Final Design Plan for the National Evaluation of the CHIPRA Quality Demonstration Grant Program: Summary

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Authors' note: This document provides a summary of the design plan as revised and submitted to AHRQ on April 15, 2014. The original plan was submitted to AHRQ on July 27, 2011 and previously updated on June 1, 2012 and August 22, 2013. In addition to the authors of this summary, those who contributed to previous versions of the plan include Leslie Foster, Anna Christensen, Chris Trenholm, and Brenda Natzke from Mathematica; Kelly Devers, Genevieve Kenney, Stacey McMorrow, and Rachel Burton from the Urban Institute; and Lisa Simpson from AcademyHealth.

Introduction

The Children’s Health Insurance Program Reauthorization Act of 2009 (CHIPRA) allowed for the funding of 10 demonstration projects to identify effective, replicable strategies for improving the quality of children’s health care. In February 2010, the U.S. Department of Health and Human Services (HHS) awarded demonstration grants to Colorado, Florida, Maine, Maryland, Massachusetts, North Carolina, Oregon, Pennsylvania, South Carolina, and Utah. Of these States, six received grants to work in multistate collaborations, bringing to 18 the number of States that received program funding.

Grantees and their partner States are implementing 52 projects across five grant categories (Table 1):

- Under **Category A**, grantees are evaluating the use of the CHIPRA initial core set and supplemental quality measures for children. The work includes examining the impact of States’ reporting on quality improvement activities.
- Grantees working in **Category B** are developing or enhancing health information technology (IT) to improve quality of care, reduce costs, and increase transparency. Grantees are pursuing a range of health IT solutions, such as encouraging uptake of electronic health records (EHRs), developing a regional health information exchange (HIE), and interfacing electronic health information with eligibility systems or social service organizations.
- **Category C** funding supports the development or expansion of provider-based care models. The models include (1) the patient-centered medical home (PCMH), which aims to improve complex care management and enhance the coordination of care across the mental health, physical health, and social service systems; (2) care management entities (CMEs), which aim to improve services for children and youth with serious emotional disorders; and (3) school-based health centers.
- Under **Category D**, grantees are implementing and evaluating the impact of a model EHR format for children. The model was developed under a separate Agency for Healthcare Research and Quality (AHRQ) contract in partnership with the Centers for Medicare & Medicaid Services (CMS).
- In addition to working in at least one of the aforementioned categories, grantees proposed additional activities under **Category E**. These activities aim to enhance their work under another category or focus on an additional interest area for CMS, such as strategies for improving perinatal care.

In August 2010, AHRQ, in partnership with CMS, awarded a contract for a national evaluation of the demonstration program. The national evaluation team (NET), which includes staff from Mathematica Policy Research, the Urban Institute, and AcademyHealth, is charged with conducting a rigorous evaluation to determine the impact of grantee activities on the quality of children’s health care and disseminating evaluation results to a wide range of stakeholders. The evaluation began in August 2010 and will conclude in September 2015. This report summarizes the goals and methods of the national evaluation.

Table 1. CHIPRA quality demonstration projects, by grant category

	Cat. A Use core and other measures	Cat. B Promote health IT	Cat. C Evaluate a provider-based model	Cat. D Use model EHR format	Cat. E Grantee-specified
Oregon*	✓	✓	✓		
Alaska	✓	✓	✓		
West Virginia	✓	✓	✓		
Maryland*			✓		✓
Georgia			✓		✓
Wyoming		✓	✓		✓
Utah*		✓	✓		✓
Idaho		✓	✓		✓
Florida*	✓	✓	✓		✓
Illinois	✓	✓	✓		✓
Maine*	✓	✓	✓		
Vermont		✓	✓		✓
Colorado*			✓		✓
New Mexico			✓		✓
Massachusetts*	✓		✓		✓
South Carolina*	✓	✓	✓		
Pennsylvania*	✓	✓		✓	
North Carolina*	✓		✓	✓	
Total projects in category	10	12	17	2	11

Source: Centers for Medicare & Medicaid Services.

*Grantees; EHR = electronic health record; IT = information technology.

A. Overview of the National Evaluation

The structure of the CHIPRA Quality Demonstration Grant Program combines a broad scope and a complex “nesting” of projects. The single demonstration program covers 10 grants across 18 States that are implementing 52 projects in five categories. (For the purposes of this evaluation, a “project” is defined as a set of intervention or assessment activities implemented by a grantee or partner State under one of the five categories described above.) This structure allows the NET to conduct a multilevel evaluation by:

- Assessing the implementation of single projects independently of all others, while focusing on whether the project’s goals and objectives were achieved.
- Combining information across projects within a single category to identify effective strategies and successful outcomes.
- Examining how specific States improved the quality of children’s health care by implementing multiple projects and describing how the activities in one category supported or enhanced projects in other categories.
- Conducting grantee-level analyses for the six grantees working with multistate collaborations and examining the extent to which these collaborations contributed to the success of the demonstration activities.
- Assessing the overall benefits of the demonstration program by comparing selected outcomes of the participating States with those of nonparticipating States.

- Examining the contributions of demonstration activities to improve quality of care in relation to four CMS special interest areas: oral health, obesity, behavioral health, and Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) programs.
- Providing insights into the successes and limitations of the program to inform future Federal demonstration efforts.

To accomplish these goals, the NET is gathering quantitative and qualitative data and analyzing this information to address a series of research questions.[a] Our overall goal is to describe and analyze the contribution of demonstration activities to improving the quality of children's health care services. In some cases, we achieve this goal by conducting formal impact analyses to determine whether particular interventions improved child health outcomes; in other instances, we synthesize qualitative information from stakeholders in States that have implemented similar projects.

AHRQ and CMS have identified 20 broad research questions and more than 200 detailed questions that the national evaluation might address. Examples include the following broad questions:

- Were grantees able to collect and report on the full set of core measures?
- How did the grantees collect data for and generate the core measures?
- How did stakeholders use core measures? What was the impact on the delivery system?
- What health IT or health IT enhancements were designed to improve the quality of children's health care or reduce costs?
- How was health IT used to improve quality of care for children enrolled in Medicaid or CHIP? Did it increase transparency and consumer choice?
- What models of provider-based care did grantees implement?
- How were these models implemented? Did they change the quality of children's health care?

To address these questions, we are collecting and analyzing quantitative and qualitative data. Sources of quantitative data include administrative and claims data and original survey data from physicians in selected States. Qualitative data sources include program documents and reports, key informant interviews with program staff and other stakeholders, and focus groups with parents in selected States.

Our findings to date have been published and disseminated in ways that address the needs of stakeholders, and we will continue this process for the duration of the project. All information that we generate for dissemination is available through the AHRQ-hosted Web page for the national evaluation (www.ahrq.gov/chipra/demoeval/*)*. The Web page includes our issue briefs, which we refer to as Evaluation Highlights, and it links to a variety of other publications that

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[a] The specific questions that we are addressing, and a detailed description of our evaluation methods, are described in the complete design plan. The plan is available by requesting an electronic copy from the director of the evaluation, Dr. Henry Ireys, at hireys@mathematica-mpr.com.

describe our findings. As the project evolves, we expect to develop additional publications and strategies for disseminating our work.

B. Developing and Revising the Design for the National Evaluation

We submitted the original design plan to AHRQ in July 2011 and updated it in May 2012, March 2013, and April 2014 based on information available at those times. This document summarizes the plan that was submitted in April 2014. This latest plan covers the final months of the evaluation, which is scheduled to end in September 2015. As of April 2014, the grantees had less than 12 months remaining in their original grant period, which is scheduled to end on February 21, 2015.

By definition, design plans include descriptions of activities that a project team expects to undertake in future years of the project. Those projected activities are based on assumptions about the availability of data and the key research questions. Consequently, our first version of the design plan articulated a wide range of potential data collection and analytic activities that we could undertake to address the many evaluation questions AHRQ provided. As the evaluation moves into its last phase, the full plan now includes several analytic approaches and strategies that we may take in the remaining months of this project, even though we are not likely to carry out all of them, given time and budgetary constraints.

The design plan also has evolved as we have learned how the States' programmatic and evaluation activities have been shaped by actual implementation experiences. Some grantees are likely to request no-cost extensions from CMS, but we do not know yet the number of grantees that will make such requests or the end dates of those extensions. During the last months of their projects, most grantees will be working to develop their own reports on the implementation and outcomes of their grant activities. We have asked grantees to submit brief summaries of and links to these reports, which we will include on the AHRQ-hosted Web page for the national evaluation.

CMS allowed grantees to seek contracts for independent evaluations of the CHIPRA quality demonstration projects. Seven grantees (Colorado, Florida, Maine, Maryland, Massachusetts, South Carolina, and Utah) have done so. To coordinate data collection activities, the NET has worked and will continue to work with these evaluators and with research staff in grantee and partner States that do not have independent evaluators.

We are aiming to ensure that national and grantee-initiated evaluation activities are not duplicative and that the combined evaluations are more comprehensive than would be possible for either team alone. Since the beginning of 2013, the NET has been meeting quarterly with grantees and their evaluation teams to promote sharing of evaluation methods among the grantees and coordination of evaluation activities between State and national evaluation teams. This collaboration is especially important because of the range and schedule of evaluation activities that grantees are pursuing.

One of the most important challenges for the national evaluation involves determining the extent to which changes in quality outcomes, such as reducing inappropriate use of emergency departments, can be attributed to the grantees' activities and interventions. To make a causal inference, we require a reliable measure of "the counterfactual"—that is, the outcomes that would have occurred if the CHIPRA quality demonstration funds had not been available. Strong counterfactual data can provide convincing answers to questions about whether the CHIPRA funds actually made the difference or whether observed changes would have happened anyway. To ensure that such data are available, the NET worked with States to identify opportunities for implementing evaluations using comparison group designs.

Other challenges that are examined in the full design plan include:

- Understanding, and accounting for, multiple health reform efforts within and across States.
- Ensuring consistent definition and measurement of project concepts and outcomes.
- Managing substantial qualitative and quantitative data to put them to best use.

C. Evaluation Strategies for Specific Grant Categories

Category A. Developing, reporting, and applying core and supplemental quality measures

The CHIPRA Quality Demonstration Grant Program is an important component of CMS and AHRQ efforts to advance the systematic collection of standard measures of the quality of children's health care across all 50 States and the District of Columbia. Although States recently have increased the number of measures they collect and report to CMS (for example, several CHIP-related measures), the efforts often cover only a subset of the full list of measures. The national evaluation aims to:

- Document grantees' experiences in (1) reporting on the core set of pediatric quality measures using a CMS-approved format and (2) in developing and utilizing supplemental measures in coordination with the Pediatric Quality Measures Program (PQMP).
- Identify strategies for more efficient and effective performance measurement of Medicaid and Children's Health Insurance Program (CHIP) programs across all types of delivery and payment models.
- Disseminate information on how performance measurement can be used to improve the quality of children's health care.

Projects in Category A are being evaluated using a mixed-methods, longitudinal, comparison design. First, in its last year, the national evaluation will document growth from 2011 to 2014 in the capacity of demonstration States to collect, report, and use the initial set of core measures, as well as supplemental measures. Reporting capacity will be based on the number of core measures States are able to report—using the correct specifications—to CMS. We will examine the use of measures with respect to State strategies for integrating these measures into quality improvement initiatives, developing different reporting modalities (for example, reporting to the public versus reporting to providers or plans), and to a more limited degree, linking measures to payment incentives.

Among CHIPRA grantee States, we also will examine the intersection of Category A with other grant categories. For example, we may compare progress in Category A for States with and without Category B funding. This will allow us to determine how CHIPRA-funded health IT activities might contribute to States' ability to collect and report the core set of measures. To strengthen the evaluation further, we also will compare the 10 CHIPRA Category A demonstration States to other States with respect to growth in capacity to report and use core quality measures. Comparison States may include the CHIPRA-funded States that are not participating in Category A, as well as States with no CHIPRA quality demonstration funding.

Category B. Using health IT to improve child health care quality

The goal of the CHIPRA Quality Demonstration Grant Program for Category B is to support demonstration States in using health IT effectively to improve the quality of children's health care, reduce Medicaid and CHIP expenditures, and promote transparency and consumer choice. The 12 States that are implementing Category B projects are using various combinations of EHRs, personal health records (PHRs), and HIEs for such purposes as (1) automated reporting of CHIPRA core quality measures, (2) reporting for EPSDT, (3) providing clinical decision support, (4) providing reports to promote quality improvement in clinical settings and support the informational needs of public health agencies, (5) fostering consumer engagement, and (6) coordinating services across different types of providers (especially in connection with medical homes).

The national evaluation aims to:

- Document how States are implementing health IT effectively to improve the quality of children's health care and identify less effective strategies that States should avoid.
- Measure the impact of health IT on the quality of children's health care, especially for children with special health care needs.
- Determine whether and how health IT increases transparency and consumer choice while safeguarding the privacy and security of personal information.
- Assess the extent to which States used funding under these grants in ways that did not overlap with their use of other Federal health IT grants.

To accomplish these goals, we are combining multiple evaluation strategies. For example, in one State (Pennsylvania), we are using a lagged comparison group design to conduct a quasi-experimental analysis that compares processes and outcomes for children who receive care from selected practices participating in the State's Category B project. We also may undertake a descriptive, non-experimental analysis to assess whether CHIPRA-funded health IT infrastructure investments improve States' capacities to report on the core set of health care quality measures for children.

This descriptive analysis will start by identifying the States (such as Maine and Pennsylvania) that have explicitly linked their Category B activities to their Category A goals. We will examine changes in the number of measures in the core set that these States reported to CMS and analyze information gathered from key informant interviews to determine whether and, if so, how the Category B activities contributed to increases in the number of reported measures. This analysis should provide useful information to other States that are seeking to use health IT resources to improve reporting on the core set of quality measures.

The Category B demonstration States differ greatly from one another in their prior health IT experience, but most will participate in at least some of the federally funded health IT initiatives that will unfold concurrently with the CHIPRA Quality Demonstration Grant Program. CMS encouraged States to leverage the resources from other initiatives to enhance their Category B projects. Therefore, an important component of the Category B-specific evaluation will be to document and understand States' participation in non-CHIPRA health IT programs and to examine the impact of CHIPRA-funded health IT interventions, alone and in combination with other federally funded initiatives.

Category C. Assessing provider-based models of care

The goal of the provider-based interventions funded under Category C of the CHIPRA quality demonstration grants is to develop, implement, and determine the impact of these interventions on the delivery of children's health care, including access, quality, and cost. Of the 17 demonstration States that are implementing Category C projects:

- Twelve are working with practices that serve children to develop or enhance PCMHs.
- Three are developing care management entities that coordinate services for children with serious emotional and behavioral disorders.
- Two are strengthening school-based health centers.

For these projects, the national evaluation aims to identify (1) the extent to which these models of care improved the quality of children's health care, especially for children with special health care needs; and (2) effective strategies for implementing these models, including key obstacles to implementation and the means for overcoming them.

To accomplish these goals, the NET is using longitudinal, quasi-experimental, mixed-methods analyses. Our specific approach varies somewhat, depending on which of the three models the State is implementing.

For the medical home models, our evaluation approach accounts for different implementation strategies across the States. Specifically, these projects vary along at least five important dimensions:

1. The specific definitions of PCMH on which they are basing their programs and the tools used to assess them.
2. The target population (all Medicaid and CHIP-enrolled children or enrolled children with special health care needs).
3. Combinations of various activities (such as learning collaboratives and coaching).
4. The use of payment models to reimburse practices for taking on new roles or developing new capabilities to serve as medical homes.
5. The timing of project implementation.

In light of this variation, our evaluation of these projects will be multifaceted. To the extent possible, we will combine quantitative data from several States to develop estimates of the impact of the projects on child health care. For this analysis, we will compare health services received by children in practices that are participating in the States' Category C projects with services received by children in similar practices that are not part of the CHIPRA grant. When quantitative analyses are not possible, we will assemble qualitative data from key stakeholders to assess perceived outcomes of these projects.

For the other models of care, we will rely primarily on qualitative data gathered from key informants and reports submitted to CMS. We also may use findings from quantitative analyses that States develop on their own to document project outcomes.

Category D. Implementation of the children's EHR format

The two Category D demonstration States, North Carolina and Pennsylvania, will implement the children's EHR format at participating practices or systems. The objectives of this grant category are to:

- Evaluate the impact of the model format on the cost and quality of care for children, particularly for children with special health care needs.
- Learn how best to use data from the format for quality improvement and cost-reduction purposes.
- Determine which strategies are most effective in recruiting providers and promoting meaningful use of the format.
- Identify issues around interoperability, privacy and security, PHRs, and beneficiaries' access to their personal health data.

CMS's guidance for Category D projects calls for each grantee to conduct its own data collection and analysis to address the agency's evaluation goals. For this category, we have been gathering and will continue to gather information needed for the national evaluation that is not feasible for the States to collect (such as information from State staff themselves about any assistance received to help implement their activities).

Category E. Grantee-specified projects

Category E grants offer States the opportunity to implement additional strategies to improve health care coordination. Activities in this category may relate to one of the CMS key interest areas or some other area of the grantee's choice, provided the activity complements the activities performed under another grant category. Because the guidelines for this category were less specific than for categories A through D, projects are quite varied in scope and methods.

Six grantees (involving 11 States) are implementing projects under Category E:

- Colorado and New Mexico are working on projects that are closely connected to their Category C projects and that involve efforts to improve preventive care, increase screening rates, and enhance management of chronic conditions in school-based health centers.

- Florida and Illinois are establishing stakeholder workgroups to improve the quality of perinatal and early childhood care for children enrolled in Medicaid and CHIP.
- Maryland, Georgia, and Wyoming are supporting their efforts to develop or expand CMEs by enhancing home and community-based services, including (in Georgia) a statewide network of certified family and youth peer support specialists.
- Massachusetts is forming a sustainable coalition of stakeholders to develop a shared understanding of pediatric health care quality priorities; create a platform for formulating system-wide goals and objectives; and implement activities to support those goals and objectives, including new measures of pediatric health care quality.
- Utah and Idaho are establishing a sustainable, regional pediatric quality improvement network.
- Vermont is (1) continuing to provide technical assistance to the National Improvement Partnership Network (NIPN), the existing national network of improvement partnership States; (2) helping 20 additional States develop sustainable, State-level improvement partnerships; and (3) evaluating the implementation, efficiency, and impact of the improvement partnership model and national network.

The national evaluation is using primarily qualitative methods to describe (1) the projects that these States are implementing and the strategies they are using (with a particular focus on collaborations across agencies, providers, and other stakeholders) and (2) the extent to which the project achieved intended effects and complemented activities pursued under other grant categories.

D. The Full Design Plan

Chapter I of the full plan describes the demonstration program; Chapter II provides a general overview of the national evaluation. Chapter III details the data sources and data collection strategies—quantitative and qualitative—that the NET will use to address research questions across the different grant categories. Chapter III also describes our overall approach to analyzing the data.

Chapters IV through VII focus on design issues relating specifically to categories A to D, respectively. Each chapter reviews the status of projects within the category; describes the approaches to evaluating the projects, including plans for comparison group designs; indicates how specific data sources (including those described generally in Chapter III) will be used to address category-specific research questions; and describes the current analysis plans. Chapter VIII describes the Category E projects and outlines how we will evaluate them. The report concludes with a schedule of the major activities during the last 18 months of the evaluation.[b]

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[b] As noted previously, the complete design plan is available from the director of the evaluation, Dr. Henry Ireys, at hireys@mathematica-mpr.com.