population enrolled in coverage	• ACS • TMSIS, MSIS or state enrollment data	• Difference-in-differences model exploiting variation across states in premium rules, grouping states by required premium amounts • Descriptive analysis of whether there is differential take-up of coverage by gender, income, disability, and other individual characteristics
2. What effects do premiums appear to have on continuity of coverage?			
a. Do incentive programs that require premiums affect continuity of coverage?	Rate of: • Mid-year disenrollment for failure to pay premiums • Disenrollment at renewal, excluding loss of eligibility • Renewed enrollment rates by whether premiums are required	• State reports • TMSIS, MSIS • State enrollment records that contain premium amounts or information about reasons for disenrollment or indicators for missed or non-payment of premiums	• Descriptive regression framework, comparing outcomes to those of states with historically low Medicaid income thresholds that do not have a healthy behaviors program; to other healthy behavior states that do not require premiums; and within a state, across subgroups with different premium payment requirements • Descriptive analysis of whether there is differential continuity of coverage by gender, income, disability, and other individual characteristics

Table III.5 (continued)

Research question	Proposed outcome measures	Potential data sources[a]	Draft analytical approach[b]
b. What is the effect of premium enforceability rules, such as required time lapses (or “lock-out” periods) before reenrollment?	Rate of: • Mid-year disenrollment for failure to pay premiums • Disenrollment at renewal, excluding loss of eligibility • Renewed enrollment rates	• State reports • TMSIS, MSIS • State enrollment records that contain premium amounts or information about reasons for disenrollment or indicators for missed or non-payment of premiums	• Difference-in-differences model exploiting variation across states in premium rules

[a] We will solidify data sources for each research question after we have completed a detailed assessment of available data sources, which is scheduled for option year 1.

[b] We are still in the preliminary stages of developing an analytical approach for each research question. Whenever possible, we will develop estimates of program effects using a difference-in-differences approach that controls for observable differences among treatment and comparison states before the intervention began. For some questions this approach may not be feasible, if the data sources do not provide information in the pre-intervention period or obtaining data from comparison states would strain project resources.

ACS = American Community Survey; MSIS = Medicaid Statistical Information System; TMSIS = transformed Medicaid Statistical Information System.

Table III.6. Evaluation design for Domain 3 research questions on beneficiary engagement/premium incentive structures: research questions, outcome measures/indicators, potential data sources, and draft analytical approach

Research question[a]	Proposed outcome measures	Potential data sources[b]	Draft analytical approach[c]
1. What strategies are states using to educate beneficiaries about preferred healthy behaviors?			
a. What strategies are states using to explain incentives and disincentives? Which are perceived to be effective?	• Mode, content, timing, and other aspects of education materials • Qualitative assessment of more and less effective strategies	• Qualitative information from interviews with Medicaid administrators providers, navigators, assistors, advocates, and document review • Results from state surveys or focus groups that include questions about beneficiary understanding of incentives	• Descriptions of content and timing of education materials and perceived effectiveness of these strategies as reported by administrators, stakeholders, and via state surveys. • Descriptive statistics from state surveys or focus groups illustrating beneficiary understanding of program incentives
b. Conditional on qualitative information suggesting successful education strategies, or on survey or focus group data from state evaluations that explores beneficiary understanding, what is the effect of mode, content, and/or timing of education?	Rates of: Incentivized preventive and chronic care, stratified by beneficiaries' exposure to different educational strategies	• TMSIS, MSIS • Adult core measure set • HEDIS	• Difference-in-differences model exploiting variation across states in education strategies
2. To what extent can program incentives encourage Medicaid enrollees to actively participate in their care without impairing access to needed care?			
a. To what extent can program incentives encourage Medicaid enrollees to actively participate in their care?	• For states with accounts owned by beneficiaries, frequency of beneficiary access/use of accounts • Receipt of preventive care and adherence to recommended chronic care regimens, stratified by whether beneficiary received health risk assessment and/or initial wellness visit, and whether beneficiary faces financial incentive to obtain the service	• State reports • TMSIS, MSIS • Adult core measure set (constructed if state does not report)	• Descriptive statistics, including analysis of whether there is differential participation by gender, income, disability, and other individual characteristics • Difference-in-differences model exploiting variation across states in the timing of incentives and comparing to states with historically low Medicaid income thresholds that do not have a healthy behaviors program

Table III.6 (continued)

Research question[a]	Proposed outcome measures	Potential data sources[b]	Draft analytical approach[c]
b. Do program incentives impair access to needed care?	• Percentage self-reporting access to care or cost of care concerns, stratified by whether beneficiaries face point-of-service cost sharing • Receipt of physician services/ prescriptions (or other services for which some beneficiaries face copayments, and others do not) • Proportion of beneficiaries who reach annual cost-sharing limits, and average time to reach these limits	• Adult CAHPS • TMSIS, MSIS	• Descriptive regression framework, comparing CAHPS outcomes to states with historically low Medicaid income thresholds that do not have a healthy behaviors program • Within-state regression discontinuity framework, examining receipt of service patterns for beneficiaries who are close to income cutoff for facing point-of-service cost sharing • Descriptive analysis of whether there are differential access outcomes by gender, income, disability, aggregate out-of-pocket costs incurred, and other individual characteristics
3. Do incentives for wellness behaviors work?			
a. Which behavior incentives yield the greatest relative gains in preventive care?	Receipt of: • Incentivized and non-incentivized preventive care services	• TMSIS, MSIS • Adult core measure set • State reports • BRFSS	• Difference-in-differences model exploiting variation across states in the timing of particular incentives; possible BRFSS analysis could examine whether there are population-level effects • Descriptive analysis of whether beneficiaries respond in a way that is consistent with their individual financial incentives, or in a way that indicates a diffuse effect to other healthy behaviors • Descriptive analysis of whether there is differential receipt of care by gender, income, disability, and other individual characteristics

Table III.6 (continued)

Research question[a]	Proposed outcome measures	Potential data sources[b]	Draft analytical approach[c]
b. Which behavior incentives yield the greatest relative gains in management and care of chronic conditions?	Rates of: • Smoking cessation • Adherence to care for chronic conditions, e.g., diabetes; COPD	• TMSIS, MSIS • Adult core measure set • HEDIS • BRFSS	• Difference-in-differences model exploiting variation across states in the timing of particular incentives; possible BRFSS analysis could examine whether there are population-level effects • Descriptive analysis of whether beneficiaries respond in a way that is consistent with their individual financial incentives, or in a way that indicates a diffuse effect to other healthy behaviors • Descriptive analysis of whether there are differential outcomes by gender, income, disability, and other individual characteristics
c. Which behavior incentives yield the greatest reductions in disincentivized care (i.e., non-emergent ED visits)?	Rate of: • ED visits by type of visit (emergent, non-emergent)	• TMSIS, MSIS • MEPS • State reports	• Difference-in-differences model exploiting variation across states in the timing of specific incentives; possible MEPS analysis could examine population-level effects • Descriptive analysis of whether there is differential ED use by gender, income, disability, and other individual characteristics
4. What are the administrative costs to states and managed care companies of implementing incentive programs?			
a. What administrative costs do states with healthy behavior incentive programs incur to establish and maintain these programs? To what extent are costs borne by the state versus contracted health plans?	State spending on infrastructure investments necessary to establish and maintain individual beneficiary accounts and/or tracking of beneficiary behavior.	• Qualitative information from interviews with Medicaid and health plan administrators and document review • State reports on project-specific costs	• Descriptive analysis of administrative costs reported by state Medicaid officials and health plans, highlighting marginal costs to the state and federal government.

[a] Questions in this table are numbered by priority, according to the first beneficiary engagement/premiums subject matter expert meeting, held on December 16, 2014.

[b] We will solidify data sources for each research question after we have completed a detailed assessment of available data sources, which is scheduled for option year 1.

[c] We are still in the preliminary stages of developing an analytical approach for each research question. Whenever possible, we will develop estimates of program effects using a difference-in-differences approach that controls for observable differences among treatment and comparison states before the intervention began.

Table III.6 (continued)

For some questions this approach may not be feasible, if the data sources do not provide information in the pre-intervention period or obtaining data from comparison states would strain project resources.

BRFSS = Behavioral Risk Factor Surveillance System; CAHPS = Consumer Assessment of Healthcare Providers and Systems; COPD = chronic obstructive pulmonary disease; ED = emergency department; HEDIS = Healthcare Effectiveness Data and Information Set; MEPS = Medical Expenditure Panel Survey; MSIS = Medicaid Statistical Information System; TMSIS = transformed Medicaid Statistical Information System.

C. Outcome measures and key data sources

The evaluation will answer the questions posed above by analyzing outcomes that fall into several broad categories: access to and receipt of care; enrollment, including take-up (the proportion of the likely eligible population that enrolls), continuity, and disenrollment; costs of care; program participation by providers; beneficiary education; and active participation by beneficiaries. This section describes the outcomes and data sources that we propose to draw on in addressing questions in each of these areas, as summarized in tables III.4 through III.6. For premium assistance states, certain planned measures and data sources are tentative since it is not yet clear whether services delivered in premium assistance states will be reported to state Medicaid programs. In particular, the availability and quality of encounter data (as reflected in TMSIS and MSIS) from QHPs are unknown for premium assistance states. We will refine our planned measures and data sources as we learn more about what data QHPs and providers in QHP networks are reporting for Medicaid beneficiaries.

Access to and receipt of care. Beneficiary access to needed care under each demonstration program is of primary importance to CMS, and patterns in the receipt of care signal the effectiveness of healthy behavior incentives. We will measure temporal patterns in the receipt of care, such as what percentage of enrollees receive physician visits within 6 months of enrollment, as well as nationally standard utilization measures, such as Medicaid Adult Core Set and HEDIS, constructed using administrative data (TMSIS, MSIS, state enrollment data). We will also explore the general volume of use to assess whether access is comparable across QHPs and direct Medicaid coverage, as well as use of specifically incentivized preventive and chronic care services. To further understand access to care or potentially impaired access, our team will rely on sources of self-reported data; in particular, BRFSS (for population-level estimates) and CAHPS data (for Medicaid-specific estimates).[5]

Enrollment and retention. The evaluation will seek to understand participation in each program, measured by patterns of both enrollment and disenrollment. We will examine how various features of the premium assistance and beneficiary engagement/premiums programs may affect initial take-up, uninsurance rates among newly eligible adults, reenrollment at renewal among those eligible, and continuity of coverage within both Medicaid and the Marketplace. To observe these outcomes, we will rely on enrollment data from states, TMSIS or MSIS, and Marketplace data on plan participation. For population-level analyses of take-up, we will estimate the size of populations eligible for Medicaid using the American Community Survey, which provides annual data on demographic characteristics, including income, and coverage status by state.

Costs. Questions addressing per-beneficiary-per-month spending and administrative costs will rely on state cost reports, CMS 64 expenditure data, and TMSIS and/or MSIS. In addition, we anticipate supplementing these quantitative data sources with qualitative data from key-informant interviews. Through these interviews we can explore, for example, the relative administrative burden of implementing different incentive programs, such as beneficiary health savings accounts or premium credits for receipt of specified preventive services. These costs may

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[5] We will also evaluate the usability and value of using the NHIS to analyze use of physician services and unmet need among targeted low-income populations. Due to small sample sizes, this survey may require combining years of data for precise state-level estimates, and may not be viable for all states.

be difficult to document specifically in state financial records, but they represent real considerations for other states contemplating similar program designs.

Provider participation. Questions around provider participation are especially important for Medicaid-supported enrollment in QHPs. CMS seeks assurances that beneficiary access through commercial coverage is at least as good as, if not better than, access through traditional Medicaid coverage. We plan to measure the numbers of providers contracted to deliver care, those taking new patients, and those caring for a broad range of patients, using QHP and state MCOs contract language, provider participation records within each demonstration state, and the provider file data in TMSIS. As mentioned above, it is not yet clear whether TMSIS will yield reliable provider data for premium assistance beneficiaries enrolled in QHPs. We will adjust our plans for outcome measures and data sources as we learn more about data collection in premium assistance states.

Beneficiary education. Beneficiary education is at the heart of the beneficiary engagement/ premiums programs—our team must determine whether education strategies are successful before we can attribute changes in behavior to the incentive programs. We will review state documents to determine the mode, content, timing, and other germane aspects of education activities, and we will interview Medicaid administrators and other key informants, such as providers, navigators, assistors, and advocates, to gather information on whether these strategies are viewed as effective. For example, we will consider online account models as well as state and health plan communications intended to motivate particular behaviors (that may or may not have been tied to financial incentives), such as the health reminder cards sent by some states and/or their health plans at particular times in the year. Qualitative input from administrators and other stakeholders will inform an assessment about which strategies are most appropriate to investigate quantitatively using administrative data. For example, if administrators report that receipt of wellness visits seemed to increase following a mailer, we might look for those patterns in claims and encounter data.

While we cannot field an independent survey of enrollees within this project, the team will use the results from the states' own surveys and beneficiary focus groups that explore beneficiary satisfaction and awareness of program details. We will also work closely with CMS to prospectively influence state surveys that we can later use in our analyses by providing CMS and states with guidance on survey methods and questions within the context of the national evaluation. Our team also plans to use CAHPS surveys whenever feasible. If states are modifying CAHPS, the evaluation team will work with willing states to tailor the survey instrument to capture information about how well beneficiaries understand program incentives and which ones they believe have influenced their care-seeking behaviors.

Active beneficiary participation. The evaluation team will continue to explore defining "active participation" in beneficiary engagement/premiums programs. In some states, beneficiaries are required only to receive a health risk assessment and a wellness exam, while other states have implemented more complex incentives. The incentivized behaviors may change also over the years of the demonstrations. We will draw on key-informant interviews to understand program aims for beneficiaries' engagement in their care, and to construct quantitative measures that mark progress toward those aims (for example, frequency of logging in to online accounts, or proportion of preventive services received). To the extent that premium assistance and beneficiary engagement/premiums programs are successful at motivating changes in care-seeking behavior, we may be able to detect population-level effects of specific behavior incentives if beneficiary learning takes place and persists after Medicaid enrollment, or if the effects of specific financial incentives diffuse to other healthy behaviors that states promote but do not explicitly incentivize, or if the learned behavior diffuses to peers and relatives of beneficiaries who are not directly enrolled. To analyze service use among targeted low-income populations, we will explore the possibility of using national survey data, such as BRFSS or the Medical Expenditure Panel Survey (MEPS). These low-income populations will include current and former Medicaid enrollees, as well as some individuals who have never been enrolled in Medicaid.

D. Estimating impacts and comparison group methodologies

All three groups of research questions will rely primarily on individual-level data and, when data allow, use a difference-in-differences framework as our preferred approach to evaluate the effects of premium assistance and beneficiary engagement/premiums demonstrations. For most questions, the unit of analysis will be the individual Medicaid beneficiary; in the estimating models, we will include beneficiary characteristics such as income, age, gender, and length of enrollment in Medicaid, which could affect key outcomes.[6] We will include an intervention indicator for each state implementing a demonstration as well as state characteristics that vary over time and could influence the observed outcomes, such as unemployment rates and availability of providers.

For some of our research questions, a difference-in-differences design may not be feasible, either because we lack pre-period data, or because the level of an outcome variable is of principal interest, rather than its trend over time. For example, CMS is concerned about whether Medicaid beneficiaries enrolled in QHPs are able to access care at rates comparable to those directly enrolled in Medicaid (question 1a in Table III.4). The outcomes of interest are whether beneficiaries receive comparable volumes of care and receive care in an equally timely way following enrollment. By definition, no data on utilization among Medicaid enrollees in QHPs are available for the pre-period (prior to 2014), and we do not necessarily expect a trend over time in these outcomes. For this question, we will perform descriptive regression analyses, examining the outcomes of interest, while controlling for observable differences in the personal characteristics of enrollees. Likewise, tables III.4 and III.6 also contain questions that we will address through descriptive regression or other analytic strategies, such as pre-post analyses or regression discontinuity designs.

The selection of comparison states for each group of research questions is of primary importance because of our general reliance on a difference-in-differences analytic strategy. For all three groups of questions, we will choose states that are similar to the demonstration states but that have not previously implemented policies comparable to those we are investigating. For example, comparison states for the questions in Table III.4 will be selected from among the 27 non-demonstration states that have expanded direct Medicaid coverage to adults under the

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[6] TMSIS will include broad categories of income, but the precursor MSIS data did not include any information about beneficiary income. As of this report, the quality and completeness of the income information in TMSIS was not known.

authority of the Affordable Care Act. Like premium assistance demonstration states, the comparison states must conduct outreach to newly eligible parents and childless adults, educating them about the enrollment process and mechanisms for accessing benefits. Furthermore, we propose limiting the comparison states to those with historically low income thresholds for adults before the expansion because the two demonstration states—Arkansas and Iowa—have historically had quite low Medicaid eligibility levels for adults. In other states with historically more generous income thresholds for public coverage, the pool of low-income adults newly gaining coverage will be smaller and of somewhat higher average incomes. In addition, when a demonstration state relies on the FFMs for eligibility assessment or determination, we will select comparison states that also elected to rely on the FFM, because these states must coordinate outreach and consumer assistance efforts with the federal strategy, and manage the transfer of cases between the FFM and Medicaid, ultimately affecting the rate of successful enrollment. Potential comparison states and their 2013 Medicaid eligibility levels for non-disabled adults are shown in Table III.7.

Table III.7. Possible premium assistance comparison states

	Adults Medicaid eligibility levels, January 2013 (% FPL)			
State	Parents of dependent children, jobless	Parents of dependent children, working	Other non-disabled adults	Marketplace type
Premium assistance states				
Arkansas	13	16	0	Partnership
Iowa	27	80	0	Partnership
New Hampshire	38	47	0	Partnership
Potential comparison states that expanded Medicaid coverage directly				
Indiana*	18	24	0	FFM
Kentucky	33	57	0	SBM
Michigan	37	64	0	Partnership
Nevada	24	84	0	SBM
New Mexico	28	85	0	SBM (2014 Partnership)
North Dakota	33	57	0	FFM
Ohio	90	96	0	FFM
Oregon	30	39	0	SBM
Pennsylvania*	25	58	0	FFM
Washington	35	71	0	SBM
West Virginia	16	31	0	Partnership

Sources: http://kff.org/medicaid/fact-sheet/medicaid-eligibility-for-adults-as-of-january-1-2014/; http://kff.org/health-reform/state-indicator/state-decisions-for-creating-health-insurance-exchanges-and-expanding-medicaid/

* Indiana and Pennsylvania did not expand Medicaid until 2015, so they will not be comparison states for the first year of the premium assistance demonstrations.

FFM = federally facilitated marketplace; FPL = federal poverty line; Partnership = State Partnership Marketplace; SBM = State-Based Marketplace.

Beneficiaries in states making major eligibility expansions under the Affordable Care Act are also an important comparison group for beneficiaries in the beneficiary engagement/premiums demonstration states. This is because adult populations that have not previously been insured are likely to have pent-up demand for health care that may taper off over the first few years of enrollment. Comparing newly eligible adults in beneficiary engagement/premiums states to those in other states that made major eligibility expansions will allow us to separate changes in health care utilization that come with being newly insured, from changes in health care utilization that are driven by the specific incentives in beneficiary engagement/premiums programs.[7] All states in Table III.7 except Indiana, Michigan, and Pennsylvania (themselves beneficiary engagement/premiums demonstration states) are potential comparison states for the research questions outlined in Table III.6.

Finally, we will address several questions in Table III.5 and Table III.6 by exploiting variation across states in specific characteristics of the demonstration programs. For certain questions about healthy behavior incentives in Table III.6, we will use regression models that include state-time dummy variables to denote whether a state included a particular outcome in its incentive structure in a particular time period, such as whether beneficiaries completed a health risk assessment. Variation in when states began incentivizing different behaviors could help pinpoint whether beneficiaries seem to respond to some measures but not others. In this way, some demonstration states with less specific incentive structures will serve as comparisons for other demonstration states with more complex structures. Similarly, for questions about the effect of premiums on take-up and continuity of coverage in Table III.5, we will exploit variation across states in premium rules.

E. Key challenges for the evaluation of the premium assistance and beneficiary engagement/premiums demonstrations

The overlap between beneficiary engagement/premiums demonstration states and premium assistance states presents both a challenge and an opportunity. Because the states with approval for premium assistance (Arkansas, Iowa, and New Hampshire, though others are in discussions with CMS) are also implementing either healthy behaviors incentives (Iowa) or premium payments (Arkansas), it will be difficult to disentangle the effects of each demonstration type. Likewise, some states apply premium requirements to direct Medicaid coverage while others apply them to QHP coverage (Iowa does both). At the same time, the variation in demonstration design across these states means that there is an opportunity to conduct analyses across states to investigate the differential effects of those characteristics.

The beneficiary engagement/premiums evaluation faces an additional challenge. Namely, the incentives that beneficiaries face in these programs are often complex, and aim to motivate desired behavior in the first year (or six months) with the promise of financial rewards in a subsequent enrollment period. For example, in Iowa, after the first year of enrollment, premiums are waived if beneficiaries complete specified activities. Given the high turnover rate among Medicaid enrollees, many enrollees may not be motivated to change behavior now to receive benefits later if they do not anticipate long-term Medicaid enrollment. While we will attempt to assess outcomes over a longer time period to increase the likelihood of having a sample of beneficiaries who have learned the incentive structure, it may be hard to draw inferences reliably

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[7] We will be careful to document apparent effects of program incentives on intermediate steps before inferring causality. For example, we will first consider whether there is any evidence that the directly incentivized behaviors may be changing. If directly incentivized behaviors are not responsive, then any estimated effects on overall utilization measures become less credible.

from those enrolled for long periods, who may be very different from the majority who are enrolled for shorter periods.

Average length of enrollment also presents a challenge for our analysis of health care utilization and adherence to recommended preventive and chronic care treatment regimens. Many Medicaid beneficiaries are not continuously enrolled over long periods. Mathematica cannot build a medical utilization timeline if people are not continuously enrolled, and some care regimens are relevant only over a period of several years (such as cervical cancer screenings once every three years). However, we can compare rates of utilization during observed enrollment periods in states with behavior incentives for preventive services and chronic care treatment regimens to states without those incentives. Our error in measuring the outcomes of interest (for example, counting a woman as not meeting standards for cervical cancer screening, even though she had a screening in the [unobserved] year prior to enrolling in Medicaid) is likely to be similar and not systematic across states. In addition, our team will explore the possibility of using BRFSS or MEPS data to examine population-level impacts within low-income groups as one potential strategy to overcome the Medicaid churn and longitudinal observation problem.

IV. MANAGED LONG-TERM SERVICES AND SUPPORTS DEMONSTRATIONS

A. Introduction

The number of states using managed care delivery systems to provide LTSS to beneficiaries who are frail or have disabilities has grown from 8 in 2004 to 16 in 2012 (Saucier et al. 2012); 24 states were expected to have such programs in place by 2014. Driving this trend is the desire of state policymakers to control rising LTSS expenditures, which represent over a third (34 percent) of all Medicaid spending in 2012 (Eiken et al. 2014). State Medicaid MLTSS programs can help to contain cost growth by paying MCOs a per-member per-month capitation rate to cover the cost of a package of LTSS, which shifts financial risk to the health plans and closer to the point of service. In addition, by setting capitation rates that blend the costs of institutional care and home and community-based services (HCBS), states can create financial incentives for MCOs to favor less costly community placement and accelerate LTSS system rebalancing (Lipson and Valenzano 2013; CMS 2013).[8]

This evaluation of MLTSS programs, including those operating as section 1115 demonstration programs as well as those using other federal authorities, is designed to answer many questions about the effects of these programs, including whether MLTSS programs save costs relative to traditional fee-for-service (FFS) programs, whether these programs improve beneficiary access to care and care quality or do not result in any worse access or quality, and whether they promote long-term care system rebalancing. Because of the large number of MLTSS programs, we will select a group for the evaluation based on a range of characteristics, including the type of authority that governs the program and the population groups the program serves. The state selection criteria are discussed next, followed by a discussion of the primary research questions, outcome measures, data sources, and research methods.

B. State selection criteria

Given the large number of MLTSS programs, CMS and the evaluation team have agreed to evaluate only a selected group. We propose several criteria for choosing the programs to be evaluated, as well as factors that argue for excluding some state MLTSS programs. The states that meet the proposed criteria are shown in Table IV.1, and we explain our rationale for choosing these criteria below. Ultimately, the states to be included in the evaluation will be determined by the availability of reliable data to conduct the analyses.

1. Section 1115 and other federal authorities

The genesis for this evaluation was the rising use of the section 1115 demonstration authority to operate MLTSS programs. In the past six years, many states have been granted such approval, including Delaware, Hawaii, Kansas (using concurrent 1115/1915(c) waivers), New Jersey, and Tennessee. Arizona has operated its MLTSS program under section 1115 authority since it began in 1989. Other states, such as Florida, Minnesota, and Wisconsin, operate MLTSS programs under other federal authorities, such as combination 1915(a)/1915(c) or 1915(b)/ 1915(c) waivers. A few states used to operate MLTSS programs under these authorities but have

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[8] According to CMS guidance, "Inclusion of both institutional and non-institutional services in a managed care capitation rate, for example, provides plans with the flexibility to offer lower cost non-institutional services to beneficiaries and support system rebalancing towards greater use of non-institutional LTSS." (CMS 2013)

recently switched them to section 1115 demonstrations (New Mexico, New York, and Texas). Among states with MLTSS programs, many continue to provide LTSS to selected groups (usually people with intellectual and developmental disabilities) under an FFS model using 1915(c) authority, such as Delaware, Hawaii, New York, Tennessee, and Texas.

While the type of federal authority may affect outcomes of MLTSS programs,[9] we believe it is likely to be less important than other program features. Consequently, for the purposes of this evaluation we propose to examine MLTSS programs that were in effect as of 2014 or 2015 regardless of federal authority—to the extent that comparable data are available. When estimating outcomes, to assess whether the type of authority is associated with significant differences, we will include a specific indicator denoting whether the program operates under section 1115 authority.

2. Geographic reach within the state

We recommend including in the evaluation those states with MLTSS programs that are run statewide or in the majority of the state's regions, or that cover the majority of the target population. Essentially, we want to focus on programs that are broad enough and large enough to be generalizable. Targeted programs, such as Pennsylvania's program for autistic adults, which served just 90 people in 2012, are probably too narrow to meet generalizability criteria. It would be difficult to generate robust estimates for this type of specialized population relative to other types of MLTSS programs, particularly in any type of subgroup analyses.

3. Population groups covered

MLTSS programs cover three major population sub-groups: frail older adults aged 65 and over; people under age 65 with physical disabilities; and people under age 65 with intellectual or developmental disabilities (IDD).[10] Because these groups have very different patterns of service utilization and institutionalization rates, it will be important to develop separate estimates for each of them. Because of the need for sample sizes large enough to produce sufficient statistical power, some very specialized MLTSS programs may be too small to include in the evaluation, such as the Pennsylvania program mentioned above.

4. Other exclusions

We propose to exclude states from the evaluation where the MLTSS operates under the CMS Financial Alignment Demonstration program for Medicare-Medicaid ("dual eligible") enrollees only to avoid duplicating the efforts of a separate CMS-sponsored evaluation. We also propose to exclude Vermont, which provides a unique arrangement for LTSS under section 1115 demonstration authority; the state assumes financial risk and acts as a managed care plan, but all services are paid on an FFS basis.

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[9] For example, the type of federal authority can determine whether enrollment is voluntary or mandatory, which may result in adverse selection that can affect outcomes. In addition, section 1115 demonstration authority can give states greater flexibility in the benefits covered, though there is not much evidence of this in practice.

[10] Some states also serve other groups needing LTSS, such as children with disabilities and people with serious mental illness, but these tend to be specialized programs with small numbers of enrollees.

Table IV.1. Proposed MLTSS evaluation states, by year in which the program began

Selection criteria	In effect in 2005	Began 2006-2012	Newly implemented 2013 to 2015
Potential to be included in the evaluation			
1. Section 1115 or other Medicaid authority 2. Statewide (or nearly) 3. Enroll older adults and people under age 65 with physical disabilities	Arizona Florida[b] Massachusetts[a] Minnesota New York[a,b] Texas[a,b] Wisconsin	Delaware Hawaii New Mexico Tennessee	California[a] Illinois[a] Kansas New Hampshire New Jersey Ohio[a] Rhode Island[a]
4. Enroll people with IDD and SMI only	Michigan	North Carolina[c]	
Total = 18	**8**	**5**	**5**
Proposed for exclusion			
Operates in only one region of the state or targets a very small specialized population		Pennsylvania (adults with autism spectrum disorders)	
MLTSS covered primarily through a CMS Financial Alignment Demonstration for dual enrollees[a]			Michigan[d] South Carolina Virginia
Not typical managed care	Vermont		
Total = 8	**1**	**2**	**5**

[a] Programs in these states are being evaluated by RTI International under a separate CMS-funded evaluation of state demonstrations to integrate care for dual eligible individuals. Note that several states, including Illinois, Massachusetts, New York, Rhode Island, and Texas, have (or will have later in 2015) both a non-duals demonstration and a duals demonstration program operating concurrently. California and Ohio both have mandatory Medicaid MLTSS for Medicaid-only beneficiaries and for dual eligibles who opt out of the duals demonstration.

[b] These states implemented a major expansion of their program sometime between 2013 and 2015.

[c] North Carolina's MH/IDD/SAS Health Plan Waiver, which enrolls people with mental health and intellectual and developmental disabilities, operates as a prepaid inpatient health plan and provides HCBS to plan members who qualify for these services.

[d] Michigan's dual demonstration enrolls older adults and people under age 65 with physical disabilities; a pre-existing MLTSS program in the state enrolls people with intellectual and developmental disabilities.

HCBS = home and community-based services; IDD = intellectual and developmental disabilities; MH = mental health; MLTSS = managed long-term services and supports; SAS = substance abuse services; SMI = serious mental illness.

C. Primary research questions

This evaluation will investigate how MLTSS programs compare to FFS programs for LTSS in achieving the major objectives of all Medicaid programs: to maintain or improve access to and quality of care, to control costs, and to rebalance the long-term care system. We will examine these questions at three levels of analysis or domains: (1) at the state level, we will examine system-wide costs for LTSS and whether institutional care costs decline relative to home and community-based LTSS costs; (2) at the individual level, we will examine beneficiary access, health services utilization, and quality of LTSS; and (3) at the program level, we will assess design characteristics and how they relate to implementation and, when possible, to program outcomes.

Our proposed research questions, as well as outcome measures, potential data sources, and a draft analytical approach, are shown in Table IV.2. We discuss the measures and data sources in more detail below. We also provide an initial description of some of the issues relating to our analysis plan.

Based on discussion and input from CMS policymakers and subject matter experts, we refined the key research questions to focus on the issues important to them. For example, to determine whether MLTSS accelerates long-term care system rebalancing, we will examine how the share of spending and use of HCBS changes over time in MLTSS states relative to their experience using FFS models. We will also examine how per capita LTSS costs change when a state shifts from FFS to MLTSS and how MLTSS per capita costs change over time compared to annual changes when the states relied on FFS. To understand how MLTSS affects access and the quality of care provided to enrollees, the research questions focus on enrollee experience regarding whether they usually or always get the support they need to live independently, and changes in utilization of appropriate preventive services and avoidable hospitalizations as indicators of the quality of care management.

Table IV.2. MLTSS demonstrations evaluation design: research questions, outcome measures/indicators, potential data sources, and draft analytical approach

Research question	Proposed outcome measures or indicators	Potential data sources	Draft analytical approach[a]
A. State-level Impacts – Are MLTSS programs associated with more balanced state LTSS systems that increase use of and spending on HCBS? Do MLTSS programs cost less or reduce spending growth compared to FFS programs?			
1. How much is the HCBS share of total LTSS spending in MLTSS systems, compared to that in FFS systems, and how does this change over time?	Percentage of total LTSS spending (institutional + HCBS) used for HCBS	CMS 64 expenditure data, supplemented by additional state data used to estimate LTSS spending in MLTSS states (Truven LTSS expenditure reports for CMS)	Difference-in-differences model that compares states that adopted MLTSS systems to those with previous experience in FFS systems, overall and stratified by program maturity and benefit model (medical plus LTSS versus LTSS only).[b]
2. What is the share of all Medicaid LTSS beneficiaries using HCBS in MLTSS systems, compared to that in FFS systems? How does this share change over time?	Percentage of: • All individuals eligible for LTSS (institutional + HCBS) that use HCBS • First-time LTSS users who receive Medicaid-funded HCBS (rather than institutional care) as their initial LTSS	• TMSIS, MSIS (for states with reliable encounter data) • CCW Timeline File (for Medicare-Medicaid eligibles)	Difference-in-differences model that compares states that adopted MLTSS systems to those with previous experience in FFS systems, overall and stratified by program maturity and benefit model (medical plus LTSS versus LTSS only).[b]
3. How do per capita LTSS costs in MLTSS systems compare to those in FFS systems, and what is the change in cost growth over time?	• Average state per capita LTSS spending (institutional + HCBS) (total LTSS spending/total LTSS users) • Percentage change in average state per capita LTSS spending	• TMSIS, MSIS • CMS 64 expenditure data, supplemented by additional state data obtained from MLTSS states in Truven LTSS	Difference-in-differences model that compares states that adopted MLTSS systems to those with previous experience in FFS systems, overall and stratified by program maturity and benefit model (medical plus LTSS versus LTSS only).[b]
B. Individual-level Impacts – How does access to care, utilization of services, and the quality of care differ between MLTSS and FFS? Do MLTSS programs transform care so that people who need LTSS have better access to services and improved outcomes?			
1. How does utilization of and access to HCBS change in states switching from FFS to MLTSS systems?	• Average number of personal care visits per year/1,000 enrollees in FFS (HCBS waivers) versus MLTSS • Percentage of LTSS users who report that obtaining needed services from personal assistants and homemakers is easy or very easy, and that case managers are responsive to service requests	• MSIS/TMSIS • HCBS experience of care survey (TEFT, if data are available); state survey data in other states	**For personal care visits:** Difference-in-differences estimate that controls for outcomes during a baseline period, and groups MLTSS states by level of experience and benefit model (medical plus LTSS versus LTSS only). **For obtaining needed services measure:** Descriptive statistics[c] comparing experiences in MLTSS states (AZ and MN) to those FFS states, controlling for demographic factors like gender, age, etc., through subgroup analysis.

Table IV.2 (continued)

Research question	Proposed outcome measures or indicators	Potential data sources	Draft analytical approach[a]
2. How do patterns of hospital and nursing home use change in states switching from FFS to MLTSS systems?	Percentage of LTSS users who: • Are admitted to a hospital each year • Number of inpatient hospital days each year • Are admitted to a nursing home or ICF-IDD for any length of time after an inpatient admission; for Medicare-Medicaid enrollees, nursing homes stays beyond 100 days	• MSIS/TMSIS • Medicare claims records for Medicare-Medicaid enrollees	Difference-in-differences estimate that controls for outcomes during a baseline period, and groups MLTSS states by level of experience and benefit model (medical plus LTSS versus LTSS only).
3. Do adults with disabilities living in the community usually or always get needed support?	Percentage of adults age ≥18 with disabilities living in the community usually or always receiving needed social and emotional support	• BRFSS—some states and some years • HCBS experience of care survey (TEFT if data are available; State survey data in other states)	**Using BRFSS data:** Descriptive time series analysis.[c, d] **Using TEFT data:** Descriptive statistics[c] comparing experiences in MLTSS states (AZ and MN) to those FFS states, controlling for demographic factors like gender, age, etc., through subgroup analysis.
4. Do adults with disabilities obtain appropriate preventive health care?	• Proportion of people with disabilities reporting recent preventive health care visits (individual-level) • Percentage of LTSS users who are screened for depression, diabetes, cholesterol, cancer, or provided fall risk management (HEDIS measures, or calculation based on HEDIS measure specifications)	• BRFSS • MSIS/TMSIS • HEDIS/State EQRO reports • Medicare data (for primary care services obtained by Medicare-Medicaid enrollees)	Difference-in-differences estimate that controls for outcomes during a baseline period, and groups MLTSS states by level of experience and benefit model (medical plus LTSS versus LTSS only). May limit to Medicaid-only enrollees if Medicare data cannot be readily obtained for dual enrollees.
5. Is the quality of care provided by the MLTSS program at least the same as that provided by FFS?	Percentage of LTSS users: • Who experience potentially avoidable hospitalizations • Whose home care workers showed up "on time" (according to the care plan)	• MSIS/TMSIS • CCW Supplemental File • State EQRO reports • State hospital inpatient discharge data • Performance data reported in the quarterly or annual section 1115 monitoring reports	**For avoidable hospitalizations:** Difference-in-differences estimate that controls for outcomes during a baseline period, and groups MLTSS states by level of experience and benefit model (medical plus LTSS versus LTSS only). Calculate using AHRQ Prevention Quality Indicators (PQI) methods. If possible, divide by place of residence or adjust for the percentage of people in the nursing home or community. May limit to Medicaid-only enrollees if Medicare data cannot be readily obtained for dual enrollees. **For timeliness of homecare workers:** Descriptive statistics.[e]

Table IV.2 (continued)

Research question	Proposed outcome measures or indicators	Potential data sources	Draft analytical approach[a]
C. Program Level Impacts – How do the impacts of MLTSS programs vary by program characteristics? Which characteristics of MLTSS are associated with better outcomes (better access, more balanced state systems, better quality of care)?			
1. Are fully blended LTSS capitation payment models associated with greater use of HCBS than other payment models?	Percentage of LTSS-eligibles (institutional + HCBS) using HCBS	• CMS data on components of state actuarial rate packages[f] • MSIS/TMSIS	Descriptive statistics overall and disaggregated by state and payment model (fully blended, partially blended, residence-based rates FFS).[g]
2. How do institutional admission rates differ among state MLTSS programs that enroll only people who already meet institutional LOC need, compared to MLTSS programs that provide LTSS to those with lower LOC need as well?	Percentage of: • LTSS users admitted to a nursing home or ICF-IDD for any length of time; for dual enrollees, stays beyond 100 days. Results by LOC. • First-time LTSS users who receive Medicaid-funded HCBS (rather than institutional care) as their initial LTSS	• MSIS/TMSIS	Descriptive time series analysis[h] that presents results overall and disaggregated by state LOC requirements for MLTSS.
3. Do MLTSS programs that cover both medical and LTSS benefits have different effects on health care use than those covering LTSS only?			This question will be addressed through state and individual-level impact analyses that divide results for MLTSS states by benefit model (medical plus LTSS versus LTSS only). For states that have changed their benefit model (e.g., Texas), we may be able to conduct a difference-in-differences analysis.
4. How do protections (such as requiring managed care companies to pay providers FFS-equivalent rates, to contract with all providers, or to honor all existing plans of care) affect the change in utilization rates during and after a state transitions from FFS to MLTSS?	• Percentage of beneficiaries each quarter following MLTSS implementation who receive personal care from the same provider (individual or setting) • Percentage of NF and HCBS providers each quarter following MLTSS implementation who participated in Medicaid before MLTSS	• MSIS/TMSIS[i] • MLTSS contracts and waiver documents (for information on transition protections)	Difference-in-differences analysis if some states transition to MLTSS without protections (and can therefore serve as a control); otherwise, descriptive time series analysis.

[a] We will present the impacts for outcomes measures by year and program type (MLTSS or FFS). Where possible, we will also present results separately for the following population groups: age ≥65, age <65 with a physical disability, age <65 with an intellectual disability; and Medicaid-only versus Medicare-Medicaid eligibles (dual eligibles).

[b] We plan to adjust for provider protections in place during the initial years of MLTSS programs that can skew results (for example, by removing new MLTSS programs from some analyses). We may request additional financial or utilization data from states, depending on the quality and completeness of the encounter data for each state.

[c] Measures that rely on data from the HCBS experience of care survey can only be analyzed using descriptive statistics. The HCBS experience of care survey collects point-in-time information from 9 states; two of these states have MLTSS programs that have operated statewide for many years (AZ and MN), while a third (NH) has not yet launched its MLTSS program (scheduled to start in 2015). As such, we cannot compare outcomes between MLTSS and FFS programs, or within MLTSS programs over time.

[d] Measure based on the following indicator of emotional support and life satisfaction from BRFSS: "percentage of adults limited in any way in any activities because of physical, mental, or emotional problems who usually or always received needed social and emotional support." This question was asked by all states

Table IV.2 (continued)

participating in BRFSS from 2005-2010, and only by TN in 2013; it does not distinguish between individuals in FFS and MLTSS systems. As such, we cannot construct pre- and post-intervention periods required for regression analysis. However, should data allow, we can present trends in descriptive statistics over time.

[e] We suspect that these data will be available in very few states (Tennessee is the only state we know of that is currently reporting it). If comparable state data are not reported for MLTSS and FFS regions (treatment and control) over time, only descriptive statistics will be feasible.

[f] CMS issued recent guidance describing the information to be submitted in actuarial rate certifications (see http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Delivery-Systems/Managed-Care/Downloads/2015-Medicaid-Manged-Care-Rate-Guidance.pdf). CMS also began reviewing Medicaid actuarial rates in 2014 with support from a contractor (Lewis and Ellis). If CMS or the contractor is creating an inventory or database of state actuarial rate components, we would appreciate CMS efforts to share any information pertaining to MLTSS rates with Mathematica for this evaluation.

[g] Measures that compare state MLTSS programs (as opposed to comparing MLTSS models to FFS), will not have the pre- and post- intervention periods required for regression analysis. However, should data allow, we can present trends in descriptive statistics over time.

[h] Unless we can identify LOC over time, we will not be able to construct the pre- and post-intervention periods required for regression analysis.

[i] MSIS and TMSIS FFS and encounter claims contain provider IDs that could be used to produce measures of provider continuity. However, our experience conducting MSIS data quality reviews suggests that provider IDs are often inconsistent over time, particularly after a switch to managed care. As part of our data analysis plan, we will conduct a detailed review of provider IDs before identifying the states and years for which these measures can be calculated.

AHRQ = Agency for Healthcare Research & Quality; BRFSS = Behavioral Risk Factor Surveillance System; CCW = Chronic Condition Warehouse; CMS = Centers for Medicare & Medicaid Services; EQRO = external quality review organization; FFS = fee-for-service; HCBS = home and community-based services; HEDIS = Healthcare Effectiveness Data and Information Set; ICF-IDD = intermediate care facilities for individuals with intellectual disabilities; LOC = level of care; LTSS = long-term services and supports; MLTSS = Managed long-term services and supports; MSIS = Medicaid statistical information; NF = nursing facility; PQI = prevention quality indicators; TEFT = Testing Experiment and Functional Assessment Tools; TMSIS = transformed Medicaid statistical information system.

D. Outcome measures and key data sources

Whenever possible, we selected outcome measures for each research question that are commonly used to examine costs, access, and quality for all populations, or for Medicaid populations, whether or not they use LTSS. For example, to assess the quality of care provided to people with LTSS, we will calculate the rate of avoidable hospitalizations—an important indicator of the quality of outpatient care provided to people with acute or chronic conditions—using established methods and specifications for calculating this measure.[11] However, because of the personal nature of HCBS and the influence of individual preferences regarding whether they are of adequate quality, we also selected quality measures specific to the LTSS population. For example, we will request data from a new HCBS experience-of-care survey that is being tested in nine states through CMS's Testing Experience and Functional Assessment Tools (TEFT) grant.

Some of the outcome measures are unique to LTSS. Most notable is the aim of rebalancing LTSS away from institutional settings in favor of home and community-based settings to ensure that people can live in the least-restrictive setting possible (CMS 2013).[12] We selected measures of rebalancing at the state level that are commonly used by CMS and other organizations, such as ratios of HCBS to total LTSS spending, as well as the number of HCBS to total LTSS users, explained further below. If data are available, we will also explore whether MLTSS programs actually transform the delivery of care, for example, by examining the rate of transitions between institutional and HCBS care or transitions from acute to post-acute to LTSS relative to these care patterns in FFS models.

For each of the outcome measures, we propose to use a variety of data sources. When possible, we will use data reported by states to CMS in quarterly or annual section 1115 monitoring reports (for those states operating their MLTSS programs as a section 1115 demonstration). These documents may yield valuable performance data, quality measurement information, or details about program characteristics to be considered in the model. But there is significant variation in the data contained in states' section 1115 monitoring reports; for example, only Tennessee provides information on timeliness of home care worker visits. Because of such differences, and our proposal to include states that use other federal authorities to operate MLTSS programs, we will rely primarily on national data sources because such data are more uniform and comparable across states.

Nonetheless, many national Medicaid data sources contain incomplete or unreliable data for managed care enrollees, and data sources on quality and beneficiary experience often do not disaggregate results for LTSS users. We will investigate the quality and completeness of each source before proceeding with our analysis. While we will make every attempt to obtain uniform national data from CMS, such as TMSIS and MSIS, we may request data directly from states; for example, some states may have data collected by EQROs on measures of quality for the LTSS

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[11] For example, to calculate the percentage of LTSS users who experienced potentially avoidable hospitalizations (question B.5 in Table IV.1), we will use AHRQ Prevention Quality Indicators (PQI) software to identify hospital admissions with diagnoses that qualify as "ambulatory care sensitive conditions" for which good outpatient care can potentially prevent the need for hospitalization. Such measures require hospital inpatient discharge data to calculate and will provide a population-level estimate of the proportion of events that were avoidable.

[12] According to CMS, "States are using MLTSS as a strategy for expanding HCBS, promoting community inclusion, ensuring quality, and increasing efficiency." (CMS 2013).

population, and financial data may be requested to provide more detail about managed care spending on LTSS.

- **Medicaid LTSS spending.** For measures of state-level spending on Medicaid and LTSS, we will use the CMS 64 expenditure data, supplemented by information on specific types of LTSS expenditures (for example, institutional versus HCBS) from the LTSS Medicaid expenditure reports that Truven Health Analytics produces for CMS, which include data from CMS 372 reports on HCBS waiver programs. We will also use MSIS and TMSIS, which report enrollment and spending data for FFS and managed care enrollees. We also may use the CMS 2012-2013 inventory of actuarial rate-setting packages to determine features of state managed care capitation payment, such as risk-sharing, risk adjustment, and performance incentives, and request updated information from CMS if available.
- **Service use and expenditures.** For measures requiring individual-level information on service use and expenditures, we propose to use TMSIS, MSIS, and data from the Medicaid Analytical eXtract (MAX) system. Unlike other section 1115 demonstrations, several MLTSS programs have been operating for many years, which means we can take advantage of research-quality MAX files dating back to 2006 through the latest year (currently at least 2010 for almost all states, 2011 for 38 states, and 2012 for about 18 states).[13] These sources include encounter data documenting the services used under capitated managed care; however, whether or not the data are of sufficient quality and completeness for all study years, all study states, and LTSS is not yet known. We will investigate the quality and usability of MSIS, TMSIS, and MAX data for each state in task 5 in option year 1. If some states are deemed to have encounter data that are not suitable for research, we may need to request individual-level encounter data, or aggregate utilization data for FFS and MLTSS enrollees, directly from states.
- **Dual enrollee utilization.** For dual eligibles, we will use the Chronic Condition Warehouse (CCW) Timeline File, which tracks where Medicare beneficiaries reside each day of the year (whether in inpatient or institutional settings or at home with or without home health care) or the CMS Medicare-Medicaid Linked Enrollee Analytic Data Source (MMLEADS), which contains information on Medicare-paid medical services (such as hospitalizations, skilled nursing facility admissions, primary care visits, and preventive screenings). MMLEADS contains information for dual enrollees receiving care through Medicare FFS, and does not have service use data for dual enrollees in Medicare Advantage (MA) Special Needs Plans (SNPs).[14] MMLEADS are currently available through 2010, but an update through 2011 is expected to be released later in 2015. Depending on when the analyses for this evaluation occur, data through 2012 may also be available for this evaluation. In addition, MMLEADS does not currently contain revisions to MSIS data, so there may be missing or incorrect data for dual enrollees.

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[13] MAX data before 2006 exist but these data are less comparable across states, less detailed or of poorer quality, especially for HCBS waiver enrollment and services.

[14] Medicare Advantage plans did not begin submitting encounter data to CMS showing utilization among plan members until 2013.

- **Quality measures**. We propose to examine the percentage of LTSS users who are screened for depression, diabetes, cholesterol, or cancer, or are provided fall risk management. We will either (1) obtain state-reported HEDIS measures from the section 1115 monitoring reports, or (2) if it is not possible to distinguish MLTSS enrollees from other health plan enrollees, we will use MSIS and/or TMSIS data to construct these measures using HEDIS specifications, at least for Medicaid-only enrollees, and for dual enrollees if information for them is available through the CCW or state-maintained encounter data, health records, or discharge data.
- **Beneficiary experiences**. For beneficiary-reported measures of experience of care, we will explore a variety of survey data. For example, we might use the HCBS experience of care survey being developed and tested under the Demonstration Grant for TEFT. Arizona and Minnesota are two states using MLTSS models for whom data under this survey might be available, as well as seven other states that use FFS to deliver HCBS.[15] We might also use survey data from the BRFSS, which includes measures of health status and access to health care. If these two sources do not provide data for all states or their data are not released in a timely way, we may request survey data directly from states.[16]

E. Estimating impacts and comparison group methodologies

We are still in the preliminary stages of developing an analytical approach for each research question. Whenever possible, we will develop estimates of program effects using a difference-in-differences approach that controls for observable differences between treatment and comparison states before the intervention began. These models will also exploit variation in the timing of the MLTSS implementation in each state, where the pre-period is defined by the years when a FFS model was in use and the post-period is when the MLTSS program is operating. However, for some questions this approach may not be feasible, if the data sources do not provide information in the pre-intervention period or obtaining data from comparison states would strain project resources.

State fixed effects in the primary model will help control for unobserved variation across states that may affect outcomes (for example, consumer preferences for setting of care might vary across states and also affect outcomes, as would the availability of HCBS providers). Our models will also include controls for observed state characteristics that may vary over time (for example, Medicaid income eligibility requirements for adults), the degree of functional limitations required to qualify for HCBS and/or nursing facility care (that is, level of care criteria), and whether medical care is included in the MLTSS capitation rates. In addition, we will account for other state initiatives that may concurrently affect the outcome measures of interest for these populations (for example, financial alignment demonstrations or state participation in the Balancing Incentive Program) by adding indicators for those initiatives to the

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[15] Nine states are currently testing the HCBS experience-of-care survey (Arizona, Colorado, Connecticut, Georgia, Kentucky, Louisiana, Minnesota, Maryland, and New Hampshire). Arizona and Minnesota are also testing a revised Continuity Assessment Record and Evaluation tool with community-based LTSS clients; depending on when results are available, we may be able to analyze survey results by level of care.

[16] We considered using survey data from a new nationwide CAHPS survey of adult Medicaid beneficiaries because it includes people with disabilities and will have comparable data across states. However, the questions pertain to experience with medical care; they do not ask about experience with LTSS. For more information, see http://www.norc.org/Research/Projects/Pages/nationwide-adult-medicaid-cahps.aspx.

estimating model. When appropriate, these indicators will control for the timing of the implementation of the other state initiative.

When states have operated MLTSS programs for more than 10 years, pre-MLTSS data may be unavailable or not comparable to data after MLTSS programs went into effect. In these cases, we will perform descriptive time series analyses that examine the change in trends over time. We will present the results for outcome measures by year and program type (MLTSS or FFS). Whenever possible, we will also present results separately for children, adults over 65, adults under 65 with a physical disability, and adults under 65 with an intellectual disability. Similarly, we will present separate results for Medicaid-only versus Medicare-Medicaid eligibles.

To examine whether acute and post-acute medical care utilization patterns (such as hospital and nursing home utilization) differ between MLTSS models that cover both medical and LTSS benefits and those that cover LTSS only, we will compare average utilization rates over time for the two sets of states (Table IV.3). We may have to restrict our analysis to Medicaid-only beneficiaries in certain years, if data on Medicare benefit utilization for dual eligibles enrolled in Medicare Advantage are not available from other sources (Medicare Advantage plans serving dual enrollees did not begin submitting encounter data to CMS until 2013; therefore, Medicare Part C encounters are not included in MMLEADS).[17] We will examine the feasibility of comparing service utilization for *Medicaid-only* enrollees in states that provide comprehensive medical and LTSS, with *dual* enrollees in the same states that receive LTSS from a state Medicaid plan and medical care from Medicare FFS for people under 65. This would require controlling for other differences in demographic characteristics and in service utilization across dual and non-dual enrollees.[18]

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[17] Mathematica previously conducted a study of hospital use among Arizona dual enrollees, using state hospital discharge data because we could not obtain reliable national-level Medicare hospital utilization data for dual enrollees. While Medicare Advantage-SNPs enrolling dual enrollees are required to have contracts with state Medicaid agencies as of 2013, many of these contracts simply require plans to “coordinate with Medicare” or to offer a dual-SNP option, but most do not require that SNPs offer fully integrated Medicare-Medicaid benefits. For these reasons, differences between integrated and non-integrated MLTSS plans may be difficult to detect. Medicare Advantage SNPs began submitting encounter data in 2012 or 2013; depending on the reliability of the data and our ability to link the data at the person-level, we may be able to use this new data source to analyze hospital, post-acute, and other service use.

[18] For example, in 2010, 28 percent of dual beneficiaries used inpatient hospital services compared to 17 percent of non-dual Medicaid beneficiaries, and 21 percent of dual beneficiaries used Medicaid institutional LTSS compared to 4 percent of non-dual Medicaid beneficiaries (all full-benefit beneficiaries enrolled in FFS) (MedPAC and MACPAC 2015: exhibits 14 and 15).

Table IV.3. Categories of state MLTSS programs

Type of MLTSS program	States
Comprehensive (Medical and LTSS Benefits)	Arizona, Delaware, Hawaii, Illinois, Kansas, Minnesota, New Mexico, Tennessee, Texas[a]
LTSS Only	Florida, New York, Wisconsin (Family Care)

[a] Until recently, Texas excluded nursing facility services from the MLTSS benefit package. Starting March 1, 2015, people in nursing facilities covered by Medicaid only will get basic health services (acute care) and long-term services and supports through the STAR+PLUS Medicaid managed care program. Dual eligibles will get their basic health services through Medicare and their LTSS through STAR+PLUS Medicaid.

LTSS = long-term services and supports; MLTSS = managed long-term services and supports

For measures that are not consistently reported over time (for example, survey measures), we will produce descriptive statistics that present key characteristics of the data (such as mean, median, range, and correlation statistics). Where possible, we will divide the measures into meaningful categories that help distinguish differences across different program characteristics. For example, when examining associations with the percentage of LTSS-eligibles using HCBS, we will group state results by payment model (fully blended LTSS [capitation rates covering institutional care and HCBS], partially blended rates, and rates based on the beneficiary residence type [institutional or community]).

For many of the measures, we will disaggregate results from states with different characteristics that are likely to affect the outcomes, such as length of time that the program has been in place, payment model used, and level of care required to qualify for MLTSS. We will also make adjustments where possible to account for external influences on our findings. For example, we will adjust spending measures to account for provider protections used during the first year of a program (that is, requiring managed care companies to pay providers FFS-equivalent rates, to contract with all providers, or to honor all existing plans of care). Adjustment strategies could include separately analyzing the differences in trends between the FFS and transition periods, and the FFS and MLTSS periods, or conducting sensitivity analyses that remove new MLTSS programs in which provider protections are in place.

F. Key challenges for the evaluation of MLTSS demonstrations

There are several challenges to evaluating the effects of state MLTSS programs, including the diversity in MLTSS program design and operations, gaps in individual-level service and cost data for managed care enrollees, and the considerable differences between states using MLTSS and those relying on FFS.

1. **MLTSS program diversity.** A small number of states have operated MLTSS programs for more than 10 years, and others have been operating for only one or two years. Mature programs are likely to have outcomes that differ from those of programs that are still in early stages of implementation. Covered benefits also differ; for example, most programs include institutional care in the benefit package, but Texas did not cover nursing home care under its long-standing MLTSS program (STAR+Plus) until 2014, and Minnesota limits MCO risk for nursing home care to the first 180 days. In addition, some programs cover LTSS as part of a comprehensive package of medical services, while others cover only LTSS. Even when programs cover acute and primary care as part of the MLTSS program, health plans have limited ability to coordinate these services for Medicare-Medicaid enrollees who receive

medical care through Medicare FSS or from a Medicare Advantage health plan. Differing program rules enable Medicare-Medicaid enrollees to receive Medicare services through a separate Medicare Advantage plan or from Medicare FFS, even if a state requires enrollment in Medicaid MLTSS. Though some states are contracting with Medicare Advantage Dual-eligible Special Needs Plans (D-SNPs) to limit this option and streamline requirements between the two programs, states are not required to do so.[19] The maturity of the program, the benefit package, and the types of managed care plans (for example, local nonprofits or national for-profit chains) may also vary for each population covered by state MLTSS programs. Consequently, it will be difficult to isolate which program characteristics explain the results, and cross-state analyses must take into account these variations when examining changes in service use, quality, costs, and system rebalancing for states moving from FFS to MLTSS models.

2. **Managed care encounter data.** National Medicaid data sources, including MSIS and MAX, are known to contain incomplete or unreliable encounter data for managed care enrollees in some states. While some states have made notable improvements in reporting managed care encounter data in recent years and improving encounter data is a priority for TMSIS, we anticipate that these data may be unavailable for some states. In addition, because little is known about the LTSS encounter data, we propose to conduct a systematic assessment of their quality in task 5.
3. **Differences in state systems.** The characteristics of state long-term care systems vary enormously. This variations appears across a wide range of characteristics, including the availability of HCBS, nursing home beds per population, the supply of long-term care workers, resources that provide information about alternatives to nursing home care, and programs that help people in institutions return to the community (Reinhard et al. 2014). Furthermore, when states first implement MLTSS programs, their existing long-term care system may be at different stages of rebalancing; some were heavily reliant on institutional care, while others had already made progress in shifting the balance of care from institutional to home and community care. Because of this heterogeneity, this evaluation will need to control for differences in state systems across states, both those with MLTSS programs and those using FFS models that may be included in comparison groups.

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[19] The Medicare Improvements for Patients and Providers Act of 2008, as amended by the Affordable Care Act of 2012, required that D-SNPs have a contract with the state Medicaid agency in each state in which they operate “to provide [Medicaid] benefits, or arrange for the benefits to be provided” by calendar year 2013. However, states are not required to contract with D-SNPs. Prior to 2013, federal law and regulations encouraged D-SNPs to contract with states but did not require it. For more information, see Verdier et al. 2015.

V. RAPID-CYCLE REPORTS

The results of the proposed analyses will be presented in two different types of reports: rapid-cycle feedback reports, discussed in this chapter, and interim and final evaluation reports, discussed in Chapter VI. In the base year, we will produce the first set of rapid-cycle reports, one for each demonstration type, and in options years 1 through 4 we will produce two rapid-cycle reports for each demonstration type each year. We anticipate that the first reports will be ready for publication in July 2015. After that, we expect to publish a set of rapid-cycle reports approximately every six months.

The rapid-cycle reports will be designed to provide basic information and metrics about the overall performance of the demonstrations. The purpose will be to support the monitoring of each demonstration type through a set of performance metrics and to provide descriptive information about implementation and current status. Initially, the information will be presented in descriptive tabular formats, but as more data become available, we anticipate that these tables will be transformed into a dashboard format. Each rapid-cycle report will also include an issue brief that focuses on a specific, cross-state research topic relating to how the demonstrations are designed and implemented. We expect that the information presented in these reports will also be incorporated into the impact analyses, when appropriate. At a minimum, what we learn from monitoring and assessing the implementation of these demonstrations will help us interpret the findings from the impact analyses. We may also find that program implementation analyses can guide the selection and construction of subgroup analyses or outcome measures. It is also possible that the estimation of program impacts will have to control for specific elements, such as key program features, of the demonstration models if we believe these elements are likely to be correlated with outcomes. Hence, the monitoring data and implementation analyses conducted for the rapid-cycle reports will serve the dual purpose of reporting on the overall progress of the demonstrations and informing the impact analyses.

A. Overview

The rapid-cycle reports will include a set of basic metrics that support the monitoring the performance of the demonstrations. As noted above, the format used to present the performance metrics is expected to change over time as the database that will serve as the primary data source for this component of the reports comes to full scale. In this report, we refer to this database as the performance metrics database.

For the first of set of reports scheduled for the base year, we are constrained by the available data in state reports. The evaluation team will abstract information from the reports that states have been submitting to CMS, including their quarterly and annual progress reports, applications and operating plans and protocols, the special terms and conditions that govern each demonstration, and any state evaluation reports. However, the evaluation team will eventually obtain the data needed for the rapid-cycle reports from the performance metrics database that Customer Value Partners (CVP) and its subcontractors are building for the section 1115 demonstration program. The CVP team will populate this database with information abstracted from the state reports mentioned above. CMS project officers will use the database to monitor the demonstration, and it will be the primary data source for the data component of the rapid-cycle reports and for how the evaluation team will monitor the performance of the demonstrations. Because the performance metrics database will be in its development phase during the base year, the evaluation team will conduct its own abstraction of information for the first set of rapid-cycle reports. We envision that eventually the data component of the reports will rely primarily, if not exclusively, on data abstracts from the performance metrics database.

We anticipate that the data component of the initial set of rapid-cycle reports will focus on documenting key program features of each demonstration, but it might also include characteristics of the participants, if feasible. In addition, we expect that eventually the data component will provide information that can be used to track aspects of program performance and quality metrics. Nevertheless, each of the rapid-cycle reports for each demonstration type will contain unique data. For example, the DSRIP reports will have to include information about milestone achievement at the provider and project levels, which will not be relevant for the other demonstration types. As the performance metrics database comes online and includes a fuller array of data that states report to CMS, we anticipate later rapid-cycle reports will have a richer and more fully formed data component section that can be developed into dashboards.

In addition to the data component, each rapid-cycle report will also include a short issue brief (4 to 5 pages) focused on a descriptive analysis of a specific topic relating to how the demonstrations are designed and implemented. The following sections present our initial ideas for the dashboard data and issue brief components. Because we plan to produce the first set of rapid-cycle reports during the base year, the most fully formed ideas are those that can be explored in the initial set of rapid-cycle reports and the CMS subject matter experts have identified as priority research topics. These ideas are organized by demonstration type.

B. DSRIP

The state DSRIP programs are multifaceted and context-specific; therefore, there is considerable variation in state protocols, project requirements, and valuation methods across states. Further, states are in varying stages of implementation, and differences in state program design and requirements might reflect learning from preceding demonstrations (for example, California’s DSRIP might have informed New York’s DSRIP). Because of the evolution of DSRIP and its heterogeneity across states, the DSRIP rapid-cycle reports will provide both CMS and the evaluation team with information about DSRIP program characteristics, how they change over time, and indicators of performance and progress toward goals. In addition, these reports will provide CMS with indicators of whether states are on target with project implementation.

States participating in DSRIP include California, Massachusetts, New Jersey, New York, Kansas, New Mexico, and Texas. Given the complexity of these demonstrations, our reporting will focus on programs valued at $250 million or more, which means Kansas and New Mexico will not be included in the rapid-cycle reports. Oregon is also implementing a section 1115 demonstration that uses incentive payments to target both hospital reform and system transformation. One component provides incentive payments to the 16 coordinated care organizations that are tasked with transforming the system. Because Oregon provides incentive payments relating to reporting and benchmarks for clinic outcomes, Oregon will be included in the pool of DSRIP states.

A key challenge for any assessment of DSRIP demonstrations is the multiple layers of analysis involved: (1) at the project level, (2) at the provider coalition level, and (3) at the state level. In Chapter II, we proposed a high-level logic model that represents the programmatic and policy purpose of DSRIP and aids in understanding DSRIP globally. The DSRIP rapid-cycle reports will focus on tracking actual progress in implementing the activities and outputs associated with the milestones and goals of each state program against the state's expected progress.[20]

For the first rapid-cycle report, we propose to develop a series of tables that systematically compare key program features of state DSRIP programs to identify commonalities and differences in program characteristics, characteristics of participating provider entities, and the criteria for DSRIP incentive payments. In keeping with discussions with CMS, the first report will focus on California, New Jersey, New York, Oregon, and Texas.

In subsequent reports, we will create and update the following areas of progress in a series of dashboard tables and charts:

1. Project and funding status update
2. Progress on milestone achievement
3. Disbursement of incentive payments
4. State-reported estimates of the number of Medicaid beneficiaries and uninsured people affected
5. Implementation activities, such as convening learning collaboratives
6. High-level quality indicators

As mentioned above, the primary source of information for the data component of the rapid-cycle reports will be quarterly and annual state and provider reports submitted to CMS. However, state reports to date have been highly variable across the demonstration states, and it may prove challenging to report in a standard format across all states. We propose a number of tables that may be refined as we analyze the state documentation and look for commonalities or differences that may require presenting data in different formats than currently outlined or in state-specific tables. As states are renewed or more states have approved DSRIP programs, CMS might consider standardizing reporting to facilitate monitoring of program performance.

1. Base year dashboard data

The base year dashboard for DSRIP demonstrations is intended to provide a foundational understanding of the scope of these demonstrations and how they compare and contrast. For the first set of tables, we propose to present key features of DSRIP programs (Table V.1), characteristics of participating providers (Table V.2), and the improvements tied to incentives (tables V.3 through V.7). These draft tables differentiate currently available elements from aspirational elements that we anticipate will be added as states begin to gather data on other measures. Because each state is at a different stage of implementation, we need to establish a

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[20] If necessary, to identify monitoring indicators, we might also develop state-specific logic models tailored to state-defined activities, outputs, and outcomes.

time period for the data reports. We propose to establish a baseline by describing the key program features for the first demonstration year (the year participating providers start their improvement initiatives) and then start monitoring performance in 2014—which may reflect different demonstration years across the states, as well as different lengths of time from the baseline year.

Program features. The key features of the DSRIP programs that will be included in the first year of reporting are:

- Total funding amount (broken down by federal and state contributions)
- Implementation time frame, including any renewals that are as recent as spring 2015
- Primary orientation of demonstration
- Targeted patient populations
- Criteria for provider eligibility, including whether the program includes public hospitals, private hospitals, and non-hospital providers
- Requirements for hospital-provider coalitions
- The geographic span of the DSRIP program—statewide or limited to certain regions
- The method of funding distribution and how risk is shared, in particular, whether hospitals alone; hospitals and community-based providers; or hospitals, community-based providers, and states bear any risk of funding loss (Table V.1)
- Method of beneficiary attribution for purposes of incentive payments and for performance measurement
- Project valuation methodology
- Partnership models in use among participating providers.

As demonstrations are revised or renewed, we will update and expand this table as appropriate. In future years of reporting, we will also describe Medicaid beneficiary attribution for participating providers and track trends in the number of attributed beneficiaries to participating providers and across improvement projects (as described further below).

Table V.1. DSRIP program features by state

Program features	New York	Massa-chusetts	New Jersey	Oregon	Texas	California
Metrics available in current state reports or through other documents						
Total funding amount						
Federal contribution						
State contribution						
Implementation time frame						
Start date[a]						
Expiration date						
Primary orientation of demonstration						
Provider project-based						
System transformation						
Other						
Targeted populations						
Eligible provider criteria						
Public hospitals (yes/no)						
Private hospitals (yes/no)						
Non-hospital based providers (yes/no)						
Requirements for regional/community coalitions						
Statewide or limited to certain regions						
Distribution of risk for funding loss						
Hospitals						
Hospitals, plus other providers						
Hospitals, other providers, and the state						
Entities at risk for funding loss						
State attribution methodologies for incentive payments and performance measurement						
Project valuation methodology						
Aspirational elements, not yet available in all state reports or other documentation						
Partnership models						

[a] Year participating providers start improvement initiatives.

Participating provider entities characteristics. While the previous table shows the types of providers eligible to participate, Table V.2 will compare the characteristics of participating provider entities or coalitions, supplying information on the lead, or anchoring, entities for each state and the types of providers or partners formally engaged in coordinating with the lead entity. For example, New York has approved nine lead entities that can establish coalitions. These coalitions will function as performing provider systems and may include medical, behavioral health, long-term care, developmental disabilities, or social services providers. Each will have a general goal of building a "comprehensive regional performance network."[21] Table V.2 is illustrative and may be revised as we learn more about the participating partners in each state.

Table V.2. Lead entities and partners in participating provider systems/ coalitions, by state

	Number of lead entities by type		Number of partners/provider types with formalized commitments to participate with lead				
State	Hospital or health system	Other	Physician practices	FQHCs	Behavioral health providers	City/county health depts.	Social services providers
New York							
Massachusetts							
New Jersey							
Oregon							
Texas							
California							

Note: Table is intended to be illustrative; additional provider types or organizational partners may be added as appropriate.
FQHC = federally qualified health centers.

Improvement projects being incentivized by DSRIP programs. States specify a "menu" of improvement initiatives or projects, and providers select from the menu and report on specific metrics or milestones. To monitor the implementation of the DSRIP demonstrations, tracking must be performed at three levels: (1) the project level, defined by the type of system, clinical quality, or population health improvement; (2) the provider coalition level, which will aggregate results across the multiple projects being pursued by each coalition; and (3) the state level, aggregating results across all projects and coalitions.

By mapping each of the project-defined domains to state-defined domains of improvement, we will compare the milestones or performance targets within each domain of improvement, for example, delivery system initiatives at the state level. To compare across states, we may need to further standardize domain definitions to commonly occurring topics. Table V.3 will compare the distribution of milestones across the domains and then within each category to identify whether one or several demonstrations are more focused on clinical versus delivery system initiatives and whether they are more focused on improving (1) reporting, (2) process of care, or (3) outcome metrics. We also propose to track this information over time to identify changes in the focus of the different demonstrations. Tracking may help us identify patterns in shifting priorities as providers learn what works and what is or is not sustainable over long periods.[22]

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[21] State special terms and conditions: http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/ny/Partnership-Plan/ny-partnership-plan-attach-i-07292014.pdf

[22] Some states (such as Texas) have many projects, and the resources required to categorize and classify each one could be prohibitive. In such cases, we will investigate the feasibility of basing our analysis on a sample of projects.

Table V.3. Distribution of state-defined milestones for assessing provider progress—demonstration year 3, by milestone type and by state

Percentage of state-defined milestones by type	New York	Massa-chusetts	New Jersey	Oregon	Texas	California
All delivery system initiatives	Percentage of all metrics					
Reporting	Percentage of metrics within domain					
Process of care						
Outcome						
All clinical quality initiatives						
Reporting						
Process of care						
Outcomes						
All population health initiatives						
Reporting						
Process of care						
Outcomes						

Note: Categories are illustrative only; we may add other categories of initiatives after completing our analysis of all DSRIP projects. In states with many projects, such as Texas, we may base this analysis on a sample of projects. Only those states that have reached the third demonstration year would be included in this table. We selected the third demonstration year for reporting purposes because it will reflect a more mature program whose metrics are likely to be maintained through the end of the demonstration. Alternatively, this information could be tracked by demonstration year, with changes in metrics noted as they occur.

DSRIP = Delivery System Reform Incentive Payments.

At the project level, we will map each of the projects to categories of improvement within each domain; for example, projects addressing care coordination and enhanced access within the delivery system domain (the actual categories will be determined based on further analyses of state project protocols). Table V.4 illustrates how we might present the number of projects within each category and indicate the number that are state mandated or selected by the provider. It will also compare the planned versus the actual number of projects, where the *planned* column represents the provider coalition plans for project implementation and *actual* column represents any revisions made to provider coalitions' plans for implementation, such as when a project is discontinued. Table V.5 lines up the funding with the projects.

Table V.4. Number of projects (planned vs. actual) by improvement target area and state

Targeted improvement area (number of projects within area)	New York		Massachusetts		New Jersey		Oregon		Texas		California	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
System transformation domain												
Care coordination												
Mandatory projects	#	#	#	#	#	#	#	#	#	#	#	#
Provider-selected from menu	#	#	#	#	#	#	#	#	#	#	#	#
Off-menu	#	#	#	#	#	#	#	#	#	#	#	#
Enhanced access												
Mandatory projects	#	#	#	#	#	#	#	#	#	#	#	#
Provider-selected from menu	#	#	#	#	#	#	#	#	#	#	#	#
Off-menu	#	#	#	#	#	#	#	#	#	#	#	#
Improvement area 3/etc.												
Mandatory projects	#	#	#	#	#	#	#	#	#	#	#	#
Provider-selected from menu	#	#	#	#	#	#	#	#	#	#	#	#
Off-menu	#	#	#	#	#	#	#	#	#	#	#	#

Note: The rows presented are illustrative; the actual rows will be determined by the target areas and number of projects. In states with many projects, such as Texas, we may base this analysis on a sample. The menus change in some states over time, and we will make a determination against the menu that was in place at the time of data abstraction.

Table V.5. Funding amounts (and percentage of overall funding) by type of project, improvement target area, and state

Targeted improvement area (number of projects within area)	New York	Massachusetts	New Jersey	Oregon	Texas	California
System transformation domain						
Care coordination						
Mandatory projects	$ (%)	$ (%)	$ (%)	$ (%)	$ (%)	$ (%)
Provider-selected from menu	$ (%)	$ (%)	$ (%)	$ (%)	$ (%)	$ (%)
Off-menu	$ (%)	$ (%)	$ (%)	$ (%)	$ (%)	$ (%)
Enhanced access						
Mandatory projects	$ (%)	$ (%)	$ (%)	$ (%)	$ (%)	$ (%)
Provider-selected from menu	$ (%)	$ (%)	$ (%)	$ (%)	$ (%)	$ (%)
Off-menu	$ (%)	$ (%)	$ (%)	$ (%)	$ (%)	$ (%)
Improvement area 3/etc.						
Mandatory projects	$ (%)	$ (%)	$ (%)	$ (%)	$ (%)	$ (%)
Provider-selected from menu	$ (%)	$ (%)	$ (%)	$ (%)	$ (%)	$ (%)
Off-menu	$ (%)	$ (%)	$ (%)	$ (%)	$ (%)	$ (%)

Note: The rows presented are illustrative; the actual rows will be determined by the target areas. In states with many projects, such as Texas, we may base this analysis on a sample. The base for the milestones and metrics may have to be adjusted if it becomes too difficult to tie the funding back to individual projects.

2. Later-year dashboard data

As mentioned, we expect that the dashboards will be expanded to include more information and more topic areas as state reports become richer and more uniform. The following sets up our current ideas for later contract years.

Project and funding status update. In each semiannual rapid-cycle report, we will present project and funding status updates (Table V.6) to monitor the funding results of these demonstrations. Ideally this information will be presented on a year-by-year basis to allow tracking of trends in funding disbursement.

Table V.6. Funding status update

State (and current demonstration year)	Total funding disbursed to providers (current reporting period)	Total funding disbursed to secondary pools (current reporting period)	Total funding disbursed cumulative	Balance
State A (DY 3)				
State B (DY1)				
Etc.				

Note: The data source for this table will have to come from CMS and is the supporting documentation for the CMS 64.9, required documentation submitted quarterly to CMS documenting incentive payments disbursed.

CMS = Centers for Medicare & Medicaid Services.

Progress on milestone achievement. We will present the percentage of milestones met by participating provider entities by state and demonstration year (Table V.7). As each state is in a different stage of implementation, we will assess the percentage of milestones met based on the current demonstration year. By organizing the information by type or category of project, we may be able to identify areas where DSRIP demonstrations are more (or less) successful.

Table V.7. Percentage of milestones of total possible milestones based on provider plans met in each category of targeted improvements for each state (example table)

Category of targeted improvement	New York/DY#	Massa-chusetts/ DY#	New Jersey/ DY#	Oregon/ DY#	Texas/ DY#	California/ DY#
Delivery system initiatives[a]						
Care coordination						
Infrastructure						
Process – pay for reporting						
Process – pay for performance						
Outcomes – pay for reporting						
Outcomes – pay for performance						
Enhanced access to care						
Infrastructure						
Process – pay for reporting						
Process – pay for performance						
Outcomes – pay for reporting						

Notes: This table assumes that all state annual reports include summary tables of milestones met by participating providers in each category of improvement similar to Appendix B: DY8 Milestones Completed by Public Hospital Systems in California's DY8 Aggregate Public Hospital System Annual Report, December 31, 2013.

For states with any waiver renewals, we will determine in concert with CMS the demonstration time period to cover for each state and will align comparisons accordingly.

[a] Only two categories are presented, as this table is meant to be illustrative. We will include all the commonly defined categories we identify in the Year 1 dashboard table.

CMS = Centers for Medicare & Medicaid Services; DY = demonstration year;

Disbursement of incentive payments. Monitoring will include updates on disbursement of incentive payments for each state, reflecting the most recent state update (Table V.8).

Table V.8. Disbursement of incentive payments for California (example table)

Participating provider entity	Category of targeted improvement	Milestone/ metric	Level of achievement	Pay for reporting (yes/no)	Pay for performance (yes/no)	Total achievement value (possible amount)	Percentage of total achieved
Entity 1	Care coordination Enhanced access to care						
Entity 2	Care coordination Enhanced access to care						
Entity 3	Care coordination Enhanced access to care						
Etc.							

State-reported estimates of affected beneficiaries. We will report updates on the number of attributed Medicaid beneficiaries and uninsured individuals for purposes of measuring performance, by state and demonstration year (Table V.9). For each state, we will also present state-specific tables that present the number of attributed individuals for each participating provider entity, broken out into state-defined subpopulation categories (in New York, for example: developmental disabilities, behavioral health, long-term care, and “other”). These tables will reflect state-reported numbers of attributed Medicaid beneficiaries and uninsured individuals or estimates of the number of affected target populations based on state documentation.

Table V.9. Number of attributed Medicaid beneficiaries and uninsured individuals, by state and current demonstration year

State/Current DY	Total number of attributed Medicaid beneficiaries	Total number of attributed uninsured individuals
State A/DY		
State B/DY		
Etc.		

DY = demonstration year

Implementation activities. For implementation updates, we will monitor state reporting, as well as core implementation activities and operational features that promote continuous learning and improvement. For example, we expect to report on items like the number of learning collaborative sessions held since the last update for each learning collaborative in each state (for example, Oregon has a Transformation Center that hosts a variety of learning collaboratives for the coordinated care organizations and providers, and New York is also planning multiple learning collaboratives). To make sure we capture the activities that align with CMS priorities, we propose to select additional continuous quality improvement activities in collaboration with CMS. However, the data might be disparate across states, so we might not be able to report on this monitoring topic consistently. As with other topics, tracking this information over time could be important to understanding how these demonstrations evolve and to identifying challenging implementation issues.

Quality metrics. Because the ultimate goal of DSRIP is to improve care for Medicaid beneficiaries and the uninsured, we will monitor progress on several commonly shared quality measures across the demonstration states. This monitoring topic is initially mostly aspirational, given the variation in reporting of quality metrics across states and that participating providers might modify measure definitions to accommodate their circumstances. Because of these anticipated challenges, we will aim to monitor a common set of quality metrics across demonstration states but might need to scale back or report on measures unique to each state initially if we are unable to develop a common set. We intend to look across demonstration states to identify common quality measures, for example, 30-day readmissions rate, as well as shared measures such as the Medicaid adult and child core measure sets that could be used for benchmarking purposes. If we are able to find a common set, we will present descriptive statistics on measure performance by state for the current demonstration year, as shown in Table V.10. Extraction of data to support this table may be valuable to report on in detail to CMS to inform further consideration of the need to standardize state reporting.

Table V.10. Performance on 30-day readmissions rate among state participating provider entities (example)

State/ DY#	Mean	Minimum	10th percentile	25th percentile	50th percentile/ median	75th percentile	90th percentile	Maximum

DY = demonstration year.

3. Special topic briefs

Base year. For the base year (2015), we propose a topic reflecting guidance from CMS DSRIP subject matter experts. For this base year report, we will develop an issue brief (4-6 pages) on the following topic.

> **How are participating lead entities establishing community partnerships? How are hospitals and community-based providers working together to transform the delivery system in DSRIP states?** This brief would explore what methods for partnership are in place among hospital-based and community providers and explore aspects of partnerships, such as commitments, data sharing agreements and information exchange, incentive/risk-sharing, and stakeholder representation. The brief would also investigate early implementation phase planning around partnerships and explore how this aspect has evolved throughout implementation - from the state planning level through operationalization of partnerships at the provider level and will seek to uncover barriers and facilitators to partnership formation and the role of partnerships in achieving the goals of DSRIP.

Later years. We have started developing ideas for other issue briefs that could be addressed in later years:

- How does the method of attribution of beneficiaries vary across DSRIP states, and how do the various methods affect implementation and achievement of outcomes? What are the comparative advantages and disadvantages of the various methods?
- What are the various measurement strategies in place to monitor the effectiveness of DSRIP and inform performance improvement? Which measures have been found to be more effective tools for improvement at the provider level? Which are most meaningful at the policymaking level? Have states and providers found useful measures of system transformation?
- How does the method of project valuation vary across DSRIP states, and how is funding allocated among participating providers across the states? What are the comparative advantages and disadvantages of the various methods? How does valuation for similar targeted improvements compare across states and participating providers?
- What are the most common strategies used by safety net hospitals to transform the delivery system? Which strategies have state administrators and providers found to have the greatest potential to deliver coordinated, cost-effective care? To what extent are strategies driven by local factors versus other considerations?

- How does the distribution of risks and incentives affect collaboration among participating providers and the achievement of milestones?
- What are the characteristics of high-performing providers or projects in terms of organizational, legal, or other distinguishing infrastructure features?
- How do DSRIP programs promote collaboration between the medical care and the public health systems to improve population health?
- How does DSRIP fit into the state's overall plans for transforming the state's safety net system or broader health care system?
- Which aspects of DSRIP demonstrations seem to be sustainable over the long-term? How are states preparing for sustainability of changes made through DSRIP, and what evidence is there of the alignment?

To address concerns raised by consumer advocacy groups, we may also explore consumer experience with DSRIP projects through interviews with consumer representatives. If project resources allow, we may also investigate this issue by obtaining data from those states and DSRIP projects that collect data through consumer experience surveys.

C. Premium assistance

In Arkansas, Iowa, and New Hampshire, CMS has approved section 1115 demonstrations that make premium assistance mandatory for newly eligible adults. In contrast with earlier premium assistance programs, the new demonstrations support the purchase of a standardized, affordable set of benefits through QHPs in the Marketplace, providing potentially more seamless coverage to adults whose income rises above the Medicaid income limits. In addition to Arkansas, Iowa, and New Hampshire, several states have approached CMS about designing similar programs, including Utah.

1. Base year dashboard data

For the first rapid-cycle report, we propose to develop a series of tables that systematically compare program features across premium assistance states, accompanied by short bullet points summarizing major commonalities and differences. As an illustration of what we propose, Table V.11 includes dashboard metrics that compare premium assistance program features, Table V.12 includes metrics that compare enrollment trends and plan participation, and Table V.13 includes a set of initial performance metrics. The dashboards are intended to draw primarily from state-reported data captured in the database maintained by CVP, though most measures are not available in the current array of state reports. These draft tables differentiate currently available elements from aspirational elements. We will refine the tables as states begin to gather data on other measures.

Table V.11. Premium assistance program features

Program features	Arkansas	Iowa	New Hampshire
Metrics available in current state reports or through other documents			
Program name			
Date program was authorized, date enrollment began, and dates that significant new features are introduced (e.g., Health savings accounts in Arkansas)			
Medicaid beneficiary eligibility groups (e.g., FPL, demographics such as age, exempt populations such as medically frail)			
Wrap-around benefits covered			
Beneficiary premium contribution requirements (amount and timing)			
Other mandatory cost sharing (amount and timing)			
Aspirational metrics, not yet available in all state reports or through other documents			
Medicaid beneficiary eligibility for programs targeting particular chronic conditions			
Outreach and enrollment methods used to educate beneficiaries			
Relationship to other state health reform initiatives			

Note: Data will be drawn from the state’s special terms and conditions and progress reports as documented in the database maintained by CVP. We will supplement these sources with qualitative data collection, such as phone calls with state Medicaid officials to gather additional detail on outreach and enrollment strategies and the relationship of the demonstration with other state health reform initiatives.

FPL = federal poverty level.

Table V.12. Premium assistance enrollment trends and plan participation

Enrollment and plan participation metrics	Arkansas	Iowa	New Hampshire
Metrics available in some current state reports or through other documents			
Enrollment Total program enrollment, by income eligibility group/program (e.g., Iowa Wellness Plan vs. Iowa Marketplace Choice Plan) Point-in-time total enrollment by demographic characteristics: age, gender, race/ethnicity, income, geography-urban/rural, medically frail determinations			
QHP participation Number and proportion of marketplace plans participating in premium assistance demonstration Change in marketplace issuer participation since last quarter Criteria used to select participating plans			
Aspirational metrics, not yet available in state reports or through other documents			
Proportion of likely eligible population enrolled			
Monthly enrollment New enrollments during the month Point-in-time total enrollment Monthly counts of beneficiaries who moved from one program to another because of changes in income Monthly counts of beneficiaries who moved from one program to another because of changes in medically frail status			
Monthly renewal and churn Number of renewals			
Number of disenrollments at 12-month renewal due to loss of eligibility: Those eligible for another Medicaid program Those who lose any Medicaid eligibility			
Number of disenrollments at 12-month renewal for non-eligibility reasons: Those required to pay premium Those not required to pay premium			
Number of disenrollments outside annual renewal cycle: Those found ineligible for Medicaid for failure to make required premium payments Those found ineligible for Medicaid, due to reported change in circumstance (e.g., Increase in FPL, move out of state) Those found eligible for different Medicaid program due to reported change in circumstance (e.g., onset of disability)			
Number of disenrollments (at renewal or due to change in circumstance) due to loss in Medicaid eligibility where beneficiary is transferred to marketplace QHP			

Note: Most data will be drawn from state progress reports as documented in the database maintained by CVP. We will supplement this source by (1) reviewing Marketplace websites to determine the total number of Marketplace issuers participating in a state; (2) conducting interviews with state Medicaid officials to understand their criteria for selecting Marketplace issuers to participate in the demonstration; and (3) analyzing data from the American Community Survey to identify the size of the likely eligible population on an annual basis.

FPL = federal poverty level; QHP = qualified health plan.

Table V.13. Premium assistance performance metrics—access and costs

Access and cost metrics	Arkansas	Iowa	New Hampshire
Metrics available in some current state reports			
Beneficiary grievances filed (number and type)			
PMPM expenditures for wrap-around benefits EPSDT expenditures Family planning expenditures Non-emergency medical transportation expenditures			
Aspirational metrics, not yet available in state reports			
PMPM expenditures QHP premium payments			
Administrative costs of premium assistance implementation			
Percentage of providers Taking new patients Caring for more than one or two Medicaid patients			
Percentage of beneficiaries Receiving physician visit within 6 months of enrollment Receiving a prescription within 6 months of enrollment			

Note: Most data will be drawn from state progress reports as documented in the database maintained by CVP. We will supplement this source by conducting interviews with state Medicaid officials to understand their administrative costs for implementing premium assistance programs.

EPSDT = Early Periodic Screening, Diagnosis, and Treatment; PMPM = per-member-per-month; QHP = qualified health plan.

2. Special topic briefs

Base year. CMS premium assistance subject matter experts helped us identify the top priority topic for the issue brief that will make up one component of the first rapid-cycle report. We will begin to produce the other topics during the first contract option year.

1. **How do premium assistance states administer wrapped benefits?** This report will describe the methods by which states with Medicaid-supported QHP enrollment demonstrations administer wrapped benefits, such as non-emergency medical transportation, EPSDT benefits for 19- and 20-year-olds, family planning services and supports, and/or dental and vision benefits. The goal of this issue brief will be to understand the variation in states' administration approaches and how different approaches may affect beneficiary access.

Later years. In addition to the priority topic above, CMS subject matter experts, stakeholders (including researchers and advocates from around the country), and Mathematica have identified other potential topics for later reports, including:

1. What is the degree of engagement between state departments of insurance and Medicaid offices for establishing and operating premium assistance? What kinds of challenges are state Medicaid programs encountering in relying on commercial insurance, and how are they addressing those challenges?

2. How do provider networks and access compare between regular Medicaid and the QHPs contracted as premium assistance plans?
3. What is the interaction of LTSS and the new adult group in premium assistance states? How should states approach delivering LTSS for newly enrolled adults?

The list of future-year topic briefs will be refined over time as new ideas are added and policy priorities shift. However, CMS subject matter experts and the evaluation team have already discussed several possibilities for report topics to consider when premium assistance demonstrations are more established and data are available from several years of program experience. These include:

1. To what extent does the premium assistance model mitigate the potential for churn between Medicaid and QHPs? How much overlap is there between Medicaid MCOs and Marketplace QHPs? How stable has Marketplace and Medicaid MCO participation been over time? Are there many new entrants into or exits of plans to and from these different markets?

2. To what extent do enrollees move between Medicaid and QHPs? When they move, to what extent do they stay enrolled with the same health plan?

D. Beneficiary engagement/premiums

CMS has approved several section 1115 demonstrations that test alternative ways of providing adult coverage by using incentives to encourage personal responsibility in health care and healthy behaviors. Some of these programs attempt to motivate healthy behaviors and improve health outcomes by financially rewarding enrollees for seeking care and making behavior changes. Arkansas, Indiana, Iowa, Michigan, and Wisconsin are currently implementing beneficiary engagement/premiums section 1115 demonstrations.

1. Base year dashboard data

For the first rapid-cycle report, we propose to develop a series of tables that systematically compare program features across healthy behavior states, accompanied by short bullet points summarizing major commonalities and differences. Table V.14 illustrates dashboard metrics that compare healthy behavior program features. Because “take-up” and continuity of coverage are of keen interest given the incentives and disincentives in these programs, we also propose to monitor enrollment metrics that capture any churning that these programs experience. Table V.15 presents metrics that compare enrollment trends in each state. Table V.16 includes a set of measures that may shed light on the effectiveness of incentives for motivating particular behaviors and tracking receipt of incentivized and non-incentivized healthy behaviors. The dashboards are intended to draw primarily from state-reported data captured in the database maintained by CVP, though most measures are not available in the current array of state reports. These draft tables differentiate currently available elements from aspirational elements. We will refine the tables as states begin to gather data on other measures.

Table V.14. Beneficiary engagement/premiums program features

Program features	Indiana	Iowa	Michigan	Wisconsin
Metrics available in current state reports or through other documents				
Program name				
Date program was authorized, date enrollment began, and dates that significant new features are introduced				
Medicaid beneficiary groups covered/ eligibility requirements (e.g., FPL, demographics, mandatory/optional, exempt populations, particular chronic-condition groups)				
Enhanced benefits offered				
Required monthly financial contributions (amounts and timing)				
Other mandatory cost sharing (type and amounts)				
Penalties for failure to make required financial contributions				
Encouraged healthy behaviors (and effective date)				
With financial incentives				
Without financial incentives				
Disincentivized behaviors				
Aspirational, not yet available in state reports				
Provider incentives				
Ability of third-party entity to contribute to beneficiary financial requirements				
Relationship to other state health reform initiatives				

Note: Data will be drawn from the state's special terms and conditions and progress reports as documented in the database maintained by CVP. We will supplement these sources with qualitative data collection, such as phone calls with state Medicaid officials to gather additional detail on the relationship of the demonstration to other state health reform initiatives and to stay up to date on states' evolving plans to incentivize or discourage a more specific set of behaviors.

FPL = federal poverty level.

Table V.15. Beneficiary engagement/premiums program enrollment patterns

Enrollment metrics	Indiana	Iowa	Michigan	Wisconsin
Metrics available in some current state reports				
Enrollment				
Total program enrollment, by income eligibility group/program (e.g., HIP Basic, HIP Plus, HIP Link)				
Aspirational metrics, not yet available in state reports or through other documents				
Proportion of likely eligible population enrolled				
Monthly enrollment				
New enrollments during the month				
Point-in-time total enrollment				
Point-in-time total enrollment by demographic characteristics: age, gender, race/ethnicity, income, geography-urban/rural, medically frail determinations, groups diagnosed with chronic conditions				
Monthly renewal and churn				
Number of renewals				
Number of disenrollments at renewal due to loss of eligibility:				
Those eligible for another Medicaid program				
Those who lose any Medicaid eligibility				
Number of disenrollments at 12-month renewal for non-eligibility reasons:				
Those required to pay premium				
Those not required to pay premium				
Number of disenrollments outside of annual renewal cycle:				
Those found ineligible for Medicaid for failure to make required premium payments				
Those found ineligible for Medicaid as a result of a reported change in circumstance (e.g., increase in FPL, move out of state)				
Those found eligible for different Medicaid program because of reported change in circumstance (e.g., onset of disability)				
Monthly contributions:				
Number of payments made by beneficiaries				
Number of payments made by third-party entities				

Note: Most data will be drawn from state progress reports as documented in the database maintained by CVP. We will supplement this source by analyzing data from the American Community Survey on an annual basis to identify the size of the likely eligible population.

FPL = federal poverty level; HIP = Healthy Indiana Plan.

Table V.16. Beneficiary engagement/premiums performance metrics

Performance metrics	Indiana	Iowa	Michigan	Wisconsin
Metrics available in some current state reports				
Beneficiary grievances filed, number and type				
Aspirational metrics, not yet available in state reports or through other documents				
Preventive care and care quality				
Basic utilization (percentage of beneficiaries with any use, and PMPM average), stratified by financial incentive group:				
Physician visits				
Prescriptions				
Enhanced benefits				
Emergency department visits				
Receipt of preventive care, stratified by financial incentive group if incentives apply				
Complete HRA				
Eligible population				
Percentage receiving service				
Complete wellness visit with primary care physician				
Eligible population				
% receiving service who completed HRA				
% receiving service who did not complete HRA				
Preventive screening #1, 2, 3 (e.g., cervical cancer)				
Eligible population				
% receiving service who completed HRA				
% receiving service who did not complete HRA				
Medical assistance with smoking cessation				
Eligible population				
% receiving service who completed HRA				
% receiving service who did not complete HRA				
Receipt of flu shot				
Eligible population				
% receiving service who completed HRA				
% receiving service who did not complete HRA				
Utilization related to chronic care management				
Admission rates for:				
Diabetes short-term complications				
COPD or asthma in older adults				
Asthma in younger adults				
Heart failure				
Beneficiary engagement strategies				
Mode, content, and timing of educational materials states use to explain incentives and disincentives				
Evidence on beneficiary understanding of incentive structure				
Proportion of beneficiaries using accounts designed to encourage beneficiary participation in health care, by month (if applicable)				

Note: Most data will be drawn from state progress reports as documented in the database maintained by CVP. We will supplement this source by conducting interviews with state Medicaid officials to understand the mode, content, and timing of educational materials stats use to explain incentives and disincentives, as well as evidence on beneficiary understanding of the incentive structures.

COPD = chronic obstructive pulmonary disease; HRA = health risk assessment; PMPM = per-member-per-month.

2. Special topic briefs

Base year. We worked with CMS subject matter experts to identified top priorities for special topic briefs. The first two below will be the topics for 2015 rapid-cycle reports, while the third and fourth are high priorities for the next round of reports. These top-priority topics will (1) describe variation across states in the way they are designing the details of healthy behaviors programs, and (2) draw on early state findings:

1. **What is the variation across states in the timing of rewards (immediate versus long-term) for incentivized healthy behaviors?** This report will examine states' early experiences with healthy behavior adoption across differently designed incentive structures. We will provide details on how beneficiaries earn rewards and the time lapse between the incentivized behavior and the reward, and we will connect these program attributes to available data on the percentage of beneficiaries performing the desired behaviors. We will also include information about whether third parties can contribute to performing desired behaviors. This analysis will help states in this demonstration group, as well as those considering these demonstrations, to compare the possible effect of rewards that are more immediate versus those that are more attenuated.
2. **What variation is there across states in the amount and timing of premium payments that are required of enrollees?** This report will describe the monthly contributions required of beneficiaries who must made regular financial contributions, including details on amounts, timing, and method of collection. The description will facilitate an exploratory analysis of the relationship between premium requirements and program enrollment. In addition, we will examine attributes of the enrolled population to assess whether premium design might affect take-up among different subgroups.
3. **What systems have states established for beneficiaries to manage their health accounts, and what are the costs to administer them?** This report will take a close look at the health savings accounts set up by a subset of states in this demonstration group. We will describe differences across these states' in the degree of beneficiary control over accounts, beneficiaries' "ownership behavior" as revealed by certain account activities, and the ways in which states share account information with beneficiaries. We will also examine the pros and cons of state administration of accounts versus administration by managed care plans.
4. **What is the variation in administrative complexity of different premium payment and cost-sharing requirements and systems?** This topic would examine how states monitor and protect Medicaid beneficiaries from out-of-pocket expenditures that exceed acceptable Medicaid limits. In Arkansas, for example, the state has received approval to distribute Independence Account cards that will help manage out-of-pocket costs at the point of service, whereas other states (like Indiana) require members to track their out-of-pocket costs and then report when they have hit the limit (an approach sometimes referred to as the "shoebox method").

Later years. The list of future-year topic briefs will be refined over time as new ideas are added and policy priorities shift. However, CMS subject matter experts and the evaluation team have already discussed several possibilities for report topics to consider after the two priority topics have been addressed. These include:

1. What strategies are states and health plans using to educate beneficiaries about the tools available to them to manage their care, and to communicate the preventive and chronic care practices that are encouraged? We will explore modes and content of education related to healthy behaviors by plan and by program.
2. How are states and health plans helping enrollees achieve personal health goals? How do they use health risk assessments to engage enrollees, stratify risk, and assign case managers?
3. What have states learned about beneficiary satisfaction with the health behavior programs, and about how states have used beneficiary feedback to improve program/outcomes?

E. MLTSS

As noted previously, several states have embraced managed care for LTSS, and the number of state MLTSS programs have grown considerably over the past few years and we anticipate that they will continue to grow. The rapid-cycle reports for the MLTSS demonstrations will be designed to help CMS and other stakeholders track the growth of MLTSS and a set of basic program outcomes while also delving into key implementation issues that these programs face.

1. Base year dashboard data

For the first rapid-cycle report, we propose to develop a series of tables that systematically track and compare enrollment trends, health plan contractor participation, and program features across MLTSS states, which will identify major commonalities and differences in program size and characteristics. While we explored the possibility of reporting quality metrics, our initial findings indicate that further investigation is needed to determine whether any common measures can be reported across states.

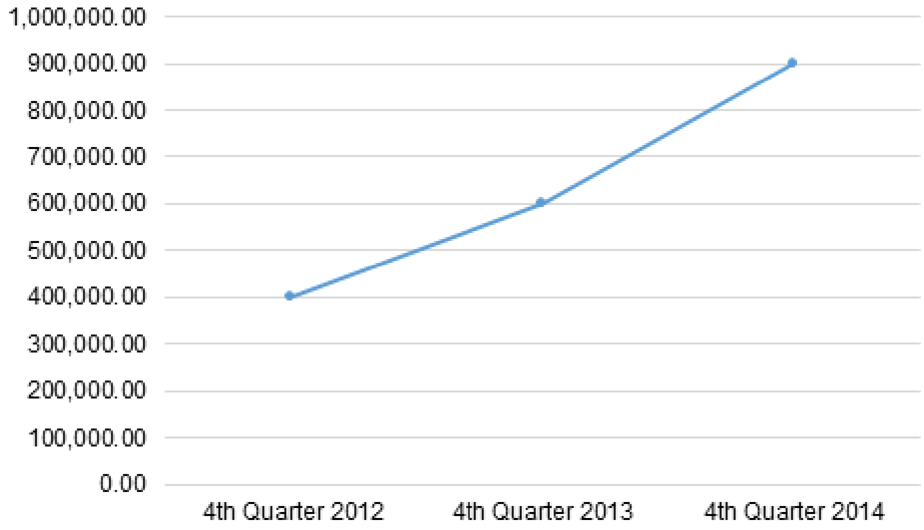
Enrollment. Section 1115 demonstrations usually submit program-level enrollment data in their quarterly reports to CMS. For non-1115 states, enrollment data will be gathered from state websites and other sources, such as MSIS/TMSIS or MAX, or the Medicaid Managed Care Data Collection System (MMCDCS) as needed. The number of intervals reported will depend on the availability of quarterly data across the evaluation states. Table V.17 and Figure V.1 illustrate how the data might be presented.

Table V.17. Quarterly enrollment in MLTSS programs: CYs 2013-2014

Program	CY ’13, Qtr 1	CY ’13, Qtr 2	CY ’13, Qtr 3	CY ’13, Qtr 4	Avg. quarterly change	CY ’14, Qtr 1	CY ’14, Qtr 2	CY ’14, Qtr 3	CY ’14, Qtr 4	Avg. quarterly change
Program 1 (e.g., ALTCS)										
Program 2 (e.g., TX Star+Plus)										
Total										

Source: Section 1115 quarterly evaluation reports, MSIS/TMSIS, or state websites.
CY = calendar year; Qtr = quarter.

Figure V.1. Total enrollment in MLTSS programs



Source: Section 1115 quarterly evaluation reports, MMCDCS, MSIS/TMSIS, or state websites.

Data required to populate Table V.18 (quarterly disenrollment numbers) and Table V.19 (number receiving LTSS by site of care) are not always available in the section 1115 reports submitted to CMS, and are not readily available on state websites. In the first dashboard, if tables V.18 and V.19 are included, they will have many empty cells, which may prompt recommendations to CMS regarding future reporting by states.

Table V.18. Quarterly disenrollment in MLTSS programs: CYs 2013-2014

Program	CY '13, Qtr 1	CY '13, Qtr 2	CY '13, Qtr 3	CY '13, Qtr 4	Avg. quarterly change	CY '14, Qtr 1	CY '14, Qtr 2	CY '14, Qtr 3	CY '14, Qtr 4	Avg. quarterly change
Program 1 (e.g., AZ ALTCS)										
Program 2 (e.g., TX Star+Plus)										
Total										

Potential source: Section 1115 quarterly evaluation reports, MSIS/TMSIS, or state websites.

Note: Data not currently available for the majority of MLTSS states.

CY = calendar year; MLTSS = managed long-term services and supports; Qtr = quarter.

Table V.19. Number of MLTSS enrollees receiving LTSS by site of care, 2013-2014

	CY '13				CY '14				Change in percentage receiving HCBS, CY '13 to '14
Program	Number receiving HCBS	Number in institutional care	Total receiving LTSS	Percentage receiving HCBS	Number receiving HCBS	Number in institutional care	Total receiving LTSS	Percentage receiving HCBS	
Program 1 (e.g., AZ ALTCS)									
Program 2 (e.g., TX Star+Plus)									
Total									

Potential source: Section 1115 quarterly evaluation reports, MSIS/TMSIS, or MAX.

Note: Data not currently available for majority of MLTSS states.

CY = calendar year; HCBS = home and community-based services; LTSS = long-term care services and supports; MLTSS = managed long-term services and supports; Qtr = quarter.

Managed care plan contractor profile. Participating plans can be identified, and secondary sources of information can be used to determine certain characteristics of each managed care plan (for example, national/local, profit/nonprofit, HMO/other, etc.). To the extent that enrollment data are available by plan, we will present market share by plan (that is, percentage of total enrollment in each plan). Table V.20, and figures V.2 and V.3, illustrate how the data might be presented.

Table V.20. Number and market share of MLTSS contractors by program, most recent period available

Program name	HMOS: for profit		HMOS: nonprofit		Provider-based organizations/ACOs		Public/quasi-public organizations		Total number of contractors
	Number of contractors	Percentage enrollment	Number of contractors	Percentage enrollment	Number of contractors	Percentage enrollment	Number of contractors	Percentage enrollment	
Program 1 (e.g., AZ ALTCS)									
Program 2 (e.g., TX Star+Plus)									
National number of contractors by type									

Source: Section 1115 quarterly evaluation reports, MMCDCS, or state websites.

Note: Percentage of enrollment will be available only in those states that report enrollment by contractor.

ACO = accountable care organization; HMO = health maintenance organization; MMCDCS = Medicaid Managed Care Data Collection System.

Figure V.2. National MLTSS contractors by type

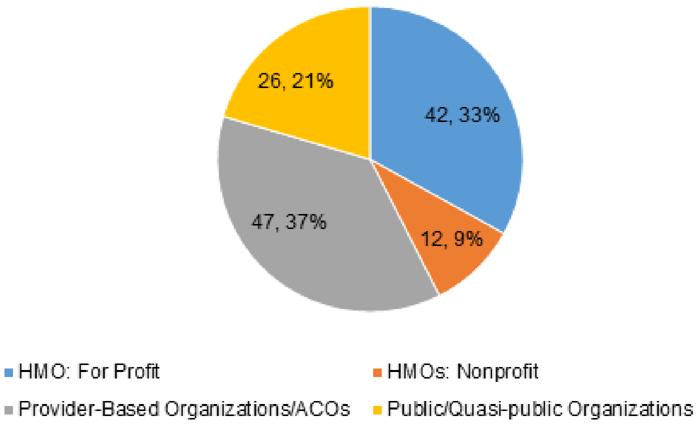
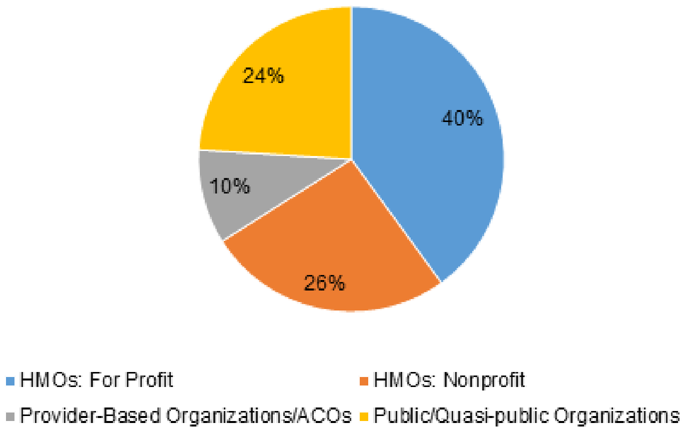


Figure V.3. MLTSS market share by contractor type



Program characteristics. Several characteristics are included in the section 1115 demonstration reports to CMS, and secondary sources of information can be used as needed to create a state comparison table of program features. Table V.21 includes target groups, benefits excluded from the capitation rate (carved out), enrollment policy, and geographic scope. Table V.22 focuses on Medicare-related requirements of each program, an important consideration in assessing the potential impact of the MLTSS program on acute care utilization.

Table V.21. Major features of MLTSS programs

		Medicaid authority					Type of Medicaid enrollment			Populations enrolled				Enrollees' level of LTSS need			Significant service areas carved out (excluded from capitation)				
Program name	Start date	1915(a)	1915(b)	1915(c)	1932(a)	1115	Mandatory	Voluntary opt-out	Voluntary opt-in	Children with disabilities	Adults with physical disabilities	Adults with I/DD	Older adults ≥65	Institutional level of care (LOC)	LTSS less than institutional LOC	No LTSS need	Behavioral health	Prescription drugs	Inpatient hospital	Institutional	Percentage of counties covered by program
State 1																					
State 2 (etc.)																					

Source: Section 1115 quarterly evaluation reports, MMCDCS, and state waivers or demonstration authority documents (for LOC).

LOC = level of care; LTSS = long-term services and supports; MLTSS = managed long-term services and supports; MMCDCS = Medicaid Managed Care Data Collection System.

Table V.22. Medicare features in MLTSS programs

	Type of Medicare enrollment			Medicare requirements in state contract			
Program name	Passive (opt-out)	Active (opt-in)	n.a. – Medicare not included	Fully integrate with Medicaid	Offer companion D-SNP option	Coordinate with Medicare providers	n.a. – no Medicare requirements
Program 1							
Program 2 (etc.)							

Potential source: State MLTSS contracts and state websites.
MLTSS = managed long-term services and supports.
n.a. = not applicable.

Quality and performance measures. Initial investigation of section 1115 demonstration reports shows that quality and performance measures are highly variable across states. Certain HEDIS measures relevant to the LTSS population, such as diabetes management and controlling high blood pressure, are available in only a few states. Similarly, CAHPS measures of getting care quickly when needed and physician communication are reported by only a few states. The most promising area for early dashboard reporting is complaints and appeals (see Table V.23 for an example of how we might present this type of information).[23] However, states report complaints in a variety of ways, such as by program, by plan, or by both. Some break complaints into topic areas. A metric will be selected based on what is most commonly available across states. Similarly, regarding appeals, states report items in this area by several names that may be comparable. For example, Hawaii reports HCBS appeals, Tennessee reports LTSS appeals, and Texas reports appeals by service area. Further investigation is needed to determine comparability across states.

Table V.23. Selected MLTSS program complaints and appeals measures

Program	Complaints*	LTSS-related appeals*
Program 1		
Program 2 (etc.)		

*Measure to be determined.

LTSS = long-term services and supports; MLTSS = managed long-term services and supports.

Table V.24 summarizes the information in tables V.17 through V.23 and illustrates how we anticipate these data tables will expand as more information becomes available through the program metrics database.

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[23] Because of the challenges involved with defining ombudsman issues, we do not include them.

Table V.24. Summary of plans for MLTSS rapid-cycle report data tables

Data element	Metrics available in current state reports or in other documents	Aspirational metrics, not yet available in all state reports or through other documents
Enrollment and disenrollment (tables V.17, V.18, V.19)		
Monthly or quarterly enrollment	X	
Enrollment by population group		X
Enrollment by contractor (health plan)		X
Quarterly disenrollment (voluntarily, involuntarily, and by reason)	.	X
Number of MLTSS enrollees receiving LTSS by site of care	X	
HCBS, institutional, total		
percentage receiving HCBS		
MLTSS contractors (health plans) by type and market share (Table V.20)		
Total number of contractors	X	
HMOs, for-profit		
HMOs, nonprofit		
Provider-based orgs/ACOs		
Public/quasi-public orgs		
Market share (percentage of total MLTSS enrollment), total and by contractor type	X	
HMOs, for-profit		
HMOs, nonprofit		
Provider-based orgs/ACOs		
Public/quasi-public orgs		
Major MLTSS program features (tables V.21, V.22)		
Medicaid authority	X	
1115, 1915(a), 1915(b), 1915(c), 1932(a), other		
Program start date (date of first enrollment)	X	
Percentage of counties covered by program	X	
Type of enrollment	X	
Mandatory, voluntary opt-out, voluntary opt-in		
Populations enrolled	X	
Children with disabilities		
Adults with physical disabilities		
Adults with intellectual/development disabilities		
Older adults aged ≥65		
Medicare features in MLTSS program	X	
Type of Medicare enrollment		
Passive (opt-out), active (opt-in)		
NA (Medicare not included)		
Medicare requirements in state contract	X	
Fully integrated		
Offer companion D-SNP option		
Coordinate with Medicare providers		
NA		

Table V.24 (continued)

Data element	Metrics available in current state reports or in other documents	Aspirational metrics, not yet available in all state reports or through other documents
Enrollees' level of LTSS need	X	
Institutional level of care (LOC)		
LTSS less than institutional LOC		
No LTSS need		
Services carved out/excluded from capitation	X	
Behavioral health		
Prescription drugs		
Inpatient hospital		
Institutional care		
Other		
Availability of consumer directed options		X
MLTSS complaints/appeals (Table V.23)		
Total complaints by month	X	
By reason		X
By contractor		X
Resolution		X
Total appeals by quarter	X	
By reason		X
By contractor		X
Resolution		X

ACO = accountable care organization; D-SNP = Dual-eligible Special Needs Plan; HMO = health maintenance organization; LOC = level of care; LTSS = long-term services and supports; MLTSS = managed long-term services and supports

2. Special topic briefs

Base year. CMS MLTSS subject matter experts have identified the following topic for the 2015 rapid-cycle report. This report will describe variation across states in the way they are designing MLTSS programs, and provide more detailed information than the dashboard tables on program features.

1. **Who is being enrolled into MLTSS programs?** This report will examine the target populations of MLTSS programs across several dimensions, including age, disability/condition, level of LTSS needs, type of residence, benefits received (Medicaid-only or Medicare-Medicaid dual eligible); and geographic areas. This work will inform the development of study cohorts within the evaluation. For each program, the populations enrolled will be described and, to the extent that data are available, enrollment numbers will be compiled by population. Individual state profiles will be aggregated to present a national profile of people enrolled in MLTSS programs.

Later years. CMS subject matter experts and Mathematica have identified other potential topics for the first contract option year, including the following (presented in order of priority):

2. **Which LTSS reform initiatives have states implemented within or in parallel to MLTSS?** Many states that have implemented MLTSS have also implemented federally supported LTSS reform initiatives, such as the Money Follows the Person demonstration, the Balancing Incentive Program, and the recently authorized Community First Choice (1915k) and HCBS (1915i) state plan options. Some states have made MLTSS contractors responsible for implementing key aspects of the initiatives, while others have operated reform initiatives separately, in parallel to their MLTSS programs. This report will identify whether or not each MLTSS state participates in federally supported LTSS reform initiatives, and what each has required of its MLTSS contractors as part of them.
3. **What are the enrollment policies and processes used in MLTSS programs?** This study would describe how people were enrolled into MLTSS programs at initial start-up, challenges encountered and strategies used to address problems across a diverse set of approaches and issues, including voluntary and mandatory Medicaid enrollment; opt-in and opt-out approaches; phased-enrollment strategies, including enrollment by geographic area, birth date, or other criteria, and length of time allotted per enrollment phase; lock-in policies at initial enrollment, and longer term; consumer and provider communications prior to and during enrollment; use of enrollment brokers; and key points of information transfer (e.g. among Medicaid, other state agencies, enrollment brokers, LTSS entry points, health plans, providers). As part of this issue brief, we may also examine how MLTSS programs enroll people who become eligible for Medicaid after they enter nursing homes by spending down their resources.[24]
4. **What have states' experiences been with MLTSS implementation schedules?** This study would compare program implementation schedules contained in section 1115 demonstration planning documents against progress reports submitted to CMS to determine actual implementation timelines, which key milestones were met on time or delayed, and, where applicable, significant barriers that had to be overcome. The report will identify typical time frames needed to achieve milestones, which may inform states' planning efforts in the future.

The list of future-year topic briefs will be refined over time as new ideas are added and policy priorities shift. However, CMS subject matter experts and the evaluation team have already discussed several possibilities for later report topics, such as:

- How are states incentivizing and evaluating contractor performance in MLTSS?
- HCBS waiting lists: what happens to them after MLTSS programs are implemented?
- How have MLTSS programs delinked institutional and community level-of-care requirements, and what are the implementation issues?

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[24] This issue was examined in Mathematica's National Evaluation of the Money Follows the Person Demonstration Grant Program for CMS (Lipson and Valenzano 2013). This report examined five states and could be expanded and updated as part of this evaluation of section 1115 demonstrations.

- Why do some states add LTSS to MCO contracts that previously covered only medical care services, while other states seek to procure LTSS from new plans?
- Do provider-based plans vs. insurer-based Medicaid plans differ in their approach to care management, the types of providers in their networks, or other key program features?
- LTSS provider access standards: what are they and how do they work?
- What effect do state policies that protect provider rates during MLTSS program start-up have on provider participation and costs?

VI. INTERIM AND FINAL EVALUATION REPORTS

The interim and final evaluation reports will focus on presenting the results of the impacts and outcomes analyses we conduct. When work for the interim evaluation reports commences in option year 2, we will first revisit the research questions selected for each demonstration type and presented in this evaluation plan. The purpose will be to work collaboratively with CMS to ensure that these initial research questions are still salient in option year 2 or to revise them if CMS's research needs have changed. It is common for evaluations of this size and magnitude to alter research priorities midstream as new information is obtained about program implementation and key metrics such as early enrollment results or as the policy environment shifts. We anticipate that the rapid-cycle reports will be a primary vehicle for tracking and understanding how the demonstrations are developing and maturing.

Once the research questions are reviewed, the research team for each demonstration type will first draft a work plan and a detailed schedule of milestones, such as when data will be obtained, when programming specifications will be written, and when initial data runs will be completed. As results become available, each research team will begin to develop detailed outlines for the interim (or final) report. Because stakeholders for these reports are extremely busy and have little time to read a detailed report, we anticipate that the evaluation reports will include brief executive summaries that present key highlights of the more detailed report in a way that engages readers and helps them quickly understand the overall results. The detailed evaluation reports will discuss the key research questions, the data sources, methods, findings, and study limitations. In the concluding chapter, we will also set forth ideas for how the evaluation can be expanded and enhanced. If appropriate to do so, the reports will also discuss how the results inform policy and operational considerations for the Section 1115 demonstrations.

We expect that the drafts of each interim evaluation report will be ready for CMS review three months before the end of option year 2.[25] When we receive feedback from CMS on the draft, we will revise the report to reflect CMS comments and draft a set of PowerPoint slides that highlight the report findings. The final versions of the interim reports, which we will submit one month before option year two ends, are intended to be fully accessible and will meet 508 compliance requirements.

In option year 4, we will repeat this process for the final evaluation reports. We anticipate the these reports will expand upon what we were able to accomplish with the interim reports and incorporate more years of data and new data sources that have become available since the interim reports were produced. We again anticipate that the draft reports will be submitted to CMS for review about three months before the end of option year 4 and that the final version and PowerPoint slides, which will incorporate the comments we received on the draft report, will be submitted one month before the end of option year 4.

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[25] We will work with CMS to determine whether we should submit all four draft evaluation reports at the same time or stagger their submission to spread out the review of the reports and possibly their public release and the webinar presentations.

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