

**U.S. Department of Health and Human Services**

**Report to Congress:**

**Plan to Implement a Medicare Home Health Agency Value-Based Purchasing Program**

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## 1 Executive Summary

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The Medicare home health benefit provides an opportunity for individuals who are generally unable to leave their home, and who need skilled medical care for their illness or injury for a finite and predictable period of time, to receive needed care at home. In recent years, the Medicare home health program has grown rapidly, both in program expenditures and the number of people served. In fact in 2009, 3.3 million Medicare beneficiaries received Medicare home health services, resulting in \$18.9 billion in total Medicare payments. At the same time, the Medicare Payment Advisory Commission (MedPAC), the Office of the Inspector General, the General Accounting Office (GAO), and other stakeholders have raised significant concerns with fraud and abuse in the Medicare home health benefit. While the benefit is designed to encourage teams of skilled professionals to provide patient-focused care to homebound beneficiaries, there is growing concern that the existing payment system does not provide the necessary incentives to provide such high quality patient focused care.

The Centers for Medicare and Medicaid Services (CMS) views implementation of a home health value-based purchasing (VBP) program as an important step in revamping how Medicare pays for health care services, moving the program towards rewarding better value, outcomes, and patient-focused care instead of the volume of services provided. A home health VBP program would make value-based incentive payments in a fiscal year to home health agencies (HHAs) that meet performance standards for a defined performance period for that fiscal year. Using financial incentives to reward quality and improvement in health care, VBP programs aim to hold providers accountable for the quality of care they provide to Medicare beneficiaries, promote more effective, efficient and high quality care processes, and address the variation in quality across care settings.

As part of its VBP initiatives, CMS seeks to continuously promote improvement in quality, efficiency and outcomes for Medicare beneficiaries in all of our payment systems, especially in the rapidly growing post-acute care area. Broad participation in the Medicare Home Health Pay-for-Performance Demonstration was an important initial step that demonstrated providers' willingness to engage with Medicare around quality incentives and heightened awareness of their performance on specific measures. The demonstration also showed that providers will make the necessary investments to redesign care to improve the quality and efficiency of care delivered to their patients as a result of these incentive programs. For example, several agencies invested in new software, initiatives to prevent falls, telemonitoring, and nurse reviewers during the course of the demonstration.

Creation of a home health VBP program will align with many of the Department of Health and Human Services' (HHS) and CMS' efforts to improve coordination of care. CMS' plan to implement a home health VBP program will be designed so that it is consistent with the National Quality Strategy to promote health care that is focused on the needs of patients, families, and communities. The strategy is also designed to make the health care system work better for doctors and other providers – reducing their administrative burden and helping them collaborate to improve care. The strategy presents three aims for the health care system:

- **Better Care:** Improve the overall quality, by making health care more patient-centered, reliable, accessible, and safe.

- **Healthy People and Communities:** Improve the health of the United States population by supporting proven interventions to address behavioral, social, and environmental determinants of health in addition to delivering higher-quality care.
- **Affordable Care:** Reduce the cost of quality health care for individuals, families, employers, and government.<sup>1</sup>

The design of the home health VBP program can build upon the lessons learned from Medicare quality and VBP initiatives and State and private sector efforts to promote innovative payment and service delivery models to preserve or enhance the quality of care and reduce the growth in program expenditures. Some of these initiatives include the Home Health Pay-for-Performance Demonstration, the Nursing Home Value-Based Purchasing Demonstration, and other Federal, State and private sector initiatives. By implementing a VBP program for HHAs, quality improvement and performance will, over time, align with the National Quality Strategy and other providers in the health system, fostering a culture of shared accountability for beneficiaries and quality improvement.

The current home health pay-for-reporting program provides the needed foundation upon which to build a VBP program that would hold providers accountable for the quality of care they provide to Medicare beneficiaries. Implementation of a full scale home health VBP program will be a crucial next step in ongoing efforts to link payment to performance for home health services. Home health VBP can help ensure that Medicare patients have access to timely, safe and effective home health services, protect the vulnerable home health population, and better allocate resources toward value. In addition, the home health VBP program should be designed so that it supports future development in needed data, reporting, and payment systems that will emerge as a result of changes in health care delivery systems; and quality measurement priorities.

## **Background**

Section 3006(b)(1) of the Patient Protection and Affordable Care Act (Pub. L. 111-148), enacted on March 23, 2010, as amended by the Health Care and Education Reconciliation Act of 2010 (Pub. L. 111-152), enacted on March 30, 2010 (collectively known as the Affordable Care Act) requires the Secretary of Health and Human Services (the “Secretary”) to develop a plan to implement a VBP program for payments under the Medicare program under Title XVIII of the Social Security Act (“the Act”) for HHAs.

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<sup>1</sup> To help achieve these aims, the strategy also establishes six priorities, to help focus efforts by public and private partners. These priorities are: (1) making care safer by reducing harm caused in the delivery of care; (2) ensuring that each person and family are engaged as partners in their care; (3) promoting effective communication and coordination of care; (4) promoting the most effective prevention and treatment practices for the leading causes of mortality, starting with cardiovascular disease; (5) working with communities to promote wide use of best practices to enable healthy living; and (6) making quality care more affordable for individuals, families, employers, and governments by developing and spreading new health care delivery models. The strategy was developed both through evidence-based results of the latest research and a collaborative transparent process that included input from a wide range of stakeholders across the health care system, including federal and state agencies, local communities, provider organizations, clinicians, patients, businesses, employers, and payers. Additional information on the National Quality Strategy can be accessed at: <http://www.hhs.gov/news/press/2011pres/03/20110321a.html>.

Section 3006(b)(2) of the Affordable Care Act requires the Secretary to consider the following issues in developing a plan to implement a VBP program for HHAs:

- 1) The ongoing development, selection, and modification process for measures (including under section 1890 of the Act<sup>2</sup> and section 1890A of the Act, as added by section 3014 of the Affordable Care Act),<sup>3</sup> to the extent feasible and practicable, of all dimensions of quality and efficiency in HHAs.
- 2) The reporting, collection and validation of quality data.
- 3) The structure of value-based payment adjustments, including the determination of thresholds or improvements in quality that would substantiate a payment adjustment, the size of such payments, and the sources of funding for the value-based bonus payments.
- 4) Methods for the public disclosure of information on the performance of HHAs.
- 5) Any other issues determined appropriate by the Secretary.

Additionally, the statute requires the Secretary to consult with relevant affected parties and consider demonstrations relevant to a home health VBP program, but there is no statutory requirement to implement a VBP program for home health agencies

### **Current Home Health Quality, Reporting, and Payment Programs**

The plan to implement a home health VBP program will be designed so that it coordinates with existing home health program components to minimize the burden associated with implementing such a program. Some of these existing components include:

- *Payment Policies* that pay providers based on 60-day prospective payment episodes.
- *Quality and Utilization Measures* collected through the Outcome and Assessment Information Set (OASIS) assessment and the Home Health Consumer Assessment of Healthcare Providers (HCAHPS) survey.
- *Reporting Systems*, such as Home Health Compare, to communicate agency performance to stakeholders.

Each of these three components is described in more detail below.

Under the existing prospective payment system (PPS), Medicare pays HHAs on a nationally standardized 60-day rate adjusted for case-mix, wage index, and other factors. As long as a physician continues to recertify a patient's eligibility for the home health benefit, the home health PPS permits continuous participation in the program. At the end of a 60-day episode, a decision must be made whether or not to recertify the patient for a subsequent 60-day episode. The Affordable Care Act made a number of changes to the home health payment policy including a requirement that prior to certifying a patient as eligible for the home health benefit, a physician must document that he or she, or a non-physician practitioner, has had a face to face encounter with the patient.

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<sup>2</sup> Section 1890 of the Act contains provisions regarding the process for developing and maintaining health care performance measures by a consensus-based entity.

<sup>3</sup> Section 1890A of the Act contains provisions regarding the process for selecting quality and efficiency measures with input from multi-stakeholder groups, and dissemination and review of the measures used by the Secretary.

CMS currently collects data on a variety of measures that could be incorporated into a VBP program to reflect HHA performance. The Outcomes and Assessment Information Set (OASIS) assessment and the Home Health Consumer Assessment of Healthcare Providers and Systems (HHCAHPS) survey both collect data used to calculate current publicly-reported measures endorsed by the National Quality Forum (NQF). OASIS is the basis for performance measurement in the home health setting. This assessment is used both to measure changes in a patient's clinical and functional status between the start and end of care and to risk adjust these outcome measures. Completion of the OASIS, among other assessments, is one of the requirements an HHA must meet to participate in the Medicare program as set forth in the Medicare payment regulations and conditions of participation.<sup>4</sup> Using the OASIS data collected and transmitted by HHAs to their respective state agencies, CMS has been generating agency-specific quality reports since January 2001. Additionally, the Agency for Healthcare Research and Quality (AHRQ) developed the HHCAHPS, a public-private initiative to develop standardized surveys of patients' experiences with ambulatory and facility-level care.<sup>5</sup> CMS administers the ongoing use of the HHCAHPS and anticipates that the first reporting of patient experience data will occur in early 2012.

The Home Health Compare web site reports data on a number of home health measures.<sup>6</sup> The web site allows users to see how well patients of one agency fare compared to those of other agencies, and to compare each agency's outcomes to state and national averages. Since 2003, a subset of the OASIS-based performance measures has been made available to the public via Home Health Compare. Some HHCAHPS data will also be incorporated into the web site once the patient experience data become available.

### **Roadmap for Home Health Value-Based Purchasing Implementation Plan**

CMS continuously promotes improvement in quality, efficiency and outcomes for Medicare beneficiaries. Implementation of a home health VBP program will represent the next step in linking payment to performance for home health services. Several key elements will be involved in designing and implementing a VBP program for HHAs:

- Continuous Quality Improvement Framework – An effective VBP program requires selection of a comprehensive set of quality measures that directly reflect patient outcomes relevant in home health settings. When determining how to address quality measurement gaps in existing measures, CMS could consider additional measures associated with quality of home health care identified in peer-reviewed clinical literature, or in widespread use among States and private stakeholders. CMS could also consider measures suggested by the Measures Applications Partnership, a public-private partnership convened by the NQF.

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<sup>4</sup> Code of Federal Regulations, "Conditions of Participation: Home Health Agencies," 42 C.F.R. Part 484, [http://www.access.gpo.gov/nara/cfr/waisidx\\_99/42cfr484\\_99.html](http://www.access.gpo.gov/nara/cfr/waisidx_99/42cfr484_99.html)

<sup>5</sup> AHRQ CAHPS Overview. Retrieved from: [https://www.cahps.ahrq.gov/content/cahpsOverview/OVER\\_Intro.asp?p=101&s=1](https://www.cahps.ahrq.gov/content/cahpsOverview/OVER_Intro.asp?p=101&s=1)

<sup>6</sup> [www.medicare.gov/HomeHealthCompare/](http://www.medicare.gov/HomeHealthCompare/)

- Enhanced Data Infrastructure and Validation Process – Compilation of complete and accurate data sets are necessary for CMS to calculate performance scores and subsequently distribute payment incentives to HHAs.
- Scoring Rules for Individual Measures – CMS could evaluate either attainment or improvement (or both) of HHA performance on each measure. One potential definition, attainment, uses the direct calculation of the measure as the relevant performance metric and reflects each HHA’s level of performance. An alternate definition, improvement, examines the change in attainment between one measurement period and the next. It will also be necessary to define what constitutes quality performance for each measure in order to assess and reward HHAs consistent with policy priorities.
- A Performance Assessment and Evaluation Model – A VBP program will need to assess HHA achievements across all measures. A composite score could serve as both a summary of overall HHA performance and as a factor in determining the size of each HHA’s VBP payment. CMS could also decide to rely solely on the individual measure performance scores to determine VBP payments.
- Funding for the VBP Program – There are several options to link payments to performance. One option would be to continue the system currently in place for home health pay-for-reporting, where a portion of a provider’s annual update is based on their compliance in a previous year. Qualifying for the payment update would be linked to reporting of quality measures and performance on those measures. Another option would be to implement payment withholds from HHAs similar to the hospital VBP program where the payment withhold and payment adjustment occur in the same year, or result in a net adjustment.
- Transparency and Public Reporting – Making VBP program data publicly available will enable beneficiaries and their families to make informed decisions about their care. It will also allow stakeholders to better understand the care provided and to compare care across HHAs. Data could be posted on the [Home Health Compare](#) web site.
- Coordination across Medicare Payment System – In developing the VBP program CMS will seek to coordinate the home health VBP program with existing VBP, pay-for-reporting, quality monitoring, and public reporting systems. This effort will serve to eliminate payment and provider “silos” and will improve the quality of care and better coordinate care transitions models between all types of hospitals, HHAs, and skilled nursing facilities/nursing facilities for beneficiaries. We will also seek to align measures across programs and settings where appropriate.

## 2 Introduction

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The Medicare program includes a home health benefit under which eligible homebound elderly and disabled individuals can receive certain health care services. Medicare covers HHA services only when the person to whom the services are to be provided is an eligible Medicare beneficiary. The beneficiary must be confined to the home; under the care of a physician; in need of part-time/intermittent skilled nursing care or in need of physical therapy, speech-language pathology or have a continuing need for occupational therapy and be under a home health plan of care. The HHA that is providing the services to the beneficiary must have in effect a valid agreement to participate in the Medicare program. Covered services are provided by Medicare-certified HHAs and include visits from nurses; occupational, physical, or speech therapists; medical social workers; and home health aides. Medicare finances this care through both the Hospital Insurance (Part A) and Supplementary Medical Insurance (Part B) trust funds. Designed to enable beneficiaries to remain in their homes and reduce the need for hospital or skilled nursing facility care, home health is a rapidly growing part of the Medicare program. HHAs served 3.3 million Medicare beneficiaries in 2009, an increase from 3 million beneficiaries in 2005. During the same period, Medicare fee-for-service home health expenditures increased to \$18.9 billion from \$12.9 billion.

Section 3006(b) of the Affordable Care Act requires the Secretary to develop a plan to implement a VBP program for Medicare payments to HHAs.

Under the Affordable Care Act, the Secretary must consider the following issues in developing the plan:

- 1) The ongoing development, selection, and modification process for measures (including under section 1890 of the Act<sup>7</sup> and section 1890A of the Act, as added by section 3014 of the Affordable Care Act),<sup>8</sup> to the extent feasible and practicable, of all dimensions of quality and efficiency in HHAs.
- 2) The reporting, collection and validation of quality data.
- 3) The structure of value-based payment adjustments, including the determination of thresholds or improvements in quality that would substantiate a payment adjustment, the size of such payments, and the sources of funding for the value-based bonus payments.
- 4) Methods for the public disclosure of information on the performance of HHAs.
- 5) Any other issues determined appropriate by the Secretary.

The Secretary is also required to consult with relevant affected parties and consider experience with demonstrations that the Secretary determines are relevant to the home health VBP program.

### 2.1 CMS Goals for Value-Based Purchasing Programs

CMS views VBP as an important step in revamping how Medicare pays for health care services, moving the program toward rewarding better value, outcomes, and innovation instead of the

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<sup>7</sup> Section 1890 of the Act contains provisions regarding the process for developing and maintaining health care performance measures by a consensus-based entity.

<sup>8</sup> Section 1890A of the Act contains provisions regarding the process for selecting quality and efficiency measures with input from multi-stakeholder groups, and dissemination and review of the measures used by the Secretary.

volume of services provided. CMS considered the following principles in developing the plan to implement a home health VBP program to align with other value-based payment initiatives:

- Public reporting and value-based payment systems should rely on a mix of standards, processes, outcomes, and patient experience measures. Across all programs, CMS seeks to move as quickly as possible to the use of primarily outcome and patient experience measures. To the extent practicable and appropriate, outcomes and patient experience measures should be adjusted for risk or other appropriate patient population or provider characteristics. CMS could also explore adding an outcome measure that would focus on the efficient provision of care and desirable health outcomes.<sup>9</sup>
- To the extent possible and recognizing differences in payment system maturity and statutory authorities, measures should be aligned across Medicare's and Medicaid's public reporting and payment systems. CMS seeks to evolve to a focused core set of measures appropriate to the specific provider category that reflects the level of care and the most important areas of service and measures for that provider.
- To the extent practicable, measures used by CMS should be nationally endorsed by a multi-stakeholder organization. Measures should be aligned with best practices among other payers and the needs of the end users of the measures.
- The collection of information should minimize the burden on providers to the extent possible. As part of that effort, CMS will continuously seek to align its measures with the adoption of meaningful use standards for health information technology so that collection of performance information is part of care delivery.
- Providers could be scored on their overall achievement relative to national or other appropriate benchmarks. VBP scoring methodologies could also consider improvement in performance as an independent goal. Over time, scoring methodologies could be more weighted toward outcome, patient experience, and functional status measures. Scoring methodologies should be reliable, straightforward, and stable over time and enable consumers, providers, and payers to make meaningful distinctions among providers' performance.

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<sup>9</sup> For more information on a potential efficiency measure see page 34 of the Roadmap for Home Health Agency Value-Based Purchasing Implementation.)

### **3 Current Home Health Payment, Quality, and Reporting Programs**

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The design and development of a home health VBP program will be coordinated with Medicare's existing home health data collection, quality reporting, and payment systems. CMS has invested significant resources in the collection of clinical data and development of measures suitable for home health. Some of these measures have been publicly reported since 2003. In addition, the home health VBP program will be designed in such a way so as to support inevitable development in data, reporting, and payment processes that will emerge as a result of changes in health care delivery and payment systems; and quality measurement priorities.

#### **3.1 Recent Home Health Cost and Utilization Trends**

The prospective payment system (PPS) for home health provides HHAs a fixed per patient payment for each 60 day episode of home health services based on each patient's clinical and functional needs as well as service utilization. Home health care is often categorized as a type of post-acute care, although recent data indicates that the majority of home health episodes are not immediately preceded by a hospitalization or a post-acute care stay. In their 2011 Report to the Congress, MedPAC showed that in 2008, only 37 percent of episodes were preceded by a hospitalization or post-acute care stay. MedPAC defined episodes preceded by a hospitalization or post-acute care stay as those episodes which occurred less than 15 days after a hospitalization, skilled nursing facility, or inpatient rehabilitation facility stay. Of the 63 percent of episodes not preceded by a hospitalization or post-acute care stay, 19 percent did not have a home health episode in the 60 days preceding the episode.<sup>10</sup>

Variations in the use and cost of Medicare home health services and in the number and types of Medicare-certified home care providers could be attributed to revisions to Medicare payment and coverage policies. Medicare home health spending increased at an average annual rate of 26 percent between 1988 and 1996 after CMS clarified regulations about eligibility and coverage. Spending then declined by more than 50 percent in the two years after implementation of the Interim Payment System in 1999.<sup>11,12</sup> The use and cost of services, and the number of providers have rebounded in recent years under the home health PPS implemented in October 2000.

In recent years, home health PPS has grown rapidly, both in program expenditures and the number of Medicare beneficiaries. HHAs served 3.3 million beneficiaries in 2009, an increase of 10 percent from 2005. However, Medicare spending on HHAs grew at a disproportionate rate relative to the number of beneficiaries, reaching \$18.9 billion in 2009, an increase of nearly 50 percent from \$12.9 billion in 2005. The disproportionate increase could be attributed to an increase in the reporting of severe conditions among home health beneficiaries, an increase in the number of 60-day payment episodes each beneficiary receives, and increasing numbers of

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<sup>10</sup> MedPAC 2011 Report to Congress: Medicare Payment Policy p. 184.

<sup>11</sup> CE Bishop and S Karon, "The composition of home health care expenditure growth," *Home Health Care Services Quarterly* 10(1/2) (1989): 139-175.

<sup>12</sup> PW Shaughnessy, et al, "OASIS and outcome-based quality improvement in home health care: research and demonstration findings, policy implications, and considerations for future change," *Policy and Program Overview* 1 (2002).

financial outlier cases.<sup>13</sup> In addition, growth in case-mix, not related to real changes in patient health status, may also have contributed to the growth in expenditures.

### **3.2 Current Payment Methodology**

Adoption of a home health VBP program would modify the current home health payment methodology. This section briefly reviews the standard payment, adjustments to this payment, and the claims submission process.

#### **3.2.1 Standard Episode Payments**

Medicare pays HHAs on the basis of a national standardized 60-day episode rate that is adjusted for case mix, wage index, and non-routine medical supplies. Depending on the episode, the rate may be further adjusted as an outlier or as a partial episode payment (PEP), or paid on a per-visit basis via a low utilization payment adjustment (LUPA) when there are 4 or fewer visits in an episode.<sup>14</sup> To initiate an episode, a physician must approve a plan of care and certify that the patient is homebound and requires skilled services.<sup>15</sup> A patient can receive an unlimited number of 60-day home health episodes as long as a physician continues to recertify the plan of care. The HHA receives part of the anticipated payment at the beginning of the episode. After a completed episode, the HHA submits a final claim to receive the remaining payment, subject to any final reconciliation.

Case-mix adjustments modify the base payment rate the HHA receives for a given 60-day episode. Within five days of the start of care, the HHA must complete an Outcomes and Assessment Information Set (OASIS) assessment. Information from the OASIS assessment determines the episode's Health Insurance Prospective Payment System (HIPPS) code, which consists of the following five components:

- Episode timing,
- Clinical severity,
- Functional status,
- Service utilization, and
- Non-routine supplies

The episode timing, clinical, functional, and service utilization elements of the HIPPS code sort the patient into one of 153 case-mix groups. The non-routine supplies (NRS) factor assigns a separate payment level for non-routine medical supplies.

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<sup>13</sup> Acumen, LLC analysis of 2005-2009 home health claims.

<sup>14</sup> See Centers for Medicare & Medicaid Services, "Home Health Prospective Payment System Rate Update for Calendar Year 2011; Changes in Certification Requirements for Home Health Agencies and Hospices; Final Rule," 75 Fed. Reg. 70372 (November 17, 2010).

<sup>15</sup> Referring physicians may not work for or otherwise have a financial relationship with the HHA to maintain program integrity. The Affordable Care Act of 2010 includes a requirement, effective as of January 2011, that a physician certify that either he or a non-physician practitioner had a face-to-face encounter with the patient prior to or soon after the start of a home health episode.

Adjustments to the base payment rate determine the payment for each episode of care. The national standard conversion factor (\$2,192.07 in 2011) is multiplied by the weight associated with each case-mix group. To correct for geographic differences in wages, 77 percent of the resulting value is adjusted by the hospital wage index for the Core Based Statistical Area (CBSA) in which the beneficiary lives. In addition, the Affordable Care Act requires a 3 percent add-on payment for rural patients through December 2015. There is an additional prospective payment to cover any non-routine supplies (NRS) (wound care products, etc.) used during the episode. The NRS conversion factor (\$52.54 in 2011) is multiplied by weights associated with the six possible NRS severity levels from the HIPPS code. This payment is made whether or not NRS are actually provided during the episode. Any durable medical equipment (DME) the patient requires is paid based on a separate fee schedule outside of the home health PPS.

### **3.2.2 Additional Adjustments to Episodes**

In addition to the basic case-mix adjustment, episodes are subject to three additional types of adjustments: outlier payments, partial episode payments (PEPs), and low-utilization payment adjustments (LUPAs). The outlier payment is intended to protect HHAs from excessive financial risk due to resource-intensive patients. If the imputed episode cost, estimated from actual service utilization, exceeds the total episode payment by more than a fixed amount (equal to 67 percent of the conversion factor amount in 2011), the agency receives some portion (80 percent in 2011) of the excess. CMS recently implemented an Affordable Care Act provision that requires that outlier payments cannot account for more than 10 percent of an HHA's total payments. If a patient is transferred to another HHA in the middle of a 60-day episode or selects a Medicare Advantage (MA) plan during a PPS episode, the original episode is subject to a PEP adjustment. The PEP is a pro-rated payment, based on the number of days between the first visit and last visit (inclusive).<sup>16</sup> PEPs also apply when a patient is discharged early because all treatment goals have been met but then returns to the same agency within the 60-day time period. Upon returning to the HHA, a new 60-day episode begins and the original episode is subject to a PEP adjustment. Episodes which consist of four or fewer visits are eligible for LUPAs and are paid on a per-visit basis using defined rates for each discipline. LUPA payments are subject to wage-adjustment, but not to case-mix adjustment.

### **3.3 Quality Measurement in Home Health**

The overarching purpose of quality measurement in home health is to support the National Quality Strategy's three-part aim of better health care for individuals, better health for populations, and lower costs for healthcare. Implementation of a VBP program in this care setting will help achieve the three-part aim by linking the objectives of the National Quality Strategy to fee-for-service payment to HHAs. Over time, the program will also help align the goals for quality measurement and improvement at HHAs with those of other providers in the health system, promoting shared accountability across care settings for beneficiary care and quality improvement.

Measures should address as fully as possible, (given the availability of well-validated measures and the need to balance breadth with minimizing burden,) the six domains of measurement that arise from the six priorities of the National Quality Strategy: clinical care; person- and caregiver-

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<sup>16</sup> A Low Utilization Payment Adjustments (LUPA) episode cannot receive PEP adjustments.

centered experience and outcomes; safety; efficiency and cost reduction; care coordination; and community/population health. Measure sets should rely on a mix of standards, outcomes, process of care measures, and patient experience of care measures including measures of care transitions and changes in patient functional status, with an emphasis on measurement as close to the patient-centered outcome of interest as possible.

The measure sets should evolve so that they include a focused set of measures that reflects the most important areas of service and quality improvement for HHAs as well as addresses a core set of measure concepts that align quality improvement objectives across all provider types and settings.

The Outcome and Assessment Information Set (OASIS)<sup>17</sup> is a group of data elements that represent core items of a comprehensive assessment for an adult home care patient, and that form the basis for measuring patient outcomes for purposes of outcome-based quality improvement (OBQI). The OBQI Outcome Report includes 37 risk-adjusted outcome measures, derived from OASIS data, which measure changes in a patient's health status between two or more time points. An example of an OASIS-based outcome measure is whether a patient improves in the ability to ambulate independently between home health start of care and discharge, with ambulation ability measured according to the precise zero-to-six scale in the OASIS-C ambulation item. The OBQI Outcome reports provide agencies a series of outcomes for their patients in the current year, compared to prior year and to national reference (*i.e.*, benchmarking) values.<sup>18</sup>

The OASIS is a key component of Medicare's partnership with the home care industry to continuously improve and monitor home health care outcomes. It is also an integral part of the Conditions of Participation (COPs) for Medicare-certified HHAs. As required by the Medicare regulations<sup>19</sup> to participate in the program HHAs must complete comprehensive assessments incorporating the OASIS assessment items. OASIS enables HHAs, clinicians, CMS, and quality improvement organizations to measure clinical and functional outcomes and coordinate care planning for each patient. CMS recently implemented patient experience surveys, HHCAHPS, adding beneficiary perspective to home health quality measurement. The surveys will impact the CY 2012 Annual Payment Update. The measures are expected to be publicly reported in mid-2012.

The following section reviews the history of OASIS, including recent refinements to improve its usefulness for quality measurement. HHCAHPS is discussed in more detail in Sections 3.4.1 and 3.4.2 below.

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<sup>17</sup> For additional, please refer to CMS' web site that disseminates policy and technical information related to OASIS: [https://www.cms.gov/OASIS/01\\_Overview.asp#TopOfPage](https://www.cms.gov/OASIS/01_Overview.asp#TopOfPage)

<sup>18</sup> . For additional information, refer to: [http://www.cms.gov/HomeHealthQualityInits/16\\_HHQIOASISOBQI.asp#TopOfPage](http://www.cms.gov/HomeHealthQualityInits/16_HHQIOASISOBQI.asp#TopOfPage)

<sup>19</sup> Code of Federal Regulations, "Conditions of Participation: Home Health Agencies." [http://www.access.gpo.gov/nara/cfr/waisidx\\_05/42cfr484\\_05.html](http://www.access.gpo.gov/nara/cfr/waisidx_05/42cfr484_05.html)

### 3.3.1 Authorizing Statutes and Legislation

Since 1999, the COPs have required that Medicare-certified HHAs collect and submit OASIS data when evaluating adult (18 years or older) non-maternity patients receiving skilled services with Medicare or Medicaid as a payer source. OASIS data must be collected for these patients at five specific time points during the home health episode:

- admission to home care,
- resumption of care after an inpatient stay,
- recertification every 60 days that the patient remains in care,
- transfer to an inpatient facility, and
- discharge from home care.

Since 2000, agencies have also been required to encode and transmit patient OASIS data to their respective state OASIS repositories. The Deficit Reduction Act (DRA) of 2005 reinforced these reporting requirements for HHAs.<sup>20</sup> Section 5201(c)(2) of the DRA added Section 1895(b)(3)(B)(v)(II) to the Act, requiring that “every [HHA] shall submit to the Secretary [of Health and Human Services] such data that the Secretary determines are appropriate for the measurement of healthcare quality.” This program is known as the home health pay-for-reporting program. Since 2007 CMS has had the authority to assess payment adjustments for failure to submit data for the reporting year.

### 3.3.2 OASIS Outcome Measures and Risk Adjustment

Home health experts and CMS, partnering with the industry, originally designed OASIS to collect quality information in the home health setting. OASIS, along with clinical and empirical research, makes it possible to measure changes to clinical and functional status between the start and end of care and to risk adjust these outcome measures.

OASIS outcome measures are calculated for completed quality episodes, defined as the time period between the OASIS assessment submitted at admission to home care or resumption of home care and the OASIS assessment submitted at transfer to an inpatient facility or discharge from home care. All completed quality episodes receive a value of zero, one, or missing for each relevant OASIS measure. For example, the “Improvement in Ambulation” measure is scored as zero if the beneficiary’s ability to walk does not improve during the episode. Conversely, this measure is scored as one if the beneficiary’s ability to walk does improve. An episode receives a “missing” value if the patient had no disability in ambulation at the start of care. Episode scores of zero or one are termed “valid,” and those with a score of one are termed “successful.” To calculate a measure score on the HHA level, the sum of all successful episodes for a particular measure is divided by the sum of all valid episodes for that measure.

Outcome measures require risk adjustment to capture differences in patient characteristics when they enter home care, including diagnoses, functional status, and past treatment. For example, patients who enter home health after a hospital stay are more likely to experience an additional hospitalization during the home health episode than are those admitted from the community. Risk adjustment for OASIS-based outcome measures uses information from the start-of-care

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<sup>20</sup> P.L. 109-171.

assessment to predict the patient's likely outcome. Risk adjustment models are used to calculate an agency's predicted performance and subsequently adjust reported measures based on whether the agency did better or worse than expected, given its particular mix of patients.

The OASIS data collected and transmitted by HHAs to their respective state agencies has allowed CMS to generate agency-specific quality reports since January 2001. These reports are available to Medicare-certified HHAs through the Certification and Survey Provider Enhanced Report (CASPER) system and the CMS's Quality Improvement and Evaluation System (QIES) web site [<https://www.qtso.com>], They allow agencies to incorporate information about their performance into their overall patient care quality monitoring and improvement programs.

### **3.3.3 OASIS Dataset Revision for Improved Quality Measurement**

Between 2002 and 2006, CMS sponsored several initiatives to revise the OASIS and related measures. These revisions were in response to suggestions and feedback from the home health industry and supported new quality measurement and reporting initiatives. In addition, changes were recommended by governmental and policy-making bodies, such as the Institute of Medicine, the Agency for Healthcare Research and Quality (AHRQ), MedPAC, and the NQF.

In response to this feedback, CMS funded a large-scale revision of OASIS, including both: 1) refinements to *existing* data items (and the corresponding outcome measures); and 2) the development and testing of *new* data items primarily for the measurement of home health processes of care. CMS called the resulting collection of items "OASIS-C." In 2008, CMS submitted the new OASIS-C-based measures to the NQF for consideration, along with the previously-endorsed measures. In 2009, a total of 23 OASIS-C based measures were endorsed as voluntary consensus standards for accountability and public reporting. The OASIS-C process measures were granted a two-year Time Limited Endorsement (TLE) by the NQF, to allow additional data collection and analyses to ensure reliability and validity. These measures are currently under review by the NQF for full endorsement.

### **3.3.4 The CARE Instrument**

As required under Section 5008 of the Deficit Reduction Act of 2005 (DRA), CMS implemented the Post-acute Care Payment Reform Demonstration (PAC-PRD) in January 2008 and it continued for a 3-year period. The project collected standardized information on patient health, functional status, resource use and outcomes associated with treatment in each PAC provider setting. During the data collection period, the Continuity Assessment Record and Evaluation (CARE) tool was used at admission to and discharge from the acute hospital and PAC settings (*e.g.*, home health care, skilled nursing facilities, inpatient rehabilitation facilities and long-term care hospitals) to measure the health and functional status, changes in severity, and other outcomes for Medicare patients.

### **3.3.5 Other Types of Home Health Measures**

Most current Medicare demonstrations rely, to the extent possible, on pre-validated existing performance measures rather than engaging in the validation process separately. There are a number of reasons for this approach. A rigorous performance measurement validation process is costly and time consuming. To meet the overall performance measurement needs of Medicare, CMS has a well-established process for measurement development, selection and validation.

External input is achieved through these processes, largely through submission and review by the NQF. Products from this CMS performance measurement development and validation process are then utilized across Medicare, including in both demonstrations and national programs. CMS could use ongoing processes for the development, selection, and modification of measures for a home health VBP program (see Section 3.4.1).

### **3.4 Public Reporting of Home Health Measures**

Since 2003, the Medicare Home Health Compare web site<sup>21</sup> has publicly reported a subset of the OASIS-based measures. The web site provides information for consumers and their families about the quality of care provided by individual HHAs. This empowers consumers to make informed healthcare decisions while allowing them to compare each agency's outcomes to state and national averages. These public reporting activities are described below.

#### **3.4.1 Measures Derived from OASIS-C Data**

Public reporting of the new and revised OASIS-C home health quality measures underwent a transition period beginning in January 2010 with the collection of OASIS-C data. This transition continued until July 2011 with public reporting of the newly revised measures. In addition to moving from calculating measures based on the earlier OASIS-B1 data to the new OASIS-C dataset, CMS revised the Home Health Compare web site to incorporate new NQF-endorsed measures. Thirteen NQF-endorsed process measures have been published on the Home Health Compare web site since October 2010. Seven NQF-endorsed outcome measures, one utilization measure, and one potentially-avoidable event (PAE) measure were first publicly reported in July 2011 after risk adjustment models were revised to incorporate OASIS-C items. Descriptions of all OASIS-C publicly reported home health measures are included in Appendix A. These descriptions include quality measure definitions, the OASIS-C items used to calculate the measures, and information on numerator, denominator, and exclusions.

**Description of NQF-endorsed measures that are publicly reported** - Table 2 below lists the NQF-endorsed home health measures that are currently publicly reported. The table divides the domains into functional and clinical status, process, utilization, and patient experience, which are based on the NQF's four measure evaluation criteria, including importance, scientific acceptability, feasibility, and usability. Appendix A contains more detailed measure definitions.

**The Functional and Clinical Status domains** incorporate measures that directly reflect the actual health status of home health beneficiaries. Examples of functional and clinical status measures in the home health population include improvement in the status of wounds, improvement in cognitive functioning, and improvement in ambulation. These measures can capture events that will occur for most patients, such as stabilization in various types of functional ability. They can also reveal adverse events.

**The Utilization domain** includes measures that directly reflect consumption of medical care in other settings and indirectly measure beneficiary health changes. An HHA whose beneficiaries are stabilizing or improving more than similar beneficiaries at other HHAs might consequently experience lower hospitalization rates.

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<sup>21</sup> For additional information related to the Home Health Compare web site, refer to <http://www.medicare.gov/homehealthcompare/search.aspx>

**The Patient Experience domain** includes measures that assess patients' responses to the services they received from the HHA. Although patients may not be the most knowledgeable informants about the technical quality of the care they receive, they are the most knowledgeable informants about their experiences with care. The recently required HHCAHPS survey provides detailed information about patients' experience with care in the home health setting and the data needed to calculate patient experience measures. In addition to questions asking about overall experience with the quality of care they received and whether patients would recommend the HHA to a friend, patients are asked to report whether, or how often, specific events or behaviors that are indicators of home health care quality occurred. Reports about events and behaviors are more specific, actionable, understandable, and objective than general ratings. These types of questions are quite different than general satisfaction ratings. CAHPS questions about specific aspects of care allow users to identify areas of care that are strong and those that need improvement.

**The Process domain** identifies agencies that consistently follow clinical best practices and invest in quality improvement initiatives. These measures are generally directly under the control of HHAs.

**Table 2: NQF-Endorsed Measures**

Clinical and Functional Status	Process <sup>22</sup>	Utilization	Patient Experience
Improvement in Bathing	Influenza Immunization Received for Current Flu Season	Acute Care Hospitalization	Patient Care (Composite Measure)
Improvement in Ambulation-Locomotion	Pneumococcal Vaccine Ever Received	Emergency Department Use without Hospitalization <sup>23</sup>	Communication (Composite Measure)
Improvement in Bed Transferring	Timely Initiation of Care		Specific Care Issues (Composite Measure)
Improvement in Management of Oral Medication	Depression Assessment Conducted		Overall Rating
Improvement in Dyspnea	Multifactor Fall Risk Assessment Conducted for Patients 65 and Over		Willingness to Recommend
Improvement in Pain Interfering with Activity	Pain Assessment Conducted		
Improvement in Status of Surgical Wounds	Pressure Ulcer Prevention in Plan of Care		
	Pressure Ulcer Prevention Implemented in Short Term Episodes		
	Pain Interventions Implemented During Short Term Episodes		
	Drug Education Implementation in Short Term Episodes		
	Diabetic Foot Care Implemented in Short Term Episodes		
	Heart Failure Symptoms Addressed During Short Term Episodes		

<sup>22</sup> Process measures currently have time-limited NQF endorsement and are being evaluated for full endorsement.

<sup>23</sup> This measure is currently being re-specified using Medicare claims-data and may be publicly reported in Late 2011 or Early 2012.

### **3.4.2 Collection and Reporting of Home Health Consumer Experience Data**

As described previously, CMS administers the Home Health Consumer Assessment of Healthcare Providers and Systems (HHCAHPS), a public-private initiative to develop standardized surveys of patients' experiences with ambulatory and facility-level care.<sup>24</sup> The HHCAHPS survey includes 34 questions covering topics such as specific types of care provided by home health providers, communication with providers, interactions with the HHA, and global ratings of the agency. The survey was tested nationally in 2009-2010 and was approved by OMB in July 2009.<sup>25</sup> Quality composite measures and two global measures based on HHCAHPS data were endorsed by the NQF in March 2009.

CMS intends to expand the public reporting of quality measures for Medicare-certified HHAs to include measures based on the HHCAHPS data by using composite measures and global ratings of care. Each composite measure consists of four or more questions regarding one of the following: patient care; communications between providers and patients; and specific care issues (medications, home safety, and pain). Two global ratings will be reported. The first asks the patient to assess the care given by the HHA's care providers, and the second asks about the patient's willingness to recommend the HHA to family and friends. (See Section 3.4.1 for CAHPS survey details).

### **3.4.3 Reporting Home Health Quality Data for Annual Payment Update**

HHAs are required as part of the Medicare Conditions of Participation (COPs) to conduct patient-specific comprehensive assessments of each patient's current health status and other information that may be used to develop a patient's plan of care and demonstrate progress toward the plan of care goals. The assessment information is collected using the OASIS assessment tool. Additionally, payments for an episode of Medicare home health care are adjusted for patient severity by case-mix based on patient's clinical and functional status and service utilization as reported on the OASIS.

Section 1895(b)(3)(B)(v) of the Act, as added by section 5201(c) of the DRA of 2005,<sup>26</sup> requires a payment adjustment if a HHA does not submit data for the reporting year, "the home health market basket percentage increase applicable for such year shall be reduced by 2 percentage points." The 2 percentage point reduction applies to annual payment updates beginning on January 2007 and each year thereafter. HHAs that meet the reporting requirements are eligible for the full home health market basket percentage increase. The information collected via the OASIS assessment instrument meets the requirements of the statutory requirement without providing an additional burden of reporting through a separate mechanism. Therefore, in implementing pay-for-reporting, CMS required HHAs to submit OASIS data "in order to receive

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<sup>24</sup> Agency for Healthcare Research and Quality, "CAHPS Overview."

<sup>25</sup> Home Health Care CAHPS Survey, "About the Home Health CAHPS Survey," <https://www.homehealthcahps.org/Default.aspx?tabid=88>

<sup>26</sup> Section 5201 of the Deficit Reduction Act of 2005 can be accessed at: <https://www.cms.gov/HomeHealthQualityInits/downloads/HHQIDRASection5201.pdf>

the full home health market basket update to the rates”.<sup>27</sup> The current pay-for-reporting program acts to reinforce the COP requirements for completing comprehensive patient assessments. A home health VBP program would build on those reporting requirements and move to hold HHAs accountable for providing quality patient focused care.

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<sup>27</sup> Centers for Medicare & Medicaid Services. “Home Health Prospective Payment System Rate Update for Calendar Year 2010: Final Rule” (57 FR 58110, November 10, 2009).

## **4 Literature Review, Experience with Demonstrations and Quality Initiatives and Consultation with Affected Parties**

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Prior to the enactment of the Affordable Care Act, the Medicare program, the private sector, and the States had all devoted significant effort to implementing innovative care delivery and payment models. In these earlier policy examples, elements of VBP were often termed pay-for-reporting. Some initiatives linking payment to quality, such as the Home Health Pay-for-Performance Demonstration and Nursing Home Value-Based Purchasing Demonstration, will soon have evaluation results completed or are still under way and therefore do not have final quality and performance results available at this time. The pay-for-performance initiatives align with increased emphasis by CMS to improve quality reporting systems for the Medicare program. The Department of Health and Human Services (HHS) and CMS began launching several quality initiatives in 2001 to ensure quality health care for all Americans through accountability and public disclosure.

In addition, The Affordable Care Act requires creation of a National Quality Strategy to include HHS agency-specific plans, goals, benchmarks, and standardized quality metrics where available. These elements are to be developed through collaboration with participating agencies and private sector consultation. Nation-wide support and subsequent impact will be optimized when entities responsible for implementing strategic plans participate in their development. Efforts are underway across HHS to obtain additional private sector input on specific goals, benchmarks, and quality metrics. The Agency for Healthcare Research and Quality is tasked with supporting and coordinating the implementation, planning and further development and updating of the Strategy.

As implementation of the National Quality Strategy proceeds, it will be periodically refined, based on lessons learned in the public and private sectors, emerging best practices, new research findings, and the changing needs of the United States. Updates on the Strategy and the progress in meeting the three aims of better care, improved health, and making quality care more affordable will be delivered annually to Congress and the American people.

CMS conducted a literature review of Medicare pay-for-performance demonstrations and related State and private sector quality initiatives. Efforts to obtain additional information included the following:

- Reviewed the Home Health Pay-for-Performance Demonstration
- Conducted a Literature Review of CMS, State, and Private Sector Quality Initiatives.
- Held a Special Open Door Forum on February 24, 2011 with 755 participants.
- Interviewed experts on HHA Performance Measurement and/or VBP Implementation.

### **4.1 CMS, Value-Based Purchasing Demonstrations**

This section provides information on quality initiatives implemented by CMS that varied in terms of care setting, measures, performance-scoring methodologies, payment calculations, and outcomes. For information on State and private sector initiatives see Appendix B.

CMS demonstrations include:

- Medicare Nursing Home Value-Based Purchasing Demonstration
- CMS Premier Hospital Quality Initiative Demonstration
- Care Management for High Cost Beneficiaries
- Home Health Pay-for-Performance Demonstration

#### **4.1.1 Medicare Nursing Home Value-Based Purchasing (NHVBP) Demonstration**

The NHVBP Demonstration is a 3-year demonstration that began July 1, 2009 with the following initial number of participating facilities and states represented: Arizona: 41; New York: 79; and Wisconsin: 62.<sup>28</sup> Most of these facilities are dually-certified and licensed both as skilled nursing facilities under Medicare and as nursing facilities under Medicaid. Facilities in these three States volunteered to participate in the demonstration. CMS annually assesses the performance of participants across four quality-of-care domains: (1) nurse staffing, (2) resident outcomes, (3) appropriate hospitalizations, and (4) survey deficiencies. The demonstration requires participating facilities to submit nurse staffing data that includes payroll, resident census, and agency staff data. CMS also uses data collected from the minimum data set<sup>29</sup> (for outcome measures), inpatient hospital claims (for hospitalization rates), and State health inspection surveys for scoring facilities. CMS risk-adjusts each of these measures (except for survey deficiencies) to capture actual differences in quality compared with simply capturing differences in patient populations or facility characteristics. This program was designed to be budget neutral. CMS derives funding for incentive payments from a State-specific “payment pool” generated by the project’s Medicare savings. The demonstration awards financial incentives on the basis of attainment or improvement. It also ranks facilities relative to one another within each State; the top performers are those that ranked highest in overall care relative to other facilities.

Although the demonstration is still under way and overall evaluation results are not yet available, several of the facilities that participated in the NHVBP Demonstration have reported improvement in their quality measures. For example, one facility reported that it decreased the incidence of pressure ulcers from 1.75 percent of residents to 0.3 percent of residents by implementing several facility-wide quality initiatives, ranging from improving staff education to ensuring that residents had proper footwear to prevent foot ulcers (Gurwin Jewish Nursing, 2010). In addition to lower rates of pressure ulcers, the facility also noticed an improvement in the length of time required for pressure ulcers to heal. After implementing a similar program to lower the use of physical restraints on residents, and through better staff education, family

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<sup>28</sup> Additional detail on the CMS NHVBP Demonstration can be found at:  
<http://www.cms.gov/demoprojectsevalrpts/md/itemdetail.asp?filterType=dual,%20keyword&filterValue=Value-based&filterByDID=0&sortByDID=3&sortOrder=ascending&itemID=CMS1198946&intNumPerPage=10>

<sup>29</sup> The Minimum Data Set (MDS) is a validated, federally-required, patient assessment instrument used to collect health and functional status data for all residents who receive post-acute, short-term and long-term care through Medicare or Medicaid certified nursing facilities. Interdisciplinary teams working in facilities use the MDS to assess residents. MDS 3.0 replaced MDS 2.0 as of October 1, 2010. MDS 3.0 introduces significant improvements by (1) capturing the resident’s voice through resident interviews to assess psychological health, pain and personal preferences; (2) incorporating clinical assessment methods for determining cognitive and functional state, pressure ulcer staging and delirium; and (3) promoting culture change by engaging interdisciplinary teams to develop care plans aimed at delivering high quality care.

involvement, and care coordination, the facility reported that it was able to reduce its use of the restraints by half within one quarter of the year.

Another nursing facility reported significant improvements in its hospital admission rates for heart failure (Newcombe, 2010). Prior to its involvement in the NHVBP demonstration, 25 to 35 percent of the facility's hospital admissions were due to heart failure. The facility's heart failure prevention program revolved around improving staff education and care coordination. The facility assessed each patient to determine the risk of heart failure, which it then color-coded and subsequently indicated on the patient's doors and charts. The facility documented patients' weights daily, as well as heart failure-specific and other clinical assessments for early indications of heart failure. It also made facility-wide changes, such as eliminating high-sodium convenience foods and replacing many unhealthy food options with heart-healthy ones. The percentage of acute-hospital transfers with a diagnosis of heart failure fell from a high of 25 percent to under 5 percent one year later.

### **Lessons Learned from the NHVBP Demonstration:**

- **Data Collection, Quality Measurement and Performance Results:** The demonstration collects data and provides participating facilities with annual performance updates on their quality. The lag time between data collection and dissemination of performance results limit the frequency of updates. Certain features of the demonstration such as collecting payroll data and calculating turnover, calculating avoidable hospitalizations and defining episodes have required CMS and the facilities to implement and develop new processes.
- **Sustained Level of Participation:** Currently, 179 facilities participate in the NHVBP Demonstration. The high level of participation could be attributed to the flexibility that facilities have to implement initiatives that preserve or enhance the quality of care for beneficiaries. Facilities participate in quarterly conference calls that allow them to share lessons learned.
- **Payroll Data:** The NHVBP Demonstration requires participating facilities to submit nurse staffing data that includes payroll, resident census, and agency staff data. This requirement added a significant learning curve for participating facilities. Some facilities experience more difficulty providing the payroll data in the prescribed format than others. Generally, facility chains are more efficient with the payroll data submission.

#### **4.1.2 CMS Premier Hospital Quality Initiative Demonstration**

As a precursor to the Hospital Inpatient Quality Reporting Program, CMS implemented the Premier Hospital Quality Incentive Demonstration (HQID) in October 2003. This demonstration project included hospitals in the Premier Perspective system (Premier Inc. operates a nationwide organization of not-for-profit hospitals). Under the demonstration, Premier collected and submitted to CMS patient- and hospital-level quality data from participating member hospitals. CMS used these data to create an aggregate quality score for each participating hospital, and the top performers each year received a quality incentive bonus payment.

CMS gained several years of experience using financial incentives to promote improvement in the quality of hospital inpatient care through this demonstration.<sup>30</sup> The average composite quality scores (CQS), which represents an aggregate of all quality measures within each clinical area, improved significantly between the inception of the program and the end of Year 5 (September 30, 2008):<sup>31</sup>

- from 87.5 percent to 97.9 percent for patients with acute myocardial infarction;
- from 84.8 percent to 97.7 percent for patients with coronary artery bypass graft;
- from 64.5 percent to 93.8 percent for patients with heart failure;
- from 69.3 percent to 95.4 percent for patients with pneumonia;
- from 84.6 percent to 97.3 percent for patients with hip and knee replacement; and
- from 85.8 percent to 93.1 percent for Surgical Care Improvement Project patients.

The total improvement in average CQS over HQID's first five years was 18.3 percentage points. Between HQID's fourth and fifth years, the average CQS increased 1 percentage point.

### **Lessons Learned from the HQID**

- Operations, data collection and validation costs: CMS learned that data collection and validation can be expensive, time consuming, and sometimes difficult. Any data collection process that is developed should be designed so that it obtains the needed data while minimizing collection costs in order to focus organizational efforts on healthcare goals.
- Time lags of reporting and incentives: CMS learned that there can be time lags between the reporting of quality data and the payment of incentives due to data collection and processing. Policies and procedures need to be designed in order to minimize delays.
- Control group also improves, impact of VBP: Health care policies and operations do not occur in a vacuum, but in a dynamic environment. We found that in the HQID, the control group improved as much and nearly as fast as the experimental group. Thus, the value of VBP should be defined in terms that also measure the purchasers' goals and internal quality improvement dynamics at the providers.
- Need to measure transitions and community care: Some of the most important issues in terms of value to the patient include the quality of care transitions to the community and the quality of the health care in the community. While acknowledged as important, these are concepts that are not solely under the control of the hospital, and are under the control of myriad community providers and require design collaboration.

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<sup>30</sup> Additional information on CMS' HQID, including the number of participating hospitals and states, can be accessed at: [http://www.cms.gov/HospitalQualityInits/35\\_HospitalPremier.asp#TopOfPage](http://www.cms.gov/HospitalQualityInits/35_HospitalPremier.asp#TopOfPage)

<sup>31</sup> The CQS improvements for the first five clinical areas are aggregated over five years, beginning in October 2003. CMS established the SCIP clinical area measurement baseline in 2006. Results of CMS' Premier Hospital Quality Incentive Demonstration can be accessed at: [http://www.cms.gov/HospitalQualityInits/35\\_HospitalPremier.asp#TopOfPage](http://www.cms.gov/HospitalQualityInits/35_HospitalPremier.asp#TopOfPage)

- Scoring methods and measures: Quality scoring measures and methods are technical and complex concepts, and may change on a regular basis depending on developments in clinical science and measurement methods. Specialized experts need to be involved in this process, and the system needs adequate resources to provide development and staffing for the process.

#### **4.1.3 Care Management for High Cost Beneficiaries**

CMS initiated the Care Management for High Cost Beneficiaries (CMHCB) program in 2005. Participating organizations had the opportunity to share in any Medicare savings beyond savings targets established at the start of the demonstration. The planned three-year demonstration involved six health care organizations that focus on congestive heart failure (CHF), diabetes, and/or chronic obstructive pulmonary disease. In 2009, CMS granted a three-year extension for three of the six organizations that achieved the Medicare savings target of 5 percent. The three participants in the extension are Key to Better Health, a division of Village Health; Massachusetts General Care Management Program; and Health Hero Network's Health Buddy program. The Key to Better Health program in New York provides intensive management directed by nephrologists in supplementary clinics to beneficiaries with chronic kidney diseases. The Massachusetts General Care Management Program in Boston provides management services and specialized programs for patients with chronic conditions, and the Health Buddy program in Washington provides remote monitoring devices to patients and checks the patients' conditions to prevent complications. Evaluations of these programs will be available after the demonstration is complete.

#### **4.2 Home Health Pay-for-Performance Demonstration**

The Home Health Pay-for-Performance Demonstration<sup>32</sup> was a two-year demonstration, which began in January 2008 and ended in December 2009. It demonstrated the impact of financial incentives on the quality of care provided to home health patients in traditional fee-for-service Medicare and on their overall Medicare costs. The demonstration distributed funds across home HHAs that either maintained high levels of quality or achieved significant improvement in quality of care. Under the demonstration, 576 (280 treatment vs. 287 control group) HHAs participated. The treatment group included, by region, the Midwest (IL = 66); North East (CT and MA = 48); South (AL, GA, and TN = 99); and West (CA = 67). The demonstration distributed funds to HHAs that either maintained high levels of quality or achieved significant improvement as measured by seven Outcome and Assessment Information Set (OASIS) measures (1) Incidence of Acute Care Hospitalization; (2) Incidence of Any Emergent Care; (3) Improvement in Bathing; (4) Improvement in Ambulation/Locomotion; (5) Improvement in Transferring; (6) Improvement in Management of Oral Medications; and (7) Improvement in Status of Surgical Wounds. These are all NQF-endorsed measures. Medicare savings for the

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<sup>32</sup> Recruitment for participation began in October 2007, and implementation of the demonstration began in January 2008, and continued through December 2009. The following states participated in the demonstration: Connecticut and Massachusetts in the Northeast region; Illinois in the Midwest region; Alabama, Georgia, and Tennessee in the South region; and California in the West region. Participating agencies represented more than 30 percent of all Medicare-certified HHAs in the participating states. Additional background about CMS' Home Health Pay-for-Performance Demonstration can be accessed at:

<http://www.cms.gov/DemoProjectsEvalRpts/MD/itemdetail.asp?filterType=none&filterByDID=-99&sortByDID=3&sortOrder=descending&itemID=CMS1189406&intNumPerPage=10>

demonstration were determined by comparing total Medicare costs for beneficiaries receiving care from the intervention group's HHAs with the costs for beneficiaries served by the control group HHAs in the same region, including the costs associated with care received from other providers. These costs include Medicare payments for home health care, inpatient hospital care, nursing home and rehabilitation facility care, outpatient care, physician care, durable medical equipment (DME), and hospice care.

## **HHA Perspectives**

Abt Associates contacted HHAs that participated in the treatment group of the Home Health Pay-for-Performance demonstration to learn about their experiences and recommendations for a large-scale home health VBP program. These interview summaries are separate from the expert interviews and CMS Special Open Door Forum. Nine HHAs representing different geographic regions, agency sizes, and demonstration outcomes participated in individual one-hour interviews. Participants included CEOs, directors, and managers of quality improvement or clinical operations for agencies, including corporate representatives from HHA networks. Their responses are summarized below.

### *Benefits of Participation*

The main benefits of the demonstration reported by participants were that it heightened awareness of their performance on specific measures and provided helpful resources for quality improvement. Most agency representatives reported that they joined the demonstration because it supported quality improvement in areas that aligned with their existing efforts and goals. Participants reported the demonstration introduced their staff to the concept of VBP, which they anticipate will be widely implemented in the future. The financial incentive was not cited as a main motivating factor in part because participating HHAs did not know whether they would be assigned to the demonstration's intervention or comparison group, or if their performance would qualify them for an incentive payment under the demonstration. Some HHAs did not report significant changes in quality outcomes as a result of the demonstration. Although one noted improvements in oral medication and ADLs, most attributed improvements in outcomes to pre-existing quality improvement activities and "what they were already doing anyway."

### *Burdens*

Participants did not report any administrative burden associated with participating in the demonstration. Several agencies did invest in new software, programs to prevent patient falls, telemonitoring, and nurse reviewers at the time of the demonstration. One HHA network began circulating quarterly reports comparing the performance of control and treatment agencies within their corporation. These investments were coincidental with the demonstration and those who received an incentive payment reported they recouped their costs. Most HHAs implemented their new programs or procedures for all patients regardless of payer status; however, one agency focused certain efforts on just Medicare FFS patients.

### *Lessons Learned*

Interviewed participants reported they learned the importance of involving staff with decisions about agency VBP implementation, to allow them to assume an appropriate level of

responsibility and to prepare them for a future shift to that system. Additionally, agencies reported they increased their use of quality improvement reports (provided by CMS and by private vendors) to analyze their progress in achieving outcome goals, target areas for new initiatives, and hold staff accountable. One participant noted her agency learned that it needed to focus more on implementing best practices to keep up with industry-wide quality improvement.

### *Recommendations*

Participants uniformly believed that all Medicare-certified HHAs should be required to participate in future VBP programs so all agencies experience the potential burdens and benefits of the program. Some HHA representatives expressed concern that without mandatory participation, low-performing agencies in areas with limited competition may not choose to pursue quality improvement. Mandating participation in the program would also avoid administrative confusion stemming from multiple compensation structures.

Most HHAs said that CMS should only include Medicare FFS patients in future VBP programs because Medicare Advantage plan case managers may restrict or deny an agency's treatment recommendations for a patient, which affects outcomes for those patients. These agencies also believed any benefits from a Medicare FFS program (such as adoption of best practices) would ultimately be shared by all patients. Alternatively, some participants were in favor of including all patients regardless of payer source as long as risk adjustment is adequate.

In general, the participants felt that the outcome measures in the demonstration were appropriate, though some recommended grouping several of the functional outcomes in one ADL measure. Some were concerned that outcome indicators like emergent care and hospitalizations up to 30 days after discharge may be beyond the HHA's ability to improve, effectively punishing agencies for hospitalizations that were beyond their control and encouraging agencies to cherry pick patients to improve their scores. Participants saw process measures as something that an HHA can impact, and they supported using process measures as long as these measures are accurately reported. HHAs opposed using staffing measures because staffing is already regulated and should be managed at the discretion of the agency.

Participants had mixed opinions about incorporating cost or efficiency measures. Some viewed those measures as a way to standardize home care costs, as long as quality is monitored. Others did not think cost or efficiency measures would achieve any cost savings. All but one of the agencies expressed concerns about the inclusion of the HHCAHPS patient experience survey in a VBP program because it is viewed as subjective and too lengthy for elderly clients, with some respondents asserting that patients fail to distinguish between their various medical providers when assessing their HHA. Some participants questioned whether there is an inverse correlation between patient experience and improvement in functional outcomes in situations where patients feel that HHA staff are being "too aggressive" in the pursuit of treatment goals.

Participants were generally supportive of using OASIS data for measuring quality improvement in a VBP program, but some were concerned about inaccurate results due to providers lacking sufficient education on standards for accurate OASIS data reporting, or "gaming" of OASIS data by providers seeking to improve their scores. Interviewed participants also were supportive of the use of claims-based data to calculate outcomes for hospitalization and emergent care use.

In general, participants supported defining peer groups at the state level, though some recommended comparisons by region, patient demographics, patient payer source, referral source, and agency size. Allowing agencies in chains or consortia or other multi-provider entities to be ranked and rewarded under VBP as a group was not seen as appropriate, unless agencies sought to do this in order to share resources such as telemonitoring. All HHAs were in favor of maintaining incentives for both performance (with a minimum attainment threshold) and improvement, though several valued performance over improvement. In addition to financial rewards, participants supported awarding agencies a symbol of achievement that could be used for marketing. Other suggestions included exempting high performers from state surveys and providing in-kind services such as IT support.

### **4.3 Stakeholder Feedback from CMS Special Open Door Forum**

CMS held a Special Open Door Forum on February 24, 2011, to solicit public comment on the development of the plan for implementing VBP in the home health setting. Approximately 755 stakeholders participated in the public listening session. Further, CMS created a special mailbox so that participants could submit written comments.

The public listening session sought comments on the key elements related to developing a plan for a home health VBP program. Specifically, CMS invited the public to comment on the following:

- The ongoing development, selection, and modification process for measures of quality and efficiency;
- The reporting, collection, and validation of quality data;
- The structure of VBP adjustments, including determination of thresholds or improvements in quality, the size of such payments, and the sources of funding for the value-based bonus payments;
- Methods for the public disclosure of information on the performance of HHAs; and
- Any other issues of interest to the public on this topic.

Several stakeholders provided very useful responses to these key elements.

#### **4.3.1 The Development of Measures of Quality and Efficiency**

Some stakeholders recommended that particular attention be paid to ensure measures used in a VBP program are well adjusted for differences in case-mix. These agencies and organizations expressed concern with the current risk-adjustment system, specifically for functional and clinical outcomes, as well as acute-care hospitalizations.

Additionally, other stakeholders proposed that measures should be “harmonized” across the continuum of care received by Medicare beneficiaries, and that all measures should be publicly reported for at least one year before being used for VBP. Several HHAs suggested that utilization measures not under the control of agencies should not be included in the VBP program and referenced emergent care and hospitalization as two of the outcomes that were not under HHA control. One stakeholder suggested that process, structure, and outcome measures should be included in a VBP program.

#### **4.3.2 The Reporting, Collection, and Validation of Quality Data**

One stakeholder recommended that CMS standardize VBP-related data collection for hospital, post-acute, home health, and ambulatory care, to streamline the collection, submission, and oversight necessary to implement VBP programs. Several HHAs requested thorough validity and reliability testing for any measure used in a VBP program. One agency expressed dissatisfaction with the fact that while OASIS-C was released in 2010, the “accuracy of the data reported and risk adjustment methodology have yet to be tested.” Others questioned the NQF’s decision to remove “Discharge to the Community” as a publicly reported home health measure, stating “This is a measure that has been reported for years and is risk adjusted... is a measure that represents the ultimate outcome of quality home health... This measure is particularly important to inpatient facilities and community-based physician practices looking at the continuum of care...” Finally, agencies expressed concern measures would be difficult to calculate for small, rural agencies. One stakeholder proposed that small HHAs be categorized as “critical access” agencies exempt from VBP.

#### **4.3.3 The Structure of Value-Based Payment Adjustments**

Stakeholders suggested that composite scores would provide fairer and more comprehensible measurements of home health quality care. Another stakeholder expanded on this idea, proposing that composite scores should be built on functional and clinical status and patient experience measures, while hospitalization and ER-use measures should be reported separately as individual scores. This suggestion aligned with those of other HHAs which emphasized the idea that composite scores would only be advantageous if they were composed of related measures. One stakeholder also proposed that scoring in a VBP program should be based on a confidence interval around absolute thresholds, to ensure that agencies with fewer patients would not be disadvantaged by a few negative cases.

Additionally, three stakeholders suggested that poor performers should not be rewarded for moving towards the average; rather, rewards or bonuses in a VBP program should be based on a combination of attainment and improvement thresholds. They suggested that agencies that reach thresholds—or agencies in the top quartile or decile of performance or attainment—should receive bonuses on a quarterly basis, based on the previous six or 12 month’s performance, to achieve cash flow predictability and to provide incentives frequently to encourage improvement. One stakeholder also emphasized that a VBP program should be based on bonuses rather than penalties. Some individual HHAs hoped that incentives would be funded from money saved from other care settings rather than penalties collected from the home health setting. Others expressed interest in CMS withholding some portion of payments at the beginning of the performance measurement period, to build a pool of “contributions” to be distributed later as payments or bonuses. One HHA encouraged CMS to use the savings from the VBP program to encourage providers to implement electronic medical records. Finally, several HHAs recommended that bonuses should be relatively small, to reduce the incentive for HHAs to “cherry pick” low-risk patients.

#### **4.3.4 Methods for Public Disclosure of the Information**

Some individual HHAs supported publicly reporting quality measures, expressing that any measure used for VBP should first be reported on the [Home Health Compare](#) web site for at least one year. One agency articulated concern with a 12-month window for calculating publicly-

reported scores; instead, it proposed a three- or six-month window, which would be easier to understand. Additionally, agencies conveyed that public reporting would complement a VBP program by increasing patient flow for high-achieving agencies, which would thus encourage beneficiaries to seek high-quality care and/or avoid low-quality care.

#### **4.4 Value-Based Purchasing Expert Interviews**

Nine experts, working in academic, research, and government settings, were contacted and asked to participate in a brief discussion regarding key VBP design issues. These nine health care experts have focused their research on medical payment and financing methods, quality measurement, and the post-acute care delivery system. While each expert primarily spoke to his or her area of expertise, several points of consensus emerged.

##### **4.4.1 The Scope of Measures Included in a VBP Payment Set**

All experts interviewed recommended that a VBP program should include a range of measures, to address both objective and subjective aspects of home health care. Five experts suggested including process measures explaining that these measures are effective because they are easily understandable, do not need to be risk adjusted, and can often be verified using claims data. Most experts also recommended including other risk-adjusted outcome measures, particularly those measuring potentially avoidable events, along with risk-adjusted utilization measures.

While some experts recommended including more patient experience measures, others argued that patients are not a reliable source of information on provider quality. Finally, some experts disagreed on whether to include efficiency measures in the VBP program. Two experts stated that efficiency measures are crucial aspects of VBP that remain to be developed. In contrast, one expert warned that it may be more effective to emphasize quality measures before introducing efficiency measures, to encourage agencies to improve quality of care before focusing on costs.

##### **4.4.2 Introducing Claims-Based Measures to the VBP Payment Set**

To expand the range of sources from which to create a VBP payment set, six experts recommended the introduction of Medicare claims-based measures. They noted that claims-based measures provide agencies with an incentive to report accurate data to other sources such as OASIS, which can be cross-checked with claims data. Experts also observed that while claims data have a submission lag, they may be especially useful to calculate rates of potentially avoidable events and hospital or emergency department use accurately. Finally, one expert recommended creating a penalty for agencies that did not submit OASIS assessments beyond a pre-determined threshold reporting rate.

##### **4.4.3 Ranking Performance Based on Improvement and Attainment**

Seven experts recommended distributing VBP payments based on quality improvement with an attainment threshold. However, two experts also suggested rewarding improvement without an attainment threshold, to create incentives for poor-performing providers. One expert proposed awarding bonuses based on improvement and attainment separately but encouraging high performance by providing a larger payment to top-quality providers. While one expert suggested implementing a penalty for poor performance, defined as lacking improvement or failing to surpass an attainment threshold, another expert cautioned that the consumer market would steer

away from low performers, and thus enforcing a financial penalty against poor performers would amplify their penalties.

#### **4.4.4 Using Composite Measures to Reflect Performance**

Expert interviews did not establish a clear consensus on the use of composite measures to report and make payments based on performance. Five experts mentioned that composite measures may more adequately reflect overall quality of care, compared to individual measures. However, these experts qualified their statements by noting that composite measures may be more useful to consumers than to providers, who may benefit from more specific, individual measures. One expert suggested composite measures should be specific to certain categories of care, rather than combining all individual measures into one overarching measure to allow consumers to identify those agency characteristics that are most relevant to the consumers' health.

Four experts cautioned against using composite scores outside of the public reporting arena. They explained that agencies are not able to interpret and respond to composite scores easily and that composite measures may not be developed and validity-tested. Additionally, they noted, compiling individual measures into a composite measure may create a combined score that reflects unexplained variation in individual scores rather than actual differences among agencies. Several of these comments regarding composite scores were in the context of a single-agency composite that captures performance on disparate domains – *e.g.* combining outcome, process, and avoidable event measures into a single composite score. Many of the experts, however, noted that composite measures composed of more closely correlated individual measures would summarize agencies performance in specific areas, while avoiding many of the problems with single-agency composite measures. Additionally, some experts emphasized the need for validity testing of any composite measure.

#### **4.4.5 Frequency and Size of VBP Payments**

Four experts recommended that VBP payments should be disbursed quarterly, to tie payments closely to performance periods. Additionally, three experts suggested that the payments should be funded from a bonus pool created from withheld payments. One expert noted that funding bonuses from anticipated Medicare savings may lead to uncertainty on the part of HHAs receiving a payment. Therefore, creating a bonus pool from withheld payments may provide more of an incentive to improve quality of care than funding VBP payments from savings.

Three experts recommended that the size of VBP payments should be about one to five percent of total home health payments. They noted that HHAs are typically under-funded, so a small fraction of payments would suffice to encourage agencies to improve quality. However, two experts suggested that a small bonus would not adequately create incentives for agencies, and that VBP payments should reflect 30 to 50 percent of total home health payments. One expert cautioned against large payments, suggesting that if the bonus pool is composed of withheld payments, agencies might experience difficulties with cash-flow. Additionally, one expert encouraged variable beneficiary co-payments to drive beneficiaries towards higher-performing agencies and thus encourage poor-performing agencies to improve. However, this expert cautioned that beneficiaries should not be required to make co-payments if they do not have access to high-performing agencies.

#### **4.4.6 Publicly-Reporting VBP Measures**

Most experts recommended publicly reporting composite measures to present understandable data to consumers. One expert strongly supported the idea of reporting home health VBP composite scores on a publicly available web site to facilitate consumers' ability to select providers of high-quality care. Four experts emphasized that publicly reported measures that already exist should be included in the VBP payment set, to reduce the data collection burden and ensure transparency between providers and consumers. Finally, one expert suggested that all VBP measures should be reported, regardless of NQF-endorsement, because non-NQF-endorsed measures may still be useful for consumers.

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## **5 Roadmap for HHA VBP Implementation Plan**

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This section outlines the elements that CMS must consider in order to develop a home health VBP program. CMS will need to assess the operational feasibility and potential burden associated with implementing such a program. In an effort to minimize the burden related to program implementation (*e.g.*, collecting patient-level information), CMS could build upon the existing quality performance monitoring and public reporting systems under Medicare.

Section 3006(b)(2)(A) of the Affordable Care Act, requires that in developing the home health VBP plan, the Secretary must consider the ongoing development, selection and modification process for measures, including under section 1890 and 1890A of the Act. Section 1890 of the Act contains provisions regarding the contract with a consensus-based entity, the qualifications of the entity, and the tasks performed by the entity, including endorsing and maintaining measures and convening multi-stakeholder groups to provide input on measures. Section 1890A of the Act contains provisions regarding the process for selecting quality and efficiency measures with input from multi-stakeholder groups, and dissemination and review of the measures used by the Secretary. In order to coordinate with Section 1890 and 1890A of the Act, in developing new measures for a home health VBP program, CMS could seek stakeholder input as appropriate, such as through rulemaking and the NQF endorsement process. This process would assist with measure development, selection, maintenance and modification, subsequently allowing the agency to use such measures to measure quality and performance in HHAs. In addition, HHA quality measures allow beneficiaries and their families to actively seek facilities that provide high-quality health care services.

In preparing a plan to implement a VBP program in HHAs, CMS must take into account the challenges and length of time involved in developing new quality measures, soliciting multi-stakeholder input, seeking endorsement of the quality measures, and finalizing the proposed program through rulemaking. Adopting an incremental approach to phase-in a home health VBP program would allow stakeholders time to adjust under the new system. The elements discussed below build on existing CMS efforts in other Medicare settings to minimize the financial and administrative burden associated with designing and implementing a home health VBP program.

In addition, analogous to CMS' experience with other quality initiatives, CMS and stakeholders could require additional time to establish the infrastructure and processes to operate the program. The elements below describe an array of options for developing a home health VBP program, which will provide a basis for CMS to develop a more specific set of policies and recommendations.

### **5.1 Continuous Quality Improvement Framework**

The Home Health Value Based Purchasing Program would promote continuous quality improvement and build on existing tools and quality measures and current data collected from OASIS and Medicare claims. CMS would also need to look at a comprehensive measure set that directly reflects patient outcomes relevant in home health settings. One option would be for CMS to use the existing domains to measure home health performance (see additional details in Table 2 NQF-Endorsed Measures). Each domain is composed of one or more related measures. The measures included in these domains assess both the quality and efficiency of care. Since

they encompass more than just quality of care, this discussion refers to elements of these domains as “performance measures” rather than as “quality measures.”

Following is a description of the existing domains and their potential use in a home health VBP program:

**The Functional and Clinical Status domain** incorporates measures that directly reflect the actual health status of home health beneficiaries. However, challenges to using these measures in the home health VBP program include: the need to rely on agency-reported data that could be both inaccurate and incomplete; the importance of appropriate risk adjustment methods that account for differences in patient severity; and the relationship between functional and clinical outcomes and the patient’s own behavior or the actions of the patient’s non-HHA caregivers.

**The Utilization domain** includes measures that directly reflect consumption of medical care in other settings and indirectly measures beneficiary health changes. For instance, HHAs that have low rates of acute care hospitalizations may benefit the Medicare program through lowering expenditures.

Strong performance on measures in the utilization domain is associated with both the efficient provision of care and desirable health outcomes, making these measures a compelling addition to a home health VBP measure portfolio. However, the current measurement framework would require additional development and refinement in order for CMS to consider including them in the VBP measure portfolio. For example, the current NQF-endorsed measure of acute care hospitalization only captures some aspects of resource use and HHA quality, as hospitalizations vary substantially in costliness and some patients experience multiple hospitalizations while receiving home health care. Medicare claims data from various delivery settings (*e.g.*, hospital inpatient and outpatient, physician, rehabilitation facilities, and skilled nursing facilities) could be used to create more refined measures of utilization, including measures of Medicare spending. It will be important for CMS to consider including such measures in the home health VBP program to capture the efficiency of HHA activities and track such performance over time. In addition, consideration should be given as to whether the EHR meaningful use measures for eligible professionals and eligible hospitals could support and align with home health VBP measures (*e.g.*, meaningful use measures related to health information exchange).

**The Patient Experience domain** includes measures that assess patients’ responses to the services they received from the HHA. Patient experience measures, especially in chronic care settings, have become a critical tool to identify the link between patient experience and the perceived quality of care. Further, these measures drive transparency in the home health setting by providing an assessment of the interactions between beneficiaries and HHAs, and empowering patients (including family, caregivers, and providers) to make informed health care decisions. However, like functional and clinical status measures and utilization measures, care experience measures might reflect differences in health conditions among the patient population rather than solely capturing the actions of each HHA. Risk adjustment for HHCAHPS includes health status which would partially adjust for health conditions.

**The Process Domain** identifies agencies that consistently follow clinical best practices and invest in quality improvement. Rewarding HHAs for strong performance on these measures could encourage quality improvement initiatives and increase engagement with the home health

VBP program. Process measures record whether an HHA provides appropriate healthcare service to a patient, and are independent of the patients' underlying health characteristics. They include, for example, the percentage of agency patients who received an influenza vaccination and the percentage of patients assessed for risk of falling. Process measures tracking specific HHA care processes associated with better health outcomes could be valuable indicators of quality. They could also provide actionable feedback for agencies and identify specific quality improvement initiatives to improve patient outcomes. However, clear evidence should link care processes to meaningful outcomes, as the ultimate goal of measurement is to improve patient well-being.

**Building on the Measure Development Process** - The criteria for selecting and developing measures within domains allows for a rigorous assessment of the strengths and weaknesses of each measure. Because a number of home health measures are already developed and endorsed by the NQF, these measures together with their measure evaluation criteria provide a useful initial framework for measure selection. As referenced earlier in the report, currently no home health measures in the structure domain are endorsed by the NQF. When addressing quality measurement gaps, CMS could consider new quality measures that reflect consensus among affected parties, measures associated with quality of home health care identified in clinical literature, or in widespread use among States and private stakeholders.

CMS could expand beyond the NQF-endorsed measures by explicitly considering how the audience for the home health VBP program differs from the audience for public reporting. For instance, the average agency completes a fall risk assessment for over 95 percent of patients to whom the measure applies (patients over 65), yielding a measure where the high success rate leaves minimum room for additional improvement. Typical compliance with the pain assessment process measure is similarly high. These measures might reassure consumers that they are selecting an HHA that complies with best practices, but it could be difficult to identify differences in the quality of care across HHAs for VBP. However, some measures that are limited in their usefulness for public reporting could provide valuable information for a VBP program. For example, a measure reflecting lower than average healthcare costs in other care settings could help identify those HHAs that generate savings for Medicare in other settings and provide valuable information for the VBP measures portfolio.

Existing outcome measures may not be closely linked to HHA treatment. For instance, clinical and functional status measures currently are specified for all home health patients, not just those with specific clinical conditions for which a beneficiary receives HHA treatment. Most publicly-reported OBQI measures track changes in activities of daily living (ADLs) and instrumental activities of daily living (IADLs) without addressing how improvement in these measures may be linked to the principal diagnosis or other health conditions for which a beneficiary is receiving home health care. For example, the OBQI report (distributed to HHAs that contains a series of outcomes for their patients in the current year, compared to prior year and to a national benchmark) includes a measure of improvement in walking for all beneficiaries, including those who may not have received physical therapy for impaired ambulation; thus, this measure may be irrelevant when determining overall quality of care provided by an HHA. Further, utilization measures, such as Acute Care Hospitalization, are calculated based on all hospitalizations, regardless of whether the hospitalization was attributable to the quality of home health services.

Some measures are specific to the home health setting and rely on data only collected in that setting. These measures could also be modified or refined to harmonize with measures used for VBP in other settings, such as hospitals or skilled nursing facilities. Because some Medicare patients receive care in multiple community-based, acute, and post-acute facilities, harmonized process or outcomes measures would provide a consistent way to coordinate a beneficiary's healthcare over time and to ensure that she receives appropriate care in each setting.

Harmonizing measures between settings would allow CMS to promote their implementation and more accurately track the beneficiary's receipt of care in various settings. Aligning measures would also allow CMS to emphasize policy priorities regarding certain processes or outcomes uniformly across care settings and identify the most cost-effective settings in which these different types of care are provided. Additionally, measure harmonization in the process domain would give CMS a means by which to avoid creating incentives for redundant care. Influenza vaccinations, for example, are generally only provided to beneficiaries once a season. The already-harmonized influenza vaccination measure asks providers to verify that the patient has received the appropriate vaccinations. Thus, healthcare providers are not encouraged to provide their patients with unnecessary shots over the course of one flu season. Other process measures could also be harmonized to ensure that providers' actions do not lead to overutilization (*i.e.*, clinically ineffective or harmful) use of healthcare services.

**New Measure Development** could help identify gaps in the home health quality measurement framework. To the extent practicable, measures used by CMS should be nationally endorsed by a multi-stakeholder organization. Measures should be aligned with best practices among other payers and the needs of the end users of the measures.

The initial portfolio for VBP measures could include new measures using Medicare claims data or other data sources, building upon the existing group of NQF-endorsed measures, promoting harmonization across settings, and expanding the scope of current home health performance measurement, including:

- Claims-based Utilization Measures to reduce reporting burden and ensure effective allocation of resources,
- Structural Measures/ Electronic Health Technology Measures to assess capacity to deliver care, and
- Patient Safety Measures to influence multiple aspects of quality.

**Claims-based Utilization Measures** - reflect the explicit cost of Medicare services used by a beneficiary during an episode of care. These measures could be developed by re-specifying the current OASIS-based utilization measures, in which agencies report the number of inpatient and outpatient services accessed during a home health episode of care, by using existing Medicare claims data. The utilization domain could be further expanded by using claims data to calculate total Medicare costs incurred during each episode. Claims-based measures also mitigate the impact of missing data on the home health VBP program, minimize the data reporting burden on HHAs, and limit opportunities for gaming. For example, in order to improve their quality scores HHAs could under-report the extent to which their patients use hospitals or emergency rooms. However, HHAs may also not always be aware of all hospital or emergency room care their clients receive, depending when it occurs so obtaining this information from claims may be more accurate. Measuring utilization from claims data also presents a more complete picture of the

quality of care and produces less administrative burden. However, we note that one drawback to using claims based measures is that there can be a time lag in obtaining access to the claims data. Development of claims-based utilization measures for hospital and emergent care is already underway, and these new measures could be incorporated into a VBP program once complete specifications are available and validity has been tested and confirmed. Acute care claims-based measures could be used directly for public reporting, but could also be coupled with the corresponding OASIS data and reported to agencies. Showing agencies the percentage of their patients who are deemed hospitalized through IP claims data and the percentage of patients for whom an HHA submitted appropriate OASIS assessments would improve HHA awareness of acute care utilization. This paired measure could improve agency awareness of changes in patient health status while encouraging submission of OASIS assessments at appropriate time points and could result in better coordination of transitions and post discharge outcomes.

**Structural/Electronic Health Technology Measures** - evaluate features relevant to a provider's capacity to deliver care and describe the quality of the health care delivery environment. These measures could focus on an agency's utilization of health information technology (IT) and include the adoption of electronic health records (EHRs), use of technology to exchange health information, and use of telemonitoring programs. For example, such measures could track the frequency and timeliness of electronic health information exchange between physicians and HHAs in terms of physicians' orders and home health plans of care. Such measures could be constructed to support the meaningful use of EHRs by eligible physicians and eligible hospitals. The home health VBP program could take into account the importance of electronic health information and the capacity for appropriate and timely exchange of data as a component of quality measurement. This effort could promote more rapid adoption of information technology and interoperable standards in this setting that would contribute to improving coordination of care among providers serving Medicare beneficiaries and transitions between care settings. In addition, consideration should be given as to whether the meaningful use measures for eligible professionals and eligible hospitals could support and align with the home health VBP measures (*e.g.*, meaningful use measures related to health information exchange). Some HHAs may need resources and technical capacity to enhance their data analytical capabilities so that they could use OASIS data to analyze the quality of care or perform other types of data analysis.

Certification of health IT will provide assurance to purchasers and other users that an EHR system, or other relevant technology, offers the necessary technological capability, functionality, and security to help them meet the meaningful use criteria established for a given phase. Providers and patients must also be confident that the electronic health IT products and systems they use are secure, can maintain data confidentially, and can work with other systems to share information. Confidence in health information systems is an important part of advancing health IT system adoption and allowing for the realization of the benefits of improved patient care.

Eligible professionals and eligible hospitals who seek to qualify for payment incentives under the Medicare and Medicaid EHR Incentive Programs are required by statute to use Certified EHR Technology. Once certified, complete EHRs and EHR modules could be used by eligible professionals and eligible hospitals, or be combined, to meet statutory requirements. While there are currently no certified EHRs for HHAs under a Federally-administered certification program, some of the recognized components may be applicable to this post-acute care setting.

Use of EHRs could assist home health providers and physicians in efficiently handling the regular exchange of information that must occur throughout a patient's care. An example of home health beneficiaries using services by another provider during the course of an episode of home health care is found with the frequent contacts between the home health provider and physician. These contacts and need for information exchange arise as a result of the patient's evolving condition and needs, and services that the home health provider will perform. At the start of an episode of care, the home health providers are required to complete a comprehensive assessment, including the OASIS-C; integrate appropriate assessment information into the plan of care; and send the plan of care to the physician for review, modification, and approval; at which point the plan is sent back to the home health provider who can then perform the services ordered in the plan of care. Throughout the home health episode, the plan of care may be modified as the patient's condition and needs change, necessitating iterative exchanges of information between the home health provider and the physician.

In almost all cases today, the plan of care travels between the home health provider and the physician as a paper or faxed form. This is true even though the home health provider may generate the plan of care from data it holds in electronic form in its EHR, and even though the physician may use an EHR. There are two major benefits from an electronic exchange of the plan of care: reducing overhead effort through greater efficiency, and improving clinical outcomes through more complete and timely collaboration. The Visiting Nurse Service of New York has had favorable experience in an electronic exchange of the plan of care with physicians in two large group practices, with a third scheduled to go live later in 2011. Although there has not been a formal evaluation of these exchanges, to date, all parties report experiencing efficiency gains and information exchange appears to be timelier.

In its 2005 report to Congress, MedPAC recommended that a home health pay-for-reporting program should include measures of the functions supported by information technology.<sup>33</sup> Measures of telemonitoring and EHR use could be developed in the home health setting to reflect a provider's capacity to deliver care<sup>34</sup> Recent research has demonstrated that health IT demonstrates significant potential to improve the quality of care for home health beneficiaries.<sup>35,36</sup> The availability of EHRs could also improve care coordination for the many beneficiaries with chronic conditions who receive care across different settings, subsequently reducing the administrative burden for providers to collect quality information. Use of EHRs could support timely health information exchange between home health providers, physicians, and hospitals to enable more efficient service delivery and more timely clinical collaboration.

Other structural measures could evaluate staff quality by measuring training levels, turnover, or types of staff members (consistent with the current Medicare Nursing Home Value-Based

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<sup>33</sup> Medicare Payment Advisory Commission. 2005 Report to Congress. The report can be accessed at: [http://www.medpac.gov/documents/June05\\_Entire\\_report.pdf](http://www.medpac.gov/documents/June05_Entire_report.pdf).

<sup>34</sup> Medicare Payment Advisory Commission. "Report to Congress: Promoting Greater Efficiency in Medicare." June 2007. The report can be accessed at: [http://medpac.gov/documents/Jun07\\_EntireReport.pdf](http://medpac.gov/documents/Jun07_EntireReport.pdf).

<sup>35</sup> Rajendra Singh, et al, "Dynamic Capabilities in Home Health: IT-enabled Transformation of Post-Acute Care," *Journal of the Association for Information Systems* 12(2) (2011), 163-188.

<sup>36</sup> Bonnie J. Wakefield, et al, "Effectiveness of Home Telehealth in Comorbid Diabetes and Hypertension: A Randomized, Controlled Trial," *Telemedicine Journal and E-Health* (2011): Online ahead of print.

Purchasing Demonstration). For example, a structural measure could reflect whether an HHA uses staff with expertise in multiple aspects of health, such as dietitians, medical directors, and nurse practitioners. This measure could create incentives for HHAs to hire diverse licensed staff members who can collaborate to provide more comprehensive care and prevent avoidable hospitalizations and other costly adverse events.

**Patient Safety Measures** - MedPAC also noted a need for further development of patient safety measures. Current NQF-endorsed patient safety measures include assessments of patient risk for falls and pressure ulcers. However, performance on these process measures is not associated with lower rates of potentially avoidable events (PAEs) and may reflect HHA adoption of electronic methods that prompt practitioners to mechanically complete risk assessments rather than efforts to improve patient safety by both collecting and using risk assessment information. Additional patient safety measures could be developed to address PAEs such as hospitalizations due to urinary tract infections or pneumonia. By choosing patient safety measures that are relevant to recently hospitalized patients, this effort could also support measure harmonization across the hospital inpatient and outpatient and post-acute care settings.

## **5.2 Enhanced Data Infrastructure and Validation Process**

Creation of a data infrastructure and validation process would link payment to the quality of care and ensure data oversight for CMS to appropriately calculate performance incentives, rather than just tying payment to receiving HHA quality data. Complete and valid data are necessary for CMS to calculate performance scores and subsequently distribute payment incentives to HHAs. CMS currently collects substantial data in the home health setting, including OASIS assessments, HHCAPHS surveys, and home health Medicare claims. However, agencies are not always aware of home health beneficiary hospitalizations, and this lack of awareness affects appropriate submission of OASIS assessments, distorts OASIS-based measures of utilization, and could adversely impact care quality.

Implementation of a home health VBP program would improve data accuracy and completeness in several ways. In the current program, HHAs may have an incentive to avoid submitting OASIS data for patients who have received suboptimal care. In order to provide an incentive for HHAs to submit discharge, recertification, death, or transfer (DRDT) assessments for all episodes, the home health VBP program could require complete and accurate reporting or assign a zero on the minimum score to all episodes with a missing DRDT submission after 90 days from the start of care. HHAs could also be directly encouraged to submit complete data through an “enhanced” pay-for-reporting program in which HHAs must submit a substantial percentage of all required assessments to earn funds placed at risk by the pay-for-reporting program.

## **5.3 Scoring Rules for Individual Measures**

The next step in creating a VBP program is to establishing the rules for scoring individual measures and domains. Once CMS selects the measures from each of the domains discussed above, the agency could evaluate HHA performance on each measure. (As discussed below a decision would need to be made about whether it was appropriate to weight performance on the measures by their respective domains.) One definition, attainment, simply uses the direct calculation of the measure as the relevant performance metric and reflects each HHA’s level of

performance. An alternate definition, improvement, examines the change in attainment between one measurement period and the next.

Applying these rules to a comprehensive VBP measure portfolio and appropriately defining performance would allow the home health VBP program to assess and reward HHAs consistent with the existing policy priorities of continuous quality improvement. Performance could be defined as attainment, improvement or both for each measure.

**Definition of Performance** - In establishing the VBP program CMS will need to determine how to recognize HHA improvement. Defining performance as attainment or improvement consistent with the CMS goals for VBP programs described earlier in this report should be considered in developing VBP scoring methodologies. CMS' goal is that providers could be scored on their overall achievement relative to national or other appropriate benchmarks. VBP scoring methodologies could also consider improvement in performance as an independent goal. Over time, scoring methodologies could be more weighted toward outcome, patient experience, and functional status measures.

Defining performance based on attainment aims to recognize HHAs with superior performance levels. This also aligns with VBP principles to motivate high performance levels and to ensure that a wide range of stakeholders easily understands the scoring system. The CMS pay-for-reporting program, some VBP demonstrations,<sup>37</sup> and private sector initiatives<sup>38,39,40</sup> have all defined provider performance based on attainment level. Initially low-performing HHAs could be encouraged to improve the quality and efficiency of their care by defining provider performance based on meaningful improvement over time. Because one of the primary goals of a VBP program is to improve overall quality of care, defining performance based on improvement could make more HHAs eligible for payment incentives. To prevent chronically low performing HHAs from receiving payment incentives, CMS could require HHAs to meet a certain threshold to become eligible for the reward. However, there are a number of drawbacks to relying on improvement scores alone. For example, when measures that already have a high success rate are used, the margin for improvement is small (for example, the average HHA currently completes a fall risk assessment for over 95 percent of patients to whom the measure applies, yielding a high success rate with little room for additional improvement).

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<sup>37</sup> Examples of CMS VBP or pay-for-performance demonstrations which define performance based on attainment include: the End-Stage Renal Disease (ESRD) Management Demonstration, the Premier Hospital Quality Incentive Demonstration, and the Nursing Home Value-Based Purchasing Demonstration, and the Home Health Pay-for-Performance Demonstration.

<sup>38</sup> Integrated Healthcare Association, "The California Pay-for-Performance Program: The Second Chapter: Measurement Years 2006-2009," (2009).

<sup>38</sup> See Integrated Healthcare Association 2009 for a description of the pay-for-performance implementation within an association of private California Health Plans.

<sup>39</sup> Meredith B. Rosenthal et al, "Early Experience with Pay-for-Performance," *The Journal of the American Medical Association*, 294(14) (2005): 1788-1793.

<sup>40</sup> See Rosenthal and colleagues (2005) for PacifiCare HMO's description of its physician pay-for-performance system.

CMS could also consider defining performance based on a combination of attainment and improvement. Performance could be evaluated on all measures based on HHA attainment and it could also be evaluated based on improvement for all measures or only for certain measures. Separate attainment and improvement scores could be created for measures where both performance definitions apply. After both improvement and attainment scores are calculated, CMS could identify the higher of the attainment or improvement scores, consistent with the current NHVBP demonstration and HVBP program. Alternatively, CMS could weight attainment more heavily than improvement scores in determining VBP payments or could first reward attainment and then assign improvement bonus only to those HHAs not eligible for attainment scores (as in the home health pay-for-reporting demonstration). CMS will need to devote a significant amount of effort into determining the proper distribution of attainment versus improvement measures. We will take into account the appropriate mix of measures to cover the basic quality domains of safety, care coordination, clinical care, efficiency and patient experience without unduly burdening providers. To determine the right mix of measures CMS' plan would consider numerous factors including the experiences of other VBP models such as those for hospitals and ESRD. We would also analyze the data from the home health pay-for-reporting program.

#### **5.4 A Performance Assessment and Evaluation Model**

The selected mode could be used to assess HHA achievements across all measures. The performance assessment could be based on either a single composite score or multiple individual measures. A composite performance score combines individual measure performance scores into a single metric. CMS could use the composite score both as a summary of overall HHA performance and to determine the size of each HHA's VBP payment. Alternatively, CMS could rely solely on the individual measure performance scores and instead adjust VBP payments based on some combination of these scores.

A number of advantages arise from using a composite performance score. First, a single value summarizes overall HHA performance that could empower beneficiaries to compare performance among HHAs and more easily understand such scores. Second, the composite score could simplify the administrative determination of the VBP payment for each HHA. Third, previous research suggests that composite scores generally exhibit less year-to-year volatility compared to individual measures scores.<sup>41</sup> Finally, the composite score could allow CMS to set minimum thresholds for levels of attainment for the different individual performance measures. For instance, the composite score formula could assign the lowest score to HHAs that did not meet a minimum threshold for each individual measure.

Alternatively, payment based on multiple individual measures also offers several advantages. Most important, using individual measures could increase the participation rate of HHAs if the plan adopts a voluntary VBP program. For example, HHAs could receive bonuses for superior performance on some measures and penalties for inferior performance on other measures. Moreover, while it could be difficult for an HHA to increase its composite score above a certain attainment threshold, the same HHA could still find an incentive to achieve a superior performance level on each individual performance measure. If CMS chooses to reward agencies

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<sup>41</sup> Thomas MaCurdy, et al, "Evaluating the Stability of Physician Efficiency Scores," (2010).

based on individual measures, much of the following discussion on weighting individual measures could still apply.

Combining measure scores into a composite performance score involves specifying a mechanism that integrates performance scores for each measure into a single metric. Although most previous VBP demonstrations have created composite scores as simple weighted averages of individual measure scores, CMS could consider a number of different approaches. One option for designing the mathematical function to convert individual measure scores into a composite score includes applying a weighting scheme that emphasizes some measures over others (*e.g.*, based on clinical importance, impact on cost, size of eligible population, and potential for improvement) and using a non-linear function. Such a non-linear function could be appropriate, if CMS adopts a performance assessment model where HHAs receive the lowest composite score in cases where their performance on any one individual measure falls below a minimum threshold. Even though non-linear composite score mechanisms have their merits, for simplicity's sake, the remainder of this report examines the basic linear weighting mechanism.

Under the linear framework, the weights determine the relative importance (*i.e.*, impact) of each measure on the composite score. A measure assigned a higher weight has a larger influence on the HHA's overall score. Since the composite score could eventually be used to determine VBP payment incentives, individual measures receiving larger weights have a bigger impact on the VBP incentive payment compared to measures with lower weights. Individual measures with the same weights contribute equally to the overall composite score and, ultimately, the HHA's VBP payment.

Consideration of prioritizing measure scores to create composite performance scores involves prioritizing individual measures according to a number of criteria. Four established criteria for weighting individual measures and/or measure domains that CMS could consider include:

1. Clinical importance
2. Impact on cost
3. Size of eligible population
4. Potential for improvement

Measures intended to have a larger impact on the selected policy priorities listed above could be assigned higher weights. The first criterion, clinical importance, would allocate the most weight to measures within the functional and clinical status domain. Although clinical trials and epidemiological studies can assist in evaluating the importance of each measure, in cases where robust quantitative data are not available, weights typically rely on subjective expert opinion to determine clinical importance. Choosing to weight based on the second criterion, cost impact, prioritizes metrics that generate the most savings for Medicare, such as measures in the utilization domain. However, some process and outcome measures may improve patient well-being but increase costs to the Medicare program in the short term and thus this criterion must be applied cautiously in order to avoid discouraging the delivery of needed care.

CMS could also weight measures depending on the fraction of Medicare beneficiaries nationally who are eligible to receive a score on that metric. Under this criterion, the "Pain Assessment Conducted" process measure would receive more weight than the "Heart Failure Symptoms Addressed During Short Term Episodes of Care" measure since all home health beneficiaries are

eligible for the former measure while only those with heart failure symptoms who have received home care for less than 60 days are eligible for the latter. Weighting measure performance scores by the number of eligible beneficiaries is especially important if the VBP measures portfolio includes some measures that apply only to subpopulations of home health beneficiaries. Such weighting creates incentives for HHAs to select patients from the subpopulations for whom they expect to achieve the best outcomes. For instance, if an HHA achieves superior performance on measures specific to beneficiaries admitted to home health care from the community but performs poorly on measures specific to beneficiaries admitted from the hospital, weighting eligible population size could encourage the HHA to treat more community-admitted beneficiaries. One obvious drawback of relying on the size of the eligible population criterion is that it provides less weight for performance indicators that have a large clinical impact but that affect fewer beneficiaries.

Weighting based on potential for improvement emphasizes measures and domains with lower initial average levels of attainment across all agencies. “Pain Assessment Completed” would receive less weight than the “Influenza Immunization Received for Current Flu Season” since the former measure has nearly 100 percent attainment (96 percent average agency compliance) while the latter measure has significant room for improvement (63 percent average agency compliance). Performance on measures often depends in part on factors outside of the HHA’s control such as patient compliance. Improving compliance rates to 100 percent may not be a feasible goal. Instead of applying the above criteria to formulate weights for individual measures, weights could be applied to an intermediate composite score, which is a weighted average of the measure performance scores in a given domain.

Several domain-level scoring models have already been created to assess HHA performance. For example, experts have developed a methodology to combine the patient experience measures included in HHCAHPS to form a single patient experience score. In its 2007 Report to Congress, MedPAC discussed pay-for-performance in home health<sup>42</sup> and proposed a composite score for functional and clinical status measures called the “Standardized Quality Index” (SQI). By relying on domain composites, the home health VBP program could prioritize measure importance based on these external standards. If CMS determines that existing domain composites align with policy goals reasonably well, these measures could be incorporated into the home health VBP program. CMS would still need to apply an overall weight to each domain and determine weights for individual measures within domains where no domain-level aggregation method exists in the literature.

Medicare VBP programs and demonstrations, and related private sector initiatives could inform CMS’s selection of domain weights for a single composite performance score. Under the HVBP program, CMS finalized a methodology for calculating a Total Performance Score for each hospital by combining the greater of the hospital’s achievement or improvement points for each measure to determine a score for each domain, weighting each domain score (for the FY 2013 Hospital VBP Program, the weights will be clinical process of care = 70 percent, patient experience of care = 30 percent), and adding together the weighted domain scores (Hospital Inpatient VBP Program Final Rule for further explanation of the details of the FY 2013 Hospital VBP Program [76 FR 26490 through 26547]).

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<sup>42</sup>Medicare Payment Advisory Committee, “Report to the Congress,” (2007).

CMS could choose weights that best reflect the overarching priorities of the home health VBP program. Domains need not be given equal weight, and over time, scoring methodologies should be more weighted towards outcome, patient experience and functional status measures, consistent with CMS VBP design principles.

Selecting already robust risk-adjusted individual performance measures will not typically create appropriate risk-adjusted composite performance scores. If individual measures are independent of one another, then risk-adjusting at the individual level can properly account for variation in case mix across HHAs at both the individual and composite levels. In most instances, however, interactions occur among measures. In this case, even when individual measures are properly risk adjusted, measure interactions render the composite score improperly adjusted for risk and patient mix. In addition, there could be additional factors outside of an HHA's control that affect its overall performance but that are not relevant to individual scores. For instance, CMS might decide to use the share of dual-eligible Medicare beneficiaries treated as a risk-adjustment factor for the composite score—since these individuals may demonstrate lower adherence to treatment guidelines and thus experience lower clinical and functional outcomes on several measures—but such a factor would not be desirable to incorporate in models of risk adjustment for individual measure scores. Including dual-eligible status in these models could lower the standard of care expected when an HHA treats a dual-eligible beneficiary.

Issues Related to Small Sample Size - Using a small number of cases for individual performance metrics could impact calculating payment incentives. HHAs that are located in rural areas may have lower patient volumes when compared to HHAs located in urban areas. HHAs with insufficient sample sizes could report a small number of cases in the measure denominator for one or more of the individual measures that could be used in the VBP payment incentive. The small number of cases for a given measure could lead to an inaccurate indication of the underlying performance of HHAs. In addition, HHAs that report a small number of cases could lead to performance results that vary substantially from each performance period.

Home health VBP may need to consider alternative strategies for addressing small numbers. CMS could explore a variety of approaches to increase measure reliability and appropriately address the issue of small numbers on individual HHA performance metrics. These could include:

- Composite measures that combine information across related performance measures within the same HHAs. Composite measures combine individual measures according to selected topics such as specific conditions, clinical and functional status, process, utilization, or patient experience.
- Collecting and combining the most recent data within the same HHAs over longer time periods such as quarterly or annually. Some HHAs could report small numbers or treat a limited number of patients for a given condition. Using a longer time period would allow for sufficient data to accumulate and allow CMS to subsequently calculate stable performance scores (*e.g.*, establishing a minimum number of cases to calculate the performance for a given measure).

## 5.5 Funding the VBP Program

There are several options for linking payments to performance. One option would be to continue the system currently used in the home health pay-for-reporting program where a portion of a provider's annual update is based on their compliance with program requirements in a previous year. Qualifying for the payment update would be linked to reporting of quality measures and performance on those measures. Another option would be to implement payment withholds from HHAs similar to the hospital VBP program where the payment withhold and payment adjustment occur in the same year, or result in a net adjustment. Feedback from providers indicated a general preference for withholding funds.

A VBP program could be implemented for HHAs by transitioning from the current pay-for-reporting program to the VBP program. Accurate and complete data reporting will be critical for CMS to evaluate HHA performance, and the initial phases of the home health VBP program should focus on strengthening incentives for HHAs to submit required data. A transition period during which the current pay-for-reporting program is phased out and a VBP program is phased in could mirror the incremental approach outlined in the 2007 Hospital VBP Program Report to Congress.<sup>43</sup> The home health VBP program would need to rely on discharge, recertification death or transfer (DRDT) assessments to calculate certain process measures, and all functional and clinical status outcome measures. During the transition period, CMS could calculate and report new VBP composite measures to inform HHAs of their scores before tying payments to performance. CMS could use this period to gradually increase the portion of payments tied to VBP. For example, to phase in the VBP program incrementally, CMS could use a five-stage process that include (1) Pre-implementation; (2) Introduce Funding Mechanism (3) Reward Both Performance and Reporting; (4) Base Rewards Entirely on Performance; and (5) Evaluate Program and Incorporate Lessons Learned. Under this framework (for illustrative purposes), the VBP payment pool could be funded through an adjustment to the annual update like that currently used in the HHA pay-for-reporting program or a two-percent agency withhold.

*Stage 1: Pre-implementation* – During the pre-implementation stage, CMS would focus incentives on complete and accurate OASIS data submission to strengthen the current pay-for-reporting system by placing a greater emphasis on episode level data. For example, the pay-for-reporting penalty could be extended to the individual payment episode level by scaling the two percent pay-for-reporting update reduction by the fraction of assessments completed and submitted. Additionally, CMS could introduce direct measures of agency's performance in reporting rates of OASIS start-of-care (SOC) or resumption-of-care (ROC) assessments and DRDT assessments, as well as timely submission of DRDT assessments. The pre-implementation stage could also include the introduction and public reporting of Medicare claims-based measures, including utilization, electronic health technology, and patient safety measures.

*Stage 2: Introduce Funding Mechanism* – The second implementation stage could continue the current adjustment to the next year's update or it could introduce a funding mechanism in which a percentage of all episode payments would be withheld from agencies to fund the payment pool. Under this example, high-performing agencies would recover the entire withhold or earn the full

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<sup>43</sup> Centers for Medicare & Medicaid Services, "Report to Congress: Plan to Implement a Medicare Hospital Value-Based Purchasing Program," (2007).

update, whereas HHAs that did not reach a predetermined threshold (*e.g.*, those scoring in the lowest reporting quartile) could receive only a portion of the potential payment.

*Stage 3: Reward Both Performance and Reporting* – The third implementation stage could serve as a hybrid between pay-for-reporting and VBP. CMS could determine part of an agency’s annual update or return a percentage of the payment withhold to agencies based on their data-reporting rate while tying payment to performance for the remaining amount. HHAs failing to report data above a pre-determined threshold rate would be ineligible for the reporting-based portion. Under the payment withhold option payments could be determined in a similar way.

Additionally, HHAs who did not submit OASIS assessments needed to calculate quality measures could also see a decrease in their composite performance scores and ultimately their performance-based payment.

*Stage 4: Base Rewards Entirely on Performance* – The fourth implementation stage could entirely tie VBP payments to performance, and the pay-for-reporting program could be completely discontinued. Thus, HHA reporting frequency could only affect VBP payments to the extent that the missing data would lower agencies’ composite scores and the subsequent VBP payments.

*Stage 5: Evaluate Program and Incorporate Lessons Learned* – The final implementation stage could include continued evaluation of all aspects of the VBP program. Based on lessons learned from program evaluation, CMS could increase the size of the VBP based update or the payment withholds used to fund the VBP incentive pool. Similarly, CMS could expand the VBP measures set to reflect changes in both national priorities and clinical standards. Additional features of the home health VBP program could be refined further based on lessons learned from the initial implementation stages.

**Determining the Frequency of VBP Payments** could allow CMS to accomplish a number of policy goals. If CMS distributes payment incentives annually, this could allow for timely feedback. By distributing payment incentives to HHAs more frequently (*i.e.*, making funds available proximate to performance periods), agencies might be able to defray costs of correcting deficiencies earlier. Distributing VBP payments too frequently could lead to excessive administrative cost and volatility in agencies’ composite scores because the sample of eligible episodes would be smaller. This problem could be particularly acute for small HHAs as they could become ineligible for a large number of performance measures, depending on the minimum required sample size to calculate scores.

## **5.6 Transparency and Public Reporting**

Home health VBP performance data could be included on the CMS [Home Health Compare](#) web site to allow the public to readily access the information. Public reporting of the data will give beneficiary’s and their family’s additional data on which to make their decisions about care. CMS could also enhance the CASPER reporting system currently used to communicate quality measures to agencies to make more information available to providers to encourage facilities to monitor their performance and improve it. CMS could use the current CASPER reports to include in-depth information on HHAs’ performance on the VBP measures, publicly-reported measures, and other measures considered to be useful in performance improvement efforts.

To provide comprehensive information to HHAs, the reports could include the following agency-specific information:

- Data submission rate
- Individual measure information
- Number of patients eligible for scoring on each individual measure
- Scores on each individual measure
- Percentile ranking for each individual measure
- VBP composite score each quarter
- Percentile ranking for the VBP composite score
- VBP payment each quarter

The reports also could include the following data at the peer-group level to summarize and compare how each individual HHA performs against similar agencies:

- Summary statistics on the data submission rate
- Summary statistics on the scores on individual measures
- Summary statistics on the VBP composite score each quarter
- Summary statistics on the VBP payment (as a percentage of total revenue) each quarter
- Trends over time for the scores on individual measures
- Trends over time for the VBP composite score
- Trends over time for the VBP payment

CMS could continue disseminating these reports to agencies monthly, with VBP bonus information updated as it became available. Additionally, as an extension of the current preview reports, CMS could deliver these reports to agencies before data about their performance was publicly reported or used for payment. This would allow agencies to review their data and scores before CMS publicly reported their performances.

To communicate agency performance information to beneficiaries, CMS could continue to publicly report measures on the [Home Health Compare](#) web site. While several VBP measures would likely achieve NQF endorsement for public reporting, some measures may not be useful for public reporting. For example, though a measure of the cost of emergency care could be important to include in the VBP program, consumers could instead be more concerned about the occurrence of emergent care. To the extent practicable, CMS could seek national endorsement for each of its measures by multi-stakeholder organizations. Measures should also be aligned with best practices among other payers and the needs of the end users of the measures.

## **5.7 Coordination Across Medicare Payment System**

We plan to align the home health quality measure reporting system with the existing home health pay-for-reporting system. In addition, we plan to coordinate home health VBP across Medicare payment system initiatives such as existing VBP, pay-for-reporting, quality monitoring, and public reporting. Adoption of the CARE tool would facilitate the alignment of the quality measures across payment systems by providing robust input into developing more clinical outcome-based metrics. The effort to eliminate payment and provider “silos” could improve the

quality of care and better align care transition models between hospitals (inpatient and outpatient) and all post-acute care settings (*e.g.*, HHAs, skilled nursing facilities/nursing facilities, and inpatient rehabilitation facilities) for beneficiaries. The home health VBP program could also coordinate its efforts with the Medicaid program especially for dual eligible beneficiaries who use home health services. Use of comparable measures for comparable services in different care settings would facilitate beneficiary choice among HHAs, skilled nursing facilities, and other post-acute care options.

Additionally, the Affordable Care Act established the Centers for Medicare & Medicaid Innovation (“Innovation Center”) to test innovative payment and service delivery models to preserve or enhance the quality of care and reduce program expenditures in Medicare, Medicaid and Children’s Health Insurance Program (CHIP). In August 2011, the Innovation Center released the Bundled Payments for Care Improvement Initiative<sup>44</sup> which is designed to test alternative models for payment and inform future Innovation Center and Department of Health and Human Services activities that aim to improve the quality of care for Medicare, Medicaid and CHIP beneficiaries while reducing costs through payment innovation and care coordination.

In the context of the cross-provider Medicare initiatives, consideration should be given to how VBP for an individual provider group—in this case, HHAs—might in the longer term be integrated into models that facilitate quality improvement across the care continuum. One possible approach could be, over time, to integrate performance measurement systems developed for multiple provider settings as the basis for VBP.

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<sup>44</sup> The Fact Sheet on Bundled Payments for Care Improvement Initiative can be accessed at: <http://www.innovations.cms.gov/documents/pdf/Fact-Sheet-Bundled-Payment-FINAL82311.pdf>.

## 6 CONCLUSION

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CMS is committed to continuously driving improvements in quality, efficiency and outcomes for Medicare beneficiaries. A home health VBP program will be the next step in linking payment to performance for home health services. In addition, the agency seeks continuous quality improvement in existing programs, such as the transition from OASIS-B1 data to the new OASIS-C dataset, administering the Home Health Pay-for-Reporting Demonstration, and through strategic partnerships with beneficiaries, families, providers, consumer groups, and States to transform the current system into a high performing, value-driven post-acute care setting.

Several elements will be involved in designing and implementing a VBP program for HHAs:

1. **Continuous Quality Improvement Framework** – An effective VBP program requires selection of a comprehensive set of quality measures that directly reflect patient outcomes relevant in home health settings. When determining how to address quality measurement gaps in existing measures, CMS could consider additional measures associated with quality of home health care identified in peer-reviewed clinical literature, or in widespread use among States and private stakeholders. CMS could also consider measures suggested by the Measures Applications Partnership, a public-private partnership convened by the NQF.
2. **Enhanced Data Infrastructure and Validation Process** – Compilation of complete and accurate data sets are necessary for CMS to calculate performance scores and subsequently distribute payment incentives to HHAs.
3. **Scoring Rules for Individual Measures** – CMS could evaluate either attainment or improvement (or both) of HHA performance on each measure. One potential definition, attainment, uses the direct calculation of the measure as the relevant performance metric and reflects each HHA's level of performance. An alternate definition, improvement, examines the change in attainment between one measurement period and the next. It will also be necessary to define what constitutes quality performance for each measure in order to assess and reward HHAs consistent with policy priorities.
4. **A Performance Assessment and Evaluation Model** – A VBP program will need to assess HHA achievements across all measures. A composite score could serve as both a summary of overall HHA performance and as a factor in determining the size of each HHA's VBP payment. CMS could also decide to rely solely on the individual measure performance scores to determine VBP payments.
5. **Funding for the VBP Program** – A funding source is required to make payment incentives based on quality and efficiency. One option would be to continue the system currently in place for home health pay-for-reporting, where a provider's annual update is partially based on their performance in a previous year. Another option would be to implement payment withholds from HHAs and make adjustments to future payments.

6. Transparency and Public Reporting –Making VBP program data publicly available will enable beneficiaries and their families to make informed decisions about their care. It will also allow stakeholders to better understand the care provided, to compare care across HHAs, and to make improvements. Data could be posted on the Home Health Compare web site. The performance reporting system will need to be designed so that it coordinates with already existing systems.
7. Coordination across Medicare Payment Systems – In developing the VBP program CMS will seek to coordinate the home health VBP program with other existing VBP, pay-for-reporting, quality monitoring, and public reporting systems. This effort will serve to eliminate payment and provider “silos” and will improve the quality of care and better coordinate care transitions models between hospitals, HHAs, and skilled nursing facilities/nursing facilities for beneficiaries.

As described above, the “Roadmap for Home Health Agency Value-Based Purchasing Implementation Plan” describes each of these elements, by aligning with the existing home health quality monitoring and reporting programs, and using lessons learned from the existing VBP and pay-for-reporting demonstration.

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## Appendix A: OASIS-C Quality Measure Definitions

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Appendix A presents the distribution of scores calculated on all Calendar Year 2010 OASIS quality episodes for the twenty-two measures<sup>45</sup> publicly reported on Medicare's Home Health Compare website, in Table A.1 and Table A.2. Additionally, it presents NQF-endorsed OASIS-C quality measure definitions in Table A.3. (We note that Increase in Pressure Ulcers is no longer publicly reported on Home Health Compare so we have removed it from Table A.3)

Table A.1 illustrates the agency-level scores for each measure, calculated for all Medicare Certified Agencies with greater than 20 episodes for which the measure applied. The score represents the fraction of assessments for which the measured process or outcome was achieved, out of the number of assessments for which the measure applied. Along with the average agency score, the table provides the number of agencies meeting the reporting criteria, the standard deviation, and the minimum and maximum agency score. For example, in 2010, 9,043 agencies had at least 20 episodes for which conducting a depression assessment would have been best practice. Among those 9,043 agencies, the average score was 90 percent, with a standard deviation of 16.8 percent. The minimum score of zero percent indicates that at least one agency conducted no depression assessments on its patients for whom depression assessments would have been best practice. A maximum score of 100 percent indicates that at least one agency performed depression assessments on all of its patients for whom depression assessment would have been best practice.

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<sup>45</sup> A 23rd NQF endorsed measure, Emergency Department Use without Hospitalization, is currently being re-specified using Medicare claims data and will be publicly reported in late 2011 or early 2012.

**Table A.1: Agency-Level Scores for Each OASIS-C Quality Measure**

Measure	# w/ ≥20 Assess.	% w/ ≥20 Assess.	Agency Avg.	Std. Dev.
<b>PROCESS MEASURES</b>				
Depression Assessment Conducted	9,043	83%	89.9%	16.8%
Diabetic Foot Care Implementation in Short Term Episodes	6,507	60%	85.6%	14.9%
Drug Education Implementation in Short Term Episodes	8,280	76%	84.9%	14.2%
Multifactor Fall Risk Assessment Conducted for Patients 65 and Over	8,546	79%	95.6%	10.1%
Heart Failure Symptoms Addressed During Short Term Episodes of Care	2,566	24%	96.8%	4.3%
Pneumococcal Polysaccharide Vaccine Ever Received	8,992	83%	59.4%	24.3%
Pressure Ulcer Prevention Implementation in Short Term Episodes	6,162	57%	88.1%	14.9%
Pressure Ulcer Prevention in Plan of Care	7,386	68%	89.9%	14.3%
Pressure Ulcer Risk Assessment Conducted	9,048	83%	91.7%	12.9%
Pain Assessment Conducted	9,048	83%	95.5%	8.1%
Pain Interventions Implementation During Short Term Episodes of Care	7,928	73%	94.9%	8.2%
Timely Initiation of Care	9,048	83%	87.2%	11.8%
Influenza Immunization Received for Current Flu Season	8,224	75.6%	62.6%	20.8%
<b>FUNCTIONAL AND CLINICAL STATUS OUTCOMES</b>				
Improvement in Ambulation and Locomotion	7,982	73%	48.3%	15.9%
Improvement in Bathing	8,071	74%	59.2%	15.8%
Improvement in Bed Transferring	7,771	71%	49.0%	16.7%
Improvement in Dyspnea	7,691	71%	57.4%	18.6%
Improvement in Management of Oral Medications	7,454	69%	42.5%	16.5%
Improvement in Pain Interfering with Activity	7,928	73%	64.3%	15.4%
Improvement in Status of Surgical Wounds	3,035	28%	76.9%	11.1%
Acute Care Hospitalization	9,039	83%	30.3%	15.1%
More Pressure Ulcers	8,226	76%	0.4%	0.8%

Table A.2 illustrates the observed rate for each measure, among all agencies. The observed rate represents, among assessments for which the measure should have been completed, the fraction of assessments for which the measure was positively completed. In addition to the overall observed rate, the observed rates are also stratified by demographic characteristics such as race as indicated on the OASIS, age group (less than 65 years, 65-75 years, over 75-85 years, over 85 years) and gender. For example, in 2010 a depression assessment was conducted on 92 percent of all quality episodes occurring at Medicare Certified Agencies. Among beneficiaries who were white, black, Hispanic or another race/ethnicity, a depression assessment was conducted on 93 percent, 90 percent, 89 percent, and 89 percent of episodes, respectively.

**Table A.2: Observed Rate of Each OASIS-C Quality Measure**

Measure	Overall Obs. Rate	Observed Rate (Num./Den.) by Patient Race				Observed Rate (Num./Den.) by Patient Age				Observed Rate (Num./Den.) by Gender	
		White	Black	Hisp.	Other	<65	65-75	75-85	85+	Male	Female
<b>PROCESS MEASURES</b>											
Depression Assessment Conducted	93%	94%	91%	91%	90%	93%	93%	93%	93%	93%	93%
Diabetic Foot Care Implementation in Short Term Episodes	85%	84%	88%	87%	88%	87%	86%	85%	80%	86%	84%
Drug Education Implementation in Short Term Episodes	85%	84%	85%	86%	86%	85%	85%	85%	83%	85%	84%
Multifactor Fall Risk Assessment Conducted for Patients 65 and Over	94%	94%	94%	96%	96%	N/A	94%	94%	94%	94%	94%
Heart Failure Symptoms Addressed During Short Term Episodes of Care	97%	97%	97%	96%	96%	97%	97%	97%	97%	97%	97%
Pneumococcal Polysaccharide Vaccine Ever Received	60%	63%	50%	47%	50%	49%	59%	63%	64%	59%	60%
Pressure Ulcer Prevention Implementation in Short Term Episodes	88%	89%	88%	85%	86%	87%	87%	89%	91%	89%	88%
Pressure Ulcer Prevention in Plan of Care	90%	91%	90%	86%	87%	89%	89%	90%	92%	90%	90%
Pressure Ulcer Risk Assessment Conducted	96%	96%	94%	92%	92%	94%	95%	96%	96%	96%	96%
Pain Assessment Conducted	97%	97%	96%	97%	96%	97%	97%	97%	97%	97%	97%
Pain Interventions Implementation During Short Term Episodes of Care	95%	95%	95%	95%	96%	95%	95%	95%	95%	95%	95%
Timely Initiation of Care	88%	89%	85%	87%	87%	87%	89%	88%	88%	89%	88%
Influenza Immunization Received for Current Flu Season	63%	65%	55%	52%	55%	54%	61%	65%	67%	62%	63%
<b>FUNCTIONAL AND CLINICAL STATUS OUTCOMES</b>											
Improvement in Ambulation and Locomotion	54%	56%	51%	48%	50%	55%	62%	56%	45%	56%	53%
Improvement in Bathing	64%	65%	62%	59%	60%	66%	72%	65%	54%	65%	64%
Improvement in Bed Transferring	54%	55%	51%	47%	49%	56%	61%	55%	45%	55%	53%
Improvement in Dyspnea	62%	63%	62%	50%	53%	60%	64%	63%	61%	62%	62%
Improvement in Management of Oral Medications	46%	47%	49%	37%	39%	52%	57%	48%	35%	47%	46%
Improvement in Pain Interfering with Activity	66%	65%	67%	70%	70%	62%	67%	67%	67%	68%	65%
Improvement in Status of Surgical Wounds	85%	85%	85%	85%	85%	82%	85%	86%	87%	84%	86%
Acute Care Hospitalization	27%	26%	33%	26%	24%	32%	26%	26%	26%	29%	26%
Increase in Number of Pressure Ulcers	0%	0%	0%	0%	0%	1%	0%	0%	1%	1%	0%

**Table A.3 presents NQF-endorsed OASIS-C quality measure definitions.**

**Table A.3: OASIS-C Quality Measure Definitions**

<b>Measure Title: HHC Label</b>	<b>Measure Description</b>	<b>Numerator</b>	<b>Denominator</b>	<b>Measure-Specific Exclusions</b>
<u>Improvement in Ambulation-Locomotion:</u> How often patients got better at walking or moving around	Percentage of home health episodes of care during which the patient improved in ability to ambulate.	Number of home health episodes of care where the value recorded on the discharge assessment indicates less impairment in ambulation/locomotion at discharge than at start (or resumption) of care.	Number of home health episodes of care ending with a discharge during the reporting period, other than those covered by generic or measure-specific exclusions.	Home health episodes of care for which the patient, at start/resumption of care, was able to ambulate independently, episodes that end with inpatient facility transfer or death, or patient is nonresponsive.
<u>Improvement in Bathing:</u> How often patients got better at bathing	Percentage of home health episodes of care during which the patient got better at bathing self.	Number of home health episodes of care where the value recorded on the discharge assessment indicates less impairment in bathing at discharge than at start (or resumption) of care.	Number of home health episodes of care ending with a discharge during the reporting period, other than those covered by generic or measure-specific exclusions.	Home health episodes of care for which the patient, at start/resumption of care, was able to bathe self independently, episodes that end with inpatient facility transfer or death or patient is nonresponsive.
<u>Improvement in Bed Transferring:</u> How often patients got better at getting in and out of bed	Percentage of home health episodes of care during which the patient improved in ability to get in and out of bed.	Number of home health episodes of care where the value recorded on the discharge assessment indicates less impairment in bed transferring at discharge than at start (or resumption) of care.	Number of home health episodes of care ending with a discharge during the reporting period, other than those covered by generic or measure-specific exclusions.	Home health episodes of care for which the patient, at start/resumption of care, was able to transfer independently, episodes that end with inpatient facility transfer or death, or patient is nonresponsive.
<u>Improvement in Dyspnea:</u> How often patients' breathing improved	Percentage of home health episodes of care during which the patient became less short of breath or dyspneic.	Number of home health episodes of care where the discharge assessment indicates less dyspnea at discharge than at start (or resumption) of care.	Number of home health episodes of care ending with a discharge during the reporting period, other than those covered by generic or measure-specific exclusions.	Home health episodes of care for which the patient, at start/resumption of care, was not short of breath at any time, episodes that end with inpatient facility transfer or death.
<u>Improvement in Management of Oral Medications:</u> How often patients got better at taking their drugs correctly by mouth	Percentage of home health episodes of care during which the patient improved in ability to take their medicines correctly (by mouth).	Number of home health episodes of care where the value recorded on the discharge assessment indicates less impairment in taking oral medications at discharge than at start (or resumption) of care.	Number of home health episodes of care ending with a discharge during the reporting period, other than those covered by generic or measure-specific exclusions.	Home health episodes of care for which the patient, at start/resumption of care, was able to take medicines correctly without assistance or supervision, episodes that end with inpatient facility transfer or death, or patient is nonresponsive, or patient has no oral medications prescribed.

<b>Measure Title: HHC Label</b>	<b>Measure Description</b>	<b>Numerator</b>	<b>Denominator</b>	<b>Measure-Specific Exclusions</b>
<u>Improvement in Pain Interfering with Activity:</u> How often patients had less pain when moving around	Percentage of home health episodes of care during which the patient's frequency of pain when moving around improved.	Number of home health episodes of care where the value recorded on the discharge assessment indicates less frequent pain at discharge than at start (or resumption) of care.	Number of home health episodes of care ending with a discharge during the reporting period, other than those covered by generic or measure-specific exclusions.	Home health episodes of care for which the patient, at start/resumption of care, did not have pain interfering with activity, episodes that end with inpatient facility transfer or death, or patient is nonresponsive.
<u>Improvement in Status of Surgical Wounds:</u> How often patients' wounds improved or healed after an operation	Percentage of home health episodes of care during which the patient demonstrates an improvement in the condition of surgical wounds.	Number of home health episodes of care where the patient has a better status of surgical wounds at discharge compared to start (resumption) of care.	Number of home health episodes of care ending with a discharge during the reporting period, other than those covered by generic or measure-specific exclusions.	Home health episodes of care for which the patient, at start/resumption of care, did not have any surgical wounds or had only a surgical wound that was unobservable or fully epithelialized, episodes that end with inpatient facility transfer or death.
<u>Acute Care Hospitalization:</u> How often home health patients had to be admitted to the hospital	Percentage of home health episodes of care that ended with the patient being admitted to the hospital.	Number of home health episodes of care for which the assessment completed at the conclusion of the episode indicates the patient was admitted to a hospital for a reason other than a scheduled treatment or procedure.	Number of home health episodes of care ending with a discharge or transfer to inpatient facility during the reporting period, other than those covered by generic or measure-specific exclusions.	Home health episodes of care that end in patient death.
<u>Timely Initiation Of Care:</u> How often the home health team began their patients' care in a timely manner.	Percentage of home health episodes of care in which the start or resumption of care date was either on the physician-specified date or within 2 days of the referral date or inpatient discharge date whichever is later.	Number of home health episodes of care in which the start or resumption of care date was either on the physician-specified date or within 2 days of the referral date or inpatient discharge date whichever is later.	Number of home health episodes of care ending with discharge, death, or transfer to inpatient facility during the reporting period, other than those covered by generic or measure-specific exclusions.	None
<u>Depression Assessment Conducted:</u> How often the home health team checked patients for depression	Percentage of home health episodes of care in which patients were screened for depression (using a standardized depression screening tool) at start/resumption of care.	Number of home health episodes of care in which patients were screened for depression (using a standardized depression screening tool) at start/resumption of care.	Number of home health episodes of care ending with discharge, death, or transfer to inpatient facility during the reporting period, other than those covered by generic or measure-specific exclusions.	Home health episodes for which the patient is nonresponsive.

<b>Measure Title: HHC Label</b>	<b>Measure Description</b>	<b>Numerator</b>	<b>Denominator</b>	<b>Measure-Specific Exclusions</b>
<u>Multifactor Fall Risk Assessment Conducted For Patients 65 And Over</u> : How often the home health team checked patients' risk of falling	Percentage of home health episodes of care in which patients 65 and older had a multi-factor fall risk assessment at start/resumption of care.	Number of home health episodes of care in which patients 65 and older had a multi-factor fall risk assessment at start/resumption of care.	Number of home health episodes of care ending with discharge, death, or transfer to inpatient facility during the reporting period, other than those covered by generic or measure-specific exclusions.	Home health episodes for which the patient is NOT age 65 or older at the start of care/resumption of care
<u>Pain Assessment Conducted:</u> How often the home health team checked the patient for pain	Percentage of home health episodes of care in which the patient was assessed for pain, using a standardized pain assessment tool, at start/resumption of care.	Number of home health episodes of care in which the patient was assessed for pain, using a standardized pain assessment tool, at start/resumption of care.	Number of home health episodes of care ending with discharge, death, or transfer to inpatient facility during the reporting period, other than those covered by generic or measure-specific exclusions.	None
<u>Pressure Ulcer Risk Assessment Conducted:</u> How often the home health team checked patients for risk of developing pressure sores (bed sores)	Percentage of home health episodes of care in which the patient was assessed for risk of developing pressure ulcers at start/resumption of care.	Number of home health episodes of care in which the patient was assessed for risk of developing pressure ulcers either via an evaluation of clinical factors or using a standardized tool, at start/resumption of care.	Number of home health episodes of care ending with discharge, death, or transfer to inpatient facility during the reporting period, other than those covered by generic or measure-specific exclusions.	None
<u>Pressure Ulcer Prevention In Plan Of Care:</u> How often the home health team included treatments to prevent pressure sores (bed sores) in the plan of care	Percentage of home health episodes of care in which interventions to prevent pressure ulcers were included in the physician-ordered plan of care for patients assessed to be at risk for pressure ulcers.	Number of home health episodes of care in which interventions to prevent pressure ulcers were included in the physician-ordered plan of care for patients assessed to be at risk for pressure ulcers.	Number of home health episodes of care ending with discharge, death, or transfer to inpatient facility during the reporting period, other than those covered by generic or measure-specific exclusions.	Home health episodes for which a formal assessment indicated the patient was not at risk of developing pressure ulcers at start/resumption of care.

<b>Measure Title: HHC Label</b>	<b>Measure Description</b>	<b>Numerator</b>	<b>Denominator</b>	<b>Measure-Specific Exclusions</b>
<u>Diabetic Foot Care And Patient/Caregiver Education Implemented During Short Term Episodes Of Care:</u> For patients with diabetes, how often the home health team got doctor's orders, gave foot care, and taught patients about foot care	Percentage of short term home health episodes of care during which diabetic foot care and education were included in the physician-ordered plan of care and implemented for patients with diabetes.	Number home health episodes of care during which diabetic foot care and education were included in the physician-ordered plan of care and implemented for patients with diabetes.	Number of home health episodes of care ending with a discharge or transfer to inpatient facility during the reporting period, other than those covered by generic or measure-specific exclusions.	Home health episodes for which the discharge/transfer assessment indicates the patient is not diabetic or is a bilateral amputee; OR an assessment for recertification or other follow-up was conducted between start/resumption of care and transfer or discharge, OR patient died.
<u>Heart Failure Symptoms Addressed During Short Term Episodes Of Care:</u> How often the home health team treated heart failure (weakening of the heart) patients' symptoms	Percentage of short term home health episodes of care during which patients exhibited symptoms of heart failure and appropriate actions were taken.	Number of home health episodes of care during which patients exhibited symptoms of heart failure and appropriate actions were taken.	Number of home health episodes of care ending with a discharge or transfer to inpatient facility during the reporting period, other than those covered by generic or measure-specific exclusions.	Home health episodes for which patient does not have heart failure diagnosis, OR heart failure symptoms were not assessed, OR no heart failure symptoms exhibited since the previous assessment, OR recertification/other follow-up assessment was conducted between start/resumption of care and transfer or discharge, OR patient died.
<u>Pain Interventions Implemented During Short Term Episodes Of Care:</u> How often the home health team treated their patients' pain	Percentage of short term home health episodes of care during which the patient had pain and pain interventions were included in the physician-ordered plan of care and implemented.	Number of home health episodes of care during which the patient had pain and pain interventions were included in the physician-ordered plan of care and implemented.	Number of home health episodes of care ending with a discharge or transfer to inpatient facility during the reporting period, other than those covered by generic or measure-specific exclusions.	Home health episodes for which patient did not have pain between the previous assessment and discharge/transfer assessment OR an assessment for recertification or other follow-up was conducted between start/resumption of care and transfer or discharge, OR patient died.

<b>Measure Title: HHC Label</b>	<b>Measure Description</b>	<b>Numerator</b>	<b>Denominator</b>	<b>Measure-Specific Exclusions</b>
<u>Drug Education On All Medications Provided To Patient/Caregiver During Short Term Episodes Of Care:</u> How often the home health team taught patients (or their family caregivers) about their drugs	Percentage of short term home health episodes of care during which patient/caregiver was instructed on how to monitor the effectiveness of drug therapy, how to recognize potential adverse effects, and how and when to report problems.	Number of home health episodes of care during which patient/caregiver was instructed on how to monitor the effectiveness of drug therapy, how to recognize potential adverse effects, and how and when to report problems.	Number of home health episodes of care ending with a discharge or transfer to inpatient facility during the reporting period, other than those covered by generic or measure-specific exclusions.	Home health episodes for which the patient was not taking any drugs between start/resumption of care and discharge/transfer, OR an assessment for recertification or other follow-up was conducted between start/resumption of care and transfer or discharge, OR the patient died.
<u>Influenza Immunization Received For Current Flu Season:</u> How often the home health team determined whether their patients received a flu shot for the current season	Percentage of home health episodes of care during which patients received influenza immunization for the current flu season.	Number of home health episodes of care during which the patient a) received vaccination from the HHA or b) had received vaccination from HHA during earlier episode of care, or c) was determined to have received vaccination from another provider.	Number of home health episodes of care ending with a discharge or transfer to inpatient facility during the reporting period, other than those covered by generic or measure-specific exclusions.	Home health episodes care for which no care was provided during October 1 - March 31, OR the patient died, or the patient is NOT in any of the groups: age 50 + or 6 mo. – 18 yrs; resides in a long-term care facility; age 19-49 with high-risk conditions.
<u>Pneumococcal Polysaccharide Vaccine Ever Received:</u> How often the home health team determined their patients received a pneumococcal vaccine (pneumonia shot)	Percentage of home health episodes of care during which patients were determined to have ever received Pneumococcal Polysaccharide Vaccine (PPV).	Number of home health episodes of care during which patients were determined to have ever received Pneumococcal Polysaccharide Vaccine (PPV).	Number of home health episodes of care ending with a discharge or transfer to inpatient facility during the reporting period, other than those covered by generic or measure-specific exclusions.	Home health episodes of care during which patient died, OR patient DID NOT meet any of the following conditions: age 65 or older; OR reside in a long-term care facility; OR age 5-64 with high-risk conditions
<u>Pressure Ulcer Prevention Implemented During Short Term Episodes Of Care:</u> How often the home health team took doctor-ordered action to prevent pressure sores (bed sores)	Percentage of short term home health episodes of care during which interventions to prevent pressure ulcers were included in the physician-ordered plan of care and implemented for patients assessed to be at risk for pressure ulcers.	Number of home health episodes of care during which interventions to prevent pressure ulcers were included in the physician-ordered plan of care and implemented for patients assessed to be at risk for pressure ulcers.	Number of home health episodes of care ending with a discharge or transfer to inpatient facility during the reporting period, other than those covered by generic or measure-specific exclusions.	Home health episodes for which formal assessment indicates the patient was NOT at risk of developing pressure ulcers between start/resumption of care and the discharge/transfer, OR an assessment for recertification or other follow-up was conducted between start/resumption of care and transfer or discharge, OR the patient died.

7 APPENDIX B

State and Private Quality Initiatives	Description
States' Medicaid Nursing Home Pay-for-Performance Programs	<p>States have devised their own Medicaid quality initiatives that promote innovative payment and service delivery models to preserve or enhance the quality of care and reduce program expenditures. As of 2009, the following states have implemented pay-for-performance in nursing facilities.</p> <p>Implementation strategies, measures, performance evaluations, and payment incentives vary across States:</p> <p style="text-align: center;">Five Medicaid programs measure clinical quality outcomes,</p> <p style="text-align: center;">Nine measure consumer experience,</p> <p style="text-align: center;">Nine use staffing indicators (<i>e.g.</i>, turnover), and</p> <p style="text-align: center;">Eight use deficiency citations.</p> <p>Some States also base payment on other measures, including occupancy, efficiency, Medicaid use, and culture change measures (<i>e.g.</i>, efforts to create a humane environment). For performance evaluation, participating nursing facilities are generally ranked within a State and/or required to achieve predetermined performance threshold for each measure. In general, participating nursing facilities receive per diem add-on payments based on a composite score.</p>

<p>Kaiser Home Health Monitoring</p>	<p>Kaiser Permanente Colorado led a six-month study to evaluate the effectiveness of an at-home blood pressure monitor coupled with a web-based reporting system. Nearly 350 patients with uncontrolled hypertension were randomly assigned to a usual care group or a home monitoring group. While the usual care group received standard care, including blood pressure checks during office visits, the home monitoring group used an at-home device that uploaded the patients' data to a web-based data storage platform.</p> <p>Average systolic blood pressure at the beginning of the study was similar for the usual care group and the home monitoring group,</p> <p>At the end of the study, the patients in the home monitoring group were 50 percent more likely to achieve healthy blood pressure than the patients in the other group.</p> <p>Moreover, the home monitoring group showed a greater decrease in systolic blood pressure than the usual care group.<sup>46</sup></p>
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<sup>46</sup> Mike Miliard, "Automated At-Home Monitoring Lowers High Blood Pressure, Study Finds," Healthcare IT News (2010), <http://www.healthcareitnews.com/news/automated-home-monitoring-lowers-high-blood-pressure-study-finds>.

Centura Health	<p>The Centura Health at Home system evaluated the use of a two-way video and monitoring system for CHF patients after discharge. Participants in this program had 24/7/365 access to clinical call centers linked with telehealth monitors and a video conferencing system. Centura Health collected data to assess the effect of remote monitoring on the following.</p> <ul style="list-style-type: none"> <li>Medical service use,</li> <li>Cost of medical care,</li> <li>Savings to the system,</li> <li>Clinical measures,</li> <li>Quality of life, and</li> <li>Self-care.</li> </ul> <p>An analysis of the patients using the system showed a 90 percent decrease in emergency department visits, 100 percent decrease in re-hospitalization for CHF, and \$3,000 to \$5,000 in savings per patient.<sup>47</sup></p>
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<sup>47</sup> M Coye, A Haselkorn, and S DeMello. "Remote Patient Management: Technology-Enabled Innovation and Evolving Business Models for Chronic Disease Care," Health Affairs 28(1) (2009), <http://content.healthaffairs.org/content/28/1/126.abstract>.

<p>Integrated Health Association Pay-for-Performance</p>	<p>Integrated Health Association (IHA) has been managing the California Pay-for-Performance program on behalf of eight private health plans since 2001. IHA collects data using a standardized set of measures, and reports results for physicians in the participating physician groups. Specifically, IHA collects information on the following:</p> <p style="text-align: center;">Clinical quality,</p> <p style="text-align: center;">Patient experience,</p> <p style="text-align: center;">Use of information technology, and</p> <p style="text-align: center;">Coordinated diabetes care using the Healthcare Effectiveness Data and Information Set (HEDIS).</p> <p>Based on these measures, IHA calculates an overall composite score and an improvement score for each practice and recognizes the top 20 percent of physician groups in the State.</p> <p>Private health plans use the scores calculated by IHA to provide payment incentives for the physicians contracting with their plans using different payment methodologies. For example, Anthem Blue Cross used the composite scores to rank the physician groups, and paid the groups in the 20<sup>th</sup> to the 100<sup>th</sup> percentiles on a sliding scale, in 2010.</p> <p>In 2009, IHA reports an overall improvement in clinical measures, a slight increase in the patient experience measure scores, and a continued increase in IT activities.<sup>48</sup> The list of award winners and honorable mentions is publicly available on the IHA web site.<sup>49</sup></p>
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<sup>48</sup> Integrated Healthcare Association, “About the IHA Pay-for-Performance (P4P) Program,” IHA (2010), [http://www.iha.org/pdfs\\_documents/p4p\\_california/P4PFactSheet%20September2010.pdf](http://www.iha.org/pdfs_documents/p4p_california/P4PFactSheet%20September2010.pdf).

<sup>49</sup> Integrated Healthcare Association, “Top Performing Groups,” IHA (2009), [http://www.iha.org/p4p\\_awards.html](http://www.iha.org/p4p_awards.html).

<p>Blue Cross and Blue Shield of Massachusetts (BCBSMA) Primary Care Physician Incentive Program (PCPIP), BCBS Physician Group Incentive Program (PGIP), &amp; BCBSMA Alternative Quality Contract (AQC)</p>	<p>Blue Cross Blue Shield implements three payment incentive programs for primary care physicians, physician groups, and hospitals.</p> <p>The Primary Care Physicians Incentive Program evaluates participating practitioners on the following:</p> <ul style="list-style-type: none"> <li>BMI screening,</li> <li>ADHD medication management,</li> <li>Generic prescription utilization,</li> <li>Cholesterol level control,</li> <li>Diabetes care,</li> <li>Information technology (IT) use, and</li> <li>Cultural competency training.</li> </ul> <p>The participants of the Physician Group Incentive Program are evaluated on five categories.</p> <p>Improvement capacity category addresses efforts such as training management staff on data analytics;</p> <p>Condition-focused category includes activities such as developing standard treatment;</p> <p>Service-focused category consists of initiatives such as tailoring services in emergency room visits;</p> <p>Core clinical process-focused category evaluates efforts such as improving tracking of services; and</p> <p>Clinical IT examines adoption of electronic prescribing or implementation of patient registries.</p> <p>The Alternative Quality Contract (AQC) examines a number of measures for participating physicians and hospitals including:</p>
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	<p style="text-align: center;">Process, Outcome, and Patient experience.</p> <p>For all three programs, BCBS pays on a fee-for-service (FFS) basis and provides bonuses based on the performance measures. For instance, provider groups that participate in BCBSMA AQC negotiate an annual budget and annual rates of the change in the budget with BCBS. This budget reflects the current size and expenditure of each group. Then, at the end of the year, BCBS pays the group its surplus or recoups any deficit relative to the predetermined budget. In addition to the annual budget, participating provider groups can receive bonuses up to 10 percent based on their performance on measures in the ambulatory, office-based services, and hospital care domains. A composite score is calculated from each group’s performance from the three domains, and payments are made if the score meets absolute performance targets.</p> <p>BCBS reports that PCPIP and PGIP achieved improvements in quality of care. PGIP improved quality for chronic conditions compared to the performance of physician organizations on 18 national standard measures. In addition, PGIP achieved cost reduction through an increase in the use of generic drugs. PCPIP also maintains a public reporting platform, the “Find a Doctor” web site,<sup>50</sup> which provides information on the listed physicians and quality measures for the physician groups.</p>
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<sup>50</sup> Blue Cross MA, “Find a Doctor, Dentist, or Hospital,” BCMA (2011), <https://www.bluecrossma.com/wps/portal/members/using-my-plan/doctors-hospitals/findadoctor/>.

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