U.S. Department of Health and Human Services

REPORT TO CONGRESS:

Plan to Implement a Medicare Skilled Nursing Facility Value-Based Purchasing Program

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EXECUTIVE SUMMARY

A significant number of elderly Americans receive care in skilled nursing facilities (SNFs). This involves either short-term post-acute care for recovery from an illness or injury or, more commonly, long-term custodial care. Quality of care has been, and continues to be, a significant concern for a subset of SNFs. While a broad infrastructure exists to support quality oversight, the SNF prospective payment system (PPS), which has historically been based on costs and resources, does not provide strong incentives for furnishing high quality care to this very fragile patient population. Harnessing the significant and growing purchasing power of Medicare in this sector can provide incentives for providers to improve the quality of care for their patients.

Medicare payments represent an increasing part of the SNF revenue stream and a growing portion of Medicare spending on health care services. Currently there is no Medicare value-based purchasing (VBP) program for SNFs despite an increasing number of Medicare beneficiaries receiving skilled nursing services. The Medicare Payment Advisory Commission (MedPAC) has recommended that Congress establish a quality incentive payment policy for SNFs in Medicare.[1] MedPAC stated that linking payments to beneficiary outcomes could help improve SNF quality and redistribute payments from low-quality to high-quality providers.

CMS views implementation of a SNFVBP program as an important step in revamping how Medicare pays for health care services, moving the program towards rewarding better value, outcomes, and innovations instead of the volume of services provided. 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.

CMS's plan for a SNFVBP program will link payment to performance to improve value for Medicare beneficiaries and other residents residing in SNFs by promoting the development and use of robust quality measures to allow patients and providers to assess the quality of skilled and non-skilled care furnished in SNFs. By focusing on both SNF residents and measures that assess functional status, a robust VBP program can ensure that Medicare patients have access to timely, safe and high quality care including short-term skilled nursing care and rehabilitation services. In addition, the emphasis on Medicare beneficiaries' functional status can help prepare them for discharge to a less intensive non- institutional setting. The SNFVBP program should also 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.

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[1] Medicare Payment Advisory Commission. Report to Congress: Medicare Payment Policy (March 2011). The report can be accessed at: http://medpac.gov/documents/Mar11_EntireReport.pdf. The recommendation was originally made in the 2008 report to Congress, and can be accessed at http://www.medpac.gov/documents/Mar08_EntireReport.pdf)

Creation of a SNFVBP program will align with many of the Department of Health and Human Services' (HHS) and CMS's efforts to improve coordination of care. CMS's plan to implement a SNFVBP program will also be 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 of the health care system, 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.[2]

The design of the SNFVBP program can build upon the lessons learned from Medicare quality initiatives and States' efforts to promote innovative payment and service delivery models to preserve or enhance the quality of care and reduce the growth in program expenditures, including the Nursing Home VBP Demonstration, the Home Health Pay-for-Performance Demonstration and other Federal and State initiatives.

Background

Section 3006(a) (1) of the Patient Protection and Affordable Care Act of 2010 (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 Medicare payments under Title XVIII of the Social Security Act ("the Act") for SNFs.

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

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[2] 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.

- The ongoing development, selection, and modification process for measures (including under sections 1890 and 1890A of the Act, as added by section 3014 of the Affordable Care Act) to the extent feasible and practicable, of all dimensions of quality and efficiency in SNFs.
- The reporting, collection, and validation of quality data.
- 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 of value-based bonus payments.
- Methods for the public disclosure of information on the performance of SNFs.
- Any other issues determined appropriate by the Secretary.

Additionally, section 3006(a)(3) of the Affordable Care Act requires the Secretary in developing the plan to consult with relevant affected parties and consider experience with demonstrations relevant to the SNFVBP program.

As used in this report, a SNF is a facility certified to furnish skilled nursing and rehabilitation services to Medicare beneficiaries under the Medicare program; and a "nursing facility" or "NF" is a facility certified to furnish services to Medicaid beneficiaries under the Medicaid program. Both SNFs and NFs are licensed and surveyed by the State survey agency (for SNFs, the State is under contract with CMS). NFs, in addition to providing SNF level of care, may also furnish services to patients who require a less intensive level of long-term care services. The report uses the term "facility" or "facilities" to refer to SNFs and NFs collectively. However, most facilities in States are dually-certified and licensed both as SNFs under Medicare and as NFs under Medicaid.

As of December 2009, approximately 15,000 Medicare-certified SNFs operated across the United States.[3] These facilities provided care to 2.03 million Medicare patients in a Part A SNF stay[4] and to 858,000 patients receiving outpatient therapy covered by Part B in 2009 (Lyda-McDonald, Drozd, and Gage, 2011). As of March 2011, about 6.6 percent of these SNFs operated within hospitals, and the remaining were freestanding facilities (*i.e.*, they may be part of a hospital system but are separate organizations) (American Health Care Association, 2011). Of the freestanding SNFs, more than 90 percent operate as SNFs and NFs dually certified under Medicare and Medicaid. All but a few facilities are dually certified for Medicare and Medicaid because the participation and certification standards generally are the same for the two programs. On average, patients receiving Medicare SNF-level care require two to three times as much registered nursing time per patient day as compared to long-stay residents.[5] The large majority

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[3] RTI's analysis of 2009 facility-level information on SNF providers derived from the December 2009 Provider of Services File.

[4] Specifically, there were 2.03 million Part A SNF discharges in 2009; some Medicare beneficiaries may have had multiple SNF discharges during the year (*2010 CMS Data Compendium*, Table V.15; http://www.cms.gov/DataCompendium/14_2010_Data_Compendium.asp#TopOfPage)

[5] This estimate is based on the national median nursing home registered nurse (RN) time per patient day reported in 2007 CMS Online Survey and Certification Reporting System (OSCAR) data (The Commonwealth Fund, "Nursing Home Hours Per Patient Day," http://www.commonwealthfund.org/Content/Charts/Report/Why-Not-the-Best--Results-from-the-National-Scorecard-on-U-S--Health-System-Performance--2008/N/Nursing-Home-Staff-Hours-Per-Patient-Day.aspx) and unpublished data on median RN time per patient in SNFs collected in the Post Acute Care: Payment Reform Demonstration (PAC:PRD).

of residents in SNFs have their care paid for by Medicaid. However, most Medicaid residents are also Medicare beneficiaries who are dually eligible for both Federal programs. The majority of private-pay residents in SNFs are also Medicare beneficiaries.

Quality of Care in Facilities

Despite efforts to raise the quality of care standards for Medicare- and Medicaid-certified facilities and strengthen Federal and State oversight, CMS continues to observe substandard quality across a number of facilities. For example, State inspectors cited approximately 156,000 survey deficiencies to facilities in 2009 for violations of Federal quality regulations (Harrington et al., 2010). The categories with the greatest percentage of deficiencies nationally were the following: facility is free of accident hazards (45.43 percent); food sanitation (39.68 percent); quality of care (35.50 percent); professional standards (33.73 percent); and comprehensive care plans (29.10 percent). The categories of citations are defined in federal regulations at 42 CFR Part 483 Subpart B. Top cited deficiencies by frequency are calculated based on the percentage of facilities nationally with a particular deficiency. The average number of deficiencies per facility generally remained constant from 2004 to 2009[6], but the average number of deficiencies varied substantially across States – from 5.73 in North Carolina to 17.8 in Arizona.[7]

In a recent report, the U.S. Government Accountability Office (GAO, 2010) found that many poor-quality facilities continued to cycle in and out of compliance on subsequent surveys.[8] Data from the Minimum Data Set (MDS)[9] reveals that nationally 19 percent of short-stay residents in facilities experience pain and 12 percent suffer from pressure ulcers (American Health Care Association, 2011c). The 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 facilities.

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[6] Harrington, C., Carrillo, H., Blank, BW., O'Brian, T. "Nursing Facilities, Staffing, Residents and Facility Deficiencies, 2004 – 2009. September 2010. The report can be accessed at: http://www.pascenter.org/documents/OSCAR_complete_2010.pdf.

[7] Ibid.

[8] The CMS's Special Focus Facility (SFF) Initiative identifies nursing homes that (a) have had a history of serious quality issues and (b) are included in a special program to promote improvements in their quality of care. The SFF list includes nursing homes with a history of serious quality issues. Most nursing homes have some deficiencies, with the average being 6 to 7 deficiencies per survey. Most nursing homes correct their problems within a reasonable period of time. However, the agency has found that a minority of nursing homes have more problems than others (about twice the average number of deficiencies), more serious problems than most other nursing homes (including harm or injury experienced by residents), and a pattern of serious problems that has persisted over a long period (as measured over the 3 years before the date the nursing home was first put on the SFF list). Further information on CMS's SFF and List can be accessed at: http://www.cms.gov/CertificationandComplianc/Downloads/SFFList.pdf.

[9] The 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 NFs. 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.

Interdisciplinary teams working in facilities use the MDS to assess residents. In 2008, the U.S. Administration on Aging's national ombudsman reporting system recorded more than 208,000 complaints related to facility residents' quality of care, quality-of-life problems, or residents' rights (Administration on Aging, 2011).

Roadmap for SNFVBP Implementation Plan

In order to link payment to the quality of care provided for Medicare beneficiaries, several steps will be involved in designing and implementing a VBP program for SNFs:

- Continuous Quality Improvement Framework – A SNFVBP program should align with other Medicare programs and coordinate incentives to improve quality. The program should build on and refine existing quality measurement tools and processes. In addition, CMS could improve the quality framework by expanding the measures to include those that assess functional status such as improvements in walking, transfers, and eating that prepare Medicare beneficiaries for discharge to a less intensive non-institutional setting. CMS can also consider adopting measures that assess improvements in a beneficiary's physical condition such as better balance or measures related to specific therapy services. In addition, CMS could also consider adoption of structural measures related to the use of Electronic Health Records.

- Defining the SNFVBP Population –The SNFVBP program could measure quality for all residents in a SNF, most of whom do not generally have their long-term care services paid for by Medicare. These residents include dual eligibles and private-pay individuals. Another option would be to measure quality only for those residents whose care was paid by Medicare Part A. Measuring quality for all residents in a SNF has several benefits: Medicare beneficiaries account for the majority of residents in SNFs, even if Medicare does not pay for their stay; most of the key measures that could be used to assess performance apply to all residents in a SNF, including those who also depend on Medicaid or private payer coverage; and when measuring quality for all residents, the SNFVBP program could serve as a potential innovative model and offer lessons learned for both private payers and Medicaid.

- Enhanced Data Infrastructure and Validation Process – A SNFVBP program will need to be designed in such a way that performance incentives are accurately calculated and appropriately targeted by validating quality of care in SNFs, rather than rewarding those who simply report data.

- Performance Scoring and Evaluation Model – A SNFVBP program will need to determine a performance scoring process which could be based on attainment of a specific target, overall improvement or a combination of the two.

- Funding Source/Performance Incentive Funds – A funding source for linking payment to quality will need to be identified for a SNFVBP program. Potential options include payment withholds that could be earned back based on quality performance or by tying payment updates to overall quality performance. A

determination will also need to be made as to whether available incentives should increase over time.

- 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 SNFs. Data could be posted on the Nursing Home Compare web site.

- Coordination across Medicare Payment System – A SNFVBP program should be designed so that it coordinates and aligns with existing VBP, pay-for-reporting, and quality monitoring systems.

SECTION 1
Overview

1.1 Goals for VBP and Legislative Mandate

Section 3006(a)(1) of the Affordable Care Act requires the Secretary to develop a plan to implement a VBP program for payments under the Medicare program under Title XVIII of the Act for SNFs.

Under section 3006(a)(2) of 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 sections 1890[10] and 1890A[11] of the Act, as added by section 3014 of the Affordable Care Act), to the extent feasible and practicable, of all dimensions of quality and efficiency in SNFs.
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 SNFs.
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 SNFVBP program.

1.2 CMS's Goals for VBP 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 volume of services provided. CMS considered the following principles in developing the plan to implement a SNFVBP 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.

[10] 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 that the entity, including endorsing and maintaining measures and convening multi-stakeholder groups to provide input on measures.

[11] Section 1890A of the Act contains provisions regarding the process for selecting quality and efficiency measures with input from multistakeholder groups, and dissemination and review of the measures used by the Secretary.

- 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 multistakeholder 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 should be scored on their overall achievement relative to national or other appropriate benchmarks. VBP scoring methodologies should also consider improvement in performance as an independent goal. Over time, scoring methodologies should 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.

In preparing this report, CMS reviewed existing innovative health care programs and demonstration projects to determine if any of them could serve as models for the SNFVBP program. One example is Medicare's current Nursing Home Value-Based Purchasing (NHVBP) Demonstration, which aims to promote high-quality care and prevent costly, potentially avoidable, hospitalizations. In this demonstration, savings resulting from lower expenditures are used to fund incentive payments for providers. In comparison, the Medicare Hospital Inpatient VBP program depends on withholding part of otherwise scheduled Medicare payments to create a funding pool that is used for incentive payments. For example, this program will utilize a withhold approach by reducing the base-operating diagnosis-related group (DRG) payment amount for each discharge by 1 percent in FY 2013 to create a funding pool for value-based incentive payments.[12] CMS also researched ongoing quality efforts in the private sector. For example, to promote higher quality in the inpatient setting, WellPoint, Inc., a private health insurer, proposes to implement a hospital VBP program covering about 1,500 hospitals across the country. Hospitals will not receive annual payment increases if they fail to meet quality performance targets across 51 indicators of patient care. The indicators include whether the hospital prevents patients from relapsing after they leave the hospital, whether they follow a safety checklist, and how patients rate their experience of care. Hospitals that provide substandard quality of care across these indicators will not receive a payment update (Adamy, 2011).

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[12] See the following for additional information on the Medicare Hospital VBP program: (http://www.federalregister.gov/articles/2011/05/06/2011-10568/medicare-program-hospital-inpatient-value-based-purchasing-program#p-14).

1.3 Background on Medicare SNF Payments

Medicare pays for SNF services under both Parts A (Hospital Insurance) and B (Medical Insurance). Under Part A, the SNF (or "extended care") benefit provides coverage for patients who need daily skilled nursing or rehabilitation services that, as a practical matter, can only be provided in a SNF on an inpatient basis. To receive services covered under Part A in a SNF, a beneficiary must be admitted from a medically necessary inpatient hospital stay of at least 3 days and generally within 30 days of discharge from that hospital. In addition, the services must be needed for a "hospital-related" condition (that is, one of the conditions for which the patient was treated in the hospital, even if not the reason for the hospital admission), or for a condition which arose while being treated in the SNF for a hospital-related condition. The law defines the SNF benefit as a "post hospital" benefit, under which patients are typically transferred to SNFs from acute care hospitals for what would otherwise have been the final, convalescent portion of the hospital stay itself. SNFs vary in the acuity of the patients they accept; however, patient acuity and staff-to-patient ratios generally are both lower in a SNF than in acute care hospitals. Some SNFs provide more intensive, sub-acute treatments, such as ventilator monitoring or intensive rehabilitation therapy. Also, in situations where no Part A coverage is available (such as SNF benefits exhausted, no prior qualifying hospital stay, etc.), SNFs can receive payments under Medicare Part B for certain individual services. For example, such services can include "outpatient" therapy (physical therapy, occupational therapy, and speech/language pathology) furnished during a non-covered inpatient stay; certain diagnostic radiological services and other diagnostic tests; and orthotics/prosthetics and supplies. SNFs also could receive payments under Medicaid for dually-eligible Medicare beneficiaries.

A VBP program, which can also be referred to as "pay-for-performance," uses payment incentives to encourage providers and suppliers to improve the quality of care they provide. The current Medicare payment system for SNFs does not differentiate between high- and low-quality providers; all providers receive the same payment rates for particular types of residents. Section 4432(a) of the Balanced Budget Act of 1997 (BBA) amended section 1888 of the Act to modify how payment is made for Medicare SNF services. Effective with cost reporting periods on or after July 1, 1998, SNFs were no longer paid on a reasonable cost basis or through low-volume prospectively determined rates, but rather on the basis of a PPS. The PPS payment rates adjust for case mix and geographic variation in wages and generally cover all costs of furnishing covered SNF services (*i.e.*, routine, ancillary, and capital-related costs). The BBA mandated the implementation of a per diem PPS for SNFs related to the services furnished to beneficiaries under Part A of the Medicare program. Major elements of the system include the following:

- Rates: Federal rates were initially set using allowable costs from fiscal year (FY) 1995 cost reports updated to the first effective year of the SNF PPS (the 15 month period beginning July 1, 1998) by a SNF market basket.
- Case Mix Adjustment: Per diem payments for each admission are case-mix adjusted using a resident classification system (Resource Utilization Groups, version 4 (RUG-IV)) based on data from resident assessments (MDS) and relative weights developed from staff time data.[13]

[13] Per diem SNF payments incorporate an adjustment to account for facility case-mix using the RUG-IV classification system, which accounts for the relative resource utilization of different patient types. The RUG–IV

- Geographic Adjustment: The labor portion of the Federal rates is adjusted for geographic variation in wages using the hospital wage index.
- Annual Updates: Payment rates are updated each Federal fiscal year using a SNF market basket index, to reflect changes in the costs of goods and services used to provide SNF care. Under section 3401(b) of the Affordable Care Act, effective FY 2012, this market basket index update is itself adjusted by a Multifactor Productivity (MFP) adjustment, to reflect increases in provider productivity that could reduce the actual cost of providing services (such as through new technology, fewer inputs, etc.).

The RUG classification is based on factors such as the services furnished, clinical condition, and need for assistance to perform activities of daily living.[14] In its March 2011 Report to Congress, MedPAC has identified that rehabilitation days continued to grow as a share of all Medicare SNF days. In 2009, rehabilitation days accounted for 92 percent of Medicare SNF days, increasing from 83 percent in 2005.[15] Specifically, the nine case-mix groups for days that qualify for both rehabilitation plus extensive services accounted for 39 percent of days, increasing from 34 percent in 2007.[16] A percentage of the shift in rehabilitation days could be attributed to a shift from inpatient rehabilitation facilities (IRFs) to SNFs as IRFs comply with a rule requiring that at least 60 percent of IRF patients must have at least 1 of 13 specified conditions.[17] Under the current Medicare SNF PPS system, SNFs receive payments for the services furnished to Medicare beneficiaries without accounting for quality or outcomes achieved.

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classification system uses beneficiary assessment data from the MDS 3.0 completed by SNFs to assign beneficiaries to one of 66 RUG–IV groups. The original RUG–III case-mix classification system used beneficiary assessment data from the MDS, version 2.0 (MDS 2.0) completed by SNFs to assign beneficiaries to one of 44 RUG–III groups. Then, under incremental refinements that became effective on January 1, 2006, CMS added nine new groups—comprising a new Rehabilitation plus Extensive Services category—at the top of the RUG–III hierarchy (creating the RUG-53 classification system). The May 12, 1998 interim final rule (63 FR 26252) included a detailed description of the original 44-group RUG–III case-mix classification system. A comprehensive description of the refined RUG–53 system appeared in the proposed and final rules for FY 2006 (70 FR 29070, May 19, 2005, and 70 FR 45026, August 4, 2005), and a detailed description of the current 66-group RUG–IV system appeared in the proposed and final rules for FY 2010 (74 FR 22208, May 12, 2009, and 74 FR 40288, August 11, 2009).

[14] The Medicare Payment Advisory Commission in its March 2011 Report to Congress classifies the broad resource utilization groups into the following: (1) clinically complex; (2) extensive services; (3) special care; (4) rehabilitation; and (5) rehabilitation plus extensive services. For additional information on MedPAC's analysis, The report can be accessed at: http://medpac.gov/documents/Mar11_EntireReport.pdf.

[15] Medicare Payment Advisory Commission. March 2011 Report to Congress.

[16] For definitions of the nine-case-mix groups, see Table 7-2, on p. 150 of the Medicare Payment Advisory Commission March 2011 Report to Congress. Within the rehabilitation case-mix groups, the distribution of days continued to shift toward the highest intensity therapy groups, which are associated with the highest Medicare payments. Between 2006 and 2009, the share of ultra high and very high rehabilitation days grew from 56 percent to 71 percent of all rehabilitation days. The report can be accessed at: http://medpac.gov/documents/Mar11_EntireReport.pdf

[17] Medicare Payment Advisory Commission. March 2011 Report to Congress. Between 2004 and 2009, MedPAC has observed that the share of Medicare beneficiaries who had a major joint replacement and were discharged from a hospital to a SNF increased by 4 percentage points from 33 percent to 37 percent, the share discharged to home health care increased by 10 percentage points from 21 percent to 31 percent while the share discharged to an IRF decreased by 15 percentage points from 28 percent to 13 percent.

Table 1-1 provides measures of SNF utilization under Medicare Part A between 2004 and 2008.

Table 1-1
Measures of Medicare Part A SNF Utilization for Fee-for-Service (FFS) Beneficiaries, 2004–2008

Measure	2004	2005	2006	2007	2008
SNF program expenditures ($ billions)	$17.1	$19.0	$20.5	$22.2	$24.2
Total FFS enrollment (millions)*	36.1	36.4	35.8	35.3	35.1
Discharges (thousands)	1,764	1,982	1,985	1,959	2,027
Discharges/1,000 FFS enrollees	48.8	54.4	55.5	55.4	57.8
Days (thousands)	62,300	65,870	67,498	67,983	70,493
Days/discharge	35.3	33.2	34.0	34.7	34.8
Payment/discharge	$9,707	$9,603	$10,304	$11,305	$11,955
Payment/day	$274.79	$288.93	$303.07	$325.85	$343.73

SOURCE: RTI International analysis of data reported in the *CMS Data Compendium*, 2007 and 2009 Editions, and *2010 Medicare Trustees Report*.

*This row refers to the total number of Medicare FFS beneficiaries in the Medicare Program (excluding Medicare Advantage enrollment).

Displayed in Table 1-2 below, changes in payment per day—the market basket increase of 3.2 percent and the "intensity" increase of 2.7 percent —remain the primary drivers of the increase in SNF program expenditures between 2005 and 2008. The 1.2 percent reduction in FFS enrollees remained a slowing factor on total Medicare SNF program expenditures during the same period.

Between 2004 and 2008, the factors contributing most to the annualized average 9.1 percent increase (see Table 1-2) in Medicare SNF program expenditures are as follows:

- SNF market basket (which is a measure of inflation associated with providing SNF services), the primary factor in the annual update of the per diem rates, increased by an annualized average of 3.1 percent;
- Discharges per 1,000 Medicare FFS beneficiaries from hospitals to SNFs increased by an annualized average of 4.3 percent;
- Average SNF payments per day not accounted for by the market basket increased by an annualized average of 2.6 percent.

Table 1-2
Decomposition of Changes in Medicare Part A SNF Expenditures, FFS Beneficiaries, 2004 – 2008

% Change	2004–2005–	2005–2006–	2006–2007–	2007–2008–	2004–2008 (Annualized)	2005–2008 (Annualized)
SNF program expenditures	11.2	7.5	8.3	9.4	9.1	8.4
Total FFS enrollment	0.9	−1.8	−1.2	−0.7	−0.7	−1.2
Discharges/1,000 FFS enrollees	11.4	2.0	−0.1	4.2	4.3	2.0
Days/discharge	−5.9	2.3	2.0	0.2	−0.4	1.5
SNF market basket	2.8	3.1	3.1	3.3	3.1	3.2
Payment/day not accounted for by market basket	2.3	1.7	4.3	2.1	2.6	2.7

SOURCE: RTI International analysis of data reported in the *CMS Data Compendium,* 2007 and 2009 Editions; *2010 Medicare Trustees Report*; and *SNF-PPS and Consolidated Billing Final Rules*, 2005–2008.

SECTION 2
Literature Review and Experience with Quality Initiatives and Demonstrations

Prior to the enactment of the Affordable Care Act, the Medicare program, the private sector, and State Medicaid programs 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-performance." Some initiatives linking payment to quality, such as the NHVBP Demonstration, 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 on improving quality reporting systems for the Medicare program. HHS and CMS began launching 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. Nationwide support and subsequent impact will be optimized when entities responsible for implementing strategic plans participate in their development. HHS released the National Quality Strategy on March 21, 2011, and continuing 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.

In addition to the National Quality Strategy being implemented by HHS, CMS is already engaged in a number of quality initiatives to achieve a high quality, value-driven health care system for home health agencies, hospices, hospitals, end-stage renal disease services, physicians and SNFs/NFs. In November 2002, CMS also began a national Nursing Home Quality Initiative (NHQI).[18]

This section presents a review of selected literature regarding quality issues and CMS's experience in Medicare pay-for-performance demonstrations and quality initiatives. This work was used to inform the design and development of the plan for the SNFVBP program. Additional descriptions of projects related to States' VBP initiatives can be found in ***Appendix A***.

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[18] The Nursing Home Quality Initiative (NHQI) can be accessed at: http://www.cms.gov/NursingHomeQualityInits/. The NHQI discusses quality measures that are displayed on the Nursing Home Compare web site, which allows consumers, providers, States and researchers to compare information on nursing homes. Many nursing homes have already made significant improvements in the care provided to residents by taking advantage of these materials and the support of Quality Improvement Organization staff.

2.1 Quality of Care in Facilities and Policy Responses

Concerns related to poor quality of care in SNFs/NFs and other long-term care facilities date back to the 1970s (New York State Moreland Act Commission, 1975; Wiener, 1981). The Omnibus Budget Reconciliation Act of 1987 (OBRA '87) raised quality of care standards for facilities and home health agencies that participate in Medicare and Medicaid, and strengthened Federal and State oversight. Empirical research generally finds that quality of care in facilities improved following OBRA '87, especially related to the use of physical and chemical restraints, prevalence of dehydration and stasis ulcers, and use of catheters (Phillips et al., 1996, 1997; Fries et al., 1997; Hawes et al., 1997; Zhang and Grabowski 2004; Wiener, Freiman, and Brown 2007; Mor et al. 2009). For example, data from the MDS show that the percentage of facility residents who are physically restrained declined significantly from 9.7 percent in 2002 to 2.6 percent in 2010 (American Health Care Association, 2011a).

SNFs and NFs must comply with the requirements set forth in 42 CFR Part 483, Subpart B[19], to receive payment under the Medicare and Medicaid programs. To certify a SNF or NF, a State surveyor completes at least a Life Safety Code survey, and a Standard Survey.[20] The State has the responsibility for certifying a SNF's or NF's compliance or noncompliance with the Federal participation requirements, except in the case of State-operated facilities. However, the State's certification for a SNF is subject to CMS approval. In addition to certifying that a facility is in compliance with the requirements in 42 CFR Part 483, Subpart B, the State recommends appropriate enforcement actions to the State Medicaid agency for Medicaid and to the CMS regional office for Medicare. The regional office determines a facility's eligibility to participate in the Medicare program based on the State's certification of compliance and a facility's compliance with civil rights requirements.

Despite efforts to raise the quality of care standards for Medicare- and Medicaid-certified facilities and strengthen Federal and State oversight, CMS continues to observe substandard quality across a number of facilities. For example, State inspectors cited approximately 156,000 survey deficiencies in facilities in 2009 for violations of Federal quality regulations (Harrington et al., 2010). The average number of deficiencies per facility was 9.96 in 2009 compared to 10.44 in 2004.[21] In 2009, the average number of deficiencies varied substantially from 5.73 in

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[19] Information on the certification and compliance for SNFs and NFs to receive payment under the Medicare and Medicaid program can be accessed: https://www.cms.gov/CertificationandComplianc/12_NHs.asp.

[20] States do not announce SNF/NF surveys to the facility. This means that survey dates are not known ahead of time, and they are not predictable, so the facilities do not know when the survey will occur (beyond a window of a few months). Once the surveyors arrive they announce themselves to the facility. They conduct standard surveys and complete them on consecutive workdays whenever possible. They may be conducted at any time, including weekends, 24 hours a day. When standard surveys begin at times beyond the business hours between 8:00 a.m. and 6:00 p.m., or begin on a Saturday or Sunday, the entrance conference and initial tour is in recognition of the residents' activity (*e.g.*, sleep, religious services) and types and numbers of staff available upon entry. For further information with respect to SNF/NF certification and compliance, including links to applicable laws and regulations, please refer to CMS's website: http://www.cms.gov/CertificationandComplianc/12_NHs.asp.

[21] Harrington, C., Carrillo, H., Blank, BW., O'Brian, T. "Nursing Facilities, Staffing, Residents and Facility Deficiencies, 2004 – 2009. September 2010. The report can be accessed at: http://www.pascenter.org/documents/OSCAR_complete_2010.pdf.

North Carolina to 17.8 in Arizona.[22] Furthermore, 25 percent of the nation's facilities were cited for survey deficiencies for poor quality of care, which could entail their causing harm to or jeopardizing residents. Harrington's analysis also found that some facilities were cited for significant deficiencies and for providing substandard quality of care across a number of metrics:

- 34 percent for failure to meet professional standards;
- 30 percent for infection control problems;
- 29 percent for failure to provide comprehensive care plans;
- 24 percent for giving unnecessary drugs;
- 22 percent for poor clinical records;
- 21 percent for pressure ulcers; and
- 21 percent for poor housekeeping.

In a recent report, the U.S. Government Accountability Office (GAO, 2010) found that many poor-quality facilities continued to cycle in and out of compliance on subsequent surveys.[23] Data from the MDS reveals that nationally 19 percent of short-stay residents in facilities experience pain and 12 percent suffer from pressure ulcers (American Health Care Association, 2011c). In 2008, the U.S. Administration on Aging's national ombudsman reporting system recorded more than 208,000 complaints related to facility residents' quality of care, quality-of-life problems, or residents' rights (Administration on Aging, 2011).

The fact that residents continue to experience issues such as persistent deficiencies and serious problems (*e.g.*, including harm or injury) in a subset of facilities signals the need for CMS and stakeholders to work to improve care and promote better health outcomes and experiences for beneficiaries in these facilities. Using financial incentives to reward better health care, VBP programs aim to hold providers accountable and address the variation in quality across care settings. Like the current NHVBP Demonstration (see Section 2.2 for additional details), CMS's plan for a SNFVBP program will link SNF payment to performance to improve value for Medicare beneficiaries.

2.2 Medicare Quality Initiatives, VBP Program, and Pay-for-Performance Demonstrations

CMS has undertaken significant effort to implement innovative payment models and initiatives to improve quality of care for Medicare beneficiaries. These experiences were important in informing the design and development of the plan for a national SNFVBP program.

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[22] Ibid.

[23] The CMS's SFF Initiative identifies nursing homes that (a) have had a history of serious quality issues and (b) are included in a special program to promote improvements in their quality of care. The SFF list includes nursing homes with a history of serious quality issues. Most nursing homes have some deficiencies, with the average being 6 to 7 deficiencies per survey. Most nursing homes correct their problems within a reasonable period of time. However, the agency has found that a minority of nursing homes have more problems than others (about twice the average number of deficiencies), more serious problems than most other nursing homes (including harm or injury experienced by residents), and a pattern of serious problems that has persisted over a long period (as measured over the 3 years before the date the nursing home was first put on the SFF list). Further information on CMS's SFF and the List of facilities can be accessed at: http://www.cms.gov/CertificationandComplianc/Downloads/SFFList.pdf.

In parallel with CMS's efforts to link payment to quality outcomes under the Medicare program, nine States have devised their own Medicaid initiatives focusing on innovative payment and service delivery models and quality reporting programs to preserve or enhance the quality of care for patients (see Appendix A).

Many of the pay-for-performance initiatives under States' Medicaid programs use similar metrics that align with CMS's commitment to quality improvement in SNFs and other Medicare programs. These metrics include increasing the number of licensed staff (*e.g.*, RNs), lowering the number of citations for deficiencies, measuring patient and family experience of care, assessing service utilization, limiting staff turnover, and improving clinical outcomes. To date an overall analysis of the impact of the State VBP programs has not been conducted. Many of the States that have implemented programs are in the process of conducting internal evaluations of their effect on the quality of care. The programs can provide us with some information on whether they have been mandatory or voluntary, the size of the quality incentives payments, and the types and number of quality measures used. CMS will continue to monitor State efforts to implement and evaluate pay for performance and will use the information gained in designing a SNFVBP program. The Medicare NHVBP Demonstration will be thoroughly evaluated, and may serve as a model for both State and Federal efforts to improve the quality of care in facilities. CMS and the States are increasingly moving toward incorporating cross-setting metrics to achieve goals of consistency and transparency that include performance-based payments, quality reporting, and patient experience of care. In designing a SNFVBP program, CMS will seek to build on best practices that have been developed at both the State and Federal level.

Quality Initiatives

***Hospital Inpatient Quality Reporting Program, formerly known as the Reporting Hospital Quality Data for Annual Payment Update*:** Section 1886(b) (3) (B) (vii) of the Act (added by section 501(b) of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003) authorized the Secretary to reduce the annual percentage increase that would otherwise be paid to a subsection (d) hospital if the hospital did not submit data on a set of 10 quality indicators. Section 1886(b)(3)(B)(vii)(I) of the Act provided for a 0.4 percentage point reduction in the applicable percentage increase (which was, at that time, defined as the market basket percentage increase for hospitals in all areas) for hospitals that did not successfully submit the data on the 10 quality indicators in FY 2005 and FY 2006. The Deficit Reduction Act of 2005 required the Secretary to increase the reduction in the applicable percentage increase to 2.0 percentage points. CMS makes the data on measures it collects under the Hospital Inpatient Quality Reporting (IQR) program public, which helps consumers make more informed decisions about their health care. Section 4102(b)(1)(A) of the American Recovery and Reinvestment Act of 2009 and section 3401(a)(2) of the Affordable Care Act amended section 1886(b)(3)(B)(viii)(I) of the Act to provide that, beginning in FY 2015, the reduction will be one quarter of such applicable percentage increase (determined without regard to reductions under sections 1886(b)(3)(B)(ix), (xi), or (xii) of the Act). In FY 2009, 96 percent of hospitals participated successfully in the Hospital IQR program and received the full market basket update for FY 2010.

Quality Assurance and Performance Improvement:

CMS is responsible for implementing Section 6102 (c) of the Affordable Care Act, which contains provisions for establishing and implementing a Quality Assurance and Performance Improvement (QAPI) program for nursing homes. The statute requires that the QAPI program shall include establishing standards (regulations) and providing technical assistance to nursing homes on the development of best practices.[24] To accomplish this goal, CMS is implementing a multi-pronged effort to develop resources and technical assistance for nursing home providers, consumers, and surveyors. CMS has identified tools and resources that will help nursing homes develop and implement QAPI best practices. These tools and resources are currently being tested in a demonstration in 17 volunteer nursing homes in 4 States. A prototype set of tools was evaluated by national experts and will be released nationally. A questionnaire has also been developed which CMS plans to administer. The questionnaire is designed to identify challenges and barriers to implementing effective QAPI programs and shape the direction and content of the QAPI tools and resources. In addition to testing tools and resources, the demonstration will identify and establish effective training models that will be expanded to provide technical assistance to all nursing homes CMS is also exploring ways to collaborate with the Quality Improvement Organizations in this effort.

Throughout these efforts, CMS has involved consumers and their advocates, seeking support and feedback, as resources are developed that will be helpful in empowering consumers to be engaged participants in nursing home quality improvement efforts. Finally, as this effort has progressed, with input from multiple stakeholders, including State Agencies and surveyors, CMS has begun developing surveyor training materials that will assist nursing home surveyors to effectively evaluate quality programs.

Continuity Assessment Record and Evaluation Tool: As mandated 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 continued it 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 care hospital and PAC settings (*e.g.*, home health care, SNFs, inpatient rehabilitation facilities and long-term care hospitals) to measure health and functional status, changes in severity, and other outcomes for Medicare patients.

VBP Program

Hospital Value-Based Purchasing Program: Section 1886(o)[25] of the Act (added by section 3001(a)(1) of the Affordable Care Act) required the Secretary to establish a Hospital

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[24] *The provisions set forth at section 6102(c) of the Affordable Care Act significantly expand the level and scope of QAPI activities to ensure that facilities continuously identify and correct quality deficiencies as well as sustain performance improvement. The provision can be accessed at: http://www.cms.gov/SurveyCertificationGenInfo/downloads/qapisection6102ac.pdf.*

[25] Section 1886(o) of the Act was added by section 3001(a)(1) of the Patient Protection and Affordable Care Act and the Health Care Education Reconciliation Act of 2010. Under section 1886(o)(5)(B)(1), the Secretary must

Value-Based Purchasing (HVBP) program under which value-based incentive payments are made in a fiscal year to hospitals that meet performance standards for the performance period for such fiscal year. Payments made under the program apply to discharges occurring on or after October 1, 2012. The Hospital VBP program[26] links payment under the Medicare inpatient PPS to hospital performance on measures in the inpatient setting. Under the program, measures must be selected from those that have been included on the Hospital Compare website for at least one year prior to the beginning of the applicable performance period and have been specified under the Hospital IQR program. The FY 2013 program must include measures that cover acute myocardial infarction, heart failure, pneumonia, surgeries, as measured by the Surgical Care Improvement Project, and healthcare-associated infections, as well as measures that assess patients' experience of care as measured by the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey.

Under the HVBP program, hospitals achieving higher hospital performance scores will receive higher value-based incentive payments. This program builds on the Medicare Hospital IQR program.

Demonstrations

CMS/Premier Hospital Quality Incentive Demonstration: CMS has also gained several years of experience using financial incentives to promote improvements in the quality of hospital inpatient care through the CMS/Premier Hospital Quality Incentive Demonstration (HQID).[27] 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):[28]

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ensure that the scoring methodology under the Hospital VBP program results in an appropriate distribution of value-based incentive payments among hospitals, with hospitals achieving the highest hospital performance scores receiving the largest value-based incentive payments. The following links include both section 3001(a) of the Patient Protection and Affordable Care Act of 2010 and the Health Care and Reconciliation Act of 2010, which amended section 3001(a). The Affordable Care Act can be accessed at: http://www.healthcare.gov/center/authorities/patient_protection_affordable_care_act_as_passed.pdf and the Health Care and Reconciliation Act at: http://www.gpo.gov/fdsys/pkg/PLAW-111publ152/html/PLAW-111publ152.htm.

[26] The Centers for Medicare & Medicaid Services issued a final rule that establishes a new HVBP (HVBP) program that will reward hospitals for providing high-quality, safe care for patients. For the FY 2013 program, hospitals will receive credit for the higher of their achievement or improvement scores on each measure among the clinical process of care and patient experience of care measures finalized for this year of the program. This final HVBP rule can be accessed at: http://www.gpo.gov/fdsys/pkg/FR-2011-05-06/pdf/2011-10568.pdf.

[27] As a precursor to the Hospital IQR Program, CMS implemented the Premier Hospital Quality Incentive Demonstration (HQID) in October 2003. This demonstration project includes hospitals in the Premier Perspective system. Premier Inc. operates a nationwide organization of not-for-profit hospitals. Under the demonstration, Premier collects and submits to CMS patient- and hospital-level quality data from participating member hospitals. The CMS uses these data to create an aggregate quality score for each participating hospital, and the top performers each year receive a quality incentive bonus payment. Additional information on CMS's HQID, including the number of participating hospitals and states, can be accessed at: http://www.cms.gov/HospitalQualityInits/35_HospitalPremier.asp#TopOfPage

[28] 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.

- 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 is 18.3 percentage points. Between HQID's fourth and fifth years, the average CQS increase was 1 percentage point.

Lessons Learned from the HQID

- Operations: data collection and validation costs:
  CMS learned that data collection and validation is 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:
  We learned that there are extensive lags between the reporting of quality data and the payment of incentives. The policies and processes need to be designed in order to minimize these lags.

- Control group also improves, what is the 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:
  For hospital VBP, 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 also affected by myriad community providers.

- 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.

Results of CMS's Premier Hospital Quality Incentive Demonstration can be accessed at: http://www.cms.gov/HospitalQualityInits/35_HospitalPremier.asp#TopOfPage.

Home Health Pay-for-Performance Demonstration: The Home Health Pay-for-Performance (HHP4P) Demonstration[29] 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 FFS Medicare and on their overall Medicare costs. The demonstration distributed funds across home health agencies (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 measures endorsed by the National Quality Forum (NQF). Medicare savings for the 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.

Lessons Learned from the HHP4P Demonstration

Successful participants**:**

- Were Patient and Community Centered - They displayed cultural and linguistic sensitivity to the clientele and to the community they served.
- Were Quality Focused - They demonstrated strong leadership and an organizational culture that emphasized results. The administrative and clinical staff worked as a single system focused on improving patient care. Multidisciplinary teams were used to achieve results. They used selective hiring practices and were committed to staff education and development.
- Used Technology to Enhance Care - They automated information exchange to make care delivery more efficient and to facilitate communication. Data was captured at the point of care, submitted on a real-time basis and analyzed to improve processes.

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[29] 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's HHP4P 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.

- Implemented Specific, Targeted Strategies to Succeed – Once poor performance areas were identified, they developed training materials to address the situation, and monitored ongoing progress.

NHVBP Demonstration: The NHVBP Demonstration is one of the most relevant Medicare initiatives CMS considered in developing its plan to implement a SNFVBP program.[30] The 3-year demonstration began July 1, 2009 with the following initial number of participants (all of which are certified and licensed as SNFs and most of which are dually-certified and licensed both as SNFs under Medicare and as NFs under Medicaid): Arizona: 41; New York: 79; and Wisconsin: 62. SNFs 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 SNFs to submit nurse staffing data that includes payroll, resident census, and agency staff data. CMS also uses data collected from MDS (for outcome measures), inpatient hospital claims (for hospitalization rates), and State health inspection surveys for scoring facilities. CMS risk-adjusts the staffing and hospitalization measures to capture quality differences as opposed to 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. The NHVBP Demonstration ranks SNFs 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 participants have reported improvement in their quality measures. For example, one 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 SNF 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 involvement, and care coordination, use of restraints was reduced by half within one quarter of the year.

Another SNF 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 that SNF's hospital admissions were due to heart failure, according to information they reported. The SNF's heart failure prevention program revolved around improving staff education and care coordination. It assessed each patient to determine the risk of a heart failure, which it then color-coded and subsequently indicated on the patient's doors and charts. The SNF documented patients' weights daily, as well as heart failure–specific and other clinical assessments for early indications of heart failure. It also made other changes, such as eliminating high-sodium convenience foods and replacing many unhealthy food options with heart-healthy

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[30] 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.

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 according to information reported by the facility.

Lessons Learned from the NHVBP Demonstration

- Data Collection, Quality Measurement and Performance Results*:* The demonstration collects data and provides participating SNFs 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 of care have required CMS and the SNFs to implement and develop new processes.

- Sustained Level of Participation: Currently, 179 SNFs participate in the NHVBP Demonstration. The high level of participation could be attributed to the flexibility that SNFs have to implement initiatives that preserve or enhance the quality of care for beneficiaries. SNFs participate in quarterly conference calls that allow them to share lessons learned.

- Payroll Data*:* The NHVBP Demonstration requires participating SNFs to submit nurse staffing data that includes payroll, resident census, and agency staff data. This requirement added a significant learning curve for participating SNFs. Some experience more difficulty providing the data in the prescribed format than others. Generally, facility chains are more efficient with the payroll data submission.

The NHVBP demonstration will be completed in July 2012. After the program has ended and results are available, all three years of the program will be evaluated in the fall of 2013. The information gleaned will provide useful information that can be used to determine the key factors in implementing a successful VBP program.

Ongoing Quality Initiatives

In addition to the already completed and ongoing initiatives discussed in this section, CMS continues to implement new quality and payment demonstrations in a number of areas. Many of these efforts are being conducted by the Center for Medicare and Medicaid Innovation (Innovation Center). The Affordable Care Act established the Innovation Center to test innovative payment and service delivery models to reduce program expenditures while preserving or enhancing the quality of care in Medicare, Medicaid and the Children's Health Insurance Program (CHIP).

The Innovation Center has recently released the Bundled Payments for Care Improvement Initiative[31] which is designed to test alternative models for payment and inform future Innovation Center and HHS activities that aim to improve the quality of care for Medicare,

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[31] 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

Medicaid, and CHIP beneficiaries while reducing costs through payment innovation and care coordination.

SECTION 3
Stakeholder Perspectives

To consider substantive stakeholder perspectives in the development of the plan for implementing VBP for SNFs, RTI International (RTI)[32] and CMS solicited feedback through both key expert interviews and a special open door forum (ODF). This section summarizes the major themes that emerged from these discussions.

3.1 Methods

Expert Interviews: RTI conducted telephone interviews with nine experts between December 2010 and January 2011. These experts represented facility provider associations, consumer advocacy groups specializing in facility care, and researchers who have conducted studies on VBP and quality of care across SNFs and NFs. The discussion topics covered elements of a VBP program, including quality/performance measures and scoring of such measures, performance ranking, eligibility for incentive payments, penalties for low-quality performers, funding sources for incentive payments, and public reporting of performance information.

RTI conducted interviews in person for most experts located in the Washington, DC, area, and by telephone for experts located in different regions. Each interview lasted about an hour. A discussion guide helped to structure the interviews. In this section, respondent comments are summarized but not attributed to particular individuals. However, where appropriate, some comments are attributed to an organization type (*e.g.*, consumer organizations, provider associations, or researchers), particularly when responses differed by stakeholder type.

3.2 Major Themes from the Expert Interviews

Coordination with Other Demonstration, VBP, and Post-Acute Care Initiatives: Experts believed that more information was needed before such a SNFVBP program could be implemented. Of particular concern was the reliability and validity of existing quality measures (particularly State survey and certification systems) applied for the purpose of VBP. In addition, several experts commented that final design and implementation of a SNFVBP program should consider the results of the ongoing NHVBP Demonstration and its evaluation.

Experts generally agreed on the need for better coordination between acute-care facilities and post-acute care/long-term care providers across a continuum of care. In their view, policy regarding post-acute and long-term care providers is currently developed in "silos" for each individual provider type with minimal attention to how different provider types overlap, differ, and relate to acute-care hospitals. These policy silos result in fragmented care and separate

[32]CMS contracted with RTI International (RTI) to develop this Report to Congress. In addition, RTI interviewed nine experts to solicit feedback on the elements of a VBP program including quality/performance measures and scoring of such measures, performance ranking, data-collection, eligibility for incentive payments, penalties for low-quality performers, funding sources for incentive payments, and public reporting of performance information.

payment systems that create inefficiencies in the delivery and financing system. Provider-oriented experts argued that initiatives regarding VBP should be developed taking into account other Medicare programs involving Accountable Care Organizations and bundling of acute and post-acute services.

Defining the Target Population: Most experts believed that the population for calculating measures for a SNFVBP program should include all Medicare beneficiaries receiving care in a SNF, regardless of the source of payment. These experts noted that almost all residents are Medicare beneficiaries and that most quality measures relate to the entire population.

Performance Measures: Experts were asked which quality or performance measures should be used to assess SNFs to determine eligibility for incentive payments.

MDS-derived quality measures. Experts representing consumers and providers contended that the recent implementation of a new version of the MDS necessitated that the quality measures be tested for reliability and validity using the new data collection form before they are used in a VBP program. Consumer advocates were also skeptical of the measures because they rely on self-reported (unaudited) data from providers. They also thought that the measures were over-risk adjusted—that is, the measures controlled for variation in performance that is under the provider's control. Despite the criticism, consumer advocates thought that the measures on restraints, pressure ulcers, and weight loss were useful. Several experts stressed the need for additional rehabilitation measures for Medicare SNF services.

Some experts argued that the MDS measures are mostly assessments of case mix rather than measures of quality of care. Thus, they argued that the measures are snapshots or head counts of the residents with catheters, pressure ulcers, infections, and falls on their last assessment. Provider associations recommended risk adjustment to account for factors such as patient severity of illness, comorbidities, functional limitations, age, cognitive status, availability of a caregiver, and prognosis. Risk adjustment is necessary, in their judgment, to ensure that providers are not discouraged from accepting residents who might lower their quality scores.

Survey and certification. A few experts were enthusiastic about the use of inspection reports because they do not depend on providers to supply the data. However, most respondents believed that there is substantial intrastate and interstate variation in how deficiencies are cited, making the use of survey and certification findings as a quality measure problematic.

Rehospitalizations or potentially avoidable hospitalizations. Providers and consumer-oriented experts believed that high-quality facilities will have lower levels of potentially avoidable hospitalizations or rehospitalizations compared with low-quality facilities. However, as a quality measure, consumer advocates worried that facilities might not discharge residents to hospitals who should be transferred and stressed the need for strict monitoring. Rehospitalization measures must use appropriate risk-adjusters, given the reality that SNFs care for patients with multiple comorbidities.

Staffing measures. Consumer advocates and provider associations agreed that staffing is critical to quality of care. Consumer advocates consider registered nurse staffing as the most important measure of quality. However, although staffing measures had strong support from

consumer advocates as a measure of quality, provider associations were skeptical. Both consumer advocates and provider associations recommended that therapy hours be included in a staffing measure. Provider associations generally contended that "throwing" staff at the quality problem was inefficient and that much depended on how staff were organized, motivated, and supervised.

All experts thought that the quality of the current data on staffing is poor. They felt that the current staffing-level data captures information only during the inspection survey. Experts suggested that staffing ratios need to be adjusted for resident acuity. Experts raised concerns that some facilities game the system by staffing up during inspections. Respondents expressed strong support for new staffing data-reporting requirements in the Affordable Care Act that will use payroll records to ensure accuracy.

Satisfaction surveys, Nursing Home Consumer Assessment of Healthcare Providers and Systems (*CAHPS®), etc*. In principle, stakeholders agreed that obtaining more consumer input on quality is desirable. However, consumer advocates characterized satisfaction surveys as poor indicators of quality. In their view, satisfaction surveys have a strong positive bias. Industry representatives were mixed in their views of whether satisfaction or participant experience surveys can serve as reliable and valid measures of quality. One provider association was encouraged that the NQF is assessing Nursing Home CAHPS® but did not think that current measures were adequate to be used in a VBP program.

Five-Star Quality Rating System and composite measure used for NHVBP Demonstration. Consumers and providers agreed that the large number of measures on the Nursing Home Compare Web site confuses consumers. Thus, they favored using some type of summary or composite measure. One provider association representative worried about the confusion that would ensue if a facility received a "one"-star rating under the Five-Star Quality Rating System but received bonus payments for high quality in the VBP program. Stakeholder participants were skeptical that the new Quality Indicator Survey, which is focused on increasing consistency and thoroughness in the inspection process, would improve the reliability or validity of the surveys.

Source of Funding for Performance Payments: Several experts advocated that the SNFVBP program not be budget neutral. Some stakeholders said they would like to see more money or new sources of revenue allocated to the SNFVBP program. One provider association argued that new money should be used for the program, with no risk placed on providers. Provider representatives were also concerned about having the SNFVBP program rely on calculating savings from reduced hospitalizations or other Medicare services to finance the incentive payments. Their impression was that the required delays in payment to allow time to collect and process the data would lessen the motivation to improve quality given the long gap between performance and payment.

Provider groups opposed taking money from poor performers to finance bonus payments to high-quality or improving performers because of the potential that the quality measures would reward and punish the wrong providers. In addition, they argued that payments to high-quality or improving performers funded through reductions in payment to poor performers might adversely affect providers that experience financial difficulties, those that disproportionately

serve Medicaid residents, or that admit higher-cost residents with poorer health. Consumer advocates thought that the Medicare program already generously pays SNFs and that CMS should do more to require facilities to comply with existing quality regulations and to address low staffing levels. In the view of some consumer advocates, providers should be required to use their profits to raise staffing levels. One researcher reported that some States withhold the inflation adjustment to the Medicaid payment rate and use those funds for performance payments. One consumer advocate proposed imposing penalties on poor performers as a way of creating a pool of funds to be reallocated to high-quality providers.

Eligibility for Performance Payment: Both consumer advocates and provider association experts agreed that performance payments should be given to high performers and to SNFs that substantially improve, although cessation of poor-quality care does not warrant an incentive payment. Consumer advocates were concerned that poor performers may receive payment incentives when they in fact do not provide high-quality care or substantially improve quality. Consumer advocates thought that only a small proportion of SNFs warranted any financial bonus, perhaps 5 to 10 percent of SNFs. Moreover, consumer advocates were uneasy about the significant differences in the quality of care of SNFs under the same ownership (*i.e.*, facility chains). Thus, they questioned whether very good SNFs in a chain should be eligible for an incentive payment if other SNFs in the chain were poor performers. The consumer advocates believed that the corporation should be held responsible for the care provided in all of its facilities. Consumers and providers disagreed about whether unverified complaints should disqualify SNFs from receiving an incentive.

Providers believed that specific performance targets should be established in advance so that any SNF that meets the standards would qualify for financial incentives. They asserted that known targets facilitate improved performance because providers know what level of performance they are trying to achieve. Providers generally opposed setting eligibility for bonus payments at a particular performance percentile (*e.g.*, the top 10 percent of SNFs). Under this scenario, if a substantial number of SNFs improve or are high quality, then the percentile approach will disqualify providers who are virtually the same in terms of quality but in a slightly lower percentile—even though the differences in quality may be very small and not clinically relevant.

Distributing Performance Payments within Eligible Facilities: Providers advocated for payment structures that award different incentive amounts associated with performance levels to create additional motivation for improvements. On the other hand, consumer advocates preferred a flat amount once a threshold for payment has been reached as a way of keeping the payment structure simple. None of the respondents expressed an opinion about the best way to determine the appropriate size for the payment incentive to motivate substantial behavioral change on the part of SNFs.

Public Reporting: Some experts believed that providers pay attention to public reporting, even if the general public does not understand the measures. One consumer advocate argued for more input from families and wanted to see more study of consumer awareness, understanding, and knowledge of Nursing Home Compare, the Five-Star Quality Rating System, and the Survey and Certification system. Consumer groups were most interested in having a reporting system that is understandable to consumers and their caregivers. They wanted the

ratings of the facilities and the performance payments in the SNFVBP program publicly reported and consumer friendly. One provider association suggested showing results on a simple 100-point scale, which would be optimal for the typical consumer who is evaluating his or her options in choosing a facility. The public reporting systems in New Jersey and Massachusetts were recommended as possible models.

Experts recommended that any information reported publicly on the SNFVBP program be a component of the data displayed on the Nursing Home Compare Web site. Almost all of the experts believed that there needs to be consistency in the quality measures used for Nursing Home Compare and the SNFVBP program. Otherwise, consumers and providers might be confused.

Most experts believed that the process for developing a SNFVBP program should include substantial opportunities for provider, consumer, and researcher input. They emphasized the importance for CMS of considering all potential stakeholders' input in the design phase, recognizing that there will not always be agreement but that greater involvement will increase the positive reception and ultimate buy-in for a SNFVBP program. At least one provider wanted more involvement by the NQF in the development of measures, suggesting the kidney dialysis standard development process as a model. On the other hand, one consumer advocate strongly criticized the NQF for limiting who can vote on standards.

3.3 Major Themes from the Special Open Door Forum

CMS held a Special ODF on March 10, 2011, to solicit public comment in the development of the plan for implementing VBP in SNFs. More than 700 stakeholders (*e.g.*, provider associations, facilities, and consumer advocacy groups) participated in the public listening session. CMS also created a special mailbox so that stakeholders could submit written comments.

The public listening session sought feedback on the key elements related to developing a plan for a SNFVBP program. Specifically, CMS invited the public to provide comments on the following:

1. Target Population
2. Quality Measures
3. Measuring Quality Performance
4. Ranking Quality Performance
5. Payment Mechanisms
6. Data Infrastructure
7. Public Reporting

Several ODF stakeholders provided responses to these key elements. CMS also posted an audio recording and transcript of the ODF on the following Web site: http://www.cms.gov/OpenDoorForums/Downloads/031011TranscriptSNFVBP.pdf.

Target Population: Stakeholders that participated in the ODF were concerned that selection of a broad population including Medicaid and private-pay residents in SNFs for calculating measures under the Medicare SNFVBP program might conflict with programs and

initiatives established by other payers such as the Department of Veterans Affairs. Other stakeholders urged CMS to consider a patient-centered rather than provider-centered or silo approach to VBP. One ODF participant believed that a Medicare SNFVBP program should limit its focus to Medicare-covered stays, even though they account for a relatively small proportion of SNF days, and many SNFs would not have enough Medicare-covered residents to calculate the quality measures. There was no clear consensus among the ODF stakeholders regarding the appropriate target population for SNFVBP.

Quality Measures: A particular area of concern among several stakeholders was the potential inconsistency between the quality ratings for the SNFVBP program and the Five-Star Quality Rating System. Most stakeholders believed that the ratings should be consistent, perhaps by using the same measures. Some stakeholders argued for more measures that are specific to care settings, assessing residents' functional and clinical outcomes. They suggested discharge to home, improvement in activities of daily living (ADLs), and pain reduction after surgery. These stakeholders argued that quality measures applied under SNFVBP should go beyond what is available based on the MDS. Some stakeholders were concerned about the possible use of Nursing Home CAHPS® as part of a SNFVBP program. Some of the concerns raised by stakeholders were that that the patient should be filling out the survey instead of a family member, survey results need to be representative of the population, self-reported data could potentially be biased, and that completing the survey could be costly for providers.

Measuring and Ranking Quality Performance: Provider associations and the industry raised concerns about the inconsistency of results across States regarding the current survey and certification process. Others supported the use of MDS 3.0 for measuring quality performance because of the improvements made over MDS 2.0. Some stakeholders were supportive of the use of readmission rates as one way to measure quality performance in SNFs. Industry representatives contended that the Five-Star Quality Rating System focuses too much on survey findings, with facilities that emphasize short-stay residents faring worse in the ratings than those that have a more stable long-term care resident population. They argued that having a higher percentage of Medicare post-acute care residents will result in lower ratings because the system is not adequately risk adjusted. Some ODF stakeholders noted that quality performance should be measured by improvement with an attainment cap. They contended that improvement should be rewarded, but that at some point quality was unlikely to improve further. Other ODF stakeholders felt that a SNFVBP program should reward only high performers.

Payment Mechanisms: Stakeholders suggested a strong bias against any penalties or payment withholds as a part of SNFVBP. A number of stakeholders noted that penalties are already inherent in the state survey process and there was concern that SNFVBP would compound these. Several stakeholders also stated that penalties are a negative incentive that does not work.

Data Collection: There was consensus among the ODF stakeholders that new or additional data collection related to Medicare SNFVBP would place a burden on administrative staff at SNFs. Some stakeholders suggested that additional investments and resources should be provided to support SNFVBP.

Public Reporting**:** Stakeholders in the ODF felt that it might be premature to discuss public reporting. One participant questioned how results of the SNFVBP program would be integrated into existing public reporting initiatives.

General Comments from ODF Stakeholders**:** Several ODF stakeholders commented that final design and implementation of a SNFVBP program prior to consideration of the results of the ongoing NHVBP Demonstration and its evaluation would be premature. Several stakeholders commented that implementation of a SNFVBP program that focuses on a single provider group (in this case, SNFs) would be contrary to efforts to coordinate care across traditional provider boundaries, perpetuating the problem of potentially inefficient provider silos.

SECTION 4
SNFVBP Design Elements

The following are key elements which must be considered in developing a plan to implement a SNFVBP program:

- Target population;
- The ongoing development, selection, and modification process for measures (including under sections 1890 and 1890A of the Act), to the extent feasible and practicable, of all dimensions of quality and efficiency in SNFs;
- The reporting, collection, and validation of quality data;
- 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; and
- Methods for the public disclosure of information on the performance of SNFs.

Under section 3006(a) (2) (E) of the Affordable Care Act, the Secretary shall also consider any other issues she determines appropriate.

4.1 Options for Defining the SNFVBP Population

In developing the SNFVBP program, CMS could adopt measures that apply to all residents of the SNF. The program could collect quality data from Medicare SNF patients, along with non-Medicare patients who are receiving care in the SNF (*e.g.*, Medicaid and private pay). Most of the key measures that could be used to assess performance—inspection data, staffing levels, and most MDS quality measures—apply to all residents in the SNF (that is including those who depend on Medicaid or private payer payments). Existing staffing and health inspections data measure the SNF as a whole and cover all residents, regardless of the source of payment. Hospitalization data are collected for all Medicare beneficiaries, regardless of whether their SNF care is being paid by Medicare. In contrast, the MDS quality measures are divided into short-stay and long-stay measures, which roughly follow the differences between Medicare and Medicaid/private pay residents at the facility level. Because of the small number of Medicare patients in almost half of SNFs,[33] random normal variation could lead to measure instability over time if many of the measures were calculated based only on Medicare residents.

On the other hand, there are reasons to limit the population to residents receiving Medicare-covered SNF care. The characteristics of Medicare-covered SNF residents and their needs differ from those of people who received Medicaid-covered NF services. Medicare SNF coverage is limited to beneficiaries who, after a 3-day hospitalization, need skilled care on a daily basis that, as a practical matter, can be provided only in a SNF on an inpatient basis. In contrast, Medicaid does not have a prior hospitalization requirement and will cover beneficiaries who need only "custodial care," such as help with eating, bathing, and dressing. These differences in coverage result in different, albeit overlapping, clinical profiles. For example, among dually-eligible beneficiaries, Walsh et al. (2010) found that people receiving Medicare-

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[33] RTI's analysis of 2008 Medicare claims data indicates that approximately 44 percent of SNFs furnish care to fewer than 100 Medicare Part A patients per year.

covered SNF care had 942 hospitalizations per 1,000 person years in 2005 compared with 338 hospitalizations per 1,000 person years for people receiving Medicaid-covered NF services. Moreover, among dually eligible beneficiaries, 48 percent of people receiving Medicare-covered SNF services had a diagnosis of Alzheimer's disease or related dementia compared with 67 percent of people receiving Medicaid-covered NF care.

4.2 The Ongoing Development, Selection, and Modification Process for Measures

Under section 3006(a)(2)(A) of the Affordable Care Act, in developing the SNFVBP plan, the Secretary shall consider the ongoing development, selection and modification process for measures, including under sections 1890 and 1890A of the Act, to the extent feasible and practicable, of all dimensions of quality and efficiency in SNFs. 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 multistakeholder groups, and dissemination and review of the measures used by the Secretary. Consistent with section 1890 of the Act, in developing new measures for a SNFVBP program, CMS could seek stakeholder input through the NQF endorsement process. CMS would also subject measures to the pre-rulemaking process in section 1890A, if applicable, before selecting measures for the SNFVBP program, including considering multi-stakeholder group input on measures that the Secretary is considering for the program. These processes could be used to assist CMS in selecting measures to propose for the SNFVBP program.

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 process for measurement development, selection and validation. External input is achieved through these processes, largely through submission and review of the measures by the NQF. Products from this CMS performance measurement development and validation process are then utilized across Medicare, including in both demonstrations and quality reporting and pay-for-performance programs. CMS has an ongoing initiative that is developing and validating performance measures for SNFs and NFs. Through this initiative, CMS currently has 16 Nursing Home (NH) quality measures recently endorsed by NQF (see Table 4-1, MDS-based Quality Measures). These measures were evaluated by NQF for their suitability based on four sets of standardized criteria: Importance to Measure and Report; Scientific Acceptability of Measure Properties; Usability; and Feasibility. [34] In addition, these measures are currently under analysis as the MDS 3.0 data are submitted; an analytical report of these measures is expected in the summer of 2012. CMS could use these ongoing processes for the development, and modification of measures for a SNFVBP program.

[34] For more information refer to the NQF website at http;//www.qualityforum.org/does/measure_evaluation_criteria.aspx

Most facility quality improvement efforts use existing data collected from Federal and State survey and certification processes, the MDS, and Medicare claims data. If existing data leave significant gaps in certain quality domains, other data sources could also be used such as the Nursing Home Consumer Assessment of Healthcare Providers and Systems (NHCAHPS) results and State survey information. Some potential measures that may require no new data collection on the part of some SNFs to assess quality of care under a SNFVBP program could include the following:

- MDS-derived quality measures;
- Health-inspection citations;
- Discharge to the community;
- Potentially avoidable hospitalizations or rehospitalizations;
- Staffing levels;
- Nursing Home CAHPS; and
- The Five-Star Quality Rating System.

In order to move ahead with implementing any of the measures discussed in this section as part of a SNFVBP program, CMS would need to prioritize measures that reflect important quality goals related to Medicare services and, develop a timeline for implementation. Depending on the maturity of the measures selected CMS could also need to conduct literature reviews, analyze the evidence and define and develop specifications for each measure, The measures would also need to be harmonized across settings when possible. They would be submitted to NQF for endorsement, and evaluated by technical expert panels. In addition CMS would respond to comments from the NQF Steering Committee. CMS would also need to test the measures for validity, reliability, ease, and accuracy of collection and refine the measures as needed.

MDS-Derived Quality Measures: The SNFVBP program could focus on MDS-derived quality measures in order to address the quality of care for all Medicare patients residing in SNFs and promote the use of robust quality measures for Medicare skilled stays. (For information about the MDS quality measures specific to Medicare Part A paid stays refer to Table 4-1.)

These measures are important in assessing the quality of care furnished to Medicare short-stay residents. Given beneficiaries' need to access timely and safe short-term skilled care and rehabilitation services, such as physical and occupational therapy, CMS could consider expanding the current short-stay measure set that will allow patients and providers to validly and reliably assess the quality of care in SNFs. For example, existing quality measures for the short stay residents focus on the provision of vaccines, pain management and pressure ulcers. While these measures are applicable to the SNF/NF population, the short-stay SNF population has changed in recent years to focus on rehabilitation with over 90 percent of Medicare Part A patients in rehabilitation groups. Currently there are no short stay measures that focus on the quality of rehabilitation services provided. CMS could also expand quality measures that assess functional status such as improvements in walking, transfers, and eating that prepare Medicare beneficiaries for discharge to a less intensive non-institutional setting. These improvements can range from reduced dependency to functional independence. CMS can also look at measures

that assess progress in a beneficiary's physical condition such as improved balance or reduced contractures related to specific therapy services.

Table 4-1
MDS 3.0 based Quality Measures

Long-Stay	Short-Stay
▪ Percent of Residents Experiencing One or More Falls with Major Injury ▪ Percent of Long-Stay Residents Assessed and Appropriately Given the Seasonal Influenza Vaccination ▪ Percent of Long-Stay Residents Who Were Assessed and Appropriately Given Pneumococcal Vaccination ▪ Percent of Residents Whose Need for Help with Activities of Daily Living Has Increased ▪ Percent of Residents Who Self-Report Moderate to Severe Pain ▪ Percent of High-Risk Residents with Pressure Ulcers ▪ Percent of Residents Who Were Physically Restrained ▪ Percent of Residents Who Have Depressive Symptoms ▪ Percent of Low-Risk Residents Who Lose Control of Their Bowels or Bladder ▪ Percent of Residents Who Have/Had a Catheter Inserted and Left in Their Bladder ▪ Percent of Residents with a Urinary Tract Infection ▪ Percent of Residents Who Lose Too Much Weight	▪ Percent of Nursing Home Residents Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccination ▪ Percent of Short-Stay Residents Who Were Assessed and Appropriately Given Pneumococcal Vaccination ▪ Percent of Residents Who Self-Report Moderate to Severe Pain ▪ Percent of Residents with Pressure Ulcers That Are New or Worsened

Originally designed for care-planning purposes, CMS derives quality measures from MDS data to assess the quality of care in facilities for both long-stay residents and short-stay residents. The quality measures listed in Table 4-1 come from residents' assessment data that facilities routinely collect at specified intervals during their stay. The measures provide important information to residents, families, and providers about clinical care, resident outcomes, infection rates, and the quality of life in facilities. These measures assess the residents' physical and clinical conditions and abilities. The measures also indicate to facilities the areas in which they can improve their performances. For example, a low percentage associated with "Percent of Nursing Home Residents Who Were Assessed and Appropriately Given the Seasonal Influenza Vaccination" shows that a facility will need to improve its outcome on this measure.

In addition, CMS uses MDS derived quality measures as part of the survey and certification process, and makes them available to the public on its Nursing Home Compare Web site. MDS 3.0 quality measures are scheduled to be included on the Nursing Home Compare Web site in July 2012. Previously there were 19 NQF endorsed measures based on the MDS 2.0; four of these measures did not transition to MDS 3.0 and were retired (Delirium, Pressure Ulcers (low risk), Mobility and Bedfast A new Long Stay Falls measure was introduced, based on MDS 3.0 data. Currently there are 16 NQF endorsed measures (based on MDS 3.0 six quality measures received time-limited endorsement and have recently been submitted for full endorsement by the NQF Steering Committee), Measures were selected through a series of two independent technical expert panels (TEP) that reviewed each proposed measure for scientific merit, clinical validity and relevance to current nursing home resident samples. The measures are risk-adjusted where appropriate and are divided into those that apply to long-stay residents (*i.e.*, generally residents in NFs) and short-stay residents (*i.e.*, generally residents in SNFs). The MDS 3.0 performed well in terms of reliability in development studies (Saliba and Buchanan, 2008), and CMS is monitoring how the change in the data collection instrument has affected the quality measures.

Most MDS-derived quality measures allow facilities to focus on achieving positive resident outcomes (*e.g.*, physical and clinical conditions and abilities) rather on than inputs or processes. For example, the MDS-based measure set focuses exclusively on clinical issues and outcomes (*e.g.*, the Percent of Residents Who Lose Too Much Weight and the Percent of Residents with Pressure Ulcers That Are New or Worsened). Given the set of MDS-derived quality measures, facilities have the flexibility to apply the most appropriate clinically relevant care practices to achieve the best outcomes. The MDS is not intended to provide a rigid framework for facilities in order to account for differences in case-mix and facility specific processes. Also, many of the quality measures have been subjected to extensive research to test their reliability and validity. Because facilities are already completing the MDS assessments, CMS calculates such measures without imposing additional reporting burden on facilities.

Some measures may require additional refinement to reflect changes in the latest medical evidence and research, which in turn will strengthen their ability to capture relevant clinical information (Mor et al., 2003; Brega et al., 2008; Brega et al., 2007a; Brega et al., 2007b). Analyses of the MDS 2.0-derived measures found that the correlation among measures intended to measure the same underlying concept, such as overall SNF quality, is relatively low and that measures of performance by individual facilities vary significantly over time (Brega et al., 2007a). Moreover, one study found that more extensive risk adjustment significantly changed the quality ranking of facilities and recommended that additional risk adjustment be added to the quality measures (Mukamel et al., 2008). Also, a CMS-sponsored study of the reliability of MDS 2.0 reporting found that more than one-third (11 of 29) of the quality indicators/quality measures have discrepancy rates of more than 10 percent between MDS facility assessors and study nurse assessors, even after facility/research nurse meetings to discuss discrepant cases (Abt Associates, 2007). Finally, the relatively small size of most facilities (about 100 beds) and the modest prevalence of some quality problems can raise statistical issues in distinguishing between poor-quality care and random variation.

Federal and State Health Inspections: SNFs and NFs cannot operate unless they are licensed by the State in which they are located, and they cannot receive Medicare and Medicaid

funding unless they are certified as meeting Federal quality standards.[35] CMS maintains oversight for compliance with the Federal health and safety standards for SNFs and NFs serving Medicare and Medicaid beneficiaries. State Survey Agencies, (usually State Departments of Health,) under agreements between the State and the Secretary, carry out the certification process. The functions the States perform for CMS under the agreements in section 1864 of the Act are referred to collectively as the certification process. To monitor State compliance with Federal rules, CMS performs comparative surveys to gauge the performance of the State survey system.

Since 2007, CMS has been gradually implementing the Quality Indicator Survey (QIS) across all of the States to improve consistency and thoroughness in the inspection process.[36] CMS has currently implemented the QIS process in 23 States. The goal of the QIS is to improve the consistency of the survey process within and across states (Fish et al., 2007; White et al., 2008).

Every SNF and NF must be inspected no later than 15 months after the last day of the previous standard survey, and the statewide average interval between standard surveys of all facilities in a State may not exceed 12 months. When facilities do not meet the required standards, surveyors cite them for deficiencies. Facilities that receive serious deficiency citations may be decertified from participating in Medicare and Medicaid. Given that 78 percent of facility residents in 2011 depend on Medicare and Medicaid to finance their facility care, most facilities participate in one or both programs (American Health Care Association, 2011a, Jones et al., 2009).

An advantage of using the health inspection data for a SNFVBP program is that these quality data have been collected since the implementation of the Omnibus Budget Reconciliation Act of 1987, and they cover a wide range of quality domains (Wiener, Freiman, and Brown, 2007; Harrington et al., 2010). The standards against which the surveyors inspect facilities receive considerable support from both consumers and providers. Furthermore, unlike for the MDS data, surveyors who are employees of State governments directly collect the information during their inspections, making the data collection independent of facility employees.

However, more than other quality measures discussed in this report, the survey and certification process focuses on assessing written procedures and processes rather than outcomes. Studies by the GAO, the Office of the Inspector General, and others have found wide variation both within and across States in how they conduct surveys and issue citations (Harrington et al., 2010; Office of the Inspector General, 2008; GAO, 2005, 2007a,b). One study found that measures of quality from health inspections are only modestly correlated with measures of quality from the MDS (Wiener, Anderson, and Khatutsky, 2011).

Discharge to the Community: Many Medicare beneficiaries seek SNF care for either traditional rehabilitation conditions such as stroke or fractures or for functional losses following

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[35] Additional information on Medicare Survey and Certification for nursing homes can be found at: http://www.cms.gov/CertificationandComplianc/12_NHs.asp.

[36] Additional information on the Quality Indicator Survey for nursing homes can be found at: http://www.qtso.com.

extensive medical or surgical problems ("deconditioned" individuals). The primary goal of rehabilitative therapy is often discharge to the community, an important quality benchmark that could be included in the SNFVBP program measure set. In fact, 78 percent of Medicare SNF patients received rehabilitation services in 2003 (Donelan-McCall et al., 2006), and 43 percent were expected to be discharged within 90 days (Medicare Payment Advisory Commission [MedPAC], 2005). In its Reports to Congress (2005, 2010),[37] MedPAC has advocated discharge to the community as a measure to assess the quality of Medicare post-acute care. Information on discharge to the community could come from either the new MDS 3.0 discharge assessment or Medicare claims data. Using the MDS 3.0 discharge assessment could reduce the time lag associated with Medicare claims data.

Discharge to the community could be a potential measure for the SNFVBP program. Increases in the rate of discharges to the community could indicate improved quality. For example, empirical analysis conducted for MedPAC found that facilities with higher community discharge rates had lower rates of rehospitalizations (Kramer et al., 2008). However, discharge to the community is only one of many possible goals for Medicare SNF residents; many residents appropriately remain in the SNF after Medicare benefits end, either as Medicaid or private-pay residents. The study also analyzed the relationship between community discharge within 30 days and three post-acute care quality measures: pain, pressure ulcers, and delirium. After adjusting for case mix, higher rates of community discharge were associated with poorer performance on these quality measures. Kramer and colleagues hypothesize that if a facility appropriately provides treatment for beneficiaries with pain, pressure ulcers, or delirium in the facility rather than transferring beneficiaries to the hospital, then the facility may score worse on these post-acute care quality measures. CMS could rely on existing data sources such as SNF and hospital claims, MDS, and the Online Survey, Certification, and Reporting system to develop this measure.

Potentially Avoidable Hospitalizations: Unnecessary hospitalizations can be highly distressing and disorienting to residents, especially those with Alzheimer's disease, and may subject them to hospital-acquired illnesses. This occurrence shifts Medicare and Medicaid program resources away from providing appropriate clinical treatments to residents to unnecessary costly services. The SNFVBP program would collect quality data from Medicare SNF patients, along with non-Medicare patients who are receiving care in the SNF (*e.g.*, Medicaid patients). If the SNFVBP program includes measures such as potentially avoidable hospitalizations, it would encourage SNFs to focus on high quality and clinically integrated care coordination across settings, which would both improve the quality of life for all residents and reduce Medicare expenditures. Moreover, the program would align with several provisions in the Affordable Care Act that focus on reducing readmissions, including the Bundled Payments for Care Improvement Initiative[38] , the Independence at Home Medical Practice Demonstration Program (section 3024), and the Hospital Readmissions Reduction Program (section 3025). In its 2011 Report to Congress, MedPAC proposed that to improve quality measurement for SNFs Medicare should add potentially avoidable hospitalizations as a quality measure to its publicly

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[37] Full documentation of MedPAC's Annual Reports for 2005 and 2010 can be found at: http://www.medpac.gov/document_search.cfm.

[38] 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.

reported post-acute care measures.[39] The NHVBP Demonstration uses the rate of potentially avoidable hospitalizations as a quality measure.

A recent study by RTI International estimated that 42 percent of hospitalizations among Medicare and Medicaid dual eligibles who were receiving Medicare-covered SNF care and 47 percent of hospitalizations among dual eligibles receiving Medicaid-covered NF care were potentially avoidable (Walsh et al., 2010). These five conditions contributed to more than three-quarters of preventable hospitalizations:

- pneumonia;
- congestive heart failure;
- urinary tract infections;
- dehydration; and
- chronic obstructive pulmonary disease/asthma.

Based on RTI's analysis, prevention of these potentially avoidable hospitalizations would have resulted in $2.563 billion in Medicare savings ($719 million for residents in Medicare-paid stays and in $1.844 billion for residents in Medicaid-paid stays) in 2005.[40]

Several other studies found that a substantial portion of hospitalizations from facilities were potentially avoidable (Saliba et al., 2000; Carter, 2003; Intrator and Mor, 2004; Grabowski, O'Malley, and Barhydt, 2007; Bishop et al., 2010; Ouslander et al., 2010). In addition, one study found no significant difference in the outcomes for patients treated in facilities rather than hospitals (Loeb et al., 2006). For the facility population, treating patients for an infection at a hospital cost $4,000 more on average than treating these conditions at a facility (Boockvar et al., 2005).

Most research defines potentially avoidable hospitalizations of facility residents as some variant of the Agency for Healthcare Research and Quality (AHRQ)'s list of ambulatory care sensitive conditions. AHRQ identified 14 conditions for which hospitalizations could be prevented by access to high-quality primary care (AHRQ, 2004). Because the list was not specifically developed for facility residents, not all 14 conditions may be relevant for a mostly elderly institutionalized population. For example, CMS elected not to use all of these conditions in its NHVBP Demonstration (White et al., 2009). Instead, the NHVBP Demonstration potentially avoidable hospitalization measure only included conditions that are believed to be sensitive to the quality of facility care provided by the SNF: heart failure, respiratory infection, electrolyte imbalance, sepsis, urinary tract infection, and anemia (for long-stay patients only).

[39] Medicare Payment Advisory Commission. Report to Congress: Medicare Payment Policy (March 2011). The report can be accessed at: http://medpac.gov/documents/Mar11_EntireReport.pdf.

[40] The calculation of the savings is based on the prevention of the potentially avoidable hospitalizations that were identified. It is only attributed to the inpatient hospitalizations. It does not include physician and other costs that are related to the hospitalization (including subsequent admissions to a SNF). It does not include any offsets due to increased costs that might be necessary to achieve the reduction in the potentially avoidable hospitalizations (*e.g.*, increased use of nurse practitioners in nursing homes). RTI International. "Cost Drivers for Dually-Eligible Beneficiaries: Potentially Avoidable Hospitalizations from Nursing Facility, Skilled Nursing Facility, and Home and Community-Based Services Waiver Programs." August 2010. The report can be accessed at: http://www.cms.gov/Reports/Downloads/costdriverstask2.pdf.

To date, research on potentially avoidable hospitalizations mostly has used expert opinion rather than empirical analysis to classify which diagnoses and conditions are preventable.'

Some interventions appear to reduce hospitalizations in facility residents. For example, the Medicare Evercare demonstration had the goal of reducing medical complications and dislocation trauma resulting from hospitalization for residents who could be managed safely in facilities with expanded services.[41] Evercare is a capitated Medicare managed care plan, placing the health plan at full financial risk. The demonstration sought to test whether a capitated Medicare program that furnished more intensive primary care to facility residents, primarily through nurse practitioners, would reduce the need for hospital care. Compared with the control group, Evercare residents had half the incidence of preventable hospitalizations and total hospitalizations (Kane et al., 2003). Evaluation of the demonstration indicated that each nurse practitioner employed by the facility generated more than $100,000 in savings per year. However, because Evercare receives capitated payments, the health plan rather than Medicare benefited from the savings.

By providing high-quality care, facilities could reduce the rate of potentially avoidable hospitalizations among Medicare beneficiaries with chronic and acute conditions, although few studies have examined this relationship in depth. A report for MedPAC (Kramer et al., 2008) examining trends in community discharge and rehospitalization found that a 1-hour higher licensed nursing staffing per resident-day in facilities lowered the 100-day rehospitalization rate by approximately 1.2 percentage points. Additional research could provide more evidence on the relationship between quality of care in facilities and potentially avoidable hospitalizations; empirically it could determine which conditions and diagnoses are potentially avoidable or could be treated in the facility with adequate staffing.

A consideration for the use of potentially avoidable hospitalizations as a quality measure for SNFs is that many rehospitalizations occur very soon after admission from the hospital, suggesting premature discharge on the hospitals' part rather than poor-quality care on the part of SNFs. Also, SNFs may not fully control the decision to hospitalize residents: physicians may ultimately decide whether to hospitalize residents, and the SNFs' influence over physician behavior may be limited. In addition, financial incentives must be appropriately structured and monitored to avoid unintended consequences (*e.g.*, not to hospitalize SNF residents), which could result in poor-quality care when hospitalization or transfers to hospitals are necessary. Two strategies to protect access to hospital care for SNF residents in a VBP program could be to strictly inspect SNFs with regard to access to hospital care and to limit the target hospitalization rate to a modest percentage reduction beyond which no additional financial incentive would be provided.

Finally, data for at least a calendar year are probably necessary to calculate statistically valid utilization rates. It then takes about 6 months following an observation period for the Medicare claims to be complete and available for analysis and another 3 to 6 months to calculate the financial incentives. Thus, there would be almost 2 years between the beginning of the

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[41] (For more information, see: http://www.cms.gov/DemoProjectsEvalRpts/MD/itemdetail.asp?filterType=none&filterByDID=-99&sortByDID=3&sortOrder=descending&itemID=CMS064290&intNumPerPage=2000).

performance period and the receipt of the payment incentive. Such a long lag time between performance and payment incentive may lessen the impact of the payment incentive on SNF behavior. Although data are not yet available on the NHVBP Demonstration, a review of the literature on physician pay-for-performance initiatives hypothesizes that "end-of-year" compensation may not influence physician behavior as much as a concurrent fee or intermittent bonus (Peterson et al., 2006). This is because lack of awareness of the intervention and infrequent performance feedback seem to be substantial potential barriers to incentive effectiveness.

Staffing Measures: Although OBRA '87 generally requires that facilities maintain licensed nurses on duty 24 hours a day, a registered nurse (RN) on duty at least 8 hours a day, 7 days a week, and an RN director of nursing, these requirements are not adjusted for facility size, number of residents, or case mix; and they do not specify minimum number of staff per resident. Instead, the law requires that the facility have "sufficient" staff to provide nursing and related services to attain or maintain the "highest practicable level" of physical, mental, and psychosocial well-being of every resident. Neither Federal law nor regulation provides specific guidance as to what constitutes sufficient staffing, but many States have established minimum staffing requirements for NFs.

Currently, the main staffing information available is self-reported data collected from facilities during the health inspection, which may contain inaccuracies or irregularities in staffing patterns. Although the Five-Star Quality Rating System uses data collected during the annual inspection, the NHVBP Demonstration relies on payroll data submitted by providers, which allows for more accurate calculation of staffing levels and turnover rates. Section 6106 of the Affordable Care Act added section 1108I(g) to the Act, which requires the collection of payroll data to accurately assess staffing levels in SNFs and NFs.

A broad consensus exists that inadequate and inappropriate staffing (*e.g.*, number of RNs or licensed nurse practitioners) presents a major problem in facilities and could lead to a high incidence of poor quality care. A study by Abt Associates (2000) concluded that the large majority of NFs were substantially understaffed. The study found "strong and compelling" statistical evidence that facilities with a low ratio of nursing personnel to patients were more likely to provide substandard care, and it recommended a minimum staffing ratio of 4.1 hours of care per patient-day (Abt Associates, 2000). Since Abt released the study, direct care nursing staff has increased from an average of 3.13 hours per day in 2000 to an average of 3.62 hours per day in 2010. The half-hour per day increase could be attributed to a higher level of certified nurse assistant (CNA) and licensed practical nursing (LPN) hours; however, registered nursing hours per resident day remained relatively flat over the 10-year period (American Health Care Association, 2011a). In a review of the literature between 1975 and 2003, Bostick et al. (2006) concluded that a "proven relationship" exists between staffing levels (specifically licensed staff) and quality of care. Numerous studies indicate that higher licensed staffing levels in facilities lead to the following benefits:

1. Fewer hospitalizations (Kramer et al., 2000; Kramer and Fish, 2001; Dorr, Smout, and Horn, 2004), infections (Dorr, Smout, and Horn, 2004; Zimmerman et al., 2002), and pressure ulcers (Kramer et al., 2000; Kramer and Fish, 2001; Dorr, Smout, and Horn, 2004; Bostick, 2004)

2. Less skin trauma (Kramer et al., 2000; Kramer and Fish, 2001)
3. Lower weight loss (Kramer et al., 2000; Kramer and Fish, 2001)
4. Decreased resistance to care (Kramer et al., 2000; Kramer and Fish, 2001)
5. Higher levels of assistance (Schnelle et al., 2004)
6. Improved functional status (Kramer et al., 2000; Kramer and Fish, 2001)

Several consumer advocacy and expert panels have called for higher staffing levels to improve the overall quality for residents (National Citizens Coalition for Nursing Home Reform, 1995; Harrington et al., 2000).

Staffing ratios and turnover rates, however, are only two components of how staff affects care provided in facilities; how staff is organized, supervised, and motivated is also critically important. Increasing staffing in poorly run facilities may not improve quality of care. Moreover, although many studies found that staffing positively affects quality of care, not all studies have found this effect. In addition, some of the studies that have linked staffing to quality have been found to have errors. After reviewing studies published between 1991 and 2006, Castle (2008) found that 40 percent of the quality indicators examined showed an association with facility staffing levels, but they also found that many of these studies had substantial measurement and methodological flaws. Moreover, because most care in facilities is financed by Medicaid, their ability to hire additional staff is limited by the Medicaid payment rate. Especially in the current fiscal environment, most States have strictly constrained facility payment.

CAHPS Nursing Home Surveys: The Federal survey and certification process requires State surveyors to speak with residents about their care. However, the current survey tool does not systematically collect data from a large sample of residents or their families that could be quantitatively analyzed. In moving towards a high-value, patient-centered health care system, assessing patients' experience of their care is an important aspect of measuring quality. CMS and AHRQ have developed the CAHPS® family of surveys that assess consumer experience in managed care plans, FFS care, dialysis units, hospitals, and facilities. Patient experience of care (including family experience) serves as a particularly important quality measurement in facilities because many residents live in facilities for long periods of time. In addition, some facilities routinely query consumers about their experience with care. However, Federal law and regulations do not mandate consumer experience surveys or CAHPS Nursing Home surveys, and only a small number of facilities currently gather this information. A few States, such as Maryland, have pilot-tested family satisfaction surveys (Maryland Health Care Commission, 2006).

The CAHPS® Nursing Home Surveys are the most highly developed instruments to collect information on the patient experience with facility care. Three different but related CAHPS® Nursing Homes Surveys gather information from long-stay residents, residents who were discharged after a short stay, and family members (however, they are not necessarily substitutes for one another). Nursing home quality of life measures from short-stay residents could differ from those of long-stay residents depending on whether facilities segment their populations, and the differing expectations of each population. Surveys of family members who frequently visit facilities and participate in a patient's care planning could also provide measures of both quality of life and quality of care (*i.e.*, complements resident's survey instruments). The

family members, friends or other frequent visitors report on their own experiences with the facility's quality of care rather than the resident. An important consideration to complete family surveys is identifying the appropriate family member(s) with sufficient experience and who has participated in the resident's care planning. Information obtained from family members with SNF and NF experience who often have a large decision-making role could inform other families when they participate in the care planning for a member of their own families. In March 2011 the NQF endorsed three CAHPS® survey instruments for collecting data on quality.[42] These included Long-Stay Resident Instrument, Family Member Instrument; and Discharged Resident Instrument (intended for residents recently discharged after short stays of no more than 100 days). Quality measures using the CAHPS® Nursing Home survey instrument have been developed for both long-stay resident and family members, while the short-stay discharged resident survey is the only one for which composites[43] are pending. As the CAHPS® Nursing Home Surveys move forward and data are collected on a large number of facilities, the SNFVBP program could consider using survey data to measure patient experience of care.

Despite the importance of obtaining this type of data, national implementation of CAHPS® faces some challenges. First, CMS does not currently require SNFs and NFs to collect systematic, structured data on resident experiences, although as part of the survey and certification process, surveyors are required to discuss with residents the care that they receive. Requiring facilities to submit data on patient experiences would not increase the reporting burden on all facilities since a number of States already require patient experience of care surveys.[44] Second, the high prevalence of cognitive impairment among SNF residents (particularly among long-term institutional care residents) could impose additional challenges for CMS and stakeholders to collect such information. A CAHPS® family member survey is available for use in those situations where the resident suffers from cognitive impairment although it is not a perfect substitute for obtaining the resident's perspective. In addition, the discharged resident survey permits analysis of short-stay resident experience. This population has been shown to experience less cognitive impairment than long-stay residents. Approximately 41 percent of facility residents in 2008 had moderate to severe cognitive impairment (CMS, 2009). Third, identifying and reaching appropriate family member(s) with sufficient visit experience and participation in care planning to offer an opinion could be difficult and time consuming.

Composite Measures: An ongoing issue in quality assurance is how to summarize large numbers of individual quality measures into a single meaningful measure for providers, consumers, State regulators, and CMS. For example, in addition to the health inspections and staffing data, there are 16 different MDS quality measures, which could make it difficult to develop a summary score assessing the quality of a facility (*e.g.*, assigning weights to determine

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[42] Additional information on Nursing Home CAHPS® can be found at: https://www.CAHPS®.ahrq.gov/content/products/NH/PROD_NH_Intro.asp.

[43] The survey provides nursing home level scores on summary measures valued by consumers; these summary measures or composites are currently being analyzed. The composites may include those valued by residents: (1) Environment; (2) Care; (3) Communication & Respect; (4) Autonomy and (5) Activities.

[44] As one example, the Ohio Department of Aging has surveyed resident's experience of care to help inform consumers. Ohio Department of Aging Press Release. "State Releases List of Top Nursing Homes and Assisted Living Facilities for Resident Satisfaction: Survey Results Can Help Consumers Make Informed Decisions." The press release can be accessed at: http://www.aging.ohio.gov/news/pressreleases/2010/20100304.htm.

clinical importance and population impact for individual measures). To create a system that simplifies and summarizes the many quality measures which subsequently empowers consumers to make informed decisions, CMS developed two composite measures of facility quality. The Five-Star Quality Rating System represents a composite score, which CMS publicly reports on the Nursing Home Compare Web site. The second measure is used in the NHVBP Demonstration but is not publicly reported. By definition, these composite measures assume that facility quality is a "single product," rather than a variety of types of services in which facilities may excel in some domains but perform poorly in others. In addition, for the NHVBP Demonstration, the composite measure is the basis for distributing the financial incentives that may result from the Demonstration.

Five-Star Quality Rating System*:* In December 2008, CMS initiated summary ratings of facilities, scoring them from one to five stars on the Nursing Home Compare Web site.[45] Facilities with one star are considered to have quality that is much below average, and facilities with five stars are considered to have much-above-average quality (CMS, 2008). There is one overall Five-Star rating for each facility and separate ratings for each of the following three sources of information:

Health Inspections: Certified facilities must meet more than 180 regulatory standards designed to protect facility residents. These standards cover a wide range of topics, from proper management of medications, to protecting residents from physical or mental abuse and inadequate care, to the safe storage and preparation of food. The health inspection team consists of trained inspectors, including at least one registered nurse. These inspections take place, on average, about once a year but may be completed more often if the facility provides substandard quality of care. Using the regulatory standards, the State inspection team examines many aspects of life in the facility, including the following:

- the care of residents and the processes used to give that care;
- how the staff and residents interact; and
- the facility environment.

In addition, inspectors review the residents' clinical records, interview some residents and family members about the residents' life in the facility, and interview caregivers and administrative staff. The health inspection rating contains information from the last 3 years of on-site inspections, including both standard surveys and any complaint surveys. The most recent survey findings are weighted more than those of the prior two years. More than 200,000 on-site reviews are used in the health inspection scoring nationally.

Staffing: As part of the health inspection process, CMS collects data on facility staffing levels, including information on the following positions:

- RNs;
- LPNs;
- Licensed vocational nurses (LVNs); and

[45] Further information on the Five-Star Quality Rating System may be found at: https://www.cms.gov/CertificationandComplianc/13_FSQRS.asp.

- CNAs.

These staffing hours are from a 2-week period just before the State inspection. CMS converts the staffing hours reported by the facility into a measure that shows the number of staff hours per resident per day. These hours are then reported by type of staff, and all staff combined as a total. Staffing hours per resident per day is the average number of hours worked divided by the total number of residents. The staffing rating contains information related to the number of hours of care on average provided to each resident each day by nursing staff. The rating considers differences in residents' acuity across different facilities. For example, a facility treating more disabled residents would be expected to have more nursing staff than a facility with less acute resident needs.

Quality Measures: The quality measures rating contains information on 10 different physical and clinical MDS-derived measures for facility residents averaged over the most recent quarter—for example, the prevalence of pressure ulcers or change in the percentage of residents who need assistance with activities of daily living. The activity of daily living decline quality measure for long-stay residents is weighted more heavily than the other measures. Quality measure data are based on MDS assessments collected by facilities for all residents. More than 12 million assessments of the conditions of facility residents were used to calculate the Five-Star Quality Rating System.

The Five-Star Quality Rating System updates its ratings frequently because the quality of care in facilities is subject to change. First, the data on survey and certification and MDS is available more frequently and quickly since it excludes potentially avoidable hospitalizations. If the Five Star Rating System depended on data on potentially avoidable hospitalizations, then there would be a long time lag due to claims run out delays in calculating this measure. Thus, the Five Star Quality Rating System differs from the NHVBP Demonstration, which includes measures of hospitalization.

The health inspections have the greatest weight in calculating the final ratings, with the staffing and quality measures modifying the inspection score up or down. CMS assigns stars within each State using the following metric: the top 10 percent of facilities receive five stars; the bottom 20 percent receive one star; and the middle 70 percent of facilities receive two, three, or four stars, with equal proportions (23.33 percent) in each category.

The Five-Star Quality Rating System makes use of the quality of care data routinely collected by CMS and presents them in an easily understandable format. Although substantial amounts of research have been conducted on the individual components of the Five-Star Quality Rating System, additional research is needed on the overall rating system's ability to assess quality. At least one study suggests that the system does not fully adjust for case-mix variation (Wiener, Anderson, and Khatutsky, 2011). Moreover, recognizing the variation in how the inspection process is administered, the distribution of stars is the same within each State. Thus, this methodology may have limited ability to measure differences in facility quality across States. In addition, the Five Star Quality Rating System may have difficulty measuring improvements or declines in overall quality over time because a fixed percentage of facilities always receive a particular star rating.

NHVBP Demonstration Composite Measure: The NHVBP Demonstration assesses performance at the State level. Eligible SNFs (all of which are certified and licensed as SNFs and most of which are dually-certified and licensed both as SNFs under Medicare and as NFs under Medicaid) receive payment for either performance or improvement. SNFs with an overall performance score in the top 20 percent in either performance level or improvement qualify for a performance payment. In addition, improvers' performance level must also be at the 40th percentile among all facilities in the State. SNFs in the top 10 percent in either performance or improvement receive a larger performance payment that is 20 percent higher (adjusted for differences in resident days) than those in the next 10 percent.

The NHVBP Demonstration obtains quality data on all SNF residents (short- and long-stay). Under this approach, quality performance is based on a composite calculated by assigning percentages (totaling 100%) to the following four domains:

- Staffing (nurse staffing levels and staff turnover) = 30%
  - CMS requires SNFs to submit payroll data to calculate the staffing measures to ensure accuracy.
- Appropriate hospitalizations (rate of potentially avoidable hospitalizations) = 30%
- MDS Outcomes (resident outcomes-derived quality measures) = 20%
- Survey Deficiencies = 20%

The demonstration uses a continuous scoring system that awards points over a large range of different measures allowing greater sensitivity to any improvements in the participants' performance. This approach also helps to differentiate between participants that have similar performance levels and should motivate improvement for SNFs with all types of performance at baseline.

In designing the demonstration, CMS convened multiple meetings with national stakeholders over 2 years to gather substantive feedback prior to implementation of the NHVBP demonstration. During each meeting, 12 to 15 organizations participated and provided input during all phrases of implementation. CMS also held a technical expert panel to discuss, propose, develop, and refine the NHVBP measurement framework.

CMS determines performance scores on a State-specific basis, minimizing concerns related to the variations in survey outcomes across States (White et al., 2009; White et al., 2008). The NHVBP Demonstration assesses SNFs across a number of performance metrics, including the following:

Survey Deficiencies: The demonstration uses the survey deficiency domain in two ways. First, it is used as a screening measure. Any SNF that receives a citation for substandard quality of care or that has one or more citations for actual harm or higher in certain categories of regulations is ineligible to receive a performance payment. This screening criterion ensures that SNFs with otherwise high performance scores will not receive a performance payment if they had serious quality of care issues identified by surveyors. Second, the deficiencies that SNFs receive on their survey become part of their performance scores. The demonstration assigns

values based on the scope and severity of deficiencies and the regulatory areas in which deficiencies occur. CMS ranks SNFs within each State according to their values.

Staffing: The staffing measures include RN/Director of Nursing (RN/DON) hours per resident day; total licensed nursing hours (RN/DON and LPN) per resident day; CNA hours per resident day; and nursing staff turnover rate. The demonstration case mix adjusts staffing level measures for differences in resident acuity that affect the staffing levels needed to care for residents. Unlike the Five-Star Quality Rating System, which depends on staffing data collected during the health inspection, CMS collects quarterly payroll data from participating SNFs for the NHVBP. Section 6106 of the Affordable Care Act added section 1108I(g) to the Act, which requires that all SNFs and NFs report payroll data on staffing. These data will be used to calculate staffing and turnover measures.

MDS-derived Measures: With implementation of the MDS 3.0, CMS will transition to this new data source for quality measures when they become available as appropriate. The NHVBP Demonstration selected a subset of MDS 2.0 quality measures based on validity, reliability, statistical performance, and policy considerations:

- Chronic Care Residents: The demonstration uses four of the MDS 2.0 quality measures: (1) percent of residents whose need for help with daily activities has increased; (2) percent of high-risk residents who have pressure ulcers; (3) percent of residents who have had a catheter left in their bladder; and (4) percent of residents who were physically restrained.

- Post-acute Care (PAC) Residents: The demonstration uses three of the MDS 2.0 post-acute (*i.e.*, short-stay) quality measures: (1) percent of residents with improving level of activities of daily living (ADL) functioning; (2) percent of residents who improve status on mid-loss ADL functioning; and (3) percent of residents experiencing failure to improve bladder incontinence.

Appropriate Hospitalizations: The demonstration calculates separate rates of potentially avoidable hospitalizations for SNF short-stay and long-stay residents. The potentially avoidable hospitalization measures are risk adjusted, using covariates from Medicare claims and the MDS. As implementation of the NHVBP Demonstration advances and when an evaluation is completed to determine the effectiveness of certain measures such as potentially avoidable hospitalizations, the results could be used to inform the development of efficiency metrics for a SNFVBP program.

If the SNFVBP program adopts the NHVBP Demonstration measurement approach, it could minimize the burden for both stakeholders and CMS by building on the existing data collection and quality measurement framework. Although the methodology differs, the NHVBP Demonstration contains substantial similarities with the Five Star Quality Rating System (*e.g.*, relies on staffing, MDS-derived measures, and health inspection data). However, complete evaluation data are not yet available from the NHVBP Demonstration, which limits CMS's ability to assess how effectively the measurement framework measures quality of care.

Potential New Quality Measures: In addition, CMS could improve the quality framework by expanding the measures to include those that assess functional status such as improvements in walking, transfers, and eating that prepare Medicare beneficiaries for discharge to a less intensive non-institutional setting. CMS should also consider measures such as discharge to the community, potentially avoidable hospitalizations or rehospitalizations and composite measures currently applied in the NHVBP Demonstration. CMS can also consider adopting measures that assess improvements in a beneficiary's physical condition such as improved balance or measures related to specific therapy services. New quality measures could reflect consensus among affected parties, measures associated with quality of SNF care identified in well-respected and widely circulated peer-reviewed clinical literature, or in widespread use among States and private stakeholders.

***Structural Measures*:** Structural measures evaluate features relevant to a provider's capacity to deliver care and describe the quality of the health care delivery environment. Structural measures could focus on a SNF's utilization of health information technology (IT) and include the adoption of electronic health records (EHRs), and use of technology to exchange health information. For example, such measures could track the frequency and timeliness of electronic health information exchange between physicians and SNFs in terms of physicians' orders. The measures could be constructed to align with the meaningful use of certified EHR technology by eligible professionals and eligible hospitals. The SNFVBP 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. As CMS develops a plan to implement a SNFVBP program, it will be important to consider adopting EHR measures for the program to capture the efficiency of SNF activities and track such performance over time. In addition, consideration should be given to whether the meaningful use measures for eligible professionals and eligible hospitals could support and align with the SNFVBP measures (*e.g.*, meaningful use measures related to health information exchange). Some SNFs may need resources and technical capacity to enhance their data analytical capabilities so that they could use MDS data to analyze the quality of care or perform other types of data analysis.

Table 4-2 summarizes the key options for measuring quality and their advantages and disadvantages.

Table 4-2
Options for Measuring Performance of SNFs

Performance Option	Description	Strengths and Limitations
MDS-Derived Quality Measures	Set of 16 functional and medical condition measures based on assessment of facility residents using data from the federally mandated MDS.	**Strengths:** The MDS offers a powerful tool to implement standardized clinical assessment and coordinate care management in facilities. The MDS 3.0 was designed to improve the reliability, accuracy, and usefulness of the MDS, to include the resident in the assessment process, and to use standard protocols used in other settings. Most measures focus on outcomes rather than care processes, providing flexibility to facility management in how they achieve desired outcomes. Measures are risk adjusted where appropriate. Many of the measures have been researched and found to be reliable and valid; these measures continue to be scientifically researched. The NQF endorsed 16 3.0 MDS measures in 2011. CMS publicly reports the measures on the Nursing Home Compare Web site. **Limitations:** As with all measures in quality improvement initiatives, some measures may require additional testing and research to improve validity and reliability. Substantial variation in performance of individual facilities over time suggests that MDS-derived measures may not be stable measures of quality. Facility staff, who may not report all quality problems, complete MDS with relatively little external verification. Small size of facilities limits statistical reliability for some facilities.
Health-Inspection Citations	State Survey Agencies perform surveys (inspections) on behalf of CMS. CMS maintains oversight for compliance with the health and safety standards for facilities serving Medicare and Medicaid beneficiaries, and makes publicly available information about how individual facilities perform on these requirements.	**Strengths:** Data have been collected for a long time. Covers wide range of quality domains. State surveyors collect data rather than facility staff. Quality Indicator Survey being implemented to improve reliability and validity. Overall standards receive broad stakeholder support. **Limitations:** Based largely on processes and written procedures instead of outcomes. Wide variation across and within States in how surveys are conducted and citations issued. Intended to establish minimum quality standards rather than assessment of high quality. Additional research needed to assess survey and certification process for quality measurement purposes.
Discharge to the Community	Measures based on rates of SNF discharges to community.	**Strengths:** Measures one of the main goals of post-acute care. MedPAC supports its use as a quality measure. **Limitations:** Does not capture other goals of post-acute care or long-stay SNF residents. Not correlated with some MDS-derived quality measures. The measure could provide incentives for facilities to improperly discharge residents.

Performance Option	Description	Strengths and Limitations
Potentially Avoidable Hospitalizations	Measures based on rates of potentially avoidable hospitalizations and selected rehospitalizations	**Strengths:** Lower rates of potentially avoidable hospitalizations could be primary source to fund payment incentives. CMS collects data from Medicare claims independently of providers. Unnecessary hospitalizations adversely affect facility residents, who are subject to iatrogenic illnesses and disorientation. **Limitations:** Disagreement on what constitutes potentially avoidable hospitalization. Rehospitalizations may result from premature discharge from hospital and may not be indicative of SNF quality. Hospitalization decisions largely made by physicians rather than SNFs. VBP financial incentives may result in inappropriately delayed hospitalizations. Significant lag time between data collection and VBP performance payment incentives may lessen incentives for SNF quality improvement.
Staffing Measures	Nursing home care staff per resident	**Strengths:** Many studies link facility quality to staffing levels. Consumer advocates strongly support staffing measures. Affordable Care Act provisions will improve data quality of these measures. **Limitations:** Staffing levels measure inputs rather than resident outcomes. Other staffing factors, such as turnover, familiarity with the assignment, organization, leadership, and supervision, could be equally important. Industry considers its ability to hire staff dependent on Medicare and Medicaid payment rates. Measures require risk adjustment to be meaningful.
CAHPS® Nursing Home Surveys: Long-Stay Resident Instrument	CAHPS® survey based measures covering quality of care residents receive and the quality of life they experience during the facility stay. Measures include: ■ Care ■ Communication and Respect ■ Environment ■ Autonomy ■ Activities ■ Overall rating of care	**Strengths**: Directly captures resident experience of care and quality of life. **Limitations**: High prevalence of cognitive impairment among residents; in-person survey administration expensive.

Performance Option	Description	Strengths and Limitations
Family Member Instrument	CAHPS® survey based measures covering family members experience with the facility caring for the resident. Measures include: ■ Meeting Basic Needs: Help with Eating, Drinking, and Toileting ■ Nurses and Aides' Kindness/Respect Towards Resident ■ Facility Provides Information/ Encourages Respondent Involvement ■ Facility Staffing, Care of Belongings, and Cleanliness ■ Overall Rating of Care at Facility	**Strengths**: Captures family experience as additional quality dimension. Also, mail survey administration less expensive. **Limitations**: Family experience is not perfect substitute for resident experience.
Discharged Resident Instrument (Short-Stay)	Measures/Composites are being finalized.	**Strengths**: Directly captures SNF resident experience of care and quality of life. Also, mail survey administration less expensive. **Limitations**: Number of short-stay residents may vary greatly by SNFs; many SNFs may have small numbers that could limit the usefulness of surveys.

Performance Option	Description	Strengths and Limitations
Composite Measure: Five-Star Quality Rating System	Rating system based on health inspections, staffing, and MDS quality measures. Posted on the Nursing Home Compare Web site, this quality measure assigns each facility a rating between 1 and 5 stars. Facilities with 5 stars are considered to have much-above-average quality and facilities with 1 star are considered to have much-below-average quality. Similar to, but different from, the composite measure used in the NHVBP Demonstration.	**Strengths:** Simplified measure enables consumers, providers, and regulators to easily compare the quality of care across facilities. Makes use of all three available types of quality measures that are routinely collected and publicly available: inspections, staffing, and MDS-derived quality measures. **Limitations:** Does not include potentially avoidable hospitalizations or rehospitalizations. Formula for ratings establishes fixed percentages within States, not accounting for differences in facility performance across States.
Composite Measure: NHVBP Demonstration Performance Framework	Composite measure based on staffing levels, rates of potentially avoidable hospitalizations, MDS outcomes, and survey deficiencies. Similar to, but different from, the Five Star Quality Rating System.	**Strengths:** Includes all of the major data sources on quality, including potentially avoidable hospitalizations. Provides a summary rating of overall quality in individual SNFs. Currently being used in Medicare NHVBP Demonstration. **Limitations:** Formula for ratings establishes fixed percentages within States for ratings, not accounting for differences in SNF performance across States. Inclusion of potentially avoidable hospitalization measure could create time lag between performance period and payment of financial incentive.
Structural Measures	Use of health information technology (IT) and include the adoption of electronic health records (EHRs),	**Strengths:** Structural measures evaluate features relevant to a SNF's capacity to deliver care and describe the quality of the health care delivery environment. Could focus on a SNF's utilization of health (IT) and include the adoption of EHRs, and use of technology to exchange health information. **Limitations:** Currently only eligible professionals and eligible hospitals and critical access hospitals qualify for payment incentives under the Medicare and Medicaid EHR Incentive Programs. There are currently no EHRs that have been developed specifically for the SNF setting. Resources and technical capacity may be needed to enhance data analytic capabilities.

4.3 The Reporting, Collection, and Validation of Quality Data

Under section 3006(a)(2)(B) of the Affordable Care Act, in developing the plan to implement a SNFVBP program, the Secretary shall consider the reporting, collection, and

validation of quality data. A SNFVBP program could be based on existing tools and quality measures, and data currently collected from Federal and State survey and certification processes, MDS, and Medicare claims data (see Section 4.2 The Ongoing Development, Selection, and Modification Process for Measures). Similar to the data collection method under the NHVBP Demonstration, which mainly relies on using existing data, CMS could use existing data collection methods to minimize the burden for stakeholders. The currently reported quality information includes a set of 16 NQF endorsed measures based on MDS 3.0 These measures will be publicly reported on the Nursing Home Compare web site in July 2012 along with information on health inspection citations, and information on staffing levels. In addition, a subset of these NQF-endorsed MDS measures are specific to Medicare Part A paid short stays. As discussed previously, an advantage of using the health inspection data for a SNFVBP program is that it has been collected since the implementation of the Omnibus Budget Reconciliation Act of 1987, and covers a wide range of quality domains (Wiener, Freiman, and Brown, 2007; Harrington et al., 2010). Furthermore, unlike the MDS data, surveyors who are employees of State governments directly collect the information during their inspections, making the data collection independent of facility employees.

Completeness and accuracy of data submission will be critical elements of the SNFVBP program. A SNFVBP program would link payment to quality of care and ensure data oversight for CMS to appropriately calculate performance incentives, rather than tying payments to reporting of quality data. Efforts undertaken to continuously enhance and validate data will allow CMS to both ensure accurate payment incentive calculations and improve the quality of care for SNF residents. For example, the current measures derived from MDS data capture the quality of care in facilities by assessing residents' physical and clinical conditions at specified intervals during their stay. Completeness and accuracy of MDS data submission will be critical to the VBP program for a number of reasons. MDS-derived quality measures provide important indicators related to the functioning and medical condition of all (including private-pay) facility residents. The SNFVBP program could then rely on this data (in addition to claims, NHCAHPS, etc.) to calculate performance payment incentives. To ensure the validity of performance scores and payment incentive calculations, CMS continues to enhance MDS data completeness and accuracy through ongoing facility monitoring and training (conferences, webinars, and open door forums) in which the agency identifies areas of assessment containing a high prevalence of invalid and/or missing clinical data (*e.g.*, review the assessment by comparing to clinical records and resident/staff observations/interviews), publication of MDS User Manual Guidelines, and the Survey and Certification process.

If a decision is made to use staffing data for the SNFVBP program, CMS could rely on payroll data submitted by SNFs, which would allow the agency to more accurately calculate staffing levels and turnover rates. For example, in calculating the staffing performance measures under the NHVBP Demonstration, CMS uses the payroll, agency and census data to calculate the four staffing measures. In the demonstration, when CMS determines RN/DON hours per resident day, the agency sums the productive hours (*i.e.*, hours actually worked) by RNs and DONs, the hours worked by agency RNs, and the resident days as reported by each demonstration participant for the entire year. CMS then calculates the ratio of RN/DON hours per resident day for each participant. A similar process is used for licensed staff and CNA hours per resident day. Turnover is determined by identifying gaps in employee payroll records that indicate a break in their employment with the facility. CMS verifies the staffing data annually

by requesting a subset of facilities to submit copies of raw payroll records. Facilities that submit aberrant data may be targeted for data verification. Types of data irregularities that may trigger the data verification process include extremely low or high turnover, aberrant staffing levels or distribution of staff by job category, missing data for some payroll periods, high rates of errors on individual employee records (*e.g.*, negative hours or working more hours than expected (*e.g.*, more than 80 hours in a week)). Consistent with the collection of payroll data and subsequent verification process under the NHVBP Demonstration, Section 6106 of the Affordable Care Act, added section 1108I(g) to the Act, requires the collection of payroll data to accurately assess staffing levels in SNFs and NFs (see Section 4.2 The Ongoing Development, Selection, and Modification Process for Measures).

Efforts to Address Small Sample Size

The issue of the potential for a small number of SNF cases for individual performance metrics could impact calculating payment incentives. SNFs that are located in rural areas may have lower patient volumes when compared to SNFs located in urban areas. SNFs 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 SNFs. In addition, SNFs that report a small number of cases could have performance results that vary substantially from each performance period.

A SNFVBP program may need to consider alternative strategies for addressing a small numbers of cases. CMS could explore a variety of approaches to increase measure reliability and appropriately address the issue of small numbers on individual SNF performance metrics. These could include:

- Composite measures that combine information across related performance measures within the same SNFs. 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 SNFs over longer time periods such as quarterly or annually. Some SNFs 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)

4.4 The Structure of Value-Based Payment Adjustments, Including the Determination of Thresholds or Improvements in Quality, the Size of Such Payments, and the Source of Funding

Under section 3006(a)(2)(C) of the Affordable Care Act, in developing a plan to implement a SNFVBP program, the Secretary shall consider 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.

An important aspect of the SNFVBP plan entails the specific criteria under which SNFs may receive payment incentives. The SNFVBP program could set attainment standards for payment incentives that require SNFs to attain specific prospectively established targets or to rank in a top percentile of performance. The VBP program could also consider improvement standards relative to a baseline to qualify a SNF for a payment incentive. The CMS could also consider a hybrid of these two approaches.

Attainment-based Incentives: Under this option, SNFs could receive payment incentives if they attain a specific predetermined target or are ranked within a certain percentile of all SNFs. For example, a SNF might qualify for a payment incentive if it performs in the top 10 percent of all SNFs. This approach would reward high-performing SNFs. Specific attainment-based incentives could present challenges, particularly in the early stages of implementation. Part of the difficulty in meeting specific, predetermined targets is that CMS may need to adjust such performance levels for changes in patient mix/risk and normal variation in costs/outcomes that are beyond the SNF's control. Specific attainment targets could be based on either national or State standards, or a SNF's historical performance.

Improvement-based Incentives: SNFs could qualify for payment incentives based on meaningful improvement rather than attaining a specific target or ranking. Improvement targets could minimize the administrative burden associated with determining appropriate risk adjustment or considering variation in performance and outliers. However, focusing on improvement without specifying a minimum threshold could reward chronically low performing SNFs.

Attainment and Improvement Hybrid Model: The SNFVBP program could be designed both to reward high-performing SNFs and encourage meaningful improvement in SNFs that may not have initially been high performers. The value-based payment incentive could be determined both on the attainment and improvement in performance over time. Also, improvement could be rewarded only if a SNF meets minimum target attainment standard, thus avoiding rewarding poor performance under any circumstance. For example, the Medicare HHP4P Demonstration uses a hybrid model where 75 percent of the incentive pool would be shared with those agencies in the top 20 percent of the highest level of patient care, and 25 percent of the incentive pool would be shared with the top 20 percent of those making the biggest improvements in patient care.

Previous and existing Medicare pay-for-performance demonstrations have relied on a hybrid approach to rewarding high-quality performers. A common approach relies on rewarding improvement in early years and then to change, over time, to rewarding attainment of specific predetermined targets. The Premier Hospital Quality Demonstration, for example, used this approach (CMS, 2005). Both the current NHVBP Demonstration and the Medicare Hospital VBP program use hybrid models based on a combination of attainment and improvement goals. The NHVBP Demonstration ranks SNFs relative to one another within each State. SNFs that score in the 80th percentile or higher of the quality ratings are eligible for an incentive award as are SNFs in the 80th percentile or higher in improvement. However, SNFs performing below the 40th percentile of quality ratings do not qualify for incentive payments based on improvement.

Table 4-3 summarizes the advantages and disadvantages of each option.

Table 4-3
Options for Performance Incentive Criteria

Performance Option	Description	Strengths and Limitations
Attainment-based incentives	Base payment incentives on attainment of a specific target. Targets could be defined as attainment of a certain quality standard, relative ranking, or placement in a top/bottom percentage of facilities.	**Strengths**: Ability to clearly define and reward higher-performing participants. **Limitations**: May be difficult to achieve a high rate of attainment and may require risk adjustment.
Improvement-based incentives	Establish payment incentives based on meaningful improvement score by comparing the SNF's current measure score with its prior-period baseline performance. In addition, CMS could set a threshold level of performance to avoid rewarding the low- performing SNFs.	**Strengths**: Provides a strong incentive for low-performing facilities to improve their quality. Provides SNFs a feasible target to achieve performance. **Limitations**: Possibility of rewarding low-performing participants if there is no threshold established. Requires baseline to measure improvement.
Attainment-improvement hybrid incentives	Payment incentives combine attainment targets and improvement goals.	**Strengths**: Combines positive features of both attainment targets and improvement-based approaches. **Limitations**: This approach is more complex than others.

Size of Payment Incentives: Payment incentives could be incrementally increased over time. Value-based payment incentives should be sufficiently large to encourage SNFs to improve the quality of care for Medicare beneficiaries. As an example, payment incentives differ across State's Medicaid pay-for-performance programs. The Minnesota Department of Human Services in 2006 established the NF Performance-Based Incentive Payment Program. The State awarded time-limited rate adjustments of up to 5 percent of the operating payment rate to selected facilities. See Appendix A for additional details.

CMS could also consider an alternative option for the payment incentives using lessons learned from other Medicare VBP demonstrations. Under the NHVBP Demonstration, SNFs in the top 10 percent in either performance level or improvement receive a larger performance payment that is 20 percent higher (adjusted for differences in resident days) than those in the next 10 percent. The HHP4P Demonstration distributes 75 percent of the incentive pool to those agencies in the top 20 percent of the highest level of patient care. Twenty-five percent of the incentive pool would be shared with the top 20 percent of those making the biggest improvements in patient care. If there are no savings within a State, there are no incentive payments.

Source of Funding: CMS could consider a number of options to finance performance-incentive payments. These potential sources of funding include the following:

- **Quality Performance Funded by Payment Withholds:** The base payments to all SNFs could be reduced (or withheld) by a certain percentage compared with what they would have been otherwise. This payment withhold could be used to reward SNFs that meet quality performance standards. High performing SNFs would receive back their base payments (and potentially receive an additional amount for exceeding quality standards). Low-performing SNFs that did not meet the quality metrics would not receive any performance payments. As with any system that reduces payments or places facilities at risk for portions of their normal payments, the effect of financial penalties could be particularly acute among facilities with low or negative profit margins.[46] The payment withhold could be implemented by either reducing the SNF payment rates or eliminating or reducing the annual payment updates. For example, in its March 2011 Report to Congress, MedPAC recommended eliminating the update to the SNF payment rates for FY 2012.[47] Even with the change (*i.e.*, eliminating the update to the SNF payment rates), MedPAC believes Medicare beneficiaries will continue to have adequate access to SNF services.

- **Quality Performance Incentives with Penalties for Low Performance:** Under this model, CMS could distribute payment incentives to high performers (*e.g.*, top decile), assess penalties to the lowest performers (*e.g.*, bottom decile), and hold harmless a middle group. The payment incentives to the top group could be funded from penalties assessed to the lower group. The risk associated with penalties is that they could deprive poor performers from receiving the resources to stabilize their operations and hire needed licensed clinical staff to improve the quality of care.

Table 4-4 summarizes these options for funding payment incentive models.

The Timeliness of Value-Based Payment Incentives: Determining the timing of payments is an important element in developing a SNFVBP program. The data calculation and subsequent timely distribution of incentive payments could establish a clear link between a desired behavioral change and the reward for achieving performance metrics. Under a SNFVBP program, timely distribution of incentive payments could ensure active and sustained participation of SNFs. If there is a lag between the performance period and payments, it could reduce the program’s impact on SNF behavior related to improving quality of care. The time between the performance period and subsequent distribution of payments is related to base-year performance data collection, data submission by SNFs, measure calculation by CMS, review of the quality data, providing feedback to SNFs and public reporting of the data. When the agency completes this process, payments could be distributed at regular intervals. In developing a plan to implement a SNFVBP program, CMS could rely on the diagnoses, outcomes, and expenditure information contained in Medicare claims and other administrative data sources to calculate

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[46] The March 2011 MedPAC report notes that, on average, aggregate profit margins for SNFs continued to increase, reflecting the continued concentration of days in the highest paying case-mix groups. In 2009, the aggregate Medicare margin for freestanding SNFs was 18.1 percent, the ninth consecutive year with a margin above 10 percent. However, MedPAC also notes the variation among facilities, with 10 percent of facilities reporting negative profit margins.

[47] Medicare Payment Advisory Commission. Report to the Congress: Medicare Payment Policy (March 2011). This report can be accessed at: http://medpac.gov/documents/Mar11_EntireReport.pdf.

savings. This process could leverage existing systems and minimize the burden for SNFs. The speed in which the incentive payments can be rewarded depends on the complexity of the measures against which SNFs are measured, and on the availability of the data to compute (and verify) performance.

CMS could seek to increase the timeliness of payment adjustment incentives for SNFs by making interim or partial payments based on preliminary quality assessments. The advantage under this approach is that it distributes at least some payment to high-performing SNFs on a timelier basis. However, interim payments could likely be subject to reconciliations, which could add administrative burden and significant cost to the SNFVBP program. In some circumstances, it could retroactively reduce funding for participants.

Table 4-4
Summary of Methods for Funding Payment Incentive Models

Performance Option	Description	Strengths and Limitations
Quality performance incentive with payment withhold or payment update reduction	CMS withholds a portion of provider payment or payment updates to fund a savings pool and subsequently distributes payment incentives for high performers. Low performers would not receive any performance payments. SNFs must meet quality metrics to receive a payment bonus.	**Strengths**: Timely payment incentives because such payments would be made from modifications to payment rates rather than demonstrated savings (which have to be validated using claims data). **Limitations**: Potential to temporarily reduce payments for all, not just poor-performing SNFs. The update may vary from year to year.
Quality performance incentive with penalty for low performance	CMS could distribute payment incentives to high performers (*e.g.*, top decile), assess penalties to the lowest performers (*e.g.*, bottom decile), and hold harmless a middle group. The payment incentives to the top group could be funded from penalties assessed to the lower group.	**Strengths**: Low performance penalties could motivate low-performing SNFs to refocus their efforts to improve quality of care and patient safety for residents. **Limitations**: Penalizes low performers that may already be struggling financially, serve a high number of Medicaid patients, or have more high cost residents with poor health. Penalty enforcement could be difficult in the absence of a payment withhold.

4.5 Methods for the Public Disclosure of Information on the Performance of SNFs

Section 3006(a)(2)(D) of the Affordable Care Act requires that in developing the SNFVBP plan, the Secretary shall consider methods for the public disclosure of information on the performance of SNFs. CMS could collect and validate data from SNFs on quality, efficiency, and cost measures for performance comparison among SNFs. Performance information could be incorporated into the CMS Nursing Home Compare web site to allow the public to readily access information and avoid duplicate reporting programs for the same facilities.

CMS's Nursing Home Compare web site publicly reports the measures discussed in Section 4.2 except for discharge to the community, potentially avoidable hospitalizations, experience/Nursing Home CAHPS and the composite measure used in the NHVBP Demonstration. An incremental approach could be used to appropriately test and have SNFs submit data for new measures before these measures would be included in the set used for public reporting and then for the financial incentive.

Public reporting could offer beneficiaries and their caregivers an objective basis on which to guide and assess their individual care options and other stakeholders more information about quality and efficiency of care. In addition, public reporting and transparency—even without using financial incentives—will motivate facilities to improve their performance relative to their peers. In turn, stakeholder involvement could be critical in designing, monitoring, and refining the SNFVBP program.

Publicly reporting performance on VBP measures and information on which SNFs receive payment incentives could also increase the industry's transparency. The underlying premise for increased transparency stems from the lack of information on quality, which in turn results in a market failure (Stevenson, 2006). The expectation is that publicly reported quality information and transparency empower consumers to choose high-quality providers and to avoid those with substandard quality of care. Market competition for residents could force poor-performing providers to improve their quality of care or face substantial competition from higher-performing facilities. Hospital discharge planners, case managers, and others involved in managing the chronic care model could also use the information to more effectively coordinate

post-acute care plans for individuals and their families. SNFs could also use the information to engage clinical staff and management to identify areas to improve clinical efficiencies and implement continuous quality improvement programs. These efforts could lead to a higher performing, value-driven health care setting for beneficiaries and SNFs alike.

4.6 Any Other Issues Determined Appropriate by the Secretary

Under section 3006(a)(2)(E) of the Affordable Care Act, in developing a plan to implement a SNFVBP program, the Secretary shall consider any other issues considered appropriate by the Secretary. In reviewing the factors for a successful SNFVBP program, CMS has determined that an additional predictor of success will be the extent to which it coordinates with other VBP programs. The program will need to be designed so that it aligns with existing pay-for-performance, pay-for-reporting, and quality reporting initiatives. As part of this effort, CMS will need to consider how VBP for SNFs could be integrated with quality improvement initiatives in other Medicare payment systems. One way to accomplish this goal would be to use applicable performance measures in the SNFVBP program that are also used in other agency VBP programs.

SECTION 5

Conclusion

Roadmap for SNFVBP Implementation Plan

This section summarizes the elements that CMS must consider in order to develop a SNFVBP program. CMS will need to assess the operational feasibility and potential burden associated with implementing such a program. As discussed previously in this report, 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 and Medicaid.

In preparing a plan to implement a VBP program in SNFs, CMS must take into account the challenges and length of time involved in developing new quality measures, soliciting multistakeholder input, seeking endorsement of the quality measures, and finalizing the proposed program through rulemaking. Adopting an incremental approach to phase-in a SNFVBP 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 SNFVBP program

CMS will also base the design of the program on information gleaned from the expert interviews and the results of the ODF. Experts and ODF participants expressed their opinions on a variety of topics. Experts consulted stated that the process of developing a plan should include substantial opportunities for provider, consumer, and researcher input. CMS intends to take this guidance into account in designing a SNF VBP program. Several experts and ODF participants also commented that the final design and implementation of a SNFVBP program should consider the results of the NHVBP Demonstration and its evaluation. The Demonstration will conclude in December 2012, and evaluation results are expected in fall 2013. CMS intends to utilize the lessons learned from the demonstration in designing the SNFVBP program. ODF participants also commented on the need to align any SNFVBP program with VBP programs implemented for other payment systems which is also a part of CMS' plan.

In addition, analogous to CMS's experience with other quality initiatives, CMS and stakeholders could require additional time to establish the infrastructure and processes to operate the program. The elements discussed below (and elsewhere in this report) present an array of options for developing a SNFVBP program.

A. Continuous Quality Improvement Framework could use existing tools and quality measures whenever possible as well as consider the addition of new ones. In its 2011 NQF Voluntary Consensus Standards for Nursing Homes report, the NQF emphasizes the importance of composite measures that capture multiple dimensions of quality (*e.g.*, clinical, outcome, and patient experience). Such measures enable beneficiaries to more easily understand the quality of care provided within and across facilities.

To the extent possible a SNFVBP implementation plan should align with other Medicare quality programs to ensure that a SNFVBP program coordinates incentives and minimizes provider burden across delivery systems. Incentives to increase unnecessary utilization of services and

payment system "silos" could be barriers to improving quality and care coordination across Medicare's systems.[48] The program should build on and refine existing quality measurement tools and processes and leverage data currently collected from Federal and State survey and certification processes, MDS, and Medicare claims data. Similar to the NHVBP Demonstration, CMS could use existing data to minimize the burden for stakeholders. (Options for measuring performance of SNFs are described in Section 4.2 and summarized in Table 4.2.)

CMS could also improve the quality framework by expanding the measures to include those that assess functional status such as improvements in walking, transfers, and eating that prepare Medicare beneficiaries for discharge to a less intensive non-institutional setting. CMS could also consider measures such as discharge to the community, potentially avoidable hospitalizations or rehospitalizations and composite measures currently applied in the NHVBP Demonstration. Adopting measures that assess improvements in a beneficiary's physical condition such as improved balance or measures related to specific therapy services could also be considered. New quality measures could include those that reflect consensus among affected parties, that are identified in well-respected and widely circulated peer-reviewed clinical literature, or that are in widespread use among States and private stakeholders. CMS could also consider adoption of structural measures related to the use of EHRs. Such measures could support timely health information exchange between SNFs, physicians, home health agencies and hospitals to enable more efficient service delivery and more timely clinical collaboration. As part of this effort, State surveyors may need technical assistance regarding how to conduct surveys in an increasingly IT focused health care system and SNFs may need enhanced data analytic capabilities in order to use EHR information to analyze the quality of care. Currently only eligible professionals and eligible hospitals and critical access hospitals qualify for payment incentives under the Medicare and Medicaid EHR Incentive Programs. There are currently no EHRs that have been developed specifically for the SNF setting. Resources and technical capacity may be needed to enhance data analytic capabilities.

CMS could also explore using an instrument to measure patient experience of care such as NHCAHPS. The CAHPS® family of surveys assesses patient experience in different settings including hospitals and home health agencies. Currently, facilities do not collect and submit NHCAHPS data under a national, standardized publicly reported survey to determine patients' perspectives of their experience in facilities (*e.g.*, measure quality of life and experience). Patient experience of care serves as an important quality measurement in facilities. Some facilities routinely survey patients about their experience with their care for internal quality improvement processes. A uniform patient experience of care survey could allow CMS and stakeholders to standardize public reporting across facilities. In addition, the information from these surveys could be used for multiple purposes including empowering beneficiaries and their families to identify high quality facilities, creating incentives for facilities and providers to improve the quality of care for all residents, and holding facilities accountable through public reporting of CAHPS® data. NQF recommended CAHPS® instruments for endorsement to measure both resident (short- and long-stay) and family member experience.[49]

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[48] Medicare Payment Advisory Commission. *Report to Congress: Reforming the Delivery System. June 2008*. The Report is available at: http://medpac.gov/documents/Jun08_EntireReport.pdf.

[49] National Quality Forum. "National Voluntary Consensus Standards for Nursing Homes: Consensus Report." July 2011.

In order to move forward with implementing a SNFVBP program CMS will need to assess all current and potential new measures described here. After completing the review, CMS would determine which measures to consider proposing for the program, seek endorsement of the measures, and, if applicable, subject the measures to the pre-rulemaking process outlined in section 1890A(a) of the Act before selecting them The current CMS process for measure priority planning, will guide consideration of each potential data source and options for SNF quality measure updates. Joint component evaluations, workgroups, stakeholder / subject matter experts, and possibly a consensus building body may be needed to reach agreement and make final decisions on measures to be proposed for SNFVBP. CMS will assess the role that the current Composite Five-Star Quality Rating System and health-inspection citations would have in a SNFVBP program. CMS would also consider the potential adoption of staffing measures, potentially avoidable hospitalizations and discharge to the community measures, and potential new composite measures based on the final results from the NHVBP Demonstration, CMS would also consider structural measures such as Health Information Technology, and the role that CAHPS survey based measures could play in the program. CMS will use established measure review processes to analyze each of the potential measures discussed.

B. Defining the SNFVBP Population will be an important step in designing the program. (Options for defining the SNFVBP population are also described in Section 4.1) A SNFVBP program could assess performance on measures calculated for all residents residing in a SNF, most of whom do not generally have their long-term care services paid for by Medicare. These residents include dual eligibles and private-pay individuals. Another option would be to design the program so that it assesses SNF performance based on measures calculated only for the beneficiaries on a Part A stay. However, limiting the program in this way could present challenges because it would be difficult to develop useful measures that only assess the care received by the smaller number of beneficiaries on a Part A stay. In addition, there are several reasons why a SNFVBP program should be designed to calculate measures for all residents in a SNF. First, Medicare beneficiaries account for the vast majority of residents in SNFs, even if Medicare does not pay for their SNF stay. Second, most of the key measures that could be used to assess performance—inspection data, staffing levels, and most MDS quality measures—apply to all residents in a SNF, including those who also depend on Medicaid or private payer coverage. Most quality measures currently capture the quality of care for long-stay residents. By measuring quality across the entire resident population, this could allow CMS to implement quality initiatives that may improve care for all residents in a SNF. Third, when measuring quality for all residents, the SNFVBP program could serve as a potential innovative model and offer lessons learned for both private payers and Medicaid. Finally, because the proportion of beneficiaries under Medicare-paid stays varies greatly from one time period to the next, using the entire SNF population would help to ensure that performance results remain more stable from year to year. Before developing a SNFVBP program, CMS must review the options presented here and decide whether the program will require SNFs to calculate measures for all beneficiaries on a Medicare Part A paid SNF stay or for all residents in the SNF.

C. Enhanced Data Infrastructure and Validation Process under a SNFVBP program would link payment to quality of care and ensure data oversight for CMS to appropriately calculate performance incentives, rather than tying payments only to reporting of quality data. (Options

for the reporting, collection and validation of quality data are also described in Section 4.3). Efforts undertaken to continuously enhance and validate data will allow CMS to both ensure accurate payment incentive calculations and improve the quality of care for SNF residents. For example, the current measures derived from MDS data capture the quality of care in facilities by assessing residents' physical and clinical conditions at specified intervals during their stay. Completeness and accuracy of MDS data submission will be critical to the VBP program for a number of reasons. MDS-derived quality measures provide important indicators related to the functioning and medical condition of all (including private-pay) facility residents. The SNFVBP program could then rely on this data (in addition to claims, NHCAHPS, etc.) to calculate performance payment incentives. To ensure the validity of performance scores and payment incentive calculations, CMS continues to improve MDS data completeness and accuracy through ongoing facility monitoring and training (conferences, webinars, and open door forums) in which the agency identifies areas of assessment containing a high prevalence of invalid and/or missing clinical data (*e.g.*, review the assessment by comparing to clinical records and resident/staff observations/interviews), publication of MDS User Manual Guidelines, and the Survey and Certification process.

CMS believes that a SNFVBP program would need to build on already existing measurement development and data validation processes. Efforts are already underway to harmonize existing measures across settings. For example, a completely separate data validation process is often not practical. While the NHVBP Demonstration collects some additional data (such as payroll data), and applies these data to develop measures, for the most part it uses data that is already being collected and validated. In addition, implementing a separate development and validation process may be repetitious with work already underway in CMS. It could also conflict with measure specifications under development, or not be harmonized with the agency's other post-acute measures.

The measure validation process within CMS has been launched through initiatives such as the Nursing Home Measures Maintenance and Development project. This is an ongoing project that will be used to validate any new SNFVBP measures that are developed. This project supports efforts to update, refine, and coordinate scientifically sound, evidence-based measures of quality for use in the Medicare program. Measure criteria and selection focus on measures that are important, useable, feasible, and scientifically acceptable. Existing measures are revised as needed to ensure that they are risk-adjusted appropriately, and to enhance their reliability and validity using evidence-based research. New measures are developed in accordance with CMS priorities, measure gaps and provider needs. 16 Nursing Home measures derived from MDS 3.0 were recently endorsed by NQF. These measures were evaluated using NQF's standard evaluation criteria: importance to measure and report, scientific acceptability of measure properties; usability; and feasibility[50]. In addition, these measures are currently under analysis as the MDS 3.0 data comes in. An analytical report on these measures is expected in Spring 2012. In order to move forward in implementing a SNFVBP program, after CMS determines the measures to be included in the program, it will need to determine a method for validating the measures. The method chosen will reflect the discussion here and will build upon the results of the Nursing Home Measures Maintenance and Development project.

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[50] See NQF website for more information on the evaluation criteria at: http;//www.qualityforum.org/does/measure_evaluation_criteria.aspx).

D. Performance Scoring and Evaluation Model could score a SNF's performance based on the SNFVBP quality improvement framework referenced above using a number of different approaches, including attainment, improvement, or a combination of the two. (See Section 4.4 and Table 4.3 for additional information.) Under the attainment option, SNFs could receive performance payment incentives if they attain a specific predetermined target or are ranked within a certain percentile of all facilities. The improvement option allows SNFs to qualify for performance payment incentive based on improvement rather than attaining a specific target or ranking. CMS could establish a threshold to avoid rewarding facilities if their overall performance is low. The hybrid approach could be designed both to reward high-performing SNFs and SNFs that improve meaningfully over time. The hybrid approach is consistent with previous and existing Medicare pay-for-performance demonstrations and programs (NHVBP Demonstration, HHP4P Demonstration, and the HVBP program).

CMS could prioritize measure scores and/or instruments applied to create composite performance scores according to criteria such as clinical importance, impact on cost, size of eligible population, and potential for improvement. Medicare VBP programs and demonstrations could inform CMS's selection of domain weights for the composite performance score.

E. Funding Source/ Performance Incentives for the VBP program could be structured in a number of ways, including payment withholds from poor performing SNFs, or by holding back a portion of the base payment rate or the annual update for all SNFs. (See Section 4.4 and Table 4.4 for additional information.) If CMS were to derive payment incentives from either a small reduction in the base Medicare payment rate or in the annual payment update factor drawn from the entire pool of Medicare SNF payments, this would create an immediate funding mechanism. CMS could then determine the amount available for payment incentives in advance and subsequently distribute such payments relatively quickly once the agency measured and calculated performance. The current Hospital VBP program uses a similar approach. For the FY 2013 Hospital VBP Program, the total amount available for value-based incentive payments is equal to a reduction of one percent in the base operating DRG payment amount for each discharge occurring in FY 2013, as estimated by the Secretary.

Performance incentive funds could be gradually increased over time. Value-based payment incentives should be set at a level to encourage SNFs to improve the quality of care they provide. CMS will need to review the options for structuring performance incentives described here and decide which to use before implementing a SNFVBP program.

F. Transparency and Public Reporting would enable CMS to collect and validate data from SNFs and subsequently apply quality, efficiency, and cost measures for performance comparison among SNFs. (See Section 4.5 for additional information.) SNFVBP performance data could be incorporated into the CMS Nursing Home Compare web site to allow the public to readily access the information and to avoid duplicate reporting programs for the same SNFs. Public reporting of the data will give the public additional data on which to make their decisions about care.

Public reporting will also encourage facilities to improve their performance relative to their peers. Sharing performance information with providers will also enable them to monitor their performance and make suggestions on how the program could be improved. CMS would need to finalize a method for publicly disclosing the results of the SNFVBP program.

G. Coordination across the Medicare Payment System would allow CMS to coordinate the SNFVBP program with existing pay-for-performance, and quality reporting programs. This effort could eliminate payment and provider "silos" and improve the quality of care and better coordinate care transitions models between hospitals, SNFs/NFs, and home health agencies for beneficiaries.

In the context of the cross-provider Medicare initiatives, consideration should be given to how VBP for an individual provider group—in this case, SNFs—might in the longer term be integrated into models that facilitate quality improvement across the care continuum. For example, CMS could seek to expand bundled payment systems strategies that link acute and post acute care.

CMS could also consider incorporating efficiency measures into the SNFVBP program in order to align with quality programs used in other Medicare settings (*e.g.*, the Hospital Inpatient Quality Reporting program). Currently, efficiency measures would require time to develop, test, and refine to ensure appropriate inclusion in the SNFVBP program.

The SNFVBP program should align with the National Quality Strategy,[51] which is designed to be an adaptable and evolving guide for health care in the United States. It is a broad roadmap that will require the ongoing development of specific goals, measures, benchmarks, and initiatives, through a continued transparent collaborative process with all stakeholders. The strategy will continue to draw from pockets of excellence from which others can learn and which could eventually be brought to scale. At the Federal level, the National Quality Strategy will guide the development of HHS programs, regulations, and strategic plans for initiatives, in addition to serving as a critical tool for evaluating the full range of Federal health care efforts.

H. Possible Timelines for SNFVBP This section describes a range of timing issues that CMS must consider in order to develop and implement a SNFVBP program. These recommended steps build on existing CMS efforts in other Medicare settings to minimize the financial and administrative burden associated with designing and implementing such a program. Section 3006(a) of the Affordable Care Act requires that the Secretary submit to Congress a reporting containing this plan. CMS would incorporate lessons learned from the NHVBP demonstration into the SNFVBP program. The final year of the demonstration will conclude in December 2012. The evaluation of the demonstration is scheduled for completion in fall 2013. Participants in the ODF and expert interviews cautioned against proceeding to implement a SNFVBP program before the demonstration is completed and evaluated. We plan to use the results of the evaluation to assist us in making the final decisions described above in order to propose quality measures, and determine the SNFVBP population, an enhanced data validation process, and performance incentives.

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[51] National Strategy for Quality Improvement in Health Care: Report to Congress. March 2011. http://www.healthcare.gov/law/resources/reports/nationalqualitystrategy032011.pdf.

CMS will also need to consider the challenges and length of time involved with respect to developing any necessary new measures, soliciting additional multistakeholder input, seeking endorsement of the quality measures by the consensus group with a contract under section 1890(a) of the Act, subjecting the measures to the pre-rulemaking process under section 1890A(a) of the Act, if applicable, and publishing a proposed and final rule to implement the program. An incremental phased-in approach for SNFVBP program implementation could allow stakeholders time to adjust under the new system.

If CMS decides to develop new measures an average of one year should be anticipated for development, although this time can vary. An additional average of 9 months should be anticipated for the NQF submission and endorsement process. (This would begin with measure submission to the NQF and conclude with the NQF Steering Committee endorsement decision). The measure development and endorsement process could take from one to two years, depending on whether new measures are developed. The annual rulemaking process associated with changes in Medicare payment would also have an impact on the timing for implementation of SNFVBP. Quality measures included in VBP programs are typically proposed to the public through the rulemaking process. Hypothetically, the measures could be included in a SNFVBP Notice of Proposed Rulemaking (NPRM) published in the Federal Register. A Final Rule would typically be published about five months after the NPRM. Policies finalized in final rules are typically implemented about two months after the rule is published. 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.

Conclusion

CMS is committed to continuously driving improvements in quality and efficiency for Medicare beneficiaries. Implementation of a SNFVBP program will be an important next step in linking payment to performance. The agency seeks continuous quality improvement of the Medicare program through ongoing and newly developed VBP programs and innovative initiatives. The agency also strives to form strategic partnerships with beneficiaries, families, providers, industry and consumer groups, and States to transform the current system into a higher performing, value-driven health care system. This report, including the "Roadmap for SNFVBP Implementation Plan" addresses each of the elements required by section 3006 (a) (1) through (a)(4) of the Affordable Care Act, building on existing quality monitoring and reporting programs, examining the quality framework and lessons learned to date under relevant demonstrations, and listening to input from stakeholders.

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APPENDIX A: DESCRIPTION OF STATE'S VALUE-BASED PURCHASING INITIATIVES

Some States have devised their own Medicaid quality initiatives to promote innovative payment and service delivery models to preserve or enhance the quality of care and reduce spending. As of 2009, the following states have implemented pay-for-performance in NFs.

State	Description	Metrics	Status
Minnesota (Cooke and Arling, 2009):	Through a competitive selection process based on the NFs' proposals for quality improvement programs using evidence-based and best practices, the State contracted with approved facilities to earn performance-based incentive payments. The State awarded these time-limited rate adjustments of up to 5 percent of the operating payment rate to selected facilities.	The State evaluates these programs based on quality measures from the Minnesota Resident Quality of Life Survey or the AHRQ Nursing Home Consumer Assessment of Healthcare Providers and Systems (CAHPS®).	As of April 2009, 158 NFs in Minnesota were participating across 45 different Performance Improvement Projects. 8 NFs achieved all of their stated targets; • 10 met one or more of their stated targets; • 1 facility suspended its project before completion; and • 1 facility met no targets.
Colorado (Werner, Konetzka, and Liang, 2010):	This program assesses NFs performance on six measures.	• clinical quality measures • staffing • regulatory deficiencies • consumer experience • Medicaid use • culture change	Bonus payments of up to $4.00 per diem are available. Data from Werner, Konetzka and Liang (2010) are not available for Colorado on the proportion of the Medicaid NF budget accounted for by bonuses.
Georgia (Petersen et al., 2006; Briesacher, 2009; Georgia Department of Community Health, 2007):	This program was implemented to monitor and improve the quality of care for residents. The State required all NFs to participate under this initiative.	• family experience • employee experience • nursing retention • nursing assistant retention • pressure ulcers physical restraints • pain in long-stay residents • pain in short-stay residents	The State increased payments by 1 percent to NFs that submitted quality data and achieved minimum performance standards. The following year, Georgia increased the payment rate by 2 percent. In 2007, 78 percent of NFs received payment incentives. pay-for-performance bonuses accounted for 0.4 percent of the Medicaid NF budget.
Iowa (Kane et al., 2007; Lindenauer et al., 2007):	The State required all NFs to collect and report data for 10 quality measures, except those related to resident experience.	• deficiency-free survey • regulatory compliance • nursing hours • resident experience • the presence of a resident advocate committee	In 2002, qualifying facilities were initially paid $2.82 per day, which was changed to an increase of 1 percent, 2 percent, or 3 percent of the daily per-diem of direct and nondirect

		• employee retention • occupancy rates • administrative costs • special licensure • Medicaid utilization	reimbursement contingent on performance. In 2005, 87 percent of NFs received payment incentives of some kind. In 2009, NFs were eligible for up to $3.68 [per day in bonus payments (Werner, Konetzka, and Liang, 2010). Pay-for-performance bonuses accounted for 1.4 percent of the Medicaid NF budget.
Kansas (Kansas Department on Aging, 2007):	This voluntary program used financial incentives to reward NFs that achieved higher quality outcomes. The program measured NFs across six quality measures:	• direct care staffing • direct care staffing turnover • staff retention • operating costs • total and Medicaid occupancy • deficiency-free survey	The State increased the per-diem payment rate between $1.00 and $3.00. In 2006, 38 percent of the State's NFs received incentives—a much lower number than in the other States, likely due to the voluntary nature of the program. Pay-for-performance bonuses accounted for 0.7 percent of the Medicaid NF budget.
Ohio (Briesacher et al., 2009; Ohio Department of Job and Family Services, 2007):	This incentive program is open to all NFs in the State. The program assesses NF performance on six measures:	• whether the facility had a deficiency-free survey • resident/family experience • nurse staffing • employee retention • occupancy rates • Medicaid utilization	In 2009, NFs were eligible for up to a $3 a day increase in the per diem payment rate (Werner, Konetzka and Liang, 2010). Pay-for-performance bonuses accounted for 0.6 percent of the Medicaid NF budget.
Oklahoma (Briesacher et al., 2009; Oklahoma Health Care Authority, 2007):	This incentive is open to all NFs in the State. The program assesses NF performance on 10 measures.	• quality of life • resident/family experience • employee satisfaction • technician/assistant turnover and retention • licensed nurse turnover and retention • State survey compliance • person-centered care • clinical outcomes • direct care staffing hours • Medicaid occupancy and Medicare utilization ratio	Provider bonuses of up to 4 percent of the per diem rate are available. The maximum add-on in 2009 was $5.45 (Werner Konetzka, and Liang. 2010). Pay-for-performance bonuses accounted for 1.8 percent of the Medicaid NF budget, the highest of any state.

Utah (Briesacher et al., 2009; Kuhmerker and Hartman, 2007):	This incentive program is open to all NFs in the State. The program assesses NF performance on three measures.	• deficiency-free survey • substandard quality of care citations • State-developed CAHPS measures	Provider bonuses of between $0.50 and $0.60 per diem were available. Pay-for-performance bonuses accounted for 0.7 percent of the Medicaid NF budget (Werner, Konetzka, and Liang, 2010).
Vermont (Werner, Konetzka, and Liang, 2010):	The program assesses NFs based on four measures.	• staffing • regulatory deficiencies • consumer experience • efficiency	Bonuses are not based on per diem add-ons. Instead, each NF that qualifies for a bonus payment receives $25,000. Pay-for-performance bonuses accounted for 0.1 percent of Medicaid NF expenditures.