Skilled Nursing Facility Value-Based Purchasing Program
Exchange Function Methodology and Empirical Analyses

Executive Summary

This report is intended to provide additional details on the empirical analyses we considered when developing and finalizing a logistic exchange function with a 60% payback percentage for the Skilled Nursing Facility Value-Based Purchasing (SNF VBP) Program. This report provides additional insight to stakeholders about the Program’s policy and operations, including the details of the exchange function methodology.

Beginning in FY 2019, the SNF VBP Program will reduce the adjusted federal per diem rate otherwise applicable to each SNF for a fiscal year under Medicare by two percentage points and then redistribute 60% of the total amount of those reductions to SNFs for services furnished during that fiscal year based on their performance under the Program. The Program adopted a logistic exchange function to translate SNF performance scores into value-based incentive payments in the fiscal year (FY) 2018 Skilled Nursing Facility Prospective Payment System (SNF PPS) Final Rule.

An exchange function is a mathematical model that translates performance scores into percentage multipliers. Its most important function in the SNF VBP Program is to best reward high performance and encourage SNFs to improve the quality of care they furnish to Medicare beneficiaries. By statute, the total amount of the value-based incentive payments made to SNFs under the Program for a fiscal year must be between 50% and 70% of the total amounts withheld from SNFs’ claims for that fiscal year, as estimated by the Secretary, and the SNFs ranked in the lowest 40 percent based on their performance for a fiscal year must receive a payment rate for services furnished during that fiscal year that is less than the payment rate they would have otherwise received.

To fulfill the statutory requirements, and to ensure that the SNF VBP Program makes value-based incentive payments to as large a number of SNFs as possible, we finalized a logistic exchange function, or S-shaped curve to translate SNF performance scores into percentage multipliers. We also finalized a payback percentage of 60% of the amounts withheld from SNFs’ Medicare payments for a fiscal year.

We adopted this functional form and payback percentage, in part, based on our assessment of historical Skilled Nursing Facility Readmission Measure (NQF #2510) (SNFRM) data and the estimated effects that result from using those methodologies as part of our overall scoring process. We also assessed estimated distributions of value-based incentive payments under other exchange function forms and payback percentage alternatives. In our analyses, we concluded that the logistic function provided the largest percentage of SNFs with net-positive value-based incentive payments. Additionally, we balanced that consideration with the Medicare Program’s long-term sustainability, and as a result, finalized the 60% payback percentage.

2 FY 2018 SNF PPS final rule, 82 FR 36616 through 36619.
5 FY 2018 SNF PPS final rule, 82 FR 36616 through 36621.
The SNF VBP Exchange Function

What statutory requirements affect the SNF VBP Program’s incentive payments?

The SNF VBP Program’s requirements in statute includes several directives about the distribution of value-based incentive payments, including:

- A 2% reduction to SNFs’ otherwise applicable adjusted federal per diem rates under Medicare for a fiscal year to fund the value-based incentive payments for that fiscal year,
- A payback percentage of between 50% and 70% of that total amount of value-based incentive payments, and
- A requirement that SNFs in the bottom 40% of the ranking must receive a lower payment rate for services furnished during a fiscal year than they would have otherwise received in the absence of the Program.

Based on the calendar year (CY) 2014 payment file, we estimated that 2% of Medicare SNF payments in our analysis totaled $542.6 million. Therefore, we estimated for purposes of our analysis that we could pay between $271.3 million and $380.0 million (i.e., between 50% and 70% of the total) in value-based incentive payments. Our analysis is not tied to a particular program year. For purposes of our analysis, we also assumed that CY 2014 payments data was sufficiently representative of the FY 2019 Medicare SNF payments to provide us insights into our policy options.

How does CMS conduct SNF VBP performance scoring to implement the statutory requirements?

CMS conducts SNF VBP performance scoring by first compiling historical quality measure data from Medicare SNFs. Section 1888(g)(1) of the Social Security Act directs us to adopt a measure of all-cause, all-condition hospital readmissions for SNFs, and section 1888(h)(2)(A) of the Act directs us to apply that measure for purposes of the SNF VBP Program. We adopted the SNFRM to meet these requirements in the FY 2016 SNF PPS final rule, and refer readers to that final rule for additional discussion of the measure. The SNFRM is risk-standardized to account for differences in SNFs’ patient populations that might result in different rates of hospital readmissions.

As discussed further in the FY 2017 SNF PPS final rule, we adopted a scoring methodology for the SNF VBP Program, which is conceptually based on the Hospital VBP Program’s scoring methodology. The SNF VBP Program tracks SNFs’ performance on quality measures during a baseline period and a performance period, both of which we specify in regulation. The baseline period is used to establish performance standards, including an achievement threshold that is defined as the 25th percentile of all SNFs’ performance on the measure during the baseline period, and the benchmark, which is defined as the mean of the top decile of all SNFs’ performance on the measure during the baseline period. We also use individual SNFs’ performance during the baseline period to track improvement on the measure over time.

We measure SNFs’ performance during the performance period, and then award points to each SNF for achievement and improvement, as required by statute. We award up to 90 points for improvement.

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6 See, generally, section 1888(h) of the Social Security Act.
7 FY 2016 SNF PPS final rule, 80 FR 46411 through 46419.
8 FY 2017 SNF PPS final rule, 81 FR 52000 through 52005.
9 See, generally, section 1886(o) of the Social Security Act.
between the baseline and performance periods, and up to 100 points for achievement during the performance period. We then take the higher value of the achievement or improvement score and consider that to be the SNF performance score. Finally, we rank SNFs from low to high by their SNF performance scores as required by the Program’s statute.

Can SNFs calculate their achievement and improvement points under the SNF VBP Program?

A SNF can calculate its achievement and improvement points with the following data to perform this calculation:

- The SNF’s performance period rate on the specified measure (in this case, the SNFRM),
- The SNF’s baseline period rate on the specified measure,
- The SNF’s performance period rate on the specified measure, and
- The achievement threshold and benchmark for the program year.

Using the formulas that we adopted for achievement scoring and improvement scoring, SNFs may calculate the achievement points and improvement points that they will receive, and may therefore replicate their SNF performance score by taking the higher value of the achievement or improvement scores.

What data did CMS use for its analyses?

For our exchange function analysis, we used SNFRM data from CY 2013 as the baseline period, and CY 2015 as the performance period, which was sufficiently representative of the FY 2019 baseline period and performance period to provide us with insights into the Program’s policy options. Additionally, we estimated participating SNFs’ total Medicare payments using Medicare payment data from CY 2014, which was the most recent payment information available at the time that we performed the analysis. Each SNF in our historical datasets was scored on achievement and improvement and SNF performance scores were calculated. SNFs’ historical performance on the SNFRM, as well as the resulting SNF performance scores and incentive percentages, were also sufficiently representative to provide us additional insights. Each SNF performance score is matched with that SNF’s Medicare spending and the exchange function is calculated as discussed further below.

To replicate the SNF performance score calculations we included in our analysis, stakeholders would need to be able to perform the following:

- Compile historical quality measure data from all SNFs
- Score those data on both achievement and improvement from the specified periods
- Identify the higher of achievement and improvement scores for each SNF
- Match the resulting SNF performance scores up with Medicare payments data for each SNF

What other exchange functions did CMS consider adopting?

10 FY 2017 SNF PPS final rule, 81 FR 52001, though please note that we adopted a change to the SNF performance score’s rounding policy in the FY 2018 SNF PPS final rule (82 FR 36615).
As we discussed in the FY 2018 SNF PPS final rule, we initially considered four functional forms: (1) linear, (2) cube, (3) cube root, and (4) logistic. We also considered an alternative to the linear function with an adjustment, which we considered to provide additional SNFs with net-positive value-based incentive payments. We performed analyses with the payback percentages of 50%, 60%, and 70%, along with several functional forms to estimate value-based incentive payments for participating SNFs. We defined each of the functions for purposes of our analyses according to the following formulas:

**Cube:**

$$f(x_i) = \left( \frac{x_i}{100} \right)^3$$

**Cube root:**

$$f(x_i) = \sqrt[3]{\frac{x_i}{100}}$$

**Linear:**

$$f(x_i) = \frac{x_i}{100}$$

**Logistic:**

$$f(x_i) = \frac{1}{1 + e^{-0.1(x_i-50)}}$$

The four functional forms that we considered appear in Figure 1 below.

Figure 1: Potential Exchange Function Forms

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11 FY 2018 SNF PPS final rule, 82 FR 36616 through 36619
As shown in Figure 1 above, the linear function is a simple, steadily increasing function ranging from zero to one hundred. The cube function follows the cubic parabola between zero and one hundred, while the cube root is the inverse of the cube function. Finally, the logistic curve is an S-shaped curve ranging between zero and one hundred.

The fifth function that we considered, which we described as a linear function with adjustment, took the form of the linear function with its position reduced by 20%, with the resulting surplus in value-based incentive payments distributed to the middle 40% of SNFs to provide more facilities with net-positive value-based incentive payments. However, as we described in the FY 2018 SNF PPS final rule,12 while this option enabled us to provide net-positive value-based incentive payments to slightly more SNFs than was possible with the logistic function, we viewed its complexity as a significant drawback and concluded that we would adopt one of the four baseline functions that we initially considered.

How did CMS calculate value-based incentive payments for its analysis?

We ranked SNFs by their performance score and awarded value-based incentive payments to each SNF that (1) reflected that individual SNF’s performance score as transformed by each functional form, and (2) resulted in a total of value-based incentive payments that did not exceed the specified payback percentage in each scenario.

We then examined the resulting distributions of value-based incentive payments, focusing on the incentive multipliers that resulted. The incentive multipliers that we calculated are applied after the 2% reduction to SNFs’ Medicare payments. For example, if we awarded a SNF a 1.5% payment percentage, that SNF would experience a roughly 0.5% net reduction to its Medicare payments because the 1.5% adjustment would not make up for the full 2% reduction applied first. Conversely, a SNF receiving a 2.5% payment percentage would experience a roughly 0.5% net increase to its Medicare payments for the same reason.

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12 FY 2018 SNF PPS final rule, 82 FR 36618
What were the results of the analysis?

After calculating payment percentages for all SNFs, we aggregated the results to assess each exchange function form and payback percentage. Our aggregated findings appear in Table 1 below.

<table>
<thead>
<tr>
<th>Exchange Function</th>
<th>Payback Percentage</th>
<th>Percentage of all SNFs that received a 0% payment adjustment</th>
<th>Percentage of all SNFs that were “Net Winners” (SNFs receiving a payment adjustment &gt;=2%)</th>
<th>Percentage of all SNFs that received the maximum payment adjustment</th>
<th>Maximum Payment Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cube</td>
<td>70%</td>
<td>18.46%</td>
<td>18.77%</td>
<td>3.17%</td>
<td>5.17%</td>
</tr>
<tr>
<td></td>
<td>60%</td>
<td>18.46%</td>
<td>16.32%</td>
<td>3.17%</td>
<td>4.14%</td>
</tr>
<tr>
<td></td>
<td>50%</td>
<td>18.46%</td>
<td>13.72%</td>
<td>3.17%</td>
<td>3.12%</td>
</tr>
<tr>
<td>Cube Root</td>
<td>70%</td>
<td>18.46%</td>
<td>21.86%</td>
<td>3.17%</td>
<td>0.35%</td>
</tr>
<tr>
<td></td>
<td>60%</td>
<td>18.46%</td>
<td>3.54%</td>
<td>3.17%</td>
<td>0.02%</td>
</tr>
<tr>
<td></td>
<td>50%</td>
<td>18.46%</td>
<td>0.00%</td>
<td>3.17%</td>
<td>-0.32%</td>
</tr>
<tr>
<td>Linear</td>
<td>70%</td>
<td>18.46%</td>
<td>27.14%</td>
<td>3.17%</td>
<td>1.59%</td>
</tr>
<tr>
<td></td>
<td>60%</td>
<td>18.46%</td>
<td>18.98%</td>
<td>3.17%</td>
<td>1.07%</td>
</tr>
<tr>
<td></td>
<td>50%</td>
<td>18.46%</td>
<td>11.27%</td>
<td>3.17%</td>
<td>0.56%</td>
</tr>
<tr>
<td>Logistic</td>
<td>70%</td>
<td>18.46%</td>
<td>31.54%</td>
<td>3.17%</td>
<td>1.69%</td>
</tr>
<tr>
<td></td>
<td>60%</td>
<td>18.46%</td>
<td>27.65%</td>
<td>3.17%</td>
<td>1.17%</td>
</tr>
<tr>
<td></td>
<td>50%</td>
<td>18.46%</td>
<td>22.12%</td>
<td>3.17%</td>
<td>0.64%</td>
</tr>
</tbody>
</table>

What is the payback percentage policy?

In addition to the functional form, we assessed the appropriate payback percentage for the Program. As noted above in Table 1, we observed that as we increased the payback percentage from 50% to 60% and 70%, additional SNFs would receive net-positive payment adjustments. As we discussed above, we balanced our view that the Program should provide net-positive payment adjustments to as many SNFs as possible within the statutory constraints with the Medicare Program’s long-term sustainability. We observed that the logistic function provided the largest number of SNFs with net-positive incentive payments at all three payback percentage alternatives that we analyzed.

We therefore concluded that, on balance, a payback percentage of 60% most appropriately ensures that SNF VBP operates as a quality incentive program and takes into consideration the Medicare Program’s long-term sustainability.

Does the exchange function provide the same results each year? For example, if my SNF scores a 75 in one year, does that mean I know what value-based incentive payment my SNF will get if it receives a 75 in the next year?
The exchange function depends on the distribution of all SNFs’ performance scores from a given period, so a SNF’s payment percentage may differ even if it receives the same SNF performance score in two different program years. While the exchange function’s form will follow the formula that we have finalized, the payment percentages that result will differ each year based on the distribution of all SNF performance scores.

**Can SNFs use their performance score to calculate the payment percentage that will be applied to their Medicare payments?**

No. Due to timing and data limitations, it is not possible for SNFs to calculate their payment percentages from their SNF performance scores, because the exchange function methodology incorporates all SNFs’ performance scores and Medicare payments. CMS uses the most currently available payment information after the performance period ends to calculate payment percentages for the SNF VBP exchange function. At the time of the CMS incentive payment calculation, this national and provider-level payment information will not have been released to the public.

**Can CMS publish the scaling factor that it plans to use for the FY 2019 Program year?**

The exchange function depends on performance and payments data from all SNFs. Therefore, CMS cannot publish additional details about the exchange function that we will use for FY 2019 in advance. The performance period for the FY 2019 Program year began on January 1, 2017 and will end on December 31, 2017, followed by a claims run-out period, quality measure calculations, SNF performance score calculations, and finally the exchange function calculation. As noted above, we published the formula for the exchange function’s form that we will use, but additional specifics are dependent on the range of SNF performance scores.

**What other conclusions did CMS draw from its analysis? What policies were finalized as a result?**

As we described in the FY 2018 SNF PPS final rule, we identified the logistic function as the form under which the most SNFs would receive net-positive incentive payments. We concluded that the function’s form, which minimizes incentive payments for the lowest performers while maximizing them for the highest performers – created this desirable result.

We contrasted these results with our findings about the linear, cube, and cube root functions. As a threshold matter, we observed that each function distributed value-based incentive payments differently. The linear function distributed incentive payments as evenly as possible along its slope, with incentive payments increasing for higher SNF performance scores. The cube function, in contrast, minimized value-based incentive payments for the lowest performers to maximize value-based incentive payments for the highest performers. The cube root function instead flattened incentive payments for the highest performers to provide for a more even distribution while still penalizing the lowest performers, while the logistic function provided strong incentives for the highest performers, though not as high as the cube function.

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13 FY 2018 SNF PPS final rule, 82 FR 36618
14 FY 2018 SNF PPS final rule, 82 FR 36616 through 36619
In all the alternatives that we tested, we found that the distribution of estimated SNF performance scores and value-based incentive payments fulfilled the requirement that the bottom ranking 40% of SNFs receive less in value-based incentive payments than they would have in Medicare spending in the Program’s absence.

We concluded that the logistic function best fulfilled the direction in the SNF VBP Program’s statute as a quality incentive program by maximizing incentive percentages to high performers, particularly in contrast to the linear functional form. We therefore finalized the logistic function’s form in the FY 2018 SNF PPS rule according to the following equation:

\[
f(x_i) = \frac{1}{1 + e^{-0.1(x_i-50)}}
\]

where \(x_i\) is the SNF’s performance score. As discussed above, we finalized a payback percentage policy of 60%.
Appendix: Simplified Exchange Function Calculation

To illustrate the exchange function’s operation more simply than can be done with a dataset composed of more than 15,000 SNFs’ performance, we have created a simplified example using 20 hypothetical SNFs. Table 2 below shows each SNF’s baseline period and performance period rate on the SNF Readmission Measure as a risk-standardized readmission rate (RSRR).

Table 2: Hypothetical SNFRM Dataset

<table>
<thead>
<tr>
<th></th>
<th>Baseline Period RSRR</th>
<th>Performance Period RSRR</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNF #1</td>
<td>0.2984</td>
<td>0.1440</td>
</tr>
<tr>
<td>SNF #2</td>
<td>0.2328</td>
<td>0.1888</td>
</tr>
<tr>
<td>SNF #3</td>
<td>0.1588</td>
<td>0.2259</td>
</tr>
<tr>
<td>SNF #4</td>
<td>0.2086</td>
<td>0.2501</td>
</tr>
<tr>
<td>SNF #5</td>
<td>0.2297</td>
<td>0.2818</td>
</tr>
<tr>
<td>SNF #6</td>
<td>0.1506</td>
<td>0.1214</td>
</tr>
<tr>
<td>SNF #7</td>
<td>0.2447</td>
<td>0.2783</td>
</tr>
<tr>
<td>SNF #8</td>
<td>0.2448</td>
<td>0.1651</td>
</tr>
<tr>
<td>SNF #9</td>
<td>0.3032</td>
<td>0.1468</td>
</tr>
<tr>
<td>SNF #10</td>
<td>0.1499</td>
<td>0.1202</td>
</tr>
<tr>
<td>SNF #11</td>
<td>0.1499</td>
<td>0.2235</td>
</tr>
<tr>
<td>SNF #12</td>
<td>0.2002</td>
<td>0.1533</td>
</tr>
<tr>
<td>SNF #13</td>
<td>0.2794</td>
<td>0.1414</td>
</tr>
<tr>
<td>SNF #14</td>
<td>0.1726</td>
<td>0.2938</td>
</tr>
<tr>
<td>SNF #15</td>
<td>0.2678</td>
<td>0.1252</td>
</tr>
<tr>
<td>SNF #16</td>
<td>0.1762</td>
<td>0.1830</td>
</tr>
<tr>
<td>SNF #17</td>
<td>0.2440</td>
<td>0.2005</td>
</tr>
<tr>
<td>SNF #18</td>
<td>0.1996</td>
<td>0.2057</td>
</tr>
<tr>
<td>SNF #19</td>
<td>0.1280</td>
<td>0.1268</td>
</tr>
<tr>
<td>SNF #20</td>
<td>0.3059</td>
<td>0.2227</td>
</tr>
</tbody>
</table>

We next calculated an achievement threshold and a benchmark based on these SNFs’ baseline period performance. The 25th percentile of these SNFs’ performance during the baseline period is 0.25057, which we would invert for SNF VBP scoring purposes to 0.74943. The mean of the top decile of these SNFs’ performance during the baseline period is 0.13897, which we would invert for SNF VBP scoring purposes to 0.86103.

We then awarded achievement and improvement points to each SNF in accordance with the formulas that we have adopted in our regulations. Taking the higher of each SNF’s achievement or improvement scores, we then have calculated each SNF’s performance score, which forms the basis for value-based incentive payments. We have illustrated the distribution of SNF performance scores in Figure 2 below.
Figure 2: Distribution of Hypothetical SNF Performance Scores

As we discussed above, a significant element of the exchange function’s calculation is pairing SNF performance scores with Medicare spending amounts for each SNF. Those spending amounts enable us to (1) estimate the amount of the 2% withhold from participating SNFs’ Medicare claims, (2) estimate 60% of that total, which will then be the amount for value-based incentive payments that we will pay back to SNFs, and (3) assign each SNF a incentive multiplier using a function that reflects its SNF performance score and targets the appropriate payback pool.

In Table 3, we have paired each hypothetical SNF with its SNF performance score and an annual Medicare spending amount.
Finally, we use a mathematical calculation to assign an incentive multiplier to each SNF. We first transform each SNF’s performance score to follow the functional form that we have selected, then allocate value-based incentive payments according to the following formula:

$$\text{Adjustment}_i = x_i \times \frac{w \times p \times \sum p_i}{\sum (x_i \times p_i)}$$

The incentive multiplier for SNF \(i\) is the SNF’s transformed performance score, \(x_i\), multiplied by the amount of money to use for incentive payments \((w \times p \times \sum p_i)\) divided by the total score-weighted dollars \((\sum x_i \times p_i)\).

We describe the variables in this formula in Table 4 below.
Table 4: Exchange Function Payment Adjustment Formula Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$x_i$</td>
<td>the transformed performance score for SNF $i$</td>
</tr>
<tr>
<td>$w$</td>
<td>the proportion of dollars to withhold (i.e. 2%)</td>
</tr>
<tr>
<td>$p$</td>
<td>the proportion of dollars to create a pool of money to return (i.e. 60%)</td>
</tr>
<tr>
<td>$\sum_{i}^{n} p_i$</td>
<td>the sum of payments, $p_i$, to all SNF’s $i = 1 \ldots n$</td>
</tr>
<tr>
<td>$\sum_{i}^{n} x_i * p_i$</td>
<td>the sum of score–weighted payments, $x_i * p_i$, to all SNF $i = 1 \ldots n$</td>
</tr>
</tbody>
</table>

SNF #16, for example, received a SNF performance score of 59.528 points. This score is transformed by the logistic exchange function to 0.72167793186017, which is multiplied by the proportion of dollars to withhold ($w$), the proportion of dollars to create a pool of money to return ($p$), the sum of payments to all SNFs ($\sum_{i}^{n} p_i$), with the result then divided by the sum of score-weighted payments to all SNFs ($\sum_{i}^{n} x_i * p_i$).

The function’s main constraint is the pool of funds it can distribute to participating SNFs. For example, if we had two SNFs, each with approximately $15,000,000 in Medicare spending, each would receive a reduction of $300,000 due to the 2% withhold, for a total pool of $600,000. We would then reduce that pool to the payback percentage – in this case, 60% - and would award incentive multipliers to each SNF such that we estimate that we would pay out a total of approximately $360,000 over the course of the fiscal year.

In our hypothetical dataset, we have shown 20 SNFs with a total Medicare spending pool of $152.28 million. The 2% withhold from that total amounts to $3.05 million, and 60% of that total is $1.83
million, which represents the maximum amount of value-based incentive payments that we set our function to allow in this example.

Thus, in Table 5 below, using that method, we have awarded each SNF a value-based incentive payment percentage that follows the logistic function’s form, and that ensures that we will pay out approximately $1.83 million in value-based incentive payments over the course of the year.

Table 5: Hypothetical SNF Dataset with Incentive Payment Multipliers

<table>
<thead>
<tr>
<th>ID</th>
<th>SNF Performance Score</th>
<th>Annual Total Payments (millions)</th>
<th>Incentive Payment Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNF #1</td>
<td>90.918</td>
<td>$8.146</td>
<td>3.50%</td>
</tr>
<tr>
<td>SNF #2</td>
<td>54.793</td>
<td>$2.691</td>
<td>2.20%</td>
</tr>
<tr>
<td>SNF #3</td>
<td>24.926</td>
<td>$15.541</td>
<td>0.27%</td>
</tr>
<tr>
<td>SNF #4</td>
<td>5.361</td>
<td>$1.650</td>
<td>0.04%</td>
</tr>
<tr>
<td>SNF #5</td>
<td>0.000</td>
<td>$15.557</td>
<td>0.02%</td>
</tr>
<tr>
<td>SNF #6</td>
<td>0.000</td>
<td>$16.195</td>
<td>0.02%</td>
</tr>
<tr>
<td>SNF #7</td>
<td>0.000</td>
<td>$7.765</td>
<td>0.02%</td>
</tr>
<tr>
<td>SNF #8</td>
<td>73.959</td>
<td>$4.426</td>
<td>3.26%</td>
</tr>
<tr>
<td>SNF #9</td>
<td>90.000</td>
<td>$13.233</td>
<td>3.49%</td>
</tr>
<tr>
<td>SNF #10</td>
<td>100.000</td>
<td>$3.352</td>
<td>3.53%</td>
</tr>
<tr>
<td>SNF #11</td>
<td>26.850</td>
<td>$14.669</td>
<td>0.32%</td>
</tr>
<tr>
<td>SNF #12</td>
<td>83.406</td>
<td>$5.344</td>
<td>3.44%</td>
</tr>
<tr>
<td>SNF #13</td>
<td>93.039</td>
<td>$1.030</td>
<td>3.51%</td>
</tr>
<tr>
<td>SNF #14</td>
<td>0.000</td>
<td>$1.800</td>
<td>0.02%</td>
</tr>
<tr>
<td>SNF #15</td>
<td>0.000</td>
<td>$5.885</td>
<td>0.02%</td>
</tr>
<tr>
<td>SNF #16</td>
<td>59.528</td>
<td>$13.411</td>
<td>2.57%</td>
</tr>
<tr>
<td>SNF #17</td>
<td>45.345</td>
<td>$1.190</td>
<td>1.37%</td>
</tr>
<tr>
<td>SNF #18</td>
<td>41.209</td>
<td>$6.441</td>
<td>1.04%</td>
</tr>
<tr>
<td>SNF #19</td>
<td>0.000</td>
<td>$13.442</td>
<td>0.02%</td>
</tr>
<tr>
<td>SNF #20</td>
<td>44.826</td>
<td>$0.508</td>
<td>1.33%</td>
</tr>
</tbody>
</table>

We would like to emphasize that the incentive multipliers that we have calculated for this example reflect the distribution of SNF performance scores for this population. If the underlying scores changed, the incentive multipliers would also change based on a recalculated exchange function. We anticipate calculating the exchange function for each SNF VBP Program year to reflect the changes in measure rates that we capture during each year’s baseline and performance periods and the resulting changes in SNF performance scores.

Finally, in Figure 3 below, we have shown SNF performance scores and their resulting incentive payment percentages. The blue dots in the chart show the SNFs, while the orange dots represent the 2% “break-even” point above which SNFs receive more in value-based incentive payments than is withheld from their Medicare payments.
Figure 3: Distribution of Hypothetical SNF Performance Scores and Payment Percentages
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMS</td>
<td>Centers for Medicare &amp; Medicaid Services</td>
</tr>
<tr>
<td>CY</td>
<td>Calendar Year</td>
</tr>
<tr>
<td>FY</td>
<td>Fiscal Year</td>
</tr>
<tr>
<td>HVBP</td>
<td>Hospital Value-Based Purchasing Program</td>
</tr>
<tr>
<td>NQF</td>
<td>National Quality Forum</td>
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<tr>
<td>SNF</td>
<td>Skilled Nursing Facility</td>
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<tr>
<td>SNF PPS</td>
<td>Skilled Nursing Facility Prospective Payment System</td>
</tr>
<tr>
<td>SNFRM</td>
<td>Skilled Nursing Facility Readmission Measure (NQF #2510)</td>
</tr>
<tr>
<td>SNF VBP</td>
<td>Skilled Nursing Facility Value-Based Purchasing Program</td>
</tr>
</tbody>
</table>
Additional SNF VBP Resources

- Skilled Nursing Facility Prospective Payment System Final Rules

- Skilled Nursing Facility Value Based Purchasing Program Webpage on CMS.gov: [https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/Other-VBPs/SNF-VBP.html](https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/Other-VBPs/SNF-VBP.html).


- Nursing Home Compare Web site: [https://www.medicare.gov/nursinghomecompare/search.html](https://www.medicare.gov/nursinghomecompare/search.html).