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Measurement, Monitoring, and Evaluation of State Demonstrations to Integrate Care for Dual Eligible Individuals

Virginia Evaluation Design Plan

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Virginia Evaluation Design Plan

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Executive Summary

Virginia is implementing a capitated model demonstration under the Financial Alignment Initiative. Under the demonstration, known as Commonwealth Coordinated Care, Virginia and the Centers for Medicare & Medicaid Services (CMS) will contract with Medicare-Medicaid Plans (MMPs) to provide all Medicare benefits, service coordination, case management activities, and most Medicaid benefits to specific groups of Medicare-Medicaid enrollees. Enrollees eligible for the demonstration are individuals who are aged 21 and older. This includes individuals in the Elderly or Disabled with Consumer Direction (EDCD) home and community-based services waiver and individuals in nursing facilities. The demonstration, which will be implemented in five regions of the Commonwealth, began implementation in two regions on April 1, 2014 (communication with CMS, December 30, 2013).

CMS contracted with RTI International to monitor the implementation of demonstrations under the Financial Alignment Initiative, and to evaluate their impact on beneficiary experience, quality, utilization, and cost. The evaluation includes an aggregate evaluation and State-specific evaluations. This report describes the State-specific Evaluation Plan for the Virginia demonstration as of April 24, 2014. The evaluation activities may be revised if modifications are made to either the Virginia demonstration or to the activities described in the *Aggregate Evaluation Plan* (Walsh et al., 2013). Although this document will not be revised to address all changes that may occur, the annual and final evaluation reports will note areas where the evaluation as executed differs from this evaluation plan.

The goals of the evaluation are to monitor demonstration implementation, evaluate the impact of the demonstration on the beneficiary experience, monitor unintended consequences, and monitor and evaluate the demonstration's impact on a range of outcomes for the eligible population as a whole and for subpopulations (e.g., people with mental illness and/or substance use disorders and long-term services and supports [LTSS] recipients). To achieve these goals, RTI International will collect qualitative and quantitative data from Virginia each quarter; analyze Medicare and Medicaid enrollment and claims data; conduct site visits, beneficiary focus groups, and key informant interviews; and incorporate relevant findings from any beneficiary surveys conducted by other entities. Information from monitoring and evaluation activities will be reported in a 6-month initial implementation report to CMS and the Commonwealth, quarterly monitoring reports provided to CMS and the Commonwealth, annual reports, and a final evaluation report. The key research questions and data sources for each are summarized in ***Table ES-1***.

The principal focus of the evaluation will be at the demonstration level. CMS has established a contract management team and engaged an operations support contractor to monitor fulfillment of the demonstration requirements outlined in the Memorandum of Understanding (MOU) and three-way contracts, including MMP–level monitoring. RTI will integrate that information into the evaluation as appropriate.

Demonstration Implementation. Evaluation of demonstration implementation will be based on case study methods and quantitative data analysis of enrollment patterns. We will monitor progress and revisions to the demonstration, and will identify transferable lessons from

the Virginia demonstration through the following: document review, ongoing submissions by the Commonwealth through an online State Data Reporting System (e.g., enrollment and disenrollment statistics and qualitative updates on key aspects of implementation), quarterly key informant telephone interviews, and at least two sets of site visits. We will also monitor and evaluate several demonstration design features, including the progress developing an integrated delivery system, integrated delivery system supports, care coordination/case management, benefits and services, enrollment and access to care, beneficiary engagement and protections, financing, and payment elements. ***Table 6*** in ***Section 3*** of this report provides a list of the implementation tracking elements that we will monitor for each design feature. Examples of tracking elements include efforts to build plan and provider core competencies for serving beneficiaries with various disability types; requirements for coordination and integration of clinical, LTSS, and behavioral health services; documentation of coordination activities between MMPs and community-based organizations; phase-in of new or enhanced benefits, and methods to communicate them to eligible populations; and strategies for expanding beneficiary access to demonstration benefits.

The data we gather about implementation will be used for within-Commonwealth and aggregate analyses; included in the 6-month implementation report to CMS and the Commonwealth, and annual reports; and will provide context for all aspects of the evaluation.

Beneficiary Experience. The impact of this demonstration on beneficiary experience is a critical focus of the evaluation. Our framework for evaluating beneficiary experience is influenced by work conducted by the Center for Health Care Strategies (CHCS) on the elements of integration that directly affect beneficiary experience for Medicare-Medicaid enrollees. ***Table 8*** in ***Section 4*** of this report aligns key elements identified in the CHCS framework with the demonstration design features listed in the demonstration implementation section. The goals of these analyses are to examine the beneficiary experience and how it varies by subpopulation, and whether the demonstration has had the desired impact on beneficiary outcomes, including quality of life.

To understand beneficiary experience, we will monitor Commonwealth-reported data quarterly (e.g., reports of beneficiary engagement activities), and discuss issues related to the beneficiary experience during quarterly telephone follow-up calls and site visits with the Commonwealth and with stakeholders. We will also obtain data on grievances and appeals from CMS and, as available, other sources. Focus groups will include Medicare-Medicaid enrollees from a variety of subpopulations, such as people with mental health conditions, substance use disorders, LTSS needs, and multiple chronic conditions. Relevant demonstration statistics will be monitored quarterly, and quantitative and qualitative analyses of the beneficiary experience will be included in annual Commonwealth-specific reports and the final evaluation report.

Table ES-1
Research questions and data sources

Research questions	Stakeholder interviews and site visits	Beneficiary focus groups	Claims and encounter data analysis	Demonstration statistics[1]
1) What are the primary design features of the Virginia demonstration, and how do they differ from the Commonwealth's previous system?	X	X	—	X
2) To what extent did Virginia implement the demonstration as designed? What factors contributed to successful implementation? What were the barriers to implementation?	X	—	—	X
3) What impact does the Virginia demonstration have on the beneficiary experience overall and for beneficiary subgroups? Do beneficiaries perceive improvements in how they seek care, choice of care options, how care is delivered, personal health outcomes, and quality of life?	X	X	—	X
4) What impact does the Virginia demonstration have on cost and is there evidence of cost savings? How long did it take to observe cost savings? How were these savings achieved?	—	—	X	X
5) What impact does the Virginia demonstration have on utilization patterns in acute, long-term, and behavioral health services, overall and for beneficiary subgroups?	X	X	X	X
6) What impact does the Virginia demonstration have on health care quality, overall and for beneficiary subgroups?	—	—	X	X
7) Does the Virginia demonstration change access to care for medical, behavioral health, long-term services and supports (LTSS) overall, and for beneficiary subgroups? If so, how?	X	X	X	X
8) What policies, procedures, or practices implemented by Virginia in its demonstration can inform adaptation or replication by other States?	X	X	—	X
9) What strategies used or challenges encountered by Virginia in its demonstration can inform adaptation or replication by other States?	X	X	—	X

— = not applicable.

[1] Demonstration statistics refer to data that the Commonwealth, CMS, or other entities will provide regarding topics, including enrollments, disenrollments, grievances, appeals, and the number of Medicare-Medicaid Plans (MMPs).

Analysis Overview. Quality, utilization, access to care, and cost will be monitored and evaluated using encounter, claims, and enrollment data for a 2-year predemonstration period and during the course of the demonstration. The evaluation will use an intent-to-treat (ITT) approach for the quantitative analyses, comparing the eligible population for the Virginia demonstration with a similar population that is not affected by the demonstration (i.e., a comparison group). Under the ITT framework, outcome analyses will include all beneficiaries eligible for the demonstration in the demonstration area, including those who opt out, participate but then disenroll, and those who enroll but may not seek services, and a group of similar individuals in the comparison group. This approach diminishes the potential for selection bias and highlights the effect of the demonstration on all beneficiaries in the demonstration-eligible population. RTI will compare the characteristics of those who enroll with those who are eligible but do not enroll, and conduct analyses to further explore demonstration effects on demonstration enrollees, acknowledging that selection bias needs to be taken into account in interpreting the results.

Identifying Demonstration and Comparison Groups. To identify the population eligible for the demonstration, Virginia will submit demonstration evaluation (finder) files to RTI on a quarterly basis. RTI will use this information to identify the characteristics of demonstration-eligible beneficiaries for the quantitative analysis. ***Section 4.2.2.1*** of this report provides more detail on the contents of the demonstration evaluation (finder) files.

Identifying the comparison group members will entail two steps: (1) selecting the geographic area from which the comparison group will be drawn and (2) identifying the individuals who will be included in the comparison group. The five regions of the Commonwealth where Virginia's demonstration is being implemented represent 104 localities. Implementation will occur in two phases: in Phase I, which started on April 1, 2014 (communication with CMS, December 30, 2013), Virginia implemented in the Central Virginia and Tidewater regions; Phase II, which will begin no sooner than May 2014, would add the Northern Virginia, Roanoke, and Western/Charlottesville regions (CMS and the Commonwealth of Virginia, 2013; hereafter MOU, 2013, p. 56). Because Virginia does not intend to implement its demonstration Commonwealth-wide, RTI will consider a within-Commonwealth comparison group. We will use cluster analysis to identify potential comparison Metropolitan Statistical Areas (MSAs) that are most similar to the demonstration areas in regard to costs, care delivery arrangements, and Commonwealth policy affecting Medicare-Medicaid enrollees. If, however, the areas that will not be included in the demonstration are not sufficiently similar to the demonstration areas, or there are not enough Medicare-Medicaid enrollees in those areas, we will consider using beneficiaries from both within the Commonwealth and from out of Commonwealth MSAs similar to the demonstration areas. The approach for identifying potential out-of-State comparison MSAs would be the same as that for an in-State comparison group.

Once comparison areas are selected, all Medicare-Medicaid enrollees in those areas who meet the demonstration's eligibility criteria will be selected for comparison group membership based on the intent-to-treat study design. The comparison group will be refreshed annually to incorporate new entrants into the eligible population as new individuals become eligible for the demonstration over time. We will use propensity-score weighting to adjust for differences in individual-level characteristics between the treatment and comparison group members, using beneficiary-level data (demographics, socioeconomic, health, and disability status) and county-

level data (health care market and local economic characteristics). We will remove from the comparison group any beneficiaries with a propensity score lower than the lowest score found in the demonstration group.

The comparison areas will be determined within the first year of implementation in order to use the timeliest data available. The comparison group members will be determined retrospectively at the end of each demonstration year, allowing us to include information on individuals newly eligible or ineligible for the demonstration during that year.

Analyses. Analyses of quality, utilization, and cost in the Virginia evaluation will consist of the following:

1. A monitoring analysis to track quarterly changes in selected quality, utilization, and cost measures over the course of the Virginia demonstration.

2. A descriptive analysis of quality, utilization, and cost measures with means and comparisons for subgroups of interest, including comparison group results, for annual reports. This analysis will focus on estimates for a broad range of quality, utilization, and cost measures, as well as changes in these measures across years or subgroups of interest within each year.

3. Multivariate difference-in-differences analyses of quality, utilization, and cost measures using a comparison group.

4. A calculation of savings twice during the demonstration. RTI is developing the methodology for evaluating savings for capitated model demonstrations, which will include an analysis of spending by program (Medicaid, Medicare Parts A and B services, Medicare Part D services).

Subpopulation Analyses. For subpopulations of focus in the Virginia demonstration, we will evaluate the impact of the demonstration on quality, utilization, and access to care for medical, LTSS, and behavioral health services, and will also examine qualitative data gathered through interviews, focus groups, and surveys. Descriptive analyses for annual reports will present results on selected measures stratified by subpopulations (e.g., medical, behavioral health services, LTSS). Multivariate analyses performed for the final evaluation will account for differential effects for subpopulations to understand whether quality, utilization, and cost are higher or lower for these groups.

Utilization and Access to Care. Medicare, Medicaid, and MMP encounter data will be used to evaluate changes in the levels and types of services used, ranging along a continuum from institutional care to care provided at home and including changes in the percentage of enrollees receiving supports in the community or residing in institutional settings (see ***Table 15*** of this report for more detail).

Quality. Across all demonstrations, RTI will evaluate a core quality measure set for monitoring and evaluation purposes that are available through claims and encounter data. RTI

will obtain these data from CMS (see ***Table 16*** of this report). We will supplement these core measures with the following:

- Additional quality measures specific to Virginia that RTI will identify for the evaluation, and which will also be available through claims and encounter data that RTI will obtain from CMS. These measures will be finalized within the first 6 months of implementation.

- Quality of life, satisfaction, and access to care information derived from the evaluation as discussed in ***Section 4.1*** and ***Section 4.2***.

- Healthcare Effectiveness Data and Information Set (HEDIS) measures that MMPs are required to submit, as outlined in the Medicare-Medicaid Capitated Financial Alignment Model Reporting Requirements (CMS, 2014).

- Beneficiary surveys, such as Health Outcomes Surveys (HOS) and Consumer Assessment of Healthcare Providers and Systems (CAHPS), that MMPs are required to report to CMS.

Cost. To determine annual total costs (overall and by payer), we will aggregate the Medicare and Medicaid per member per month (PMPM) payments paid to MMPs and the costs for the eligible population that is not enrolled in the demonstration, per the intent to treat evaluation design. This approach will help us to detect overall cost impact and eliminate the effects of potential selection bias among beneficiaries who participate in the demonstration and those who opt out or disenroll. We will also include Part D PMPM and any PMPM reconciliation data provided by CMS in the final assessment of cost impact to ensure that all data are available. Cost savings will be calculated twice for capitated model demonstrations using a regression-based approach. The methodology for determining cost savings for capitated model demonstrations is currently under development and will be reviewed and approved by the CMS Office of the Actuary.

Summary of Data Sources. ***Table ES-2*** displays the sources of information the RTI evaluation team will use to monitor demonstration progress and evaluate the outcomes of the demonstrations under the Financial Alignment Initiative. The table provides an overview of the data that Virginia will be asked to provide, and evaluation activities in which State staff will participate. As shown in this table, the RTI evaluation team will access claims, encounter, and other administrative data from CMS. These data, and how they will be used in the evaluation, are discussed in detail in this evaluation plan and in the *Aggregate Evaluation Plan* (Walsh et al., 2013).

Table ES-2
Sources of information for the evaluation of the demonstrations under the Financial Alignment Initiative

RTI will obtain data from:	Type of data
CMS	• Encounter data (Medicare Advantage, Medicaid, and MMP) • HEDIS measures • Results from HOS and CAHPS surveys • Medicare and Medicaid fee-for-service claims • Medicare Part D costs • Nursing facility data (MDS) • CMS-HCC and RXHCC risk scores • Demonstration quality measures that States are required to report to CMS (listed in MOU) • Demonstration reporting measures that MMPs are required to report to CMS (listed in three-way contracts or other guidance) • Other administrative data as available
State	• Detailed description of State's method for identifying eligible beneficiaries • File with monthly information identifying beneficiaries eligible for the demonstration (can be submitted quarterly)[1] • SDRS (described in detail in Section 4 of the *Aggregate Evaluation Plan*) quarterly submissions of demonstration updates including monthly statistics on enrollments, opt-outs, and disenrollments • Participation in key informant interviews and site visits conducted by RTI team • Results from surveys, focus groups, or other evaluation activities (e.g., EQRO or Ombuds reports) conducted or contracted by the State,[2] if applicable • Other data State believes would benefit this evaluation, if applicable
Other sources	• Results of focus groups conducted by RTI subcontractor (The Henne Group) • Grievances and appeals • Other sources of data, as available

CAHPS = Consumer Assessment of Healthcare Providers and Systems; EQRO = external quality review organization; HCC = hierarchical condition category; HEDIS = Healthcare Effectiveness Data and Information Set; HOS = Health Outcomes Survey; MDS = Minimum Data Set; MMP = Medicare-Medicaid Plan; MOU = Memorandum of Understanding; RXHCC = prescription drug hierarchical condition category; SDRS = State Data Reporting System.

[1] These data, which include both those enrolled and those eligible but not enrolled, will be used (in combination with other data) to identify the characteristics of the total eligible and the enrolled population.

[2] States are not required to conduct or contract for surveys or focus groups for the evaluation of this demonstration. However, if the State chooses to do so, the State can provide any resulting reports from its own independent evaluation activities for incorporation into this evaluation, as appropriate.

References

Centers for Medicare & Medicaid Services (CMS): Medicare-Medicaid Capitated Financial Alignment Model Reporting Requirements. February 21, 2014. http://www.cms.gov/Medicare-Medicaid-Coordination/Medicare-and-Medicaid-Coordination/Medicare-Medicaid-Coordination-Office/FinancialAlignmentInitiative/Downloads/FinalCY2014CoreReportingRequirements.pdf As obtained on March 7, 2014.

Centers for Medicare & Medicaid Services (CMS), Federal Coordinated Health Care Office (Medicare-Medicaid Coordination Office [MMCO]): Personal communication, December 30, 2013.

Centers for Medicare & Medicaid Services (CMS) and the Commonwealth of Virginia: Memorandum of Understanding (MOU) regarding a Federal-State partnership to test a capitated financial alignment model for Medicare-Medicaid enrollees. http://www.cms.gov/Medicare-Medicaid-Coordination/Medicare-and-Medicaid-Coordination/Medicare-Medicaid-Coordination-Office/Downloads/VAMOU.pdf. 2013.

Walsh, E. G., Anderson, W., Greene, A. M., et al.: Measurement, Monitoring, and Evaluation of State Demonstrations to Integrate Care for Dual Eligible Individuals: Aggregate Evaluation Plan. Contract No. HHSM500201000021i TO #3. Waltham, MA. RTI International, December 16, 2013. http://www.cms.gov/Medicare-Medicaid-Coordination/Medicare-and-Medicaid-Coordination/Medicare-Medicaid-Coordination-Office/FinancialAlignmentInitiative/Evaluations.html.

1. Introduction

1.1 Purpose

The Medicare-Medicaid Coordination Office (MMCO) and Innovation Center at CMS have created the Financial Alignment Initiative to test integrated care models for Medicare-Medicaid enrollees. The goal of these demonstrations is to develop person-centered care delivery models integrating the full range of medical, behavioral health, and long-term services for Medicare-Medicaid enrollees, with the expectation that integrated delivery models would address the current challenges associated with the lack of coordination of Medicare and Medicaid benefits, financing, and incentives.

CMS contracted with RTI International to monitor the implementation of the demonstrations and to evaluate their impact on beneficiary experience, quality, utilization, and cost. The evaluation includes an aggregate evaluation and State-specific evaluations.

This report describes the State-specific Evaluation Plan for the Virginia demonstration, known as Commonwealth Coordinated Care, as of April 24, 2014. The evaluation activities may be revised if modifications are made to either the Virginia demonstration or to the activities described in the *Aggregate Evaluation Plan* (Walsh et al., 2013). Although this document will not be revised to address all changes that may occur, the annual and final evaluation reports will note areas where the evaluation as executed differs from this evaluation plan. This report provides an overview of the Virginia demonstration and provides detailed information on the framework for quantitative and qualitative data collection; the data sources, including data collected through RTI's State Data Reporting System (described in detail in the *Aggregate Evaluation Plan* [Walsh et al., 2013]); and impact and outcome analysis (i.e., the impact on beneficiary experience, and quality, utilization, access to care, and costs) that will be tailored to Virginia.

1.2 Research Questions

The major research questions of the Virginia evaluation are presented in ***Table 1*** with an identification of possible data sources. The evaluation will use multiple approaches and data sources to address these questions. These are described in more detail in ***Sections 3*** and ***4*** of this report.

Unless otherwise referenced, the summary of the Virginia demonstration is based on Virginia's Memorandum of Understanding (MOU) with CMS (CMS and Commonwealth of Virginia, 2013; hereafter, MOU, 2013); the Medicare-Medicaid Enrollee State Profile, Virginia (CMS, n.d.); and discussions and e-mail communications with MMCO staff at CMS during 2013. The details of the evaluation design are covered in the three major sections that follow:

- An overview of the Virginia demonstration
- Demonstration implementation evaluation and monitoring
- Impact and outcome evaluation and monitoring

Table 1
Research questions and data sources

Research questions	Stakeholder interviews and site visits	Beneficiary focus groups	Claims and encounter data analysis	Demonstration statistics[1]
1) What are the primary design features of the Virginia demonstration, and how do they differ from the Commonwealth's previous system?	X	X	—	X
2) To what extent did Virginia implement the demonstration as designed? What factors contributed to successful implementation? What were the barriers to implementation?	X	—	—	X
3) What impact does the Virginia demonstration have on the beneficiary experience overall and for beneficiary subgroups? Do beneficiaries perceive improvements in how they seek care, choice of care options, how care is delivered, personal health outcomes, and quality of life?	X	X	—	X
4) What impact does the Virginia demonstration have on cost and is there evidence of cost savings? How long did it take to observe cost savings? How were these savings achieved?	—	—	X	X
5) What impact does the Virginia demonstration have on utilization patterns in acute, long-term, and behavioral health services, overall and for beneficiary subgroups?	X	X	X	X
6) What impact does the Virginia demonstration have on health care quality, overall and for beneficiary subgroups?	—	—	X	X
7) Does the Virginia demonstration change access to care for medical, behavioral health, long-term services and supports (LTSS) overall, and for beneficiary subgroups? If so, how?	X	X	X	X
8) What policies, procedures, or practices implemented by Virginia in its demonstration can inform adaptation or replication by other States?	X	X	—	X
9) What strategies used or challenges encountered by Virginia in its demonstration can inform adaptation or replication by other States?	X	X	—	X

—= not applicable.

[1] Demonstration statistics refer to data that the Commonwealth, CMS, or other entities will provide regarding topics, including enrollments, disenrollments, grievances, appeals, and the number of Medicare-Medicaid Plans (MMPs).

2. Virginia Demonstration

2.1 Demonstration Goals

The goals of the Virginia demonstration are to "improve the entire beneficiary care experience through the principles of independent living, wellness promotion and cultural competence. By engaging beneficiaries in their care and allowing them to self-direct services as appropriate, the demonstration will address beneficiaries' health and functional needs in order to better equip individuals to live independently in their communities" (MOU, 2013, p. 3). Virginia indicates that "improving the beneficiary experience can then lead to system-wide benefits such as better quality, improved transitions between care settings, fewer health disparities, reduced costs for both payers and the elimination of cost shifting between Medicare and Medicaid" (MOU, 2013, p. 4).

The key objective of the Virginia model is to contract with health plans that will "provide integrated benefits to Medicare-Medicaid enrollees in the targeted geographic areas" (MOU, 2013, p. 3). The eligible population includes specific groups of Medicare-Medicaid enrollees aged 21 and older who live in the demonstration regions.

2.2 Summary of Demonstration

Virginia and CMS will contract with Medicare-Medicaid Plans (MMPs) under a capitated model demonstration under the Financial Alignment Initiative to provide all Medicare benefits, service coordination, case management activities, and most Medicaid benefits to specific groups of Medicare-Medicaid enrollees aged 21 and older in the demonstration area. Medicare-Medicaid enrollees who are eligible for the demonstration include individuals in the Elderly or Disabled with Consumer Direction (EDCD) waiver and individuals in nursing facilities.

The following groups of individuals are not eligible to enroll in the demonstration:

- Medicare-Medicaid enrollees younger than 21 years old.
- Individuals who are required to "spend down" income to meet Medicaid eligibility requirements.
- Non-full-benefit Medicaid beneficiaries.
- Individuals who are inpatients in Commonwealth mental hospitals.
- Individuals who are in Commonwealth hospitals, Intermediate Care Facilities for Persons with Intellectual Disabilities (ICFs/ID), Residential Treatment Facilities, and long-stay hospitals.
- Individuals who are participating in Federal waiver programs for home and community-based Medicaid coverage other than the EDCD waiver.
- Individuals enrolled in a hospice program.

- Individuals receiving the end stage renal disease (ESRD) Medicare benefit at the time of enrollment into the demonstration.
- Individuals with other comprehensive group or individual health insurance coverage, other than full-benefit Medicare; insurance provided to military dependents; and any other insurance purchased through the Health Insurance Premium Payment Program (HIPP).
- Individuals who have a Medicaid eligibility period that is less than 3 months.
- Individuals who have a Medicaid eligibility period that is only retroactive.
- Individuals enrolled in the Virginia Birth-Related Neurological Injury Compensation Program established pursuant to Chapter 50 (§38.2-5000 et seq.) of Title 38.2 of the Code of Virginia.
- Individuals enrolled in a Program of All-Inclusive Care for the Elderly (PACE) plan.
- Individuals participating in the Money Follows the Person and Independence at Home demonstrations.

Benefits covered under capitation to the MMPs include all Medicare-covered Part A, Part B, and Part D services; and Medicaid long-term services and supports (LTSS). Most non-LTSS Medicaid services will also be included in the capitation. Examples of services that will be excluded from the capitation rate, and paid for through fee for service (FFS), include dental care in limited cases, targeted case management for individuals with intellectual disabilities, and case management services for participants of Auxiliary Grants (MOU, 2013, p. 73). New benefits include person-centered care coordination for all enrollees, with enhanced aspects for subpopulations.

Virginia plans to use passive enrollment into the demonstration, with the option to opt out prior to enrollment. Under passive enrollment, Medicare-Medicaid enrollees will first be asked to select an MMP, and will be assigned to an MMP if they do not select one or opt out within a prescribed time frame. If an enrollee opts out of the demonstration, the enrollee can choose to remain in FFS Medicare, or enroll in a Medicare Advantage plan. They will be enrolled in FFS for Medicaid.

To participate in the demonstration, plans must meet the Commonwealth's requirements set forth in the Virginia Request for Proposal for the Medicare-Medicaid Alignment Demonstration to the health plans (Commonwealth of Virginia Department of Medical Assistance Services [DMAS], 2013c) and CMS requirements outlined in Capitated Financial Alignment Model Plan guidance; and pass a joint CMS/Commonwealth readiness review. Selected plans "will provide integrated benefits to Medicare-Medicaid Enrollees in the targeted geographic areas" (MOU, 2013, p. 3). The Virginia demonstration will be implemented in five regions of the Commonwealth, representing 104 localities. Implementation will occur in two phases. In Phase I, which began on April 1, 2014 (communication with CMS, December 30, 2013), Virginia implemented in central Virginia and Tidewater. Phase II will begin no sooner

than May 2014 and include northern Virginia, Roanoke, and Western/Charlottesville (MOU, 2013, p. 56).

Table 2 provides a summary of the key characteristics of the Virginia demonstration compared with the system that currently exists for demonstration-eligible beneficiaries.

Table 2
Key features of the Virginia model predemonstration and during the demonstration

Key features	Predemonstration	Demonstration[1]
Summary of covered benefits		
Medicare	Medicare Parts A, B, and D	Medicare Parts A, B, and D
Medicaid	Medicaid State Plan	Medicaid State Plan, excluding small number of services, such as dental care in limited cases, targeted case management for individuals with intellectual disabilities, and case management services for participants of Auxiliary Grants.
Payment method (capitated/FFS/MFFS)		
Medicare	Mostly FFS, some PACE (there are currently 10 PACE sites in Virginia, with an estimated 15 PACE sites by 2014).	Capitated
Medicaid (capitated or FFS)		
Primary/medical	FFS; capitated if enrolled in PACE	Capitated
Behavioral health	FFS	Capitated
LTSS (excluding HCBS waiver services)	FFS; capitated if enrolled in PACE	Capitated
HCBS waiver services	FFS	Capitated
Other (specify)	N/A	—
Care coordination/case management		
Care coordination for medical, behavioral health, or LTSS and by whom	N/A	MMPs will provide case management and service coordination activities through Interdisciplinary Care Teams (ICTs).
Care coordination/case management for HCBS waivers and by whom	N/A	MMPs will provide case management and service coordination activities through ICTs for waiver enrollees included in the demonstration.
Targeted Case Management (TCM)	FFS	FFS
Rehabilitation Option services	N/A	N/A
Clinical, integrated, or intensive care management	N/A	N/A

(continued)

Table 2 (continued)
Key features of the Virginia model predemonstration and during the demonstration

Key features	Predemonstration	Demonstration[1]
Enrollment/assignment		
Enrollment method	N/A	Passive enrollment with an opt-out option.
Attribution/assignment method	N/A	Medicare-Medicaid enrollees will be assigned to an MMP if they do not select a plan or opt out within a prescribed time frame.
Implementation		
Geographic area	N/A	Regional
Phase-in plan	N/A	The regions will be phased in during the first year of the demonstration. Phase I began on April 1, 2014, and included central Virginia and Tidewater. Phase II will begin no sooner than May 2014 and include northern Virginia, Roanoke, and western/Charlottesville.
Implementation date	N/A	The first effective enrollment date was April 1, 2014.

— = no data in cell; FFS = fee for service; HCBS = home and community-based services; LTSS = long-term services and supports; MFFS = managed fee for service; MMP = Medicare-Medicaid Plan; N/A = no information available at this time; PACE = Program of All-Inclusive Care for the Elderly.

[1] Information related to the demonstration in this table is from the CMS and the Commonwealth of Virginia Memorandum of Understanding, 2013; CMS: Medicare-Medicaid Enrollee State Profile, Virginia, n.d. http://www.integratedcareresourcecenter.net/pdfs/stateprofileva.pdf; DMAS, 2012a (Virginia proposal).

The characteristics of the population eligible to participate in the demonstration are presented in ***Table 3***. Virginia estimates that 78,596 Medicare-Medicaid enrollees will be eligible for the demonstration. The majority of Medicare-Medicaid enrollees (70 percent) live in the community, without receiving waiver services. Seventeen percent receive LTSS in institutional settings, and 13 percent receive LTSS in home and community-based services (HCBS) settings with an EDCD waiver.

Table 3
Characteristics of eligible population, 2011

Characteristics	No. of eligible beneficiaries	Percentage of eligible beneficiaries
Population residing in facilities[1]	13,706	17%
Subpopulations (in community)[2]		
Nonwaiver community	54,672	70%
EDCD waiver	10,217	13%
Total individuals potentially eligible for demonstration (Medicare-Medicaid enrollees aged 21 and older)	78,596	100%

EDCD = Elderly or Disabled with Consumer Direction.

[1] Includes individuals receiving long-term services and supports (LTSS) in facility settings.

[2] Includes individuals not receiving LTSS and individuals receiving LTSS in Home and Community-Based Services settings with EDCD waiver.

SOURCE: Commonwealth of Virginia, Department of Medical Assistance Services: Virginia Medicare-Medicaid Population by Region, n.d. http://dmasva.dmas.virginia.gov/content_atchs/altc/altc-icp7.pdf.

NOTE: These numbers are limited to the areas served by the demonstration.

As shown in ***Table 4***, the total Medicaid spending on all Medicare-Medicaid enrollees meeting the Virginia demonstration eligibility criteria was approximately $1.1 billion in 2012. Information for total Medicare spending on all Medicare-Medicaid eligible enrollees was not available.

Table 4
Total expenditures for Medicare-Medicaid enrollees, 2012

Population	Medicaid expenditures	Medicare expenditures	Total expenditures
All Medicare-Medicaid enrollees	$1,094,177,619	Not available	Not available

SOURCE: Commonwealth of Virginia, Department of Medical Assistance Services: Dual Demonstration Data Book and Capitation Rates: Medicaid Component Calendar Year 2014. November 2013. http://www.dmas.virginia.gov/Content_atchs/altc/cntct-mmfa_cr2.pdf. As obtained on January 15, 2014.

2.3 Relevant Historical and Current Context

History/Experience with Managed Care. Although Virginia does not have much history with capitated models for its Medicare-Medicaid enrollees (with the exception of PACE), the Commonwealth has experience with enrolling other populations into managed care. In December 1991, CMS approved Virginia's 1915(b) waiver to enroll Medicaid beneficiaries into a Primary Care Case Management program, which began in 1992 (DMAS, 2012b). The program was phased in geographically and eventually expanded Commonwealth-wide. In 1994, Medicare-Medicaid enrollees began to have the option of voluntarily enrolling in managed care plans, which later became mandatory enrollment.

Other Initiatives. Virginia has long recognized the need for an integrated system for its Medicare-Medicaid enrollees. In 2006, legislation was enacted "which directed DMAS, in consultation with the appropriate stakeholders, to develop a long range blueprint for the development and implementation of an integrated system. DMAS was directed to move forward with two different models for the integration of acute care services and LTSS: a community model and a regional model" (DMAS, 2012a, p. 7). The community model was the implementation of the Commonwealth's PACE program. As of December 2013, there were 12 PACE sites (DMAS, 2013b).

In 2007, DMAS implemented the Acute and Long-Term Care Program as a regional model for the Medicaid aged, blind, and disabled populations (Medicare-Medicaid enrollees were not eligible to enroll in managed care). "Under this program, individuals enrolled in an MCO [managed care organization] remain in the MCO for their primary and acute medical services after they are approved for HCBS LTSS" (DMAS, 2012a, p. 7). HCBS waiver services continue to be provided under the FFS program. However, Medicare-Medicaid enrollees and beneficiaries in nursing facilities were not eligible to enroll in this program. According to Virginia's proposal, DMAS worked on developing a full-risk capitated model integrating Medicaid-covered primary, acute, and LTSS but faced barriers to implementation (e.g., savings accruing to Medicare and not Medicaid; lack of budget neutrality; challenges between requirements for 1915(b) and 1915(c) waivers; exclusion of nursing facility residents).

3. Demonstration Implementation Evaluation

3.1 Purpose

The evaluation of the implementation process is designed to answer the following overarching questions about the Virginia demonstration:

- What are the primary design features of the Virginia demonstration, and how do they differ from the Commonwealth's previous system available to the demonstration-eligible population?
- To what extent did Virginia implement the demonstration as designed? What factors contributed to successful implementation? What were the barriers to implementation?
- What Commonwealth policies, procedures, or practices implemented by Virginia can inform adaptation or replication by other States?
- Was the demonstration more easily implemented for certain subgroups?
- How have beneficiaries participated in the ongoing implementation and monitoring of the demonstration?
- What strategies used or challenges encountered by Virginia can inform adaptation or replication by other States?

3.2 Approach

The evaluation team will examine whether the demonstration was implemented as designed and will look at modifications to the design features that were made during implementation; any changes in the time frame or phase-in of the demonstration; and other factors that facilitated or impeded implementation. This section will discuss the following:

- Monitoring implementation of the demonstration by key demonstration design features
- Implementation tracking elements
- Progress indicators
- Data sources
- Interview questions and implementation reports

3.3 Monitoring Implementation of the Demonstration by Key Demonstration Design Features

The major design features of the Virginia demonstration are described using a common framework that RTI will apply to all of the demonstrations under the Financial Alignment Initiative as follows:

- Integrated delivery system
- Integrated delivery system supports
- Care coordination/case management
- Benefits and services
- Enrollment and access to care
- Beneficiary engagement and protections
- Financing and payment
- Payment elements

Our analysis of the implementation of the Virginia demonstration will be organized by these key demonstration design features. This framework will be used to define our areas of inquiry, structure the demonstration variables we track, organize information from our data collection sources, and outline our annual report. ***Table 5*** illustrates the key components of each design feature that we will monitor as part of the implementation evaluation. Our goal is to frame analysis at the level of policy or practice with examples of how the intended design features and their key components translate at the point of service delivery.

Table 5
Demonstration design features and key components

Design feature	Key components
Core components of integrated delivery systems (how the delivery system is organized/integrated; interrelationships among the core delivery system components)	• Medicare-Medicaid Plans (MMPs) • Primary care • LTSS • Behavioral health services • Developmental disability services • Integration functions that bridge delivery systems and roles of community-based organizations
Care coordination/case management (by subpopulation and/or for special services) • Medical/primary • LTSS • Behavioral health services • Integration of care coordination	• Assessment process • Service planning process • Care management targeting process • Support of care transitions across settings • Communication and hand-offs between care coordinators/case managers and providers
Benefits and services	• Scope of services/benefits • New or enhanced services • Excluded services • Service authorization process
Enrollment and access to care	• Integrated enrollment and access • Provider accessibility standards • Marketing/education protocols • Opt-out, disenrollment and auto-assignment policy to MMPs • Assignment/referrals to providers • Phased enrollment of eligible populations • Workforce development for worker supply and new functions
Beneficiary engagement and protections	• Policies to integrate Medicare and Medicaid grievances and appeals • Quality management systems • Ongoing methods for engaging beneficiary organizations in policy decisions and implementation • Approaches to capture beneficiary experience, such as surveys and focus groups
Integrated delivery systems supports	• Care team composition • Health IT applied throughout the demonstration (at Commonwealth level, by MMP, at provider level, or other) • Data (Medicare claims or encounter data) and other feedback to MMPs, other providers (by the Commonwealth or other entities) • Primary care practice support (e.g., coaching, learning collaboratives, training)

(continued)

Table 5 (continued)
Demonstration design features and key components

Design feature	Key components
Demonstration financing model and methods of payment to plans and providers	• Financing model: capitated • Entities to which the State is directly making payments • Innovative payment methods to MMPs
Elements of payments to MMPs and providers	• Incentives • Risk adjustment

IT = information technology; LTSS = long-term services and supports.

3.4 Implementation Tracking Elements

Through document review and interviews with Commonwealth agency staff, we will identify and describe the delivery system for Medicare-Medicaid enrollees in the eligible population. This will enable us to identify key elements that Virginia intends to modify through the demonstration and measure the effects of those changes. Using a combination of case study methods, including document review, and telephone interviews, we will conduct a descriptive analysis of the key Virginia demonstration features.

The evaluation will analyze how Virginia is carrying out its implementation plan and track any changes it makes to its initial design as implementation proceeds. We will identify both planned changes that are part of the demonstration design (e.g., phasing in new populations) and operational and policy modifications Virginia makes based on changing circumstances. Finally, we anticipate that, in some instances, changes in the policy environment in the Commonwealth will trigger alterations to the original demonstration design.

During site visit interviews and our ongoing communication with the Commonwealth, we will collect detailed information on how Virginia has structured care coordination for beneficiaries enrolled in the demonstration. We will analyze the scope of care coordination responsibilities assigned to MMPs, the extent to which they conduct these functions directly or through contract, and internal structures established to promote service integration. The evaluation will also identify ways that the scope of care coordination activities conducted under the demonstration by MMPs compares to Virginia's approach in its capitated model programs serving other populations.

We will also collect data from the Commonwealth to track implementation through the State Data Reporting System (SDRS). The Commonwealth will submit quarterly demonstration statistics and qualitative updates through the SDRS (described in detail in the *Aggregate Evaluation Plan* [Walsh et al., 2013]). RTI will generate reports based on these data and conduct telephone calls with the Commonwealth demonstration director as needed to understand Virginia's entries. We will make additional calls to Commonwealth agency staff and key informants as needed to keep abreast of demonstration developments. We will use site visit

interviews to learn more about what factors are facilitating or impeding progress or leading to revisions in the Virginia demonstration implementation.

Table 6 shows the types of demonstration implementation elements we will track using State submissions to the SDRS, quarterly calls with State demonstration staff, other interviews, and site visits.

Table 6
Implementation tracking elements by design feature

Design feature	Tracking elements
Integrated delivery system	• Contracts with MMPs • Documentation of coordination activities between MMPs and community-based organizations • New waiver authorities submitted for the demonstration and approved by CMS • Emergence of new medical homes and health homes • Strategies for integrating primary care, behavioral health, and LTSS (as documented in Commonwealth policies, contracts, or guidelines) • Recognition and payment for care/services by nontraditional workers • Innovative care delivery approaches adopted by the demonstration
Integrated delivery system supports	• Ongoing learning collaboratives of primary care providers • Support with dissemination and implementation of evidence-based practice guidelines (e.g., webinars for providers; topics addressed in learning collaboratives) • Decision-support tools provided or supported by Commonwealth (e.g., practice-level reporting on QIs) • Commonwealth efforts to build MMP and provider core competencies for serving beneficiaries with various types of disabilities • Provision of regular feedback to MMPs and providers on the results of their performance measures
Care coordination	• Adoption of person-centered care coordination practices • Commonwealth systems for collecting data on care coordination use • As available, care coordination activities directed to individual enrollees • Requirements for assessment and service planning • Requirements for coordination and integration of clinical, LTSS, and behavioral health services • Approaches to stratify care coordination intensity based on individual needs • Requirements for care transition support, medication reconciliation, notification of hospitalizations • Commonwealth actions to facilitate adoption of EMR and EHR • Use of informatics to identify high-risk beneficiaries

(continued)

Table 6 (continued)
Tracking elements by design feature

Design feature	Tracking elements
Benefits and services	• Phase-in of new or enhanced benefits, and methods to communicate them to enrollees and potential enrollees • Adoption of evidence-based practices and services (e.g., use of chronic disease self-management programs, fall prevention programs, other)
Enrollment and access	• Commonwealth efforts to provide integrated consumer information on enrollment, benefits, and choice of MMPs/providers • Options counseling and information provided by Aging and Disability Resource Centers and State Health Insurance Assistance Programs • Initiatives to increase enrollment in the demonstration • Strategies for expanding beneficiary access to demonstration benefits • Emergence of new worker categories/functions (e.g., health coaches, community care workers)
Beneficiary engagement and protections	• Strategies implemented to engage beneficiaries in oversight of the demonstration • Quality management strategy, roles, and responsibilities • Implementation of quality metrics • Adoption of new policies for beneficiary grievances and appeals based on demonstration experience • Role of the Ombuds program
Financing and payment	• Revisions to the demonstration's initial payment methodology, including risk-adjustment methodology • Risk-mitigation strategies • Performance incentive approaches • Value-based purchasing strategies with providers

EHR = electronic health records; EMR = electronic medical records; LTSS = long-term services and supports; MMP = Medicare-Medicaid Plan; QIs = quality improvement initiatives.

3.5 Progress Indicators

In addition to tracking implementation of demonstration design features, we will also track progress indicators, including growth in enrollment and disenrollment patterns, based on Virginia's demonstration data. These progress indicators will be reported quarterly by Virginia through the SDRS, which will be the RTI evaluation team's tool for collecting and storing information and for generating standardized tables and graphs for quarterly monitoring reports for CMS and the Commonwealth. The primary goals of the system are to serve as a repository for up-to-date information about the Virginia demonstration design and progress, to capture data elements on a quarterly basis, and to monitor and report on demonstration progress by individual

States and the demonstrations as a whole. More detail on the SDRS can be found in the *Aggregate Evaluation Plan* (Walsh et al., 2013).

Table 7 presents a summary of progress indicators developed to date. The list of progress indicators may be refined in consultation with CMS as needed. RTI will provide trainings and an instruction manual to assist States in using the SDRS.

Table 7
Examples of progress indicators

Indicator
Eligibility
No. of beneficiaries eligible to participate in the demonstration
Enrollment
Total no. of individuals currently enrolled in the demonstration
No. of beneficiaries newly enrolled in the demonstration as of the end of the given month
No. of beneficiaries automatically (passively) enrolled in the demonstration
Disenrollment
No. of beneficiaries who opted out of the demonstration prior to enrollment
No. of beneficiaries who voluntarily disenrolled from the demonstration
No. of beneficiaries whose enrollment in the demonstration ended involuntarily (e.g., died, moved out of area, lost Medicaid eligibility, were incarcerated)
Demonstration service area
Whether demonstration is currently Commonwealth-wide vs. in specific counties or geographic areas (and provide list if in specific geographic areas)
Specific to capitated model demonstrations
No. of three-way contracts with Medicare-Medicaid Plans

3.6 Data Sources

The evaluation team will use a variety of data sources to assess whether the Virginia demonstration was implemented as planned; identify modifications made to the design features during implementation; document changes in the time frame or phase-in of key elements; and determine factors that facilitated implementation or presented challenges. These data sources include the following:

- **Commonwealth policies and Commonwealth requirements for provider and plan agreements:** The evaluation team will review a wide range of Commonwealth-developed documents that specify Virginia's approach to implementing its demonstration in order to develop a baseline profile of its current delivery system. Review of Virginia's agreements with CMS articulated through the demonstration Memorandum of Understanding (MOU), waivers, contracts, and State Plan Amendments will further enhance our understanding of Virginia's approach.

- **Demonstration data (collected via the State Data Reporting System):** On a quarterly basis, we will collect data from Virginia to inform ongoing analysis and feedback to the Commonwealth and CMS throughout the demonstration. Specifically, we will collect data to track policy and operational changes and progress indicators that are mostly numeric counts of key demonstration elements presented in ***Table 7***. These demonstration data also may include specific information provided by CMS or other entities engaged in this demonstration, and incorporated into the SDRS.

- **Commonwealth agency staff, stakeholders, selected contractors, care coordination organizations, MMPs:** There will be at least two sets of site visits; the first one will occur within 6 months of demonstration implementation. Using two-person teams, supplemented with telephone interviews, we will obtain perspectives from key informants on progress to date, internal and external environmental changes, reasons Virginia took a particular course, and current successes and challenges. In addition to the site visits, and interim calls for clarification about Commonwealth data submitted to the reporting system, in consultation with CMS we will develop a schedule of quarterly telephone interviews with various individuals involved in the demonstration.

  In addition to consumer advocates, as discussed in ***Section 4.1 Beneficiary Experience***, candidates for key informant interviews on demonstration implementation include, but are not limited to, the following:

  – Representatives from demonstration advisory council
  – State officials, such as the following:
    - Secretary of Health and Human Resources
    - Director of the Department of Medical Assistance Services (DMAS)
    - Chief medical officer
    - Chief quality officer
    - Demonstration project director
    - Long-term services and supports (LTSS) program director
    - DMAS director of finance
    - Commonwealth representatives from the demonstration's advisory committee
    - Behavioral Health Services director
  – Commonwealth developmental disabilities director
  – Area Agency on Aging
  – Representatives from entities providing options counseling for the demonstration
  – Representatives from the demonstration Ombuds program
  – MMP leadership and staff

- Providers contracted with MMPs, and/or provider trade association representatives
- Representatives from CMS-State Contract Management Team

The site visit interview protocols used in the evaluation will contain a core set of questions that allow us to conduct an aggregate evaluation, questions specific to the financial alignment model (capitated), as well as a few questions that are specific to the Virginia demonstration. Questions tailored to the key informants in Virginia will be developed once the demonstration is implemented, and the topics for discussion will be provided to the Commonwealth in advance of each site visit. The site visit interview protocols with core questions are provided in the *Aggregate Evaluation Plan* (Walsh et al., 2013), and will also be tailored for Virginia after the demonstration begins. In advance of the site visits, the RTI team will contact the Commonwealth to help identify the appropriate individuals to interview. We will work with the Commonwealth to schedule the site visit and the on-site interviews. We will develop an interview schedule that best suits the needs of the Commonwealth and key informants we plan to interview.

3.7 Analytic Methods

Evaluation of the Virginia demonstration implementation will be presented in an initial report to CMS and the Commonwealth covering the first 6 months of implementation, in annual Commonwealth-specific evaluation reports, and integrated into annual aggregate reports comparing implementation issues and progress across similar demonstrations and across all demonstrations, as appropriate. We will collect and report quantitative data quarterly as noted in ***Table 7***, ***Examples of Progress Indicators***, through the SDRS. We will integrate these quantitative data with qualitative data we will collect through site visits and telephone interviews with Commonwealth agency staff and other key informants, and include these data in the annual reports and the final evaluation report. These data will provide context for interpreting the impact and outcomes related to beneficiary experience, quality, utilization, and costs, and enable us to analyze (1) the changes Virginia has made to the preexisting delivery systems serving Medicare-Medicaid enrollees, (2) challenges Virginia has met, and (3) approaches that can inform adaptation or replication by other States.

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4. Impact and Outcomes

4.1 Beneficiary Experience

4.1.1 Overview and Purpose

The evaluation will assess the impact of the Virginia demonstration on beneficiary experience. Using mixed methods (i.e., qualitative and quantitative approaches), we will monitor and evaluate the experience of beneficiaries, their families, and caregivers. Our methods will include the following:

- the beneficiary voice through focus groups, and stakeholder interviews conducted by RTI;
- results of any surveys that may be conducted by Virginia, CMS, or other entities (e.g., Consumer Assessment of Healthcare Providers and Systems [CAHPS]);
- Virginia demonstration data and data from other sources submitted via the State Data Reporting System (SDRS; e.g., data on enrollments, disenrollments, stakeholder engagement activities);
- claims and encounter data obtained from CMS to analyze utilization as well as access to services and outcomes for key quality measures; and
- interviews with Virginia demonstration staff during site visits or telephone interviews with RTI.

Table 8 (described in more detail below) shows the range of topics and data sources we will use to monitor and evaluate beneficiary experience. We are interested in the perspective of the beneficiaries themselves, determining specifically the impact of the demonstration on their access to needed services, the integration and coordination of services across settings and delivery systems, provider choice, enrollee rights and protections, and the provision of person-centered care. In the process, we will identify what has changed for beneficiaries since their enrollment in the demonstration and its perceived impact on their health and well-being.

This section of the evaluation plan focuses specifically on the methods we will use to monitor and evaluate beneficiary experience, such as focus groups with beneficiaries and interviews with consumer and advocacy groups. We also discuss information about data we will obtain from Virginia, through interviews and the SDRS, and results of beneficiary surveys that may be administered and analyzed independent of this evaluation by the Commonwealth, CMS, or other entities.

Through beneficiary focus groups and key stakeholder interviews (i.e., consumer and advocacy group members), we also will explore whether we can identify specific demonstration features in Virginia that may influence replication in other States. We will also collect information from Commonwealth demonstration staff and CMS or other entities that reflects the

beneficiaries' experiences (e.g., grievances and appeals, disenrollment patterns) using RTI's SDRS. ***Section 3, Demonstration Implementation Evaluation***, describes topics we will monitor and document through interviews with Virginia demonstration staff and document reviews, including consumer protections and other demonstration design features intended to enhance the beneficiary experience. Refer to ***Section 4.2*** for a discussion of the use of claims and encounter data to establish baseline information about the beneficiaries eligible for the demonstration, and how we will use these data to inform our understanding of the impact of the Virginia demonstration on access to care and health outcomes.

Specifically, we will address the following research questions in this section:

- What impact does the Virginia demonstration have on the beneficiary experience overall and for beneficiary subgroups?
- What factors influence the beneficiary enrollment decision?
- Do beneficiaries perceive improvements in their ability to find needed health services?
- Do beneficiaries perceive improvements in their choice of care options, including self-direction?
- Do beneficiaries perceive improvements in how care is delivered?
- Do beneficiaries perceive improvements in their personal health outcomes?
- Do beneficiaries perceive improvements in their quality of life?

4.1.2 Approach

This mixed-methods evaluation will combine qualitative information from focus groups and key stakeholder interviews with quantitative data related to beneficiary experience derived from the RTI SDRS and findings from surveys that may be conducted independently by Virginia, CMS, or other entities (e.g., CAHPS). Qualitative data will be obtained directly from a beneficiary or beneficiary representative through focus groups and interviews. To avoid potential bias or conflict of interest, we will apply a narrow definition of "representative" to include only family members, advocates, or members of organizations or committees whose purpose is to represent the interest of beneficiaries and who are not service providers or do not serve in an oversight capacity for the initiative. Although no baseline qualitative data are available, beneficiaries will be asked about their experience before the demonstration and how it may have changed during the course of the demonstration.

Our framework for evaluating beneficiary experience is influenced by work conducted by the Center for Health Care Strategies (CHCS), which identified the essential elements of integration affecting beneficiary experience, including the care process and quality of life (Lind and Gore, 2010). Its work is intended to guide the design of integrated care systems for Medicare-Medicaid enrollees and to do so in ways that strengthen the beneficiary experience in the areas defined in ***Table 8***.

Table 8
Methods for assessing beneficiary experience by beneficiary impact

Direct measure	Key stakeholder interviews	Beneficiary focus groups	Recommended survey question[1]	Virginia demonstration data[2]	Interviews with Virginia agency staff on demonstration implementation
Integrated delivery system					
Choice					
Beneficiaries have choice of medical, behavioral, and LTSS *services*.	X	X	X	X	X
Beneficiaries have choice of medical, behavioral, and LTSS *providers* within the network.	X	X	X	X	X
Beneficiaries have choice to self-direct their care.	X	X	—	X	X
Beneficiaries are empowered and supported to make informed decisions.	X	X	—	—	—
Provider network					
Beneficiaries report that providers are available to meet routine and specialized needs.	X	X	X	X	—
Beneficiaries report that LTSS and behavioral health are integrated into primary and specialty care delivery.	X	X	—	X	—
Beneficiary engagement					
Beneficiaries consistently and meaningfully have the option to participate in decisions relevant to their care.	X	X	X	X	—
There are ongoing opportunities for beneficiaries to be engaged in decisions about the design and implementation of the demonstration.	X	X	—	—	X

(continued)

Table 8 (continued)
Methods for assessing beneficiary experience by beneficiary impact

Direct measure	Key stakeholder interviews	Beneficiary focus groups	Recommended survey question[1]	Virginia demonstration data[2]	Interviews with Virginia agency staff on demonstration implementation
Streamlined processes					
Beneficiaries can easily navigate the delivery system.	X	X	—	X	—
Reduced duplication of services					
Beneficiary burden is reduced through elimination of duplicative tests and procedures.	—	X	—	X	—
Enrollment and access to care					
Enrollment					
Beneficiaries have choices and assistance in understanding their enrollment options.	X	X	—	X	X
Beneficiaries report ease of disenrollment.	X	X	—	X	—
Rate of beneficiaries who opt out of enrolling into demonstration.	—	—	—	X	—
Rate of disenrollment from the demonstration by reason.	—	—	—	X	—
Access to Care					
Beneficiaries can access the full range of scheduled and urgent medical care, behavioral health services, and LTSS.	X	X	—	X	—
Beneficiaries report improved quality of life due to access to the full range of services.	X	X	X	—	—
Beneficiaries report that waiting times for routine and urgent primary and specialty care are reasonable.	X	X	—	X	—

(continued)

Table 8 (continued)
Methods for assessing beneficiary experience by beneficiary impact

Direct measure	Key stakeholder interviews	Beneficiary focus groups	Recommended survey question[1]	Virginia demonstration data[2]	Interviews with Virginia agency staff on demonstration implementation
Health outcomes					
Beneficiary health rating.	—	—	X	—	—
Quality of life					
Days free from pain.	—	—	X	—	—
Beneficiaries get the social and emotional supports they need.	—	X	X	—	—
Beneficiaries report that they are satisfied with their life.	—	X	X	—	—
Cultural appropriateness					
Beneficiaries have access to multilingual and culturally sensitive providers.	X	X	—	X	X
Beneficiaries report that written and oral communications are easy to understand.	X	X	—	X	—
Delivery systems supports					
Data sharing and communication					
Information is available and used by beneficiaries to inform decisions.	X	X	—	—	X
Beneficiaries report that providers are knowledgeable about them and their care history.	X	X	—	X	—
Beneficiaries have adequate discharge and referral instructions.	X	X	—	X	X
Beneficiaries report that providers follow up after visits or discharge.	X	X	—	X	—
Beneficiaries understand their options to specify that personal health data not be shared.	X	X	—	X	—

(continued)

Table 8 (continued)
Methods for assessing beneficiary experience by beneficiary impact

Direct measure	Key stakeholder interviews	Beneficiary focus groups	Recommended survey question[1]	Virginia demonstration data[2]	Interviews with Virginia agency staff on demonstration implementation
Care coordination					
Assessment of need					
Assessment process integrates/addresses health, behavioral health, and LTSS.	X	X	—	X	X
Medical providers actively participate in individual care planning.	—	X	X	—	—
Beneficiaries report active participation in the assessment process.	X	X	—	X	—
Person-centered care					
Care is planned and delivered in a manner reflecting a beneficiary's unique strengths, challenges, goals, and preferences.	X	X	—	X	—
Beneficiaries report that care managers have the skills and qualifications to meet their needs	—	X	X	—	—
Beneficiaries report that providers listen attentively and are responsive to their concerns.	X	X	X	X	—
Coordination of care					
The system facilitates timely and appropriate referrals and transitions within and across services and settings.	X	X	X	X	—
Beneficiaries have supports and resources to assist them in accessing care and self-management.	X	X	—	X	—
Beneficiaries report ease of transitions across providers and settings.	X	X	X	X	—

(continued)

Table 8 (continued)
Methods for assessing beneficiary experience by beneficiary impact

Direct measure	Key stakeholder interviews	Beneficiary focus groups	Recommended survey question[1]	Virginia demonstration data[2]	Interviews with Virginia agency staff on demonstration implementation
Family and caregiver involvement					
Beneficiaries have the option to include family and/or caregivers in care planning.	X	X	—	X	—
The family or caregiver's skills, abilities, and comfort with involvement are taken into account in care planning and delivery.	X	X	—	X	—
Benefits and services					
Awareness of covered benefits					
Beneficiaries are aware of covered benefits.	X	X	—	X	—
Availability of enhanced benefits					
The demonstration covers important services to improve care outcomes that are not otherwise available through Medicaid or Medicare program.	—	—	—	X	X
Flexible benefits are available to meet the needs of beneficiaries.	—	—	—	X	X
Awareness of enhanced benefits					
Beneficiaries are aware of enhanced benefits and use them.	X	X	—	X	—
Beneficiary safeguards					
Beneficiary protections					
Beneficiaries understand their rights.	X	X	—	X	—
Beneficiaries are treated fairly, are informed of their choices, and have a strong and respected voice in decisions about their care and support services.	X	X	—	X	—

(continued)

Table 8 (continued)
Methods for assessing beneficiary experience by beneficiary impact

Direct measure	Key stakeholder interviews	Beneficiary focus groups	Recommended survey question[1]	Virginia demonstration data[2]	Interviews with Virginia agency staff on demonstration implementation
Complaints, grievances, and appeals					
Beneficiaries have easy access to fair, timely, and responsive processes when problems occur.	X	X	—	X	—
Number and type of beneficiary complaints, grievance, and appeals.	—	—	—	X	—
Advocacy/member services					
Beneficiaries get assistance in exercising their rights and protections.	X	X	—	X	—
Finance and payment					
Provider incentives					
Beneficiary experience is taken into account when awarding provider and plan incentives.	X	—	—	—	X
Rate of auto-assignment (if available).	—	—	—	X	—
Rate of change of PCP requests (if available)	—	—	—	X	—

— = no data for cell; LTSS = long-term services and supports; PCP = primary care provider.

[1] The evaluation team will recommend questions to add to surveys conducted by Virginia or CMS.

[2] Drawn from State Data Reporting System, RTI analysis of administrative data, Consumer Assessment of Healthcare Providers and Systems (CAHPS) or Health Outcomes Survey (HOS) results, or from other beneficiary surveys that may be conducted by the Commonwealth or other entities.

Table 8 aligns key elements identified in the CHCS framework with the demonstration design features described in ***Section 3, Demonstration Implementation Evaluation***. We modified some elements of the CHCS framework to reflect that not all Medicare-Medicaid enrollees require intensive services as suggested by the original CHCS language used when describing comprehensive assessments and multidisciplinary care teams. For each key element, we identify the impact on beneficiary experience and detail the data sources that RTI will use to obtain the information.

As shown in ***Table 8***, we will solicit direct feedback from beneficiaries served through the demonstration to determine how closely their experience compares to the desired outcomes (improvements in personal health outcomes, quality of life, how beneficiaries seek care, choice of care options, and how care is delivered). We will include topics specific to the demonstration and supplement our understanding of direct beneficiary experience with key stakeholder interviews (e.g., consumer and advocacy groups), a review of enrollment and disenrollment, grievances and appeals, claims and encounter data analysis, and interviews with Virginia staff on demonstration implementation.

Table 9 highlights some of the quantitative measures of beneficiary experience we will monitor and evaluate using demonstration statistics and claims or encounter data analysis. See ***Section 4.2*** for a discussion of the quality, utilization, and access to care measures we plan to examine as part of the overall evaluation of impact of the Virginia demonstration on beneficiary outcomes, including for subpopulations. The draft focus group protocol and the draft stakeholder interview protocol are both discussed in this section and are available in the *Aggregate Evaluation Plan* (Walsh et al., 2013).

We will analyze our findings by subpopulation. We will identify the subpopulations of particular interest for Virginia and, where possible, will recruit sufficient numbers of individuals in those subpopulations to participate in the focus groups. We will analyze our focus group findings about beneficiary experience to determine whether differences exist by subpopulation.

Table 9
Demonstration statistics on quality, utilization, and access to care measures of beneficiary experience

Rate of auto-assignment to MMPs (if available)
Rate of disenrollment from the demonstration by reason[1]
Rate of beneficiaries who opt out of enrolling into demonstration
Number and type of beneficiary complaints, grievance, and appeals
Use of preventive services[1]
Nursing facility admissions and readmissions[1]
Emergency room use[1]
Hospital admission and readmission rates[1]
Follow-up care after hospital discharge[1]

MMP = Medicare-Medicaid Plan.

[1] See ***Section 4.2*** for discussion of specific measures.

4.1.3 Data Sources

We will rely on five major data sources to assess beneficiary experience as shown in ***Table 8***. In this section, we describe our plan for using focus group and stakeholder interviews; results of beneficiary surveys planned by the Commonwealth, CMS, or other entities (e.g., CAHPS); Commonwealth demonstration data entered into the SDRS; and interviews with Commonwealth demonstration staff.

4.1.3.1 Focus Groups

We will conduct four focus groups in Virginia to gain insight into how the initiative affects beneficiaries. To ensure that we capture the direct experience and observations of those served by the Virginia demonstration, focus groups will be limited to demonstration enrollees, their family members, and informal caregivers. ***Table 10*** shows our current plan for the composition and number of focus groups.

Preliminary topics of the focus groups include beneficiaries' understanding of the demonstration, rights, options, and choices (e.g., plan, primary care provider [PCP]); reasons beneficiaries choose to enroll and disenroll; their benefits; concerns or problems encountered; experience with care coordination; and access to primary and specialty care, and long-term services and supports (LTSS). Timing for conducting the focus groups will be influenced by our assessment of whether there is more to be learned about the experience of beneficiaries shortly after initial enrollment into the Virginia demonstration versus their perceptions of its effectiveness later in the Virginia demonstration. If the latter, we will conduct focus groups at least 1 year after implementation so that beneficiaries have had a substantial amount of experience with the demonstration. We will make the decision regarding timing of the focus groups in conjunction with CMS.

Table 10
Purpose and scope of Commonwealth focus groups

Primary purpose	To understand beneficiary experience with the demonstration and, where possible, to identify factors and design features contributing to their experience.
Composition	Each focus group includes 8–10 individuals who may be beneficiaries or family members or caregivers representing beneficiaries. These may include but are not limited to beneficiaries aged 21 and older with the following: ● intellectual and developmental disabilities; ● cognitive or memory problems (e.g., dementia and traumatic brain injury); ● physical or sensory disabilities; ● severe and persistent mental illnesses, and; ● complex or multiple chronic conditions.
Number	Four focus groups

We will recruit focus group participants from eligibility and enrollment files independent of input from the Commonwealth. In doing so, we will identify beneficiaries reflecting a range of eligibility, clinical, and demographic characteristics enrolled in the Virginia demonstration. Our subcontractor, the Henne Group, will use a structured approach for screening potential participants and obtaining their agreement to participate. If there appear to be high rates of opting out or disenrollment from the demonstration in Virginia, we will consider convening focus groups with beneficiaries who have chosen to opt out or disenroll to understand their decisions. We will work closely with Virginia demonstration staff to make the process of recruiting focus group members as smooth as possible for beneficiaries, such as selecting an accessible site and ensuring transportation and any needed special accommodations and supports to allow for full participation. Focus group recruitment and all focus group arrangements will be conducted with an awareness of the subpopulations of concern in Virginia. We will investigate the prevalence of non-English-speaking beneficiaries in the eligible population, and determine whether to hold any of the focus groups in languages other than English. A preliminary focus group protocol is presented in the *Aggregate Evaluation Plan* (Walsh et al., 2013). The protocol may be modified based on final decisions about focus group composition, content, and our understanding of issues raised during implementation of the Virginia demonstration.

4.1.3.2 Key Stakeholder Interviews

Our evaluation team will conduct key stakeholder interviews (consumer and advocacy groups) in Virginia, either in person as part of a scheduled site visit or by telephone, with major beneficiary groups whose stakeholders are served by the Virginia demonstration. The purpose of these interviews will be to assess the level of beneficiary engagement and experience with the demonstration and its perceived impact on beneficiary outcomes. Although we will interview service providers as part of our implementation analyses, service provider perspectives will not be the source of information for assessing beneficiary experience.

Table 11 identifies potential groups in Virginia whose representatives we may wish to interview and the overall purpose of the interview. We will finalize the list of key stakeholders following discussions with demonstration staff in Virginia, a review of events and issues raised during the development and early implementation of the demonstration, and the composition of enrollment by subpopulations.

Table 11
Preliminary interviewees and scope of key stakeholder interviews

Primary purpose	**Baseline:** Assess understanding of and satisfaction with demonstration design; expectations for the demonstration; perceived concerns and opportunities. **Throughout demonstration:** Spot improvements and issues as they emerge, and assess factors facilitating and impeding positive beneficiary experience. **Final year:** Assess extent to which expectations were met; major successes and challenges; lessons learned from beneficiary's perspective.
Subpopulations	Interviews will be held with consumer and advocacy groups whose members are served by the Virginia demonstration. These may include the following: ● Advocacy and consumer organizations representing the demonstration's eligible populations ● Advocacy and consumer organizations participating in Virginia's Medicaid Advisory Committee and its subcommittees ● Beneficiaries serving on Consumer Advisory Committees ● Beneficiary advocates
Number and frequency	**Baseline:** Up to eight telephone interviews within the first year of implementation. **Throughout demonstration:** Up to eight telephone or in-person interviews in Virginia each year to be conducted with the same individuals each time, unless other stakeholders or topics of interest are identified. **Final year:** Up to eight telephone or in-person interviews.

A draft outline of the key stakeholder interview at baseline is presented in the *Aggregate Evaluation Plan* (Walsh et al., 2013). We will revise this draft as we obtain more information about the Virginia demonstration and the issues that arise during its planning/design phase and early implementation.

4.1.3.3 Beneficiary Surveys

The RTI evaluation team will not directly administer any beneficiary surveys as part of the evaluation, and we are not requiring that States administer beneficiary surveys for purposes of the evaluation. We will include relevant findings from beneficiary surveys already being conducted for this demonstration by Virginia, CMS, or other entities. We understand that Virginia may administer beneficiary surveys as part of its demonstration. Final decisions on the content and process for administering the beneficiary surveys have not been made.

As part of CMS requirements for MMPs, participating plans will be required to conduct the Health Outcomes Survey (HOS) and CAHPS. The Medicare HOS and CAHPS surveys will be sampled at the MMP level, allowing cross-plan and aggregate comparisons, where appropriate.

We will recommend standard questions for inclusion in surveys across all demonstrations under the Financial Alignment Initiative, such as quality of life measures. We will participate in discussions with the Commonwealth and CMS (and other CMS contractors, as appropriate) regarding content and sampling issues. Topics on which we will recommend common questions across demonstrations are shown in ***Table 8***.

4.1.3.4 Demonstration Data

We will use data about the demonstration that we collect from Virginia during site visits, from reports and other materials developed by the Commonwealth, through the SDRS, and data obtained from CMS or other entities to assess the beneficiary experience. Data of particular interest include the following:

- Complaint, appeal, and grievance data from CMS or other entities, as available.
- Disenrollment and opt-out rates.
- Information about waiting lists or lags in accessing services, which will provide useful indications of where the system lacks capacity as a topic for discussion during site visits or focus groups.
- Rate of change in PCP assignment (if available).

The above quantitative indirect measures will be collected for all Medicare-Medicaid enrollees served under the demonstration and will be analyzed by subpopulations.

MMPs will report a selection of national quality measures, CMS/Commonwealth measures, and Commonwealth-specific measures (MOU, 2013, pp. 88–98). These measures will be reviewed and refined by CMS and the Department of Medical Assistance Services (DMAS) in the second and third years of the demonstration. To the extent relevant, we will use findings from these Commonwealth-specific metrics to augment our assessment of beneficiary experience and outcomes in Virginia.

4.1.3.5 Interviews with Virginia Demonstration Staff

In addition to key stakeholder interviews conducted with consumer and advocacy groups, we will address issues of beneficiary engagement and feedback during our interviews with Virginia demonstration staff. These interviews, described in ***Section 3***, will provide another perspective on how Virginia communicates and works with beneficiaries during the design and implementation of its demonstration.

4.1.4 Analytic Methods

Our analysis will assess beneficiary experience and determine, where possible, how it is affected by financial model and demonstration design features. We also want to examine whether and how beneficiary experience varies by subpopulations. The Henne Group will audio-record all focus groups, subject to approval of the group members, and the audio-recordings will be transcribed. Key stakeholder interview and focus group transcripts will be imported and analyzed using QSR NVivo 9, qualitative data analysis software, to identify emergent themes and patterns regarding beneficiary experiences during the demonstration and issues related to the evaluation research questions. A structured approach to qualitative analysis in NVivo 9 will allow us to identify themes in Virginia and compare and contrast those themes by subpopulation within and across States. Because it is implementing a capitated financial alignment model demonstration, we are particularly interested in comparing Virginia's findings, as appropriate, with those of

capitated financial alignment model demonstrations in other States, and in determining whether particular design features in the Virginia demonstration are likely to affect beneficiary experience.

Most demonstration data will be collected and tracked through the SDRS. We will also request summary statistics and reports from Virginia on its beneficiary experience surveys and others that may be required. Information from site visits and site-reported data beyond those described specifically in this section also are expected to inform analysis of beneficiary experience research questions. The findings will be grouped into the beneficiary experience domains defined in ***Section 4.1.2***.

The evaluation will consider indications of predemonstration beneficiary experience that may be available from other sources. The evaluation will not, however, have baseline data or comparison group results in this area. Results of beneficiary surveys, focus groups, and other approaches employed during the demonstration period will be presented in the annual and final evaluation reports along with available context to inform interpretation.

4.2 Analyses of Quality, Utilization, Access to Care, and Cost

4.2.1 Purpose

This section of the report outlines the research design, data sources, analytic methods, and key outcome variables (quality, utilization, and cost measures) on which we will focus in evaluating the Virginia demonstration. These analyses will be conducted using secondary data, including Medicare and Medicaid claims and managed care encounter data. This section addresses the following research questions:

- What impact does the Virginia demonstration have on utilization patterns in acute, long-term, and behavioral health services, overall and for beneficiary subgroups?
- What impact does the Virginia demonstration have on health care quality overall and for beneficiary subgroups?
- Does the Virginia demonstration affect access to care for medical, behavioral health, long-term services and supports (LTSS) overall and for beneficiary subgroups? If so, how?
- What impact does the Virginia demonstration have on cost and is there evidence of cost savings? How long did it take to observe cost savings? How were these savings achieved?

In this section we discuss our approach to identifying the eligible population for Virginia and for identifying comparison group beneficiaries. This section also describes the data sources, key analyses to be performed over the course of the demonstration, and the quality measures that will inform the evaluation. RTI will use both descriptive and multivariate analyses to evaluate the Virginia demonstration. Results of descriptive analyses focusing on differences across years and important subgroups on key outcome variables will be included in the Virginia quarterly

reports to CMS and the Commonwealth, and in the annual reports. Multivariate analyses will be included in the final evaluation. Savings will be calculated at least twice during the demonstration: once during the demonstration and once after the demonstration period has ended.

4.2.2 Approach

An appropriate research design for the evaluation must consider whether selection is a risk for bias. Potential sources of selection bias exist in the Virginia demonstration whereby the beneficiaries choosing not to enroll in the demonstration may differ from demonstration participants. First, beneficiaries may choose to opt out or disenroll from the demonstration. Reasons for opting out or disenrolling will vary but may be related to demonstration benefits or previous experience in managed care. Second, beneficiaries already enrolled in a Program of All Inclusive Care for the Elderly (PACE) or Independence at Home demonstration will not be eligible for passive enrollment into the demonstration while enrolled in those initiatives, but they can choose to disenroll from their current plans or providers. Medicare Advantage beneficiaries residing in the demonstration counties *will be* passively enrolled into the demonstration unless they opt out. To limit selection bias in the evaluation of this demonstration, we will use an intent-to-treat design. This design will address potential selection issues by including the entire population of beneficiaries eligible for the Virginia demonstration, regardless of whether they enroll in the demonstration or actively engage with the MMPs.

Under the intent-to-treat framework, outcome analyses will include all beneficiaries eligible for the demonstration in the demonstration States, including those who opt out, participate but then disenroll, and those who enroll but do not engage with the MMP; and a group of similar individuals in the comparison group. This approach diminishes the potential for selection bias and highlights the effect of the demonstrations on all beneficiaries in the demonstration-eligible population. In addition, RTI will compare the characteristics of those who enroll in the MMP with those who are eligible but do not enroll and conduct analyses to further explore demonstration effects on demonstration enrollees, acknowledging that interpreting such results will be difficult given likely selection bias.

4.2.2.1 Identifying Demonstration Group Members

The demonstration group for Virginia will include full-benefit Medicare-Medicaid enrollees aged 21 and older in five selected regions of the Commonwealth (those not eligible are listed in ***Section 2.2***). To analyze quality, utilization, and costs in the predemonstration period, and throughout the demonstration period, Virginia will submit a demonstration evaluation (finder) file that includes data elements needed for RTI to correctly identify Medicare-Medicaid enrollees for linking to Medicare and Medicaid data, and information about the enrollees eligible for and/or enrolled in the demonstration (***Table 12***). The file, constructed after the end of each quarter, will list all of the Medicare-Medicaid beneficiaries eligible for the demonstration, with additional variables in the file indicating monthly enrollment in the demonstration. Eligible individuals who were not enrolled in the demonstration in a given month will still be part of the evaluation under the intent-to-treat research design. In addition to indicating who was eligible and enrolled, this file will contain personal identifying information for linking to Medicare and

Medicaid data. RTI will notify the Commonwealth about the file's design and the method and timing of transmission after the start of the demonstration.

Table 12
State demonstration evaluation (finder) file data fields

Data field	Length	Format	Valid value	Description
Medicare Beneficiary Claim Account Number (Health Insurance Claim Number [HICN])	11	CHAR	Alphanumeric	The HICN. Any Railroad Retirement Board (RRB) numbers should be converted to the HICN number prior to submission to the MDM.
MSIS number	20	CHAR	Alphanumeric	MSIS identification number.
Social security number (SSN)	9	CHAR	Numeric	Individual's SSN.
Sex	1	CHAR	Alphanumeric	Sex of beneficiary (1=male or 2=female).
Person first name	30	CHAR	Alphanumeric	The first name or given name of the beneficiary.
Person last name	40	CHAR	Alphanumeric	The last name or surname of the beneficiary.
Person birth date	8	CHAR	CCYYMMDD	The date of birth (DOB) of the beneficiary.
Person ZIP code	9	CHAR	Numeric	9-digit ZIP code.
Monthly eligibility identification flag	1	CHAR	Numeric	Coded 0 if identified as not eligible for the demonstration, 1 if identified as eligible from administrative data, 2 if identified as eligible from nonadministrative data. Quarterly demonstration evaluation (finder) files would have three such data fields.
Monthly enrollment indicator	1	CHAR	Numeric	Each monthly enrollment flag variable would be coded 1 if enrolled, and 0 if not. Quarterly demonstration evaluation (finder) files would have three such data fields.

HCBS = home and community-based services; MDM = Master Data Management; MSIS = Medicaid Statistical Information System.

4.2.2.2 Identifying a Comparison Group

The methodology described in this section reflects the plan for identifying comparison groups based on discussions between RTI and CMS and detailed in the *Aggregate Evaluation Plan* (Walsh et al., 2013). Identifying the comparison group members will entail two steps: (1) selecting the geographic area from which the comparison group will be drawn and (2) identifying the individuals who will be included in the comparison group.

Because Virginia does not intend to implement the demonstration Commonwealth-wide, RTI will consider a within-Commonwealth comparison group. If, however, the areas that will not be included in the demonstration are not sufficiently similar to the demonstration areas, or there are not enough Medicare-Medicaid enrollees in those areas, we will consider using beneficiaries from both within the Commonwealth and from out of Commonwealth Metropolitan Statistical Areas (MSAs) similar to the demonstration areas.

To identify a comparison area, we will use statistical distance analysis to identify potential areas in Virginia that are most similar to the demonstration regions in regard to costs, care delivery arrangements, and policy affecting Medicare-Medicaid enrollees. The measures for the statistical distance analysis we will use include Medicare spending per Medicare-Medicaid enrollee, Medicaid spending per Medicare-Medicaid enrollee, nursing facility users per 65-and-over Medicaid beneficiary, HCBS users per 65-and-over Medicaid beneficiary, Personal Care users per 65-and-over Medicaid beneficiary, Medicare Advantage, and Medicaid managed care penetration for full-benefit Medicare-Medicaid enrollees. The three LTSS variables capture how areas differ in the settings in which they provide these services. Variation in LTSS policy is most easily visible in the population using the most LTSS (i.e., those aged 65 and over). The relative importance of institutional care observed in that population is expected to affect such use in the population under age 65 as well.

Once within-Commonwealth and/or out-of-Commonwealth comparison MSAs are identified, all Medicare-Medicaid enrollees in those comparison MSAs who meet the demonstration's eligibility criteria will be selected for comparison group membership based on the intent-to-treat study design. The comparison areas will be determined within the first year of demonstration implementation, in order to use the timeliest data available. The comparison group members will be determined retrospectively at the end of each demonstration year, allowing us to include information on individuals newly eligible or ineligible for the demonstration during that year. The comparison group will be refreshed annually to incorporate new entrants into the eligible population as new individuals become eligible for the demonstration over time. To ensure that the comparison group is similar to the demonstration group, we will compute propensity scores and weight comparison group beneficiaries using the framework described in ***Section 4.2.2.4*** of this report.

4.2.2.3 Issues/Challenges in Identifying Comparison Groups

The RTI team will make every effort to account for the following four issues/challenges when identifying and creating comparison groups.

1. **Similarities between demonstration and comparison groups:** Comparison group members should be as much like demonstration group members as possible and sufficient data are needed to identify and control for differences.

2. **Sample size:** Because a within-Commonwealth comparison group is being considered, it will be important to ensure sufficient sample size for the Commonwealth-wide analyses and for analyses of smaller subpopulations. If the sample size is not sufficient, we will consider adding out-of-State comparison areas identified using the statistical distance analysis described below. Based on Virginia's current plans for implementation, it is unlikely that the counties that are not eligible for the demonstration will provide sufficient sample size to support an evaluation based solely on a within-Commonwealth comparison group.

3. **Accounting for enrollment in other demonstrations:** Some Medicare-Medicaid enrollees may not be suitable for comparison group selection because of participation in other demonstrations or enrollment in Accountable Care Organizations. We will

work with CMS to specify these parameters and apply them to both Virginia and the comparison group.

4. **Medicaid data:** Significant delays currently exist in obtaining Medicaid data. If unaddressed, this problem could result in delays in formulating appropriate comparison groups. Timeliness of Medicaid Statistical Information System (MSIS) data submissions will need to be considered if out-of-Commonwealth comparison areas are required for the evaluation.

4.2.2.4 Propensity Score Framework for Identifying Comparison Group Members

Because comparison group members may differ from the demonstration group on individual characteristics, we will compute propensity scores for the demonstration and comparison group members. The propensity score represents how well a combination of characteristics, or covariates, predicts that a beneficiary is in the demonstration group. To compute these scores for beneficiaries in the demonstration and comparison groups, we will first identify beneficiary-level and market-level characteristics to serve as covariates in the propensity-score model. Beneficiary-level characteristics may include demographics, socioeconomic, health, and disability status; and county-level characteristics may include health care market and local economic characteristics. Once the scores are computed, we will remove from the comparison group any beneficiaries with a propensity score lower than the lowest score found in the demonstration group to ensure that the comparison group is similar to the demonstration group.

The propensity scores for the comparison group will then be weighted so that the distribution of characteristics of the comparison group is similar to that of the demonstration group. By weighting comparison group members' propensity scores, the demonstration and comparison group samples will be more balanced. More detail on this process is provided in the *Aggregate Evaluation Plan* (Walsh et al., 2013).

4.2.3 Data Sources

Table 13 provides an overview of the data sources to be used in the Virginia evaluation of quality, utilization, and cost. Data sources include Medicare and Medicaid fee-for-service (FFS) data, Medicare Advantage encounter data, and Medicare-Medicaid Plan encounter data. These data will be used to examine quality, utilization, and cost in the predemonstration period and during the demonstration. Data will be needed for all beneficiaries enrolled in the demonstration as well as other beneficiaries in the eligible population who do not enroll. Note that data requirements for individual beneficiaries will depend on whether they were in Medicare FFS or Medicare Advantage in the pre- and postdemonstration periods.

The terms of the Virginia MOU require the Commonwealth to provide timely Medicaid data through MSIS for the predemonstration and demonstration periods. Any delays in obtaining data may also delay portions of the evaluation.

Table 13
Data sources to be used in the Virginia demonstration evaluation analyses of quality, utilization, and cost

Aspect	Medicare fee-for-service data	Medicaid fee-for-service data	Encounter data[1]
Obtained from	CMS	CMS	CMS
Description and uses of data	Will be pulled from ● Part A (hospitalizations) ● Part B (medical services) Will be used to evaluate quality of care, utilization, and cost during the demonstration. These data will also be used for beneficiaries who opt out of the demonstration, have disenrolled, or do not enroll for other reasons; for predemonstration analyses of demonstration-eligible beneficiaries for the 2 years prior to the demonstration; and for comparison groups that may be in-Commonwealth and/or out-of-Commonwealth.	Medicaid claims and enrollment data will include data on patient characteristics, beneficiary utilization, and cost of services. Eligibility files will be used to examine changes in number and composition of Medicare-Medicaid enrollees. Will also need these data for beneficiaries who opt out of the demonstration, have disenrolled, or do not enroll for other reasons; for predemonstration analyses of demonstration-eligible beneficiaries for the 2 years prior to the demonstration; and for comparison groups.	Pre- and post-period beneficiary encounter data (including Medicare Advantage, MMP, and Part D data) will contain information on: ● beneficiary characteristics and diagnoses, ● provider identification/type of visit, and ● beneficiary IDs (to link to Medicare and Medicaid data files). Will be used to evaluate quality (readmissions), utilization, and cost; health; access to care; and beneficiary satisfaction. Part D data will be used to evaluate cost only. These data will also be used for beneficiaries who opt out of the demonstration, have disenrolled, or do not enroll for other reasons; for predemonstration analyses of demonstration-eligible beneficiaries for the 2 years prior to the demonstration; and for comparison groups that may be in-Commonwealth and/or out-of-Commonwealth.
Sources of data	Will be pulled from the following: ● NCH Standard Analytic File ● NCH TAP Files ● Medicare enrollment data	Will be pulled from the following: ● MSIS (file on inpatient care, institutional, and the "other" file) ● Medicaid eligibility files	Data will be collected from the following: ● CMS ● Medicare enrollment data

(continued)

Table 13 (continued)
Data sources to be used in the Virginia demonstration evaluation analyses of quality, utilization, and cost

Aspect	Medicare fee-for-service data	Medicaid fee-for-service data	Encounter data[1]
Time frame of data	Baseline file = 2 years prior to the demonstration period (NCH Standard Analytic File). Evaluation file = all demonstration years (NCH TAP Files).	Baseline file = 2 years prior to the demonstration period. Evaluation file = all demonstration years.	Baseline file = Medicare Advantage plans submit encounter data to CMS as of January 1, 2012. RTI will determine to what extent these data can be used in the baseline file. Evaluation file = Medicare Advantage and MMPs are required to submit encounter data to CMS for all demonstration years.
Potential concerns	—	Expect significant time delay for all Medicaid data.	CMS will provide the project team with data under new Medicare Advantage requirements. Any lags in data availability are unknown at this time.

— = no data; MMP = Medicare-Medicaid Plan; MSIS = Medicaid Statistical Information System; NCH = National Claims History; TAP = monthly Medicare claims files.

[1] Encounter data from Medicare Advantage (MA) or Program of All-Inclusive Care for the Elderly (PACE) plans in the pre-period are needed to evaluate demonstration effects for beneficiaries who previously were enrolled in Medicare Advantage or PACE plans but who enroll in the demonstration. There may also be movement between Medicare Advantage or PACE plans and the demonstration throughout implementation, which we will need to take into account using Medicare Advantage or PACE encounter data during the implementation period.

Notes on Data Access: CMS data contain individually identifiable data that are protected under the Health Insurance Portability and Accountability Act (HIPAA) of 1996. CMS, however, makes data available for certain research purposes provided that specified criteria are met. RTI has obtained the necessary Data Use Agreement (DUA) with CMS to use CMS data. A listing of required documentation for requesting CMS identifiable data files such as Medicare and MSIS is provided at http://www.resdac.umn.edu/medicare/requesting_data.asp.

4.3 Analyses

The analyses of quantitative data on quality, utilization, and cost measures in the Virginia evaluation will consist of the following:

1. a monitoring analysis to track quarterly changes in selected quality, utilization, and cost measures over the course of the Virginia demonstration (as data are available);

2. a descriptive analysis of quality, utilization, and cost measures for annual reports with means and comparisons for subgroups of interest, including comparison group results; and

3. multivariate difference-in-differences analyses of quality, utilization, and cost measures using within-Commonwealth and/or out-of-Commonwealth comparison areas.

At least one multivariate regression-based savings analysis will be calculated during the demonstration period, most likely using 2 years of demonstration data. A second savings analysis will be included in the final evaluation.

The approach to each of these analyses is outlined below in ***Table 14,*** and more detail is provided in the *Aggregate Evaluation Plan* (Walsh et al., 2013). The activities for the analyses may be revised if modifications are made to the demonstrations or if data sources are not available as anticipated. If modifications to this evaluation plan are required, they will be documented in the annual and final evaluation reports as appropriate.

Table 14
Quantitative analyses to be performed for Virginia demonstration

Aspect	Monitoring analysis	Descriptive analysis	Multivariate analyses
Purpose	Track quarterly changes in selected quality, utilization, and cost measures over the course of the demonstration.	Provide estimates of quality, utilization, and cost measures on an annual basis.	Measure changes in quality, utilization, and cost measures as a result of the demonstration.
Description of analysis	Comparison of current value and values over time to the predemonstration period for each outcome.	Comparison of the predemonstration period with each demonstration year for demonstration and comparison groups.	Difference-in-differences analyses using demonstration and comparison groups.
Reporting frequency	Quarterly to CMS and the Commonwealth.	Annually	Once, in the final evaluation except for costs, which will also be calculated (at least) once prior to the final evaluation.

4.3.1 Monitoring Analysis

Data from Medicare FFS and Medicare Advantage encounter data, MMP encounter data, MSIS files, and other data provided by Virginia via the State Data Reporting System will be analyzed quarterly to calculate means, counts, and proportions on selected quality, utilization, and cost measures common across States, depending on availability. Examples of measures that may be included in these quarterly reports to CMS include rates of inpatient admissions, emergency room visits, long-term nursing facility admissions, cost per member per month, and all-cause hospital readmission and mortality. We will present the current value for each quarter and the predemonstration period value for each outcome to look at trends over time.

The goal of these analyses is to monitor and track changes in quality, utilization, and costs. Though quarterly analyses will not be multivariate or include comparison group data, these monitoring data will provide valuable, ongoing information on trends occurring during the demonstration period. Various inpatient and emergency room measures that can be reported are described in more detail in the section on quality measures.

4.3.2 Descriptive Analysis on Quality, Utilization, and Cost Measures

We will conduct a descriptive analysis of quality, utilization, and cost measures for the Virginia demonstration annually for each performance period that includes means, counts, and proportions for the demonstration and comparison groups. This analysis will focus on estimates for a broad range of quality, utilization, and cost measures, as well as changes in these measures across years or subgroups of interest within each year. The results of these analyses will be presented in the annual evaluation reports. The sections below outline the measures that will be included.

To perform this analysis, we will develop separate (unlinked) encounter, Medicare, and Medicaid beneficiary-level analytic files annually to measure quality, utilization, and cost. Though the Medicare, Medicaid, and encounter data will not be linked, the unlinked beneficiary-level files will still allow for an understanding of trends in quality, utilization, and cost measures. The analytic files will include data from the predemonstration period and for each demonstration year. Because of the longer expected time lags in the availability of Medicaid data, Medicare FFS data and MMP encounter data may be available sooner than Medicaid FFS data. Therefore, we expect that the first annual report will include predemonstration Medicare and Medicaid FFS data and Medicare FFS, Medicare Advantage, and MMP encounter data for the demonstration period. Medicaid FFS data will be incorporated into later reports as the data become available.

Consistent with the intent-to-treat approach, all individuals eligible to participate in the demonstration will be included in the analysis, regardless of whether they opt out of the demonstration or disenroll, or actively engage with the MMPs. Data will be developed for demonstration and comparison group beneficiaries for a 2-year predemonstration period, and for each of the years of the demonstration. The starting date for Virginia is based on the Commonwealth's initial implementation date for Phase I (April 1, Central Virginia and Tidewater regions); therefore, it may represent a "performance period," not necessarily a calendar year. For individuals with shorter enrollment periods (e.g., because of beneficiary death,

change of residence, or residence in a region with a later phase-in period), the analysis will weight their experience by months of enrollment within a performance period.

We will measure predemonstration and annual utilization rates and costs of Medicare- and Medicaid-covered services together, where appropriate, to look at trends in the type and level of service use during the State demonstrations. We will calculate average use rates and costs at predemonstration and for each demonstration period. Use rates will be stratified by hierarchical condition category (HCC) scores, which are derived from models predicting annual Medicare spending based on claim-based diagnoses in a prior year of claims where higher scores are predictive of higher spending, health status measures, or similar measures. We will adjust for hospitalizations in the prior year using categorical HCC scores or similar measures. Chi-square and t-tests will be used to test for significant differences in use across years and between subpopulations, such as such as those receiving LTSS in the community and institutional settings, those receiving behavioral health services, elderly beneficiaries with and without disabilities, and nonelderly beneficiaries with disabilities.

4.3.3 Multivariate Analyses of Quality, Utilization, and Cost Measures

In the final year of the evaluation, we will use data collected for the eligible population in Virginia and data for the selected comparison group that will have been adjusted using propensity-score weighting methods to analyze the effect of the demonstration using a difference-in-differences method. This method uses both pre- and post-period data for both the demonstration and comparison groups to estimate effects. This method will be applied to these data for each quality, utilization, and cost outcome described in the next section for the final evaluation. The analytic approaches are described in greater detail in the *Aggregate Evaluation Plan* (Walsh et al., 2013). In addition, multivariate regression-adjusted estimates of cost effects (only) will be performed at an intermediate point of the evaluation, using data after 2 years of implementation.

4.3.4 Subpopulation Analyses

For subpopulations of focus in the Virginia demonstration, we will evaluate the impact of the demonstration on quality, utilization, and access to care for medical, LTSS, and behavioral health services, and will also examine qualitative data gathered through interviews, focus groups, and surveys. RTI will compare the characteristics of those who enroll with those who are eligible but do not enroll, and will conduct analyses to further explore demonstration effects on demonstration enrollees, acknowledging that selection bias must be taken into account in interpreting the results. Descriptive analyses for annual reports will present results on selected measures stratified by subpopulations (e.g., those using and not using behavioral health services, LTSS). Multivariate analyses performed for the final evaluation will account for differential effects for subpopulations in specification testing by using dummy variables for each of the specific subpopulations of interest one at a time so that the analyses can suggest whether quality, utilization, and cost are higher or lower for each of these groups.

4.4 Utilization and Access to Care

Medicare, Medicaid, and MMP encounter data will be used to evaluate changes in the levels and types of services used, ranging along a continuum from institutional care to care provided at home and including changes in the percentage of enrollees receiving supports in the community or residing in institutional settings (***Table 15***). Note that ***Table 15*** indicates the sources of data for these analyses during the demonstration, given that the analyses will include beneficiaries enrolled in the demonstration as well as those who are part of the population eligible for the demonstration, but do not enroll.

Table 15
Service categories and associated data sources for reporting utilization measures

Service type	Encounter data (Medicare Advantage, MMP enrollees, and Medicaid MCOs)	Medicaid only (FFS)	Medicare and Medicaid (FFS)
Inpatient	X	—	X
Emergency room	X	—	X
Nursing facility (short rehabilitation stay)	X	—	X
Nursing facility (long-term stay)	X	X	—
Other facility-based[1]	X	—	X
Outpatient[2]	X	—	X
Outpatient behavioral health (mental and substance use)	X	X	—
Home health	X	—	X
HCBS (PAS, waiver services)	X	X	—
Dental	X	X	—

— = not available; FFS = fee for service; HCBS = home and community-based services; MCO = managed care organization; MMP = Medicare-Medicaid Plan; PAS = personal assistance services.

[1] Includes long-term care hospital, rehabilitation hospital, State mental health facility stays.

[2] Includes visits to physician offices, hospital outpatient departments, rehabilitation agencies.

We anticipate being able to develop traditional utilization measures for each of the service classes in ***Table 15*** (e.g., various inpatient use rates based on diagnoses of interest); however, as of this writing, the timing and availability of MMP encounter data are in the process of being finalized. RTI will continue to work closely with CMS to understand how these data can best be utilized by the evaluation.

4.5 Quality of Care

Across all demonstration States, RTI will evaluate a core quality measure set for monitoring and evaluation purposes. Quality measures have multiple data sources: claims and encounter data, which RTI will obtain from CMS and analyze for evaluation measures listed in ***Table 16***; and information collected by Virginia, CMS, or others and provided in aggregate to the RTI team for inclusion in reports. The latter may include Healthcare Effectiveness Data and Information Set (HEDIS) measures collected as part of health plan performance; other data that

the Virginia MMPs are required to report; and any beneficiary survey data collected by Virginia, CMS, or other entities (e.g., CAHPS). CMS and Virginia have also identified a set of quality measures that will determine the amount of quality withhold payments (i.e., MMPs must meet quality standards to earn back a withheld portion of their capitated payments). The quality withhold measures, listed in Virginia's MOU, include some measures noted in this report, as well as additional measures. RTI expects to have access to the aggregated results of these additional measures and will include them in the evaluation as feasible and appropriate, with the understanding that these data are not available for the predemonstration period or for the comparison group.

RTI and CMS have developed the core set of evaluation measures for use across State demonstrations; the evaluation will also include a few measures specific to Virginia. ***Table 16*** provides a working list of the core quality measures to be included in the Virginia evaluation. The table specifies the measure, the source of data for the measure, whether the measure is intended to produce impact estimates, as well as a more detailed definition and specification of the numerator and denominator for the measure. These measures will be supplemented by additional evaluation measures appropriate to the Virginia demonstration. We will finalize State-specific quality measures that RTI will identify for the evaluation within the first 6 months of implementation.

Many of the measures in ***Table 16*** are established HEDIS measures that demonstration plans are required to report. The National Committee for Quality Assurance (NCQA) definitions are established and standardized. Given that these data will not be available for those who opt out or disenroll, or for comparison populations, we will collect and present the results for each relevant demonstration period.

Finally, the evaluation will analyze subgroups of interest, as appropriate, and look at measures that might be particularly relevant to them (e.g., measures that might be specific to people with developmental disabilities, behavioral health conditions). We will continue to work with CMS and the Commonwealth to identify measures relevant to Virginia and will work to develop specifications for these measures.

Table 16
Evaluation quality measures: Detailed definitions, use, and specifications

Measure concept (specific measure)	Data sources and responsibility for data collection	Domain (prevention, care coordination, beneficiary experience)	Will evaluation produce impact estimates?[1]	Definition (link to documentation if available)	Numerator/denominator description
All-cause readmission 30-day all-cause risk-standardized readmission rate	Claims/encounter RTI will acquire and analyze	Care coordination	Yes	Risk-adjusted percentage of demonstration-eligible Medicare-Medicaid enrollees who were readmitted to a hospital within 30 days following discharge from the hospital for the index admission (https://www.cms.gov/sharedsavingsprogram/Downloads/ACO_QualityMeasures.pdf).	Numerator: Risk-adjusted readmissions among demonstration-eligible Medicare-Medicaid enrollees at a non-Federal, short-stay, acute-care or critical access hospital, within 30 days of discharge from the index admission included in the denominator, and excluding planned readmissions. Denominator: All hospitalizations among demonstration-eligible Medicare-Medicaid enrollees not related to medical treatment of cancer, primary psychiatric disease, or rehabilitation care, fitting of prostheses, and adjustment devices for beneficiaries at non-Federal, short-stay acute-care or critical access hospitals, where the beneficiary was continuously enrolled in Medicare and Medicaid for at least 1 month after discharge, was not discharged to another acute-care hospital, was not discharged against medical advice, and was alive upon discharge and for 30 days post-discharge.
Immunizations Influenza immunization	Claims/encounter RTI will acquire and analyze	Prevention	Yes	Percentage of demonstration-eligible Medicare-Medicaid enrollees seen for a visit between October 1 and March 31 of the 1-year measurement period who received an influenza immunization OR who reported previous receipt of an influenza immunization (https://www.cms.gov/sharedsavingsprogram/Downloads/ACO_QualityMeasures.pdf).	Numerator: Demonstration-eligible Medicare-Medicaid enrollees who have received an influenza immunization OR who reported previous receipt of influenza immunization. Denominator: Demonstration-eligible Medicare-Medicaid enrollees seen for a visit between October 1 and March 31 (flu season), with some exclusions allowed.

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Table 16 (continued)
Evaluation quality measures: Detailed definitions, use, and specifications

Measure concept (specific measure)	Data sources and responsibility for data collection	Domain (prevention, care coordination, beneficiary experience)	Will evaluation produce impact estimates?[1]	Definition (link to documentation if available)	Numerator/denominator description
Immunizations (cont'd) Pneumococcal vaccination for patients 65 years and older	Claims/encounter RTI will acquire and analyze	Prevention	Yes	Percentage of demonstration-eligible patients aged 65 years and older who have ever received a pneumococcal vaccine.	Numerator: Demonstration-eligible Medicare-Medicaid enrollees age 65 and over who have ever received a pneumococcal vaccination. Denominator: All demonstration-eligible Medicare-Medicaid enrollees ages 65 years and older, excluding those with documented reason for not having one.
Ambulatory care-sensitive condition admission Ambulatory care sensitive condition admissions—overall composite (AHRQ PQI # 90)	Claims/encounter RTI will acquire and analyze	Prevention, care coordination	Yes	Combination using 12 individual ACSC diagnoses for chronic and acute conditions. For technical specifications of each diagnosis, see http://www.qualityindicators.ahrq.gov/Modules/PQI_TechSpec.aspx.	Numerator: Total number of acute-care hospitalizations for 12 ambulatory care-sensitive conditions among demonstration-eligible Medicare-Medicaid enrollees, aged 18 or older. Conditions include diabetes—short-term complications; diabetes—long-term complications; COPD; hypertension; CHF; dehydration; bacterial pneumonia; UTI; angina without procedure; uncontrolled diabetes; adult asthma; lower extremity amputations among diabetics. Denominator: Demonstration-eligible Medicare-Medicaid enrollees, aged 18 or older.
Ambulatory care-sensitive condition admissions—chronic composite (AHRQ PQI # 92)	Claims/encounter RTI will acquire and analyze	Prevention, care coordination	Yes	Combination using 9 individual ACSC diagnoses for chronic diseases. For technical specifications of each diagnosis, see http://www.qualityindicators.ahrq.gov/Modules/PQI_TechSpec.aspx.	Numerator: Total number of acute-care hospitalizations for 9 ambulatory care sensitive chronic conditions among demonstration-eligible Medicare-Medicaid enrollees, aged 18 or older. Conditions include diabetes—short-term complications; diabetes—long-term complications; COPD; hypertension; CHF; angina w/o procedure; uncontrolled diabetes; adult asthma; lower-extremity amputations among diabetics). Denominator: demonstration-eligible Medicare-Medicaid enrollees, aged 18 or older.

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Table 16 (continued)
Evaluation quality measures: Detailed definitions, use, and specifications

Measure concept (specific measure)	Data sources and responsibility for data collection	Domain (prevention, care coordination, beneficiary experience)	Will evaluation produce impact estimates?[1]	Definition (link to documentation if available)	Numerator/denominator description
Admissions with primary diagnosis of a severe and persistent mental illness or substance use disorder	Claims/encounter RTI will acquire and analyze	Prevention, care coordination	Yes	Percentage of demonstration-eligible Medicare-Medicaid enrollees with a primary diagnosis of a severe and persistent mental illness or substance use disorder who are hospitalized	Numerator: Total number of acute-care hospitalizations among demonstration-eligible Medicare-Medicaid enrollees, aged 18 or older with a primary diagnosis of a severe and persistent mental illness or substance use who are hospitalized. Denominator: Demonstration-eligible Medicare-Medicaid enrollees, aged 18 or older.
Avoidable emergency department visits Preventable/ avoidable and primary care treatable ED visits	Claims/encounter RTI will acquire and analyze	Prevention, care coordination	Yes	Based on lists of diagnoses developed by researchers at the New York University (NYU) Center for Health and Public Service Research, this measure calculates the rate of ED use for conditions that are either preventable/avoidable, or treatable in a primary care setting (http://wagner.nyu.edu/faculty/billings/nyued-background).	Numerator: Total number of ED visits with principal diagnoses defined in the NYU algorithm among demonstration-eligible Medicare-Medicaid enrollees. Denominator: Demonstration-eligible Medicare-Medicaid enrollees.
Emergency department visits ED visits excluding those that result in death or hospital admission	Claims/encounter RTI will acquire and analyze	Prevention, care coordination	Yes	Percentage of demonstration-eligible Medicare-Medicaid enrollees with an emergency department visit.	Numerator: Total number of ED visits among demonstration-eligible Medicare-Medicaid enrollees excluding those that result in death or hospital admission. Denominator: Demonstration-eligible Medicare-Medicaid enrollees.

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Table 16 (continued)
Evaluation quality measures: Detailed definitions, use, and specifications

Measure concept (specific measure)	Data sources and responsibility for data collection	Domain (prevention, care coordination, beneficiary experience)	Will evaluation produce impact estimates?[1]	Definition (link to documentation if available)	Numerator/denominator description
Follow-up after mental health hospitalization Follow-up after hospitalization for mental illness	Claims/encounter RTI will acquire and analyze	Care coordination	Yes	Percentage of discharges for demonstration-eligible Medicare-Medicaid enrollees who were hospitalized for selected mental health disorders and who had an outpatient visit, an intensive outpatient encounter, or partial hospitalization with a mental health practitioner. Two rates are reported: (1) The percentage of members who received follow-up within 30 days of discharge; (2) The percentage of members who received follow-up within 7 days of discharge (http://www.qualityforum.org/QPS/).	Numerator: Rate 1: (Among demonstration-eligible Medicare-Medicaid enrollees) an outpatient visit, intensive outpatient encounter, or partial hospitalization with a mental health practitioner within 30 days after discharge. Include outpatient visits, intensive outpatient encounters, or partial hospitalizations that occur on the date of discharge; Rate 2: (Among demonstration-eligible Medicare-Medicaid enrollees) an outpatient visit, intensive outpatient encounter, or partial hospitalization with a mental health practitioner within 7 days after discharge. Include outpatient visits, intensive outpatient encounters, or partial hospitalizations that occur on the date of discharge. Denominator: Demonstration-eligible Medicare-Medicaid enrollees who were discharged alive from an acute inpatient setting (including acute-care psychiatric facilities) in the measurement year. The denominator for this measure is based on discharges, not members. Include all discharges for members who have more than one discharge in the measurement year.
Fall prevention Screening for fall risk	Claims/ encounter RTI will acquire and analyze	Prevention, care coordination	Yes	Percentage of demonstration-eligible Medicare-Medicaid enrollees aged 65 years and older who were screened for future fall risk at least once within 12 months	Numerator: Demonstration-eligible Medicare-Medicaid enrollees who were screened for future fall risk at least once within 12 months. Denominator: All demonstration-eligible Medicare-Medicaid enrollees 65 years or older.

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Table 16 (continued)
Evaluation quality measures: Detailed definitions, use, and specifications

Measure concept (specific measure)	Data sources and responsibility for data collection	Domain (prevention, care coordination, beneficiary experience)	Will evaluation produce impact estimates?[1]	Definition (link to documentation if available)	Numerator/denominator description
Cardiac rehabilitation Cardiac rehabilitation following hospitalization for AMI, angina, CABG, PCI, CVA	Claims/encounter RTI will acquire and analyze	Care coordination	Yes	Percentage of demonstration-eligible beneficiaries evaluated in an outpatient setting who within the past 12 months have experienced AMI, CABG surgery, PCI, CVA, or cardiac transplantation, or who have CVA and have not already participated in an early outpatient CR program for the qualifying event/ diagnosis who were referred to a CR program.	Numerator: Number of demonstration-eligible Medicare-Medicaid enrollees in an outpatient practice who have had a qualifying event/diagnosis in the previous 12 months who have been referred to an outpatient cardiac rehabilitation/secondary prevention program. Denominator: Number of demonstration-eligible Medicare-Medicaid enrollees in an outpatient clinical practice who have had a qualifying cardiovascular event in the previous 12 months, who do not meet any of the exclusion criteria, and who have not participated in an outpatient cardiac rehabilitation program since the cardiovascular event.
Pressure ulcers Percent of high-risk residents with pressure ulcers (long stay)	MDS RTI will acquire and analyze	Prevention, care coordination	Yes	Percentage of all demonstration-eligible long-stay residents in a nursing facility with an annual, quarterly, significant change, or significant correction MDS assessment during the selected quarter (3-month period) who were identified as high risk and who have one or more Stage 2–4 pressure ulcer(s).	Numerators: Number of demonstration-eligible Medicare-Medicaid enrollees who are long-stay nursing facility residents who have been assessed with annual, quarterly, significant change, or significant correction MDS 3.0 assessments during the selected time window and who are defined as high risk with one or more Stage 2–4 pressure ulcer(s). Denominators: Number of demonstration-eligible Medicare-Medicaid enrollees who are long-stay residents who received an annual, quarterly, or significant change or significant correction assessment during the target quarter and who did not meet exclusion criteria.

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Table 16 (continued)
Evaluation quality measures: Detailed definitions, use, and specifications

Measure concept (specific measure)	Data sources and responsibility for data collection	Domain (prevention, care coordination, beneficiary experience)	Will evaluation produce impact estimates?[1]	Definition (link to documentation if available)	Numerator/denominator description
Treatment of alcohol and substance use disorders Initiation and Engagement of Alcohol and Other Drug Dependent Treatment	Claims/encounter RTI will acquire and analyze	Care coordination	Yes	The percentage of demonstration-eligible Medicare-Medicaid enrollees with a new episode of alcohol or other drug (AOD) dependence who received the following: a. Initiation of AOD treatment. The percentage who initiate treatment through an inpatient AOD admission, outpatient visit, intensive outpatient encounter or partial hospitalization within 14 days of the diagnosis. b. Engagement of AOD treatment. The percentage who initiated treatment and who had two or more additional services with a diagnosis of AOD within 30 days of the initiation visit. (http://www.qualityforum.org/QPS/)	Numerator: Among demonstration-eligible Medicare-Medicaid enrollees (a) Initiation: AOD treatment through an inpatient admission, outpatient visit, intensive outpatient encounter or partial hospitalization within 14 days of diagnosis; (b) Engagement: AOD treatment and two or more inpatient admissions, outpatient visits, intensive outpatient encounters or partial hospitalizations with any AOD diagnosis within 30 days after the date of the Initiation encounter (inclusive). Multiple engagement visits may occur on the same day, but they must be with different providers in order to be counted. Do not count engagement encounters that include detoxification codes (including inpatient detoxification). Denominator: Demonstration-eligible Medicare-Medicaid enrollees age 13 years and older who were diagnosed with a new episode of alcohol and drug dependency during the intake period of January 1–November 15 of the measurement year. EXCLUSIONS: Exclude those who had a claim/encounter with a diagnosis of AOD during the 60 days before the IESD. For an inpatient IESD, use the admission date to determine the Negative Diagnosis History. For an ED visit that results in an inpatient stay, use the ED date of service.
Depression screening and follow-up Screening for clinical depression and follow-up	Claims/encounter RTI will acquire and analyze	Prevention, care coordination	Yes	Percentage of patients aged 18 and older screened for clinical depression using an age-appropriate standardized tool AND follow-up plan documented (http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Downloads/2014_eCQM_EP_June2013.zip).	Numerator: Demonstration-eligible Medicare-Medicaid enrollees whose screening for clinical depression using an age-appropriate standardized tool AND follow-up plan is documented. Denominator: All demonstration-eligible Medicare-Medicaid enrollees 18 years and older with certain exceptions (see source for the list).

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Table 16 (continued)
Evaluation quality measures: Detailed definitions, use, and specifications

Measure concept (specific measure)	Data sources and responsibility for data collection	Domain (prevention, care coordination, beneficiary experience)	Will evaluation produce impact estimates?[1]	Definition (link to documentation if available)	Numerator/denominator description
Blood pressure control Controlling high blood pressure	Medical records (HEDIS EOC035)	Prevention, care coordination	No	Percentage of members aged 18–85 who had a diagnosis of hypertension and whose blood pressure was adequately controlled (<140/90mm Hg) during the measurement year (http://www.qualityforum.org/QPS).	Numerator: Number of demonstration participants in the denominator whose most recent, representative BP is adequately controlled during the measurement year. For a member's BP to be controlled, both the systolic and diastolic BP must be <140/90mm Hg. Denominator: Demonstration participants with hypertension. A patient is considered hypertensive if there is at least one outpatient encounter with a diagnosis of HTN during the first 6 months of the measurement year.
Weight screening and follow-up Adult BMI assessment	Medical records (HEDIS EOC110)	Prevention	No	Percentage of patients aged 18–74 years of age who had an outpatient visit and who had their BMI documented during the measurement year or the year prior to measurement.	Numerator: BMI documented during the measurement year, or the year prior. Denominator: Demonstration-eligible Medicare-Medicaid enrollees 18–74 who had an outpatient visit.
Breast cancer screening	Medical records (HEDIS 0003)	Prevention	No	Percentage of women 40–69 years of age and participating in demonstration who had a mammogram to screen for breast cancer.	Numerator: Number of women 40–69 receiving mammogram in year. Denominator: Number of women 40–69 enrolled in demonstration.

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Table 16 (continued)
Evaluation quality measures: Detailed definitions, use, and specifications

Measure concept (specific measure)	Data sources and responsibility for data collection	Domain (prevention, care coordination, beneficiary experience)	Will evaluation produce impact estimates?[1]	Definition (link to documentation if available)	Numerator/denominator description
Antidepressant medication management	Medical records (HEDIS EOC030)	Care coordination	No	Percentage of members 18+ who were diagnosed with a new episode of major depression and treated with antidepressant medication, and who remained on an antidepressant medication treatment.	Numerator: Two rates are reported. (1) Effective acute phase treatment—newly diagnosed and treated demonstration participants who remain on antidepressant medication for at least 84 days. (2) Effective continuation phase treatment—newly diagnosed and treated demonstration participants who remained on antidepressant medication for at least 180 days. Denominator: Newly diagnosed and treated demonstration participants over age 18.
Diabetes care Comprehensive diabetes care: selected components—HbA1c control, LDL-C control, retinal eye exam	Medical records (HEDIS EOC020)	Prevention/care coordination	No	Percentage of demonstration participants 18–75 years of age with diabetes (type 1 and type 2) who had each of the following: HbA1c control, LDL-C control, and retinal eye exam.	Numerator: Number of these who had HbA1c control or LDL-C control, or retinal eye exam in year. Denominator: Demonstration participants 18–75 with type 1 or type 2 diabetes.

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Table 16 (continued)
Evaluation quality measures: Detailed definitions, use, and specifications

Measure concept (specific measure)	Data sources and responsibility for data collection	Domain (prevention, care coordination, beneficiary experience)	Will evaluation produce impact estimates?[1]	Definition (link to documentation if available)	Numerator/denominator description
Medication management Annual monitoring for patients on persistent medications	Medical records (HEDIS EOC075)	Care coordination	No	Percentage who received at least 180 treatment days of ambulatory medication therapy for a select therapeutic agent during the measurement year and at least one therapeutic monitoring event for the therapeutic agent in the measurement year. Agents measured: (1) ACE inhibitors or ARB, (2) digoxin, (3) diuretics, (4) anticonvulsants.	Numerator: Number with at least 180 days of treatment AND a monitoring event in the measurement year. Combined rate is sum of 4 numerators divided by sum of 4 denominators. Denominator: Demonstration participants with at least 180 days of treatment in the year for a particular agent.

ACE inhibitor = angiotensin-converting-enzyme inhibitor; ACSC = ambulatory care-sensitive conditions; AHRQ = Agency for Healthcare Research and Quality; AMI = acute myocardial infarction; ARB = angiotensin II receptor blocker; BMI = body mass index; BP = blood pressure; CABG = coronary artery bypass graft; CHF = congestive heart failure; COPD =chronic obstructive pulmonary disease; CR = cardiac rehabilitation/secondary prevention; CVA = cerebrovascular accident; ED = emergency department; HbA1c = Hemoglobin A1c; HEDIS = Healthcare Effectiveness Data and Information Set; HTN = hypertension; IESD = Index Episode Start Date; LDL-C = low-density lipoprotein cholesterol; MDS = minimum data set; PCI = percutaneous coronary intervention; PQI = Prevention Quality Indicator; UTI = urinary tract infection.

[1] Impact estimates will be produced only for measures where data can also be obtained for the comparison group. Measures for which data are not expected to be available in the comparison group will be tracked only within the demonstration to measures changes over time.

NOTE: Definitions, use, and specifications are as of 4/24/2014.

4.6 Cost

To determine annual total costs (overall and by payer), we will aggregate the Medicare and Medicaid per member per month (PMPM) payments paid to the MMPs and the costs for the eligible population who are not enrolled in the demonstration, per the intent-to-treat evaluation design. This approach will help us to detect overall cost impact and remove potential selection bias among beneficiaries who participate in the demonstration and those who opt out or disenroll. We will include Part D PMPM and any PMPM reconciliation data provided by CMS in the final assessment of cost impact to ensure that all data are available.

The evaluation will analyze cost data for the service types shown in ***Table 14*** in the previous section on utilization with the addition of prescription drug costs. As with quality and utilization analyses, the descriptive and impact analyses presented in the annual report will include a comparison group. We will present results for important subgroups, and in more detail to better understand their demonstration experience. We will also create a high-cost-user category and track costs of this group over time. To do this, we will measure the percentage of beneficiaries defined as high cost in Year 1 (e.g., those beneficiaries in the top 10 percent of costs). In subsequent years we will look at the percentage of beneficiaries above the Year 1 threshold to learn more about potential success in managing the costs of high-cost beneficiaries as a result of the demonstration.

We will also evaluate cost savings for capitated model demonstrations twice during the demonstration using a regression-based approach and the comparison group described in ***Section 4.2.2*** of this report. The methodology for evaluating cost savings for capitated model demonstrations is currently under development and will be reviewed and approved by the CMS Office of the Actuary. If data are available, we will also estimate cost savings accruing to the Medicare and Medicaid programs separately.

4.7 Analytic Challenges

Obtaining Medicaid FFS data for the predemonstration and demonstration periods and MMP encounter data for the demonstration period will be critical for the evaluation. The Medicaid and MMP data are necessary to measure quality, utilization, and costs. It will be important that Virginia submit Medicaid FFS data in a timely manner. It will also be important for CMS to continue to work with other States that may serve as comparison groups to update and maintain their MSIS/t-MSIS submissions. Because the timing and availability of MMP encounter data are being finalized, RTI will continue to work closely with CMS to understand how these data can best be utilized by the evaluation. Other analytic challenges will include addressing financing issues, including upper payment limit (UPL), provider taxes, and disproportionate share hospital (DSH) payments as well as possible State policy changes over the course of the demonstration. RTI will work closely with CMS and the State to understand these issues and to monitor changes over the course of the demonstration and will develop approaches to incorporate these issues into analyses as necessary.

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